Government of **Western Australia**
Development Assessment Panels

Metro North-West Joint Development Assessment Panel Agenda

Meeting Date and Time: Thursday 22 January 2015; 2pm
Meeting Number: MNWJDAP/76
Meeting Venue: City of Joondalup
90 Boas Avenue
Joondalup

Attendance

DAP Members

Ms Karen Hyde (Presiding Member)
Mr Paul Drechsler (Deputy Presiding Member)
Mr Fred Zuideveld (Specialist Member)
Cr Mike Norman (Local Government Member, City of Joondalup)
Cr John Chester (Local Government Member, City of Joondalup)
Mayor Giovanni Italiano (Local Government Member, City of Stirling)

Officers in attendance

Ms Kimberley Masuku (City of Stirling)
Mr Neil Maull (City of Stirling)
Ms Melinda Bell (City of Joondalup)
Ms Jo Kempton (City of Joondalup)

Local Government Minute Secretary

Mr John Byrne (City of Joondalup)

Applicant and Submitters

Mr Jeff Malcolm (MGA Town Planners)
Mr Paul McQueen (Lavan Legal)

Members of the Public

Nil

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

Nil

3. Members on Leave of Absence

Nil

4. Noting of Minutes

The Minutes of the Metro North-West Meeting No.75 held on 12 January 2015 were not available at time of Agenda preparation.

5. Declarations of Due Consideration

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

6. Disclosure of Interests

Nil

7. Deputations and Presentations

Nil

8. Form 1 - Responsible Authority Reports – DAP Application

8.1	Property Location:	Lots 1 and 102, House Number 601, Wanneroo Road, Hamersley
	Application Details:	Hardware Showroom, Showroom, Fast Food Outlet and Garden Centre ("Masters")
	Applicant:	MGA Town Planners
	Owner:	Broadcast Australia Pty Ltd
	Responsible authority:	City of Stirling
	DoP File No:	DAP/14/00635

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

Nil

10. Appeals to the State Administrative Tribunal

10.1	Property Location:	Lot 803 (15) Hocking Parade, Sorrento (Sacred Heart College)
	Application Details:	EDUCATIONAL ESTABLISHMENT (GYMNASIUM ADDITION)
	Applicant:	MGA Town Planners
	Owner:	Roman Catholic Archbishop of Perth
	Responsible authority:	City of Joondalup
	DoP File No:	DP13/00954

The following State Administrative Tribunal Application has been received:

- City of Stirling – Lot 20 (No.99) Flora Terrace and Lot 21 (No.24) Lawley Street, North Beach – Proposed mixed used development.

11. General Business / Meeting Closure

Government of **Western Australia**
Development Assessment Panels

Form 1 - Responsible Authority Report

(Regulation 12)

Property Location:	Lots 1 and 102, House Number 601, Wanneroo Road, Hamersley
Application Details:	Showroom, Hardware Showroom, Garden Centre, Office and Fast Food Outlet Development ("Masters")
DAP Name:	Metro North-West JDAP
Applicant:	MGA Town Planners
Owner:	Broadcast Australia Pty Ltd
LG Reference:	DA14/2483
Responsible Authority:	City of Stirling
Authorising Officer:	Ross Povey Director Planning and Development
Department of Planning File No:	DAP/14/00635
Report Date:	15 January 2015
Application Receipt Date:	26 September 2014
Application Process Days:	112 days
Attachment(s):	**Attachment 1** Development Application Plans: a. Site Feature Survey, date stamped 26 September 2014 b. DA01- Site Plan, date stamped 26 November 2014 c. DA02- Basement Plan, date stamped 25 November 2014 d. DA03- Ground Floor Plan, date stamped 26 November 2014 e. DA04- Roof Plan, date stamped 23 October 2014 f. DA05- Elevations, date stamped 23 October 2014 g. DA06- Sections, date stamped 23 October 2014 h. DA07- Shadow Diagram, date stamped 23 October 2014 i. DA08 – Enlarged Plan of Café and Amenities / Administration Areas, date stamped 23 October 2014 j. SA02 – Building Signage, date stamped 25 November 2014 k. LA-01- Landscaping Site Plan, date stamped 23 October 2014 l. LA-02- Landscaping Details Plan, date stamped 23 October 2014 m. LA-03 Southern Boundary Landscaping Plan, date stamped 25 November 2014 **Attachment 2**

	Aerial Location Plan **Attachment 3** Metropolitan Region Scheme (MRS) Zoning Map **Attachment 4** City of Stirling Local Planning Scheme No. 3 (LPS 3) Zoning Map **Attachment 5** Applicant's written submissions dated 26 September, 25 November and 26 November 2014 **Attachment 6** Shawmac Transport Impact Report dated 12 January 2015 and Car Parking Assessment dated 24 November 2014 **Attachment 7** Cardno Environmental Protection and Biodiversity Conservation Assessment dated 5 August 2014 **Attachment 8** Herring Storer Acoustics Preliminary Environmental Acoustic Assessment dated November 2014 **Attachment 9** Main Roads WA comments dated 31 October and 5 December 2014 **Attachment 10** Council Minutes from 9 December 2014 **Attachment 11** Applicants Response to Submissions

Officer Recommendation:

That the Metro North-West JDAP resolves to:

Refuse DAP Application reference DAP/14/00635 and accompanying plans (Attachment 1) in accordance with Clause 10.3.1 of the City of Stirling Local Planning Scheme No. 3, for the following reasons:

1. The proposal is not consistent with the intended purpose of the City of Stirling Local Planning Scheme No.3 Public Purpose – Commonwealth Reserve;

2. The proposal does not satisfy matters (b), (f), (i), (n), (o), (p), (q) and (y) to be considered by Council in Clause 10.2 of LPS3, and is therefore not in the interests of orderly and proper planning;

3. The proposed building height is not in accordance with the City's Local Planning Policy 4.1 – Reserves and Other Zones Design Guidelines; and

4. The proposed development has not been demonstrated to satisfy the transport analysis requirements of the City's Local Planning Policy 6.7 – Parking & Access.

Background:

Insert Property Address:		Lots 1 and 102, House Number 601, Wanneroo Road, Hamersley
Insert Zoning	MRS:	Urban
	TPS:	Local Scheme Reserve detonated as 'Public Use - Commonwealth'
Insert Use Class:		Showroom, Hardware Showroom, Garden Centre, Office and Fast Food Outlet
Insert Strategy Policy:		Not Applicable
Insert Development Scheme:		Not Applicable
Insert Lot Size:		447,070m^2
Insert Existing Land Use:		Transmitting Station / Vacant
Value of Development:		$20 million

The subject site is located in the municipality of Stirling, approximately 12km north north-west of the Perth CBD. The subject site is bordered by Wanneroo Road to the east, Blissett Way to the north, residential properties along Vickers Street to the south, and Erindale Road to the west.

The subject lot is zoned 'Urban' under the Metropolitan Region Scheme (MRS) (Attachment 3) and is Reserved 'Public Use – Commonwealth' under the City of Stirling Local Planning Scheme No.3 (LPS3) (Attachment 4). A portion of the subject site currently contains a public broadcast radio transmitting tower and station, however the majority of the lot is vacant with some remnant bushland.

Details: outline of development application

The proposed development is for a 'Masters Home Improvement' store comprising Showroom, Hardware Showroom, Garden Centre, Office and Fast Food Outlet land uses. The development is proposed to be located on an area of approximately 20,000m^2 on the south-eastern corner of the subject site, abutting Wanneroo Road to the east and residential dwellings along Vickers Street to the south.

The development is summarised as follows:

- A combination of Hardware Showroom, Showroom, Garden Centre, Office and Fast Food Outlet land uses, with a total floor area of 13,898m^2;
- 367 parking bays are provided, predominantly at basement level, and include a mixture of disabled, parents, trailers and ordinary bays;

- Vehicle access and egress is proposed via Wanneroo Road – a new slip lane is proposed to facilitate this; and
- A secondary access point for delivery and service vehicles is proposed via an existing crossover to Wanneroo Road at the southern part of the site.

The application was lodged with the City on 26 September 2014. Following an assessment of the proposal, relevant referrals and the conclusion of consultation, feedback was provided to the applicant on 14 November 2014 identifying a number of key issues. At this time the City advised the applicant that if they wished to submit amended plans, agreement to an extension of time request would be required. On 26 November 2014 the applicant provided amended plans and additional information to the City however did not agree to an extension of time request. The application was subsequently considered by the Metro North-West JDAP at it's meeting on 18 December 2014, wherein it was resolved that a decision on the application be deferred to enable the City's consideration of the amended plans and additional information.

Legislation & policy:

Legislation

- Planning and Development Act 2005
- Metropolitan Region Scheme (MRS)
- Local Planning Scheme No. 3 (LPS3)

State Government Policies

Nil.

Local Planning Policies

- Local Planning Policy 4.1 – Reserves and Other Zone Design Guidelines
- Local Planning Policy 6.1 – Advertising Signs
- Local Planning Policy 6.2 – Bicycle Parking
- Local Planning Policy 6.3 – Bin Storage Areas
- Local Planning Policy 6.6 – Landscaping
- Local Planning Policy 6.7 – Parking & Access

Legislation

Local Planning Scheme No. 3

Clause 3.4.2 - Use and Development of Local Reserves

Clause 3.4.2 of LPS3 requires the following with respect to development on Local Reserves:

> *In determining an application for planning approval the Council is to have due regard to -*
> *a) the matters set out in Clause 10.2;*
> *b) the ultimate purpose intended for the Reserve.*

Clause 10.2 of LPS3 – Matters to be Considered by the Council

In considering a development application, the decision maker is to have due regard to the matters set out in clause 10.2 of LPS3. Matters relevant to the subject application are as follows:

b) *the requirements of orderly and proper planning including any relevant proposed new town planning scheme or amendment, or region scheme or amendment, which has been granted consent for public submissions to be sought;*

f) *any Local Planning Policy adopted by Council under Clause 2.4, any heritage policy statement for a designated heritage area adopted under clause 7.3.2, and any other structure plan, detailed area plan or guidelines adopted by the Council under the Scheme;*

i) *the compatibility of a use or development with its setting;*

n) *the preservation of the amenity of the locality;*

o) *the relationship of the proposal to development on adjoining land or on other land in the locality including but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the proposal;*

p) *whether the proposed means of access to and egress from the site are adequate and whether adequate provision has been made for the loading, unloading, manoeuvring and parking of vehicles;*

q) *the amount of traffic likely to be generated by the proposal, particularly in relation to the capacity of the road system in the locality and the probably effect on traffic flow and safety; and*

y) *Any relevant submissions received on the application.*

Local Planning Policies

Local Planning Policy 4.1 – Reserves and Other Zone Design Guidelines

The City's Reserves & Other Zones Design Guidelines (LPP4.1) applies to the subject site, the objectives of which are:

- *To ensure that any development does not adversely affect the amenity of surrounding properties;*
- *To ensure that any development be of a similar scale and bulk of surrounding properties; and*
- *To ensure that any new uses do not have an adverse impact on the amenity of surrounding properties.*

Local Planning Policy 6.1 – Advertising Signs

The City's Advertising Signs Policy (LPP 6.1) applies to the subject site, the objectives of which are:

- *To ensure that the display of advertisements on private sites does not adversely impact on the amenity of surrounding land;*
- *To avoid a proliferation of signs on individual sites and buildings;*
- *To improve the streetscape of major roads;*
- *Encourage the rationalisation of advertising signs on individual premises;*
- *Encourage the incorporation of advertising signs into the design consideration of buildings;*
- *To ensure that signs are not discriminatory or offensive; and*
- *To ensure that signs only relate to services and products on the site.*

Local Planning Policy 6.2 – Bicycle Parking

The City's Bicycle Parking Policy (LPP6.2) applies to the subject site, the objectives of which are:

- *To facilitate the development of adequate bicycle parking facilities;*
- *To ensure the provision of end of journey facilities; and*
- *To encourage the use of bicycles for all types of journeys.*

Local Planning Policy 6.3 – Bin Storage Areas

The City's Bin Storage Areas Policy (LPP6.3) applies to the subject site, the objectives of which are:

- *To provide sufficient space for the storage of bulk refuse bins; and*
- *To ensure that bin areas are screened from the street and are in harmony with the materials and finishes of the building.*

Local Planning Policy 6.6 – Landscaping

The City's Landscaping Policy (LPP6.6) applies to the subject site, the objectives of which are:

- *To promote improved landscaping provision and design;*
- *To improve the visual appeal of development, screen service areas and provide a buffer to boundaries;*
- *To provide shade and 'green relief' in built up areas; and*
- *To promote more environmentally sustainable landscaping.*

Local Planning Policy 6.7 – Parking & Access

The City's Parking & Access Policy (LPP6.7) applies to the subject site, the objectives of which are:

- *To facilitate the development of adequate parking facilities;*
- *To ensure safe, convenient and efficient access for pedestrians, cyclists and motorists;*
- *To ensure that a major parking problem is unlikely to occur;*
- *To ensure that car parking does not have a detrimental impact on the character and amenity of a residential area; and*
- *To ensure that an oversupply of parking does not occur that discourages alternative forms of transport and is detrimental to urban design and character of the locality.*

Consultation:

Public Consultation

The application was advertised for a period of 21 days, in accordance with Clause 9.4 of LPS3 and the City's Planning Consultation Procedure. Letters were sent to owners and occupiers of properties within a 200m radius of the subject sites, notification was placed on the City's website, and a sign was erected on Wanneroo Road.

A total of 47 submissions were received, comprising 46 submissions objecting to the application and one submission in support of the application. The relative location of all submitters is as follows:

Submissions Received	Within 200m of site	More than 200m from subject site	All Submissions
SUPPORT	2.1%	0%	2.1%
OBJECT	72.4%	25.5%	97.9%

The submissions received have been summarised in the table below. Also provided is the percentage of objections in which the issue was raised, and officer's response to the issue.

Percentage of Objections in which Issue was Raised	Issue Raised	City of Stirling Officer's Comment
83.0%	Impact on traffic and vehicle movements.	The traffic impact considerations of the proposal are discussed in further detail later in the report.
70.2%	Concerns regarding the proposed roundabout	The roundabout formed part of the original application, however has not been removed with a slip lane proposed instead. Access to the site is discussed in further detail later in the report.
59.6%	Impact on amenity	Impact on amenity is a valid planning consideration and is discussed in further detail later in the report.
42.6%	The development use is not aligned with surrounding residential uses.	Land use considerations are discussed in further detail later in the report.
29.3%	Noise concerns due to the operation of the development such as truck movements and machinery.	The applicant has advised in their justification that all truck movements and deliveries will be between Monday to Saturday, 8:00am to 6:00pm. It is apparent from review of the land use planning framework that there would be no expectation by adjoining residents that they may be subject to the noise impacts of intensive commercial development. Particularly activities involving heavy vehicle, movements and loading and unloading of goods. In this respect the proposed heavy vehicle access driveway and outdoor garden centre loading area in the SE corner of the site is considered to unreasonably impact on the amenity of adjoining residential development.
29.8%	Security and safety concerns due to the development.	The proposal is not considered to raise any concerns regarding security and safety.
14.9%	Building design, bulk and height.	The design of the building is discussed

Percentage of Objections in which Issue was Raised	Issue Raised	City of Stirling Officer's Comment
		in further detail later in this report.
10.6%	The development being metal will amplify the radiation emitted from the ABC towers to surrounding residential landowners.	The submitters have not provided any substantiated research to support this claim. It is therefore not considered relevant to the subject application.
10.6%	Loss of remnant native vegetation and the impact on flora and fauna	The application was referred to Department of Environment (DOE) due to the potential impact on matters of National Environmental Significance (NES) occurring within the proposed development site such as clearing of trees and impacts to wildlife. The DOE is satisfied that the matters of NES have been addressed in the applicant's submission to their satisfaction. In this regard an environmental assessment report forms part of the application.
8.5%	Concerns regarding the consultation process	The consultation process was undertaken in accordance with the City's Planning Consultation Procedure.
4.3%	Impact on property values	Impact on property values is not a valid planning consideration.
4.3%	Lack of adequate car parking	The parking considerations of the proposal are discussed in further detail later in the report.
2.1%	Construction noise	If approved, the construction will be required to comply with the noise limits as per the Environmental Protection (Noise) Regulations 1997.
2.1%	Air pollution	The proposal is not expected to result in any adverse impacts on air quality.
2.1%	Light pollution at night	Light from proposed signage can be limited by way of a condition of approval.

In addition to the above, two petitions were received objecting to the proposed development. The first petition contained a total of 36 signatures (7 verified and 29 unverified), and included the following statement:

> *We are all completely against the roundabout that they intend to build on the T-junction of Camberwell Road and Wanneroo Road, because if they build the shop there it will increase the traffic by 200% and noise as well. All ratepayers that I have spoken to in Vickers Street and surrounding streets have told me that they are against the building of the Masters Hardware Store because it is bad enough now and it will be a lot worse afterwards.*

The second petition contained a total of 65 signatures (2 verified and 63 unverified signatures) and included the following statement:

We the undersigned wish to jointly comment on the Hardware showroom development proposed by Masters Home Development at Lot 101, House Number 601, Wanneroo Road, Hamersley WA 6022. We wish to clearly state that we object to the proposal of having a commercial development of this nature approved at House Number 601, Wanneroo Road, Hamersley.

Firstly it is a residential area and our wish is that it remain as such, we definitely do not want any further commercial businesses approved in our area. We are already tolerating far too much of it such as the radio station adjacent to this site and the waste disposal facility 200m to the south west of this site, both of these facilities should be removed.

We would much prefer to see the site utilised for the enhancement of the area by way of public open space such as parks, recreational sporting activities, kids playing areas, and possibly some additional residential lots. We definitely do not want any further commercial type developments such as a Masters Home Improvement Store at Lot 101, House Number 601, Wanneroo Road, Hamersley. Furthermore, it would only be a duplication of a similar type facility, being Bunnings Warehouse some 400/500m to the south west of the Masters Wanneroo Road site.

Internal Referrals

Referrals to the City's Engineering Design, Parks and Reserves and Health & Compliance Business Units were undertaken as a part of the City's assessment, with applicable comments referred to further in this report.

Consultation with other Agencies or Consultants

Main Roads Western Australia

The subject site abuts Wanneroo Road, which is a "Primary Regional Road" Reserve under the Metropolitan Region Scheme. As per the applicable Notice of Delegation published in the Government Gazette on 23 December 2011, referral to Main Roads WA (MRWA) was undertaken by the City as the responsible authority.

The original plans proposed significant modifications to the existing road layout due to the inclusion of a roundabout at the intersection of Wanneroo Road and Camberwell Road. The roundabout has now been removed, and instead a slip lane along the western side of Wanneroo Road is proposed to facilitate access.

Two sets of formal comments were received from MRWA and are both provided in Attachment 9. The earlier correspondence, dated 31 October 2014, was provided in response to the original set of plans which included the roundabout proposal. The latter piece of correspondence, dated 5 December 2014, was provided in response to the amended plans which form Attachment 1 of this report.

The following extract from the most recent correspondence of Main Roads WA dated 5 December 2014 is of particular relevance:

> *As previously advised, Main Roads has reservations about the suitability of this site to accommodate an operation of this type. Nonetheless, in the event that the planning assessment for the site is favourable to the applicant, Main Roads will be obligated to allow access to the site.*

Since our advice that a roundabout was not acceptable we have held further discussions with the applicant and their representations to determine a palatable outcome. This outcome is to locate a full movement access at the northern end of the site where the current crossover is located. The concept as proposed accords generally with Main Roads intent by utilising the maximum offset between Camberwell Road and the access driveway.

The following points have been raised with the applicant and while measures have been taken to address these, Main Roads would like to ensure that they are included in the required conditions should planning approval be granted:

- *Main Roads advised the applicant of the requirement to provide a third lane through this location on Wanneroo Road in the future. The concept has now been modified such that future third lane can be implemented with minimal disruption.*
- *Southbound traffic on site will cause a headlight hazard to northbound traffic on Wanneroo Road. Mitigation is required in the general area indicated on attached concept.*
- *Design to ensure the access to the basement carpark could still match into a signalised intersection in the long term (including the third lane and a left turn lane) if signals were ultimately required at Camberwell Road.*

Traffic analysis shows that the access will perform poorly for those using the access. Main Roads independent analysis shows the intersection will perform considerably worse than the analysis provided by the applicant; however the analysis has used default criteria and so a slightly more favourable outcome may be possible if on site verification of traffic behaviours was undertaken.

Main Roads have provided a list of conditions and advice notes as part of their correspondence (Attachment 9) which they have requested be imposed in the event that the Metro North-West JDAP resolves to approve the application. Further comments regarding the City's assessment of the proposed vehicular access and traffic implications are found later in this report.

Department of Environment

The proposed development was referred to the Commonwealth Department of the Environment (DOE) due to the concerns regarding the potential impact on flora and fauna which may exist within the remnant bushland on the subject site.

The application and the advice from the DOE specifically addressed the matter of potential impact on the Carnaby's Cockatoo. The DOE have confirmed that the proposed development will not have an impact on any matters of National Environmental Significance.

Planning assessment:

The development has been assessed against the City's LPS3 and the applicable policies contained in the City's LPS3 Policy Manual. Given the number of Scheme elements and Local Planning Policies that are applicable to the proposed development, the planning assessment part of this report has been broken down into the following sections:

1. Local Planning Scheme No. 3 - Proposed Land Uses

2. Local Planning Policy 6.7 – Parking & Access
3. Local Planning Policy 4.1 – Reserves and Other Zones Design Guidelines
4. Local Planning Policy 6.6 – Landscaping
5. Local Planning Policy 6.3 – Bin Storage Areas
6. Local Planning Policy 6.2 – Bicycle Parking
7. Local Planning Policy 6.1 – Advertising Signs

1. Local Planning Scheme No. 3 - Proposed Land Uses

The subject site is identified on the LPS3 zoning map (Attachment 4) as a 'Local Reserve: Public Purpose – Commonwealth'.

Clause 3.4.2 of LPS3 requires the following with respect to development on Local Reserves:

> *In determining an application for planning approval the Council is to have due regard to -*
> *z) the matters set out in Clause 10.2;*
> *aa) the ultimate purpose intended for the Reserve.*

These two subsections will now be considered separately in further detail.

Matters to be Considered by Council

Local Planning Scheme 3 does not define the permissibility of land uses on reserved land in the same way as it does for zoned land. This means that development on reserved land is not permitted without first obtaining approval to commence development. In making its decision the responsible authority is to have due regard to the intended purpose of the reserve, as well as the relevant matters to be considered by Council under Clause 10.2 of LPS3 as follows:

b) the requirements of orderly and proper planning including any relevant proposed new town planning scheme or amendment, or region scheme or amendment, which has been granted consent for public submissions to be sought;

f) any Local Planning Policy adopted by Council under Clause 2.4, any heritage policy statement for a designated heritage area adopted under clause 7.3.2, and any other structure plan, detailed area plan or guidelines adopted by the Council under the Scheme;

i) the compatibility of a use or development with its setting;

n) the preservation of the amenity of the locality;

o) the relationship of the proposal to development on adjoining land or on other land in the locality including but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the proposal;

p) whether the proposed means of access to and egress from the site are adequate and whether adequate provision has been made for the loading, unloading, manoeuvring and parking of vehicles;

q) the amount of traffic likely to be generated by the proposal, particularly in relation to the capacity of the road system in the locality and the probably effect on traffic flow and safety; and

y) Any relevant submissions received on the application.

A number of these matters have been addressed in detail elsewhere in this report. This section will therefore focus primarily on the requirements of orderly and proper planning, the compatibility of the development within this locality, and the amenity considerations.

The requirement for development to be consistent with the principle of orderly and proper planning is a long held planning principle which is especially relevant in this instance, given the absence of a clearly defined planning framework for commercial development on land reserved for public purposes.

The proposed development is an intensive commercial land use with the capacity to accommodate 367 vehicles and with a floor area of approximately 13,897m^2. The City's draft Local Planning Strategy identifies the transmitter site as an opportunity area for future residential use which may include mixed and some amount of commercial use. However this could only occur if the transmitter towers were ever decommissioned and the site subject to detailed rezoning and structure planning processes.

The City's Local Planning Scheme 3 establishes specific commercial zones to cater for the uses proposed by this development. In this regard, services, transportation, land use interfaces (buffers) with other land uses are all planned and established in accordance with a defined framework that the public can rely on.

The City's LPS3 Zoning Maps demarcate land zoned for commercial and industrial uses. These areas contain serviced lots of a sufficient size to accommodate development of this type and scale. In these established zoned areas there is no land use conflict arising from the intended purpose of the land or with adjoining land uses.

This development is proposed to exist in complete isolation from any other commercial land use outside of any of the areas specifically zoned for such a development. Furthermore, the proposal is located directly adjacent to low and medium density residential areas. The compatibility of the proposed land uses with the surrounding existing land uses is therefore a significant consideration. The compatibility of the proposed form of development in a strategic planning sense has not been established in the City's Planning Framework.

The Balcatta Industrial Precinct is located as close as 400m to the south of the subject site across Reid Highway. This highway exists as a clear delineation between the non-residential land uses of Balcatta and the beginning of the low density suburban residential areas of Hamersley and Balga. In this regard, the proposed use and its scale are not anticipated by the local planning framework. The zonings and reserves allocated by LPS3 establish a clear objective to locate land uses in particular locations to minimise conflicts and focus business activity to serviced locations and for agglomeration purposes.

On this point, it is important to consider the fact that the properties immediately abutting the subject site are zoned Residential. Clause 4.2.12 identifies the following objectives of the Residential zone:

a) *To provide for residential development at a range of densities with a variety of housing type and size, to meet the current and future needs of the community.*

b) *To provide for a range of non-residential uses, which are compatible with and complementary to residential development.*

Table 1 of LPS3 (Zoning Table) identifies land uses which are permitted in the residential zone. Critically, all land uses proposed as part of this application are not permitted in the Residential zone. It is reasonable to conclude that in drafting LPS3 there was an agreed position, consistent with the principles of orderly and proper planning, that intensive commercial land uses such as the proposed development are not compatible with the residential zone.

With respect to amenity, the City's LPS3 defines 'amenity' as:

> *All those factors which combine to form the character of an area and include the present and likely future amenity.*

Further informing the City's assessment of the amenity implications is the decision in the matter of *Tempora Pty Ltd v Shire of Kalamunda* (1994) 10 SR (WA) 296 at [304], which found that the proper test for determining amenity impacts is as follows:

> *The determination of the amenity of the locality is a question of fact and consists of three parts: the existing amenity, the matter in which the proposed use will affect the existing amenity and the degree of impact on the locality.*

As previously identified, the immediate locality is comprised of low and medium density residential localities. Reid Highway to the south provides a clear delineation between the subject locality, and the non-residential locality further south in Balcatta. As a result it is apparent that the character of the area can be identified as being predominantly residential.

It is reasonable to expect that residential amenity may be subject to compromise where residential properties are located in close proximity to primary roads, such as in the case of the subject application. However, as outlined later in this report, the traffic implications, building bulk and scale considerations, and land uses proposed as part of the subject application could not have been reasonably anticipated by reference to the local planning framework and therefore could not be an expectation by the community that such development may occur. The proposed commercial development is inconsistent with the expected form of development in the locality, and in this regard will result in a compromised amenity outcome impacting on local residential areas by way of bulk, scale, noise, light, traffic and commercial activities.

As outlined later in this report, the applicant has not sufficiently demonstrated to the City that the proposed means of access to and egress from the site is acceptable. Specifically, there are discrepancies in the information provided to the extent that the City's traffic engineer is not satisfied that the data relied on in the Shawmac report is accurate. The City is unable to form a favourable conclusion on the traffic implications of the application when there is such a fundamental deficiency in the data relied on in the transport impact report.

The proposed heavy vehicle access drive on the southern boundary and the Garden Centre delivery and loading area directly abuts residential development. It is considered that these activities will have a significant impact on the quiet enjoyment of people's properties due to mechanical noise and audible warning devices. It is clear that the local planning framework does not anticipate intensive commercial development and therefore adjoining residents would not reasonably expect to be

subjected to such impacts arising from the site. This aspect of the proposal directly conflicts with the amenity of the area.

The community consultation undertaken by the City resulted in a substantial number of submissions, with 97.8% of all submitters opposing the proposal. The three primary concerns raised in the submissions were in regard to traffic impacts, the roundabout design, and the impacts on the amenity of the surrounding residential area. Whilst the concerns regarding the roundabout proposal are no longer applicable given it is no longer proposed, the concerns in relation to traffic impacts and residential amenity are relevant planning considerations. The City therefore considers it appropriate that the opinions of the local residents in relation to the proposed development are given significant consideration in the absence of any specific planning framework that identifies the site as being suitable for the proposed development.

Purpose of the Local Reserve

Clause 3.4.2 (b) of LPS3 requires development on Local Reserves to have due regard to the ultimate purpose of the Reserve. The subject development is on land reserved for 'Public Use – Commonwealth' purposes.

The proposed development is a private commercial enterprise which offers no demonstrated public use benefit, nor is there any relationship between the proposed development and the Commonwealth classification. Based on the Commonwealth purpose of the Public Use reserve, it is not possible to conclude that a private commercial hardware showroom is consistent with the intended purpose of the reserve. The proposal therefore fails to satisfy clause 3.4.2 (b) of LPS3.

In this respect the appropriate means of determining the suitability of the use in this location would be to address the planning framework via an amendment to LPS3. A scheme amendment would enable the strategic land use planning matters to be addressed that are beyond the scope of the development application processes.

In view of the above, the proposed development does not respond to or reflect the established planning framework nor does it satisfy the relevant matters to be considered by Council under LPS3. Neither is the application consistent with the ultimate purpose of the reserve. Consequently these matters form key reasons for recommending refusal of the application.

2. Local Planning Policy 6.7 – Parking & Access

Table 1 of Local Planning Policy 6.7 - Parking & Access Policy (LPP 6.7) provides the relevant development standards for the number of car parking bays required for the proposed development.

In relation to the uses proposed as part of this development, the following ratios are applicable:

- Hardware Showroom 1 bay per 20m^2 gross floor area (GFA)
- Showroom 1 bay per 30m^2 gross floor area (GFA)
- Fast Food Outlet 1 bay per 7m^2 of gross floor area (GFA)
- Garden Centre 1 bay per 50m^2 of nursery area

- Office 1 bay per 30m^2 gross floor area (GFA)

In accordance with LPP6.7, the development is permitted the following parking concessions:

- The proposed development is within 200m of a high frequency bus route, which allows for a 15% reduction; and
- The proposed development has provided 5 bicycle bays greater than required, which allows for a 5% reduction.

The table below outlines the car parking requirements for the proposed development:

USE	CAR PARKING REQUIREMENT	AREA (as calculated by the City)	CAR BAYS REQUIRED
Hardware Showroom	1 bay per 20m^2 GFA	4242 m^2	212.1
Showroom	1 bay per 30m^2 GFA	6082m^2 (includes entry lobby & amenities area)	202.73
Garden Centre	1 bay per 50m^2 of nursery area	1,862m^2	37.24
Office	1 bay per 30m^2 GFA	207m^2	6.9
Fast Food Outlet	1 bay per 7m^2 of GFA	52m^2	7.42
		Total required:	466.39
		Concessions (-20%):	-93.28
		Revised total:	373
		Car bays provided:	367
		Shortfall car bays:	6 bays

In accordance with Clause 5.2.2 of the LPP6.7, on site reciprocal car parking arrangements may be considered in the following circumstances:-

a) Demand for parking by the various uses proposed will not unreasonably coincide;
b) The parking facilities serving the proposed uses will be located on the one lot, or if located on a separate lot, the parking arrangements are permanent (e.g. through an easement, amalgamation, legal agreement, restrictive covenant or any other formal arrangement acceptable to Council);
c) Parking demand both in the immediate and long term can be satisfied; and
d) No substantial conflict will exist in the peak hours of operation of the uses for which the reciprocal parking arrangements are proposed.

The City believes that it is reasonable to allow for on site reciprocal parking between the proposed Hardware Showroom / Showroom / Garden Centre land uses and the proposed café (Fast Food Outlet). It is acknowledged that very few trips to the proposed development would be solely for the cafe. Allowing for reciprocity with the café only, this would reduce the parking requirement by 5.94 (6) bays. Based on this reciprocity, this would reduce the parking requirement for the proposed development to 367 bays. The application is therefore considered to comply with the City's car parking requirements as 367 car bays have been provided.

Comments from City of Stirling Engineering Officer

The City's Senior Development Engineer has undertaken an assessment of the proposed vehicle access and parking configuration against the requirements of LPP6.7, which includes the requirements of AS/NZ2890.1. Subject to relevant

conditions, the application is now considered to meet the relevant manoeuvring and parking layout requirements.

Comments from City of Stirling Engineering Design Business Unit

The City's Engineering Design Business Unit have undertaken an assessment of the proposed development, including the transport assessment report prepared by Shawmac dated 13 January 2015. Unfortunately they have identified deficiencies in the transport analysis, as follows:

> *The findings of the report cannot be taken as a true representation of the likely traffic impact of the proposed development for two main reasons:*
>
> 1. *The SIDRA analysis of the Camberwell Road / Wanneroo Road intersection (Figure 7) suggests that the traffic on Camberwell Road during the Thursday PM peak equates to 162 vehicles per day (vpd) westbound and 269 vpd eastbound for a total of 431 vpd. The report states that these figures are based on a traffic survey conducted at this intersection on 13 March 2014 with the survey results presented in Figure 4. Figure 4 suggests that the traffic volume on Wanneroo Road southbound is one (1) vehicle and the total traffic on Camberwell Road is 154 WB + 199 EB = 353 vpd (20% less than in Figure 7). These, and other discrepancies between Figures 4 and 7 have to be substantiated before they are accepted as valid inputs for the traffic analysis. It should be noted that the peak traffic volume presented in Figure 7 (i.e. 431) would appear to be more appropriate as the latest counts on Camberwell Road indicate a traffic volume of 5,000 vpd as opposed to the volume of 4,100 vpd used in the applicant's report.*
>
> 2. *The traffic generation rates in the latest report are presented as being based on traffic counts at two other Masters sites (Bayswater and Bibra Lake) conducted during a Saturday, Sunday, Monday and Tuesday prior to Christmas. The report states that the peak traffic generation of the proposed Balcatta store, and based on the data recorded at the other two stores, to be 132 vehicles per hour (vph) in the am peak and 164 vph in the pm peak (pg 10). This equates to traffic generation rates of 0.94 vph/100m^2 and 1.17 vph/100m^2 for the am and pm peaks, respectively. These values are substantially lower than the rates presented in the ITE manual (2.63 vph/100m^2, which is also the rate used in the previous version of the report) and lower than the rates used in traffic reports submitted in support of similar developments across Australia (a brief research of publicly available online reports indicated generation rates of around 0.7 vph/100m^2 for the am peak and 3 – 3.5 vph/100m^2 for the pm peak).*
>
>   *The report itself states that the peak traffic generation would be during Thursday PM peaks and, yet, none of the background surveys listed in the latest report and used to substantiate the lower generated traffic volumes have been conducted in that period.*
>
> *Based on the observations above, I am not satisfied that the analyses presented in the report are representative of the likely impact of the proposed development on the Access / Wanneroo Road and Wanneroo Road / Camberwell Road intersections.*

The developer should resubmit the traffic report and either use some of the more commonly accepted generation rates or substantiate any lower generation rates by providing detailed information from comprehensive traffic generation surveys conducted at other comparable sites during the times of the expected Balcatta store peak traffic generation as well as during the hours of the network peak hour traffic for the Balcatta site.

In view of the above, and notwithstanding the comments of Main Roads WA, the information provided by the applicant is insufficient for the City's officers to be satisfied that the proposal meets the requirements of LPS3, and specifically the transport analysis requirements of LPP6.7. This matter also forms a reason for refusal.

3. Local Planning Policy 4.1 – Reserves and Other Zone Design Guidelines

The City's Reserves and Other Zones Design Guidelines (LPP4.1) applies to the subject site and sets development standards for the proposed built form. LPP4.1 requires the building height of new buildings to be of similar height of adjoining sites.

The proposed development seeks consideration of a building height of up to 17.5m above natural ground level (NGL), with the bulk of the building at a height of 13m – 16m above NGL. The City has measured the building height from the natural ground level of the building footprint as identified on the suite feature survey submitted by the applicant. The survey identifies that the footprint of the building occurs across sloping land with RL's varying from 26.50 to 21.40. As the City is obliged to assess building height from natural ground level, the maximum height has been taken from the lowest RL, being 21.40, up to the highest point, being 38.9 AHD. This is what has led to the City's assessment identifying a maximum building height of 17.5m.

The surrounding residential zoned properties are subject to a building height of 2 – 3 storeys (6 – 8 metres). The proposed building height is therefore not consistent with the building height that is either existing or permitted on adjoining sites and conflicts with the City's Policy.

LPP4.1 provides the following objectives against which variations to its development standards may be considered:

- *To ensure that any development does not adversely affect the amenity of surrounding properties;*
- *To ensure that any development be of a similar scale and bulk of surrounding properties; and*
- *To ensure that any new uses do not have an adverse impact on the amenity of surrounding properties.*

The subject site is surrounded by low density (R20) and medium density (R40) residential areas. The most closely located dwellings are the R20 zoned single house lots fronting Vickers Street and abutting the southern boundary of the site. The majority of the surrounding locality is currently developed with a mixture of one and two storey dwellings. As the proposed development includes a concealed roof, it is considered most appropriate to compare the proposed height with the permitted height for a concealed roof in the R20 and R40 zones which is 7.0 metres as per the City's Local Planning Policy 2.6 - Residential Building Heights. The proposed building height is therefore approximately 10.5 metres greater than the height permitted on

adjoining residential lots for a concealed roof structure. In this regard the proposal is inconsistent with the most relevant objective of LPP4.1, being to ensure that any development is of a similar scale and bulk as surrounding properties. The proposed building height does not satisfy this objective.

In relation to the remaining two objectives, whist the proposal is setback from the street and adjoining lots in accordance with the requirements in LPP4.1, the proposed development is considered likely to have an adverse impact on the character and amenity of the surrounding area due to the proposed building bulk and overt high intensity commercial character. The proposal is inconsistent with the existing or future built form in the locality and will adversely impact on residential amenity by way of bulk and scale also.

In view of the above, the proposal does not satisfy the objectives of LPP4.1, and this forms a reason for refusal.

4. Local Planning Policy 6.6 – Landscaping

LPP6.6 requires all landscaped areas to be planted with a suitable number of plants and species. The proposed use of "Corymbia Callophylla" trees is not supported due to the large quantities of sizable seed capsules produced, which pose a trip risk when planted adjacent to pedestrian paths or other paved areas accessible to pedestrians. It has also been identified that the proposed development will result in the loss of five mature Bottlebrush street trees on the western side of the Wanneroo Road verge.

Notwithstanding the City's recommendation for refusal, should the Metro North West JDAP wish to approve the proposed development, conditions are recommended to be imposed requiring the tree species to be incorporated into the landscaping plan to be to the satisfaction of the City and requiring the applicant to pay for sufficient replacement trees in light of the verge trees required to be removed.

In this event, as identified previously in this report, a further report would need to be prepared by the WAPC to the Metro North West JDAP in relation to this proposal, in light of the comments of Main Roads.

5. Local Planning Policy 6.3 – Bin Storage Areas

The City's Bin Storage Policy (LPP6.3) provides standards relating to the provision of commercial and residential bin storage areas. LPP6.3 specifies that non-residential developments are to provide a bin storage area with a minimum size of $10m^2$ and minimum width of 3.5m.

The submitted plans have not identified a bin storage area. The applicant has however advised that all waste will be accommodated internally in the proposed "receiving area", which is considered acceptable to the City. Therefore should the application be considered for approval, conditions should be imposed requiring a bin storage area and Waste Management Plan to be provided to the satisfaction of the City.

6. Local Planning Policy 6.2 – Bicycle Parking

The City's Bicycle Parking Policy (LPP6.2) applies to the subject development. LPP6.2 specifies that all non-residential development with a gross floor area in excess of 400m^2 is required to provide appropriately located bicycle parking spaces and end of journey facilities.

The application has allowed for a total of 40 bicycle parking bays and is compliant with LPP6.2 in this regard. The location of the bicycle parking bays is directly adjacent to the main entrance, and is also considered acceptable.

LPP6.2 also requires the provision of end of journey facilities for the proposed development – specifically, 4 female showers and 4 male showers are to be provided, along with 40 lockers. The submitted plan of the Amenities and Administration area (Drawing No. 08 of Attachment 1), which provides additional detail beyond that provided on the overall floor plan, identifies only one unisex shower room, and no lockers.

LPP6.2 provides the following Objectives against which variations to its development standards may be considered:

- *To facilitate the development of adequate bicycle parking facilities;*
- *To ensure the provision of end of journey facilities; and*
- *To encourage the use of bicycles for all types of journeys.*

The lack of end of journey facilities in a new development of this size, which is expected to employ approximately 150 staff, is not acceptable given it has a role in encouraging employees to utilise alternative means of transport such as cycling, which relies heavily on the availability of sufficient end of journey facilities.

Should the application be considered for approval, it is recommended that a condition be imposed requiring the development to provide end of journey facilities in accordance with the requirements of LPP6.2.

7. Local Planning Policy 6.1 – Advertising Signs

The City's Advertising Signs Policy (LPP6.1) applies to the subject development. LPP6.1 specifies that wall signs are limited to a maximum of two signs per tenancy on a lot, and are not to exceed 10m^2 in aggregate.

The proposed development includes wall signs on the northern eastern facades, and result in non-compliance with the abovementioned standards. Specifically, nine wall signs are proposed with an aggregate area substantially greater than the permitted 10m^2.

LPP6.1 provides the following Objectives against which variations to its development standards may be considered:

- *To ensure that the display of advertisements on private sites does not adversely impact on the amenity of surrounding land;*
- *To avoid a proliferation of signs on individual sites and buildings;*
- *To improve the streetscape of major roads;*
- *Encourage the rationalisation of advertising signs on individual premises;*
- *Encourage the incorporation of advertising signs into the design consideration of buildings;*

- *To ensure that signs are not discriminatory or offensive; and*
- *To ensure that signs only relate to services and products on the site.*

The proposed walls signs incorporate variety of designs, and each have a separate function. Specifically, the following signs are proposed:

- One sign with the “Masters Home Improvement”;
- One sign stating “Best Price Guarantee”;
- One sign stating “Timber & Building”;
- One sign stating “Garden”;
- Three signs incorporating images representing the goods sold at the proposed development (a spanner, drill and paint roller); and
- Two directions signs stating “Customer Parking” and “Exit”.

The walls signs are not discriminatory or offensive and only relate to the service and products of the proposed development. The wall signs are designed to be attached and incorporated into the building itself and are limited only to the northern and eastern elevations. The signs have therefore been located such that they will not be visible from adjoining residential properties, which has the effect of mitigating any potential amenity impacts. It remains that the signs face residential properties across Wanneroo Road.

The proposed signage is considered to satisfy the objectives of LPP6.1. However should the development be considered for approval by the WAPC, it is recommended that conditions be imposed requiring all signs to be non-flashing, and that the proposed signage is to be in strict compliance with the signage guidelines of Main Roads WA.

Council Recommendation:

On 11 December 2014, Council provided the following recommendation in relation to the subject application:

That Council ENDORSE the City’s Responsible Authority Report to the Metropolitan North West Joint Development Assessment Panel, in relation to the application for Hardware Showroom, Fast Food Outlet and Garden Centre ("Masters”) at Lots 1 and 102, House Number 601, Wanneroo Road, Hamersley.

It is noted that this recommendation related to the plans considered by the JDAP at their meeting on 18 December 2014. Notwithstanding, as the reasons for refusal remain generally consistent with the previously submitted Responsible Authority Report, the resolution of Council is still considered relevant to the consideration of this application by the Metro North-West JDAP.

Conclusion:

The proposed Showroom, Hardware Showroom, Garden Centre, Office and Fast Food Outlet development is located on a land Reserved ‘Public Purpose – Commonwealth’. The application has been assessed against the local planning framework and has been found to be inconsistent with the intended purpose of the reserve. Therefore the development is not in accordance with the objectives of the Scheme with respect to control and management of land uses. The application is

also noncompliant with the statutory planning framework with respect to building height. In addition to these matters the application has failed to provide sufficient accurate information for the City to properly assess the traffic impacts of the proposal on the road network.

The application is recommended for refusal.

NOTES:

SURVEY CARRIED OUT USING RTK GPS, POSITIONS AND HEIGHTS ARE ACCURATE TO +/- 30 MM. HEIGHTS HAVE BEEN ADOPTED FROM SSM YOKINE 59.

IT SHOULD BE NOTED THAT UNDERGROUND SERVICES DID NOT FORM PART OF THIS SURVEY, THEREFORE PRIOR TO ANY DEMOLITION, EXCAVATION, OR CONSTRUCTION, THE RELEVANT AUTHORITY SHOULD BE CONTACTED, AND THE CERTIFICATE OF TITLE CHECKED FOR EASEMENTS AND ENCUMBRANCES

REFER TO TITLE FOR EASEMENTS AND RESTRICTIONS

THE BOUNDARIES USED IN THIS PLAN HAVE BEEN SUPPLIED BY GEORGIOU AND DIFFER FROM ACTUAL LEGAL BOUNDARIES. REFER TO SKETCH SUPPLIED.

BACKGROUND UNDERLAY HAS BEEN SUPPLIED BY GEORGIOU. ST SPATIAL TAKES NO RESPONSIBILITY OF DATA SUPPLIED BY OTHERS.

LEGEND

Supplied Boundary

Legal Boundary

City of Stirling
23 Oct 2014
RECEIVED

BROADCAST AUSTRALIA

102
DP 47318

1
D 9162

100

102
DP 47318

Stake Put 24.83
Paint Mark Put 26.63
Brick Retaining Walls
T.O.W. 23.85
T.O.W. 23.82
Satellite Dishes
7.5m
Stake Put 23.09
Stake Put 7.5m Offset (on-line)
Bottom Of Kerb 22.61
22.67
14m
Cyclone Fence
23.95
23.70
Stake Put 14m Offset (on-line) 23.44
23.37
Cyclone Fence 22.69
Stake Put 24.00
Stake Put 23.02
Flagging Put On Fence 26.02
Paint Mark Put 25.78
SLAB
Tin Shed
SHED
26.98
27.94
27.11
Stake Put 25.76
Cyclone Fence 26.63 26.68
T.O.W. 28.41
27.71
27.46
27.08
26.74
Telstra Pit 25.46 25.27
T.O.W. 26.16
T.O.W. 25.15
24.61
T.O.W. 24.37
25.92
Stake Put 27.53
Concrete Panel Retaining Wall
Concrete Panel Retaining Wall
WANNEROO ROAD

38 39 40 41 42 43

ST SPATIAL
CONSULTING SURVEYORS
Ph 08 9349 2062
Fax 08 9349 2167
PO Box 556
Balcatta WA 6914
info@stspatial.com.au

FEATURE SURVEY AND BOUNDARY MARKING

HAMERSLEY MASTERS
601 WANNEROO ROAD, HAMERSLEY, WA 6022
LOT 1 ON D9162 AND LOT 102 ON DP47318

16 8 0 8 16 24 32
SCALE 1:800 METRES

DRAWN	E. PITSONIS	08.01.13
SURVEYOR	S. KOHLSCHEIN	07.01.13
CHECKED	P. SAID	08.01.13

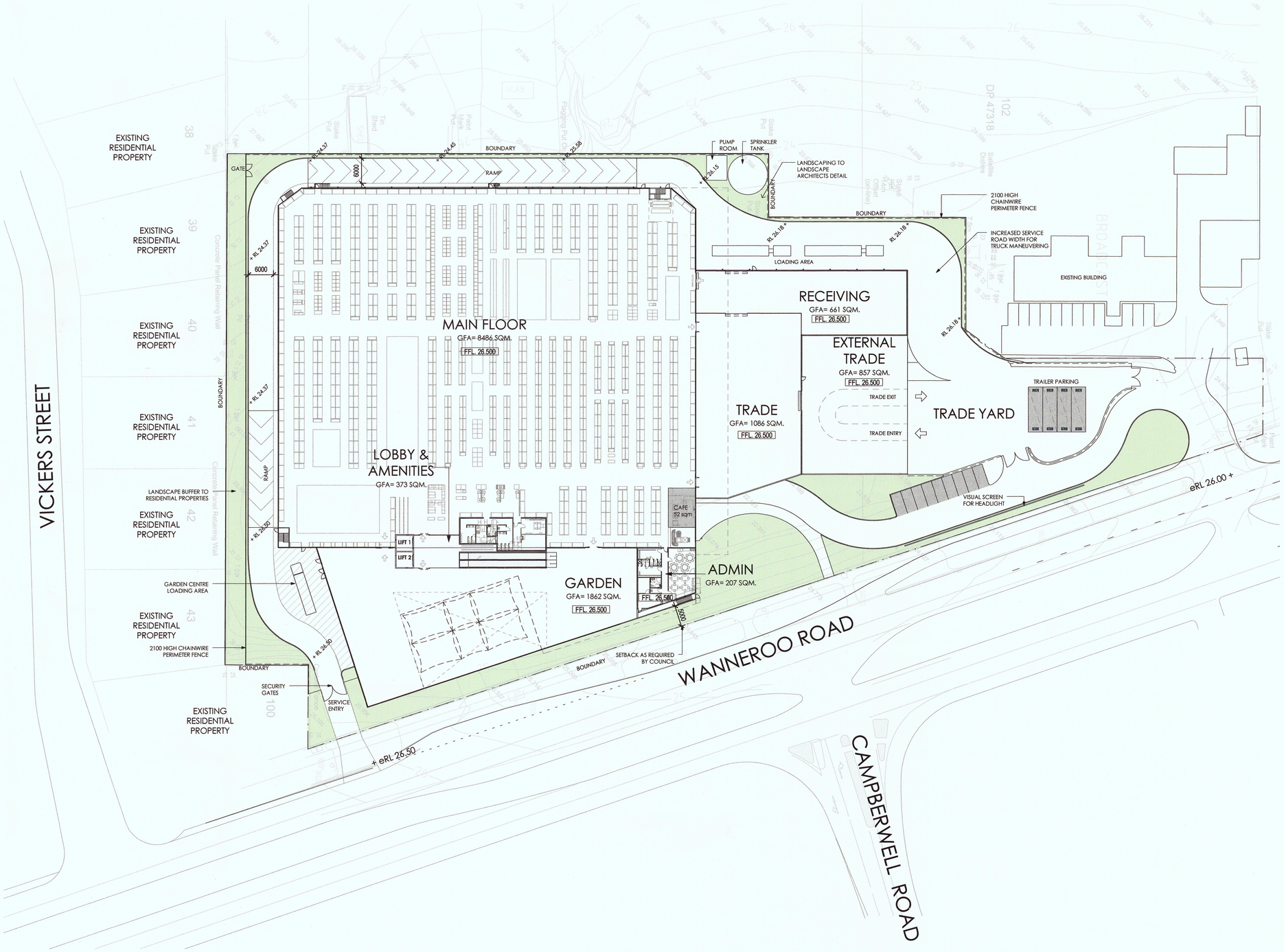
HORIZONTAL DATUM: PCG94
VERTICAL DATUM: AHD

No.	DATE	REVISION	DRAWN	SURVEYOR	CHECKED	CLIENT	DRAWING NUMBER	REV	SIZE
1	08.01.13	APPROVED AND ISSUED TO CLIENT	EP	SK	PS	GEORGIOU	14001-01	1	A3

green building council australia MEMBER

Member Australian Institute of Architects

ISSUE	AMENDMENT	DATE	CHK'D
P4	ISSUE FOR COORDINATION ONLY	08-09-14	
P			
p5	ISSUE FOR COORDINATION ONLY	11-09-10	
p6	ISSUED FOR INFORMATION	16-09-14	
7	ISSUED FOR INFORMATION	23-09-14	
PA	ISSUE FOR DA	25-09-14	
B	CARPARK ENTRY &	30-09-14	
P	LINEMARKING REVISED.		
PC	DA AMENDMENT	17-10-14	
D	SERVICE ROAD LEVEL ADMENDED & CAFE	23-10-14	
E	REVISED MASTERS RACKING ADDED. TRAVELATORS, LIFTS & LOBBY MOVED. ADMIN & AMENITIES REVISED.	11-11-14	
F	WALL BETWEEN TRADE & RECEIVING MOVED.	13-11-14	
G	TRAVELATOR, LIFT & LOBBY POSITIONS REVISED. AMENITIES & ADMIN AREAS REVISED. ACCESS ARRANGEMENTS REVISED. ISSUE FOR REVIEW.	21/11/14	
H	ROADS & CAFE	26/11/14	



NO PLANNING ADVICE HAS BEEN SOURCED FROM COUNCIL AND LOCAL AUTHORITIES IN THE PREPARATION OF THIS SITE MASTERPLAN.

ALL SETBACKS, PLOT RATIOS, LANDSCAPE AREAS, CAR PARKING NUMBERS AND THE LIKE ARE SUBJECT TO COUNCIL APPROVAL

ENTRIES, EXITS & CAR PARKING LAYOUTS ARE PRELIMINARY ONLY AND SUBJECT TO TRAFFIC ENGINEERS DESIGN. SITE ACESS POINTS SUBJECT TO MAIN ROAD WA INPUT.

SITE BOUNDARIES AND SITE AREAS INDICATIVE ONLY & SUBJECT TO CONFIRMATION BY LICENSED SURVEYOR.

TOTAL SITE AREA	**= 22,445 SQM**
GROSS FLOOR AREAS:	
MAIN FLOOR	= 8,486 SQM
ADMIN, AMENITIES,BASEMENT LOBBY & ENTRY	= 945 SQM
GARDEN CENTRE	= 1,862 SQM
INTERNAL TRADE CENTRE	= 1086 SQM
EXTERNAL TRADE CENTRE	= 857 SQM
RECEIVING	= 661 SQM
TOTAL HARDWARE GFA	**= 13,897 SQM**
SITE COVERAGE	**= 61.9%**

CARPARKING	
DISABLED	= 8
PARENTS + PRAMS	= 8
TRAILERS	= 4
ORDINARY	= 347
TOTAL CAR SPACES	**= 367**
	= 1:38

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26 NOV 2014
CITY OF STIRLING

Site Plan

LEFFLER SIMES PTY LTD
ABN 39 001 043 992
WEB: www.lefflersimes.com.au
SYDNEY 7 YOUNG ST NEUTRAL BAY NSW 2089 T:+61 2 99093344
MELBOURNE LEVEL 2 - 18 OLIVER LANE VIC 3000 T:+61 3 96546344
BRISBANE 2 - 290 BOUNDARY ST SPRING HILL QLD 4004 T:+61 7 31235544

SCALE 1:500 (0 10 20 30 40 50)

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588 DWG NO. DA01 REV. H
DATE: 31/07/14
DRAWN: JAB

LEFFLER SIMES ARCHITECTS

green building council australia MEMBER

Member Australian Institute of Architects

ISSUE	AMENDMENT	DATE	CHK'D
P2	ISSUED FOR INFORMATION	21-08-14	
P3	LOBBY AREA ADDED TO AREA SCHEDULE	01-09-14	
P			
4	ISSUE FOR COORDINATION ONLY	08-09-14	
P			
5	ISSUE FOR COORDINATION ONLY	11-09-10	
P			
A	ISSUE FOR DA	25-09-14	
B	CARPARK ENTRY & LINEMARKING REVISED.	30-09-14	
C	DA AMENDMENT	17-10-14	
D	SERVICE ROAD LEVEL ADMENDED & CAFE	23-10-14	
E	REVISED MASTERS RACKING ADDED. TRAVELATORS, LIFTS & LOBBY MOVED. ADMIN & AMENITIES REVISED.	11-11-14	
F	WALL BETWEEN TRADE & RECEIVING MOVED.	13-11-14	
G	PARALLEL PARKING ADDED ADJACENT LOBBY	17/11/14	
H	TRAVELATOR, LIFT & LOBBY POSITIONS REVISED. CARPARK REVISED. ACCESS ARRANGEMENTS REVISED. ISSUE FOR REVIEW.	21/11/14	

NO PLANNING ADVICE HAS BEEN SOURCED FROM COUNCIL AND LOCAL AUTHORITIES IN THE PREPARATION OF THIS SITE MASTERPLAN.

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	= 1:38

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25 NOV 2014
CITY OF STIRLING

Basement Plan

LEFFLER SIMES PTY LTD
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SYDNEY 7 YOUNG ST NEUTRAL BAY NSW 2089 T:+61 2 99093344
MELBOURNE LEVEL 2 - 18 OLIVER LANE VIC 3000 T:+61 3 96546344
BRISBANE 2 - 290 BOUNDARY ST SPRING HILL QLD 4004 T:+61 7 31235544

SCALE 1:250

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588 DWG NO. DA02 REV. H
DATE: 07/31/14
DRAWN: JAB

LEFFLER SIMES ARCHITECTS

green building council australia MEMBER

Member Australian Institute of Architects

ISSUE	AMENDMENT	DATE	CHK'D
P1	ISSUE FOR REVIEW	05-08-14	
P2	ISSUED FOR INFORMATION	21-08-14	
P3	LOBBY AREA ADDED TO AREA SCHEDULE	01-09-14	
P4	ISSUE FOR COORDINATION ONLY	08-09-14	
P5	ISSUE FOR COORDINATION ONLY	11-09-10	
P6	ISSUED FOR INFORMATION	23-09-14	
A	ISSUE FOR DA	25-09-14	
B	CARPARK ENTRY & LINEMARKING REVISED.	30-09-14	
C	MASTERS RACKING LAYOUT ADDED.	07-10-14	
D	DA AMENDMENT	17-10-14	
E	WALLS & DOORS AMENDED	20-10-14	
F	SERVICE ROAD LEVEL ADMENDED & CAFE	23-10-14	
G	REVISED MASTERS RACKING ADDED. TRAVELATORS, LIFTS & LOBBY MOVED. ADMIN & AMENITIES REVISED.	11-11-14	
H	WALL BETWEEN TRADE & RECEIVING MOVED.	13-11-14	
I	ROADS & CAFE	26/11/14	

BOUNDARY

PUMP ROOM

SPRINKLER TANK

LANDSCAPING TO LANDSCAPE ARCHITECTS DETAIL

EGRESS STAIRS FROM CARPARK

EXTERNAL EGRESS STAIRS FROM MAIN FLOOR

6000

SERVICE ROAD

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL COMPOSITE INSULATED PANEL

RAMP UP

2100mm HIGH CHAINWIRE PERIMETER FENCE

1800mm HIGH CHAINWIRE PERIMETER FENCE

3 DA06

INCREASED SETBACK TO PROVIDE LANDSCAPE BUFFER TO ADJACENT RESIDENTIAL PROPERTIES

100795

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL COMPOSITE INSULATED PANEL OVER 200mm CONCRETE HOB

LOADING AREA

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL CUSTOM ORB CLADDING OVER 1200mm CONCRETE DADO WALL

LOADING

EXIT

51095

RAPID ROLLER SHUTTER

MOTORIZED ROLLER SHUTTER

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH COMPOSITE INSULATED PANEL

RECEIVING

GFA= 661 SQM.

REINFORCED CONCRETE SLAB DESIGNED TO STRUCTURAL ENGINEER'S DETAILS & SPECIFICATIONS

CONCRETE FLOOR FINISH & SEALER

FFL. 26.500

15095

6000

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL COMPOSITE INSULATED PANEL

MAIN FLOOR

GFA= 8486 SQM.

REINFORCED CONCRETE SLAB DESIGNED TO STRUCTURAL ENGINEER'S DETAILS & SPECIFICATIONS

POLISHED CONCRETE FLOOR FINISH

FFL. 26.500

INTERNAL ENTRY / EXIT

MOTORIZED ROLLER SHUTTER

EXTENT OF BASEMENT BELOW

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL CUSTOM ORB CLADDING OVER 1200mm CONCRETE DADO WALL

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL COMPOSITE INSULATED PANEL OVER 200mm CONCRETE HOB

EXIT

EXTERNAL TRADE

GFA= 857 SQM.

FFL. 26.500

CANOPY OVER

TRADE EXIT

TRADE ENTRY

STEEL FRAMED CANOPY OVER

1 DA06

SERVICE ROAD

8606.5

MOTORIZED ROLLER SHUTTER

TRADE

GFA= 1086 SQM.

REINFORCED CONCRETE SLAB DESIGNED TO STRUCTURAL ENGINEER'S DETAILS & SPECIFICATIONS

CONCRETE FLOOR FINISH & SEALER

FFL. 26.500

1 DA08

INTERNAL ENTRY / EXIT

CAFE

RAMP UP 1:12

LIFTS TO CAR PARK

LIFT 1

LIFT 2

ENTRY & LOBBY & AMENITIES

GFA= 373 SQM.

FFL. 26.500

STAIR 1

EXIT

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL CUSTOM ORB CLADDING

LANDSCAPING TO LANDSCAPE ARCHITECTS DETAIL

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL COMPOSITE INSULATED PANEL

EXIT

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL COMPOSITE INSULATED PANEL OVER 200mm CONCRETE HOB

REINFORCED CONCRETE SLAB DESIGNED TO STRUCTURAL ENGINEER'S DETAILS & SPECIFICATIONS

CONCRETE FLOOR FINISH & SEALER

FFL. 26.500

TRAVELATORS TO/FROM CARPARK LEVEL

ADMIN

GFA= 207 SQM.

FFL. 26.500

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL CUSTOM ORB CLADDING OVER 1200mm CONCRETE HOB

LINE OF ROOF OVER

GARDEN

GFA= 1882 SQM.

SELECTED SHADE SAILS & STEEL POSTS

4 DA06

GARDEN CENTRE LOADING ZONE

LINE OF ROOF OVER

LANDSCAPING TO LANDSCAPE ARCHITECTS DETAIL

BOUNDARY

SECURITY GATES

EXTENT OF BASEMENT BELOW

SERVICE ENTRY

LINE OF ALUCOBOND AWNING FEATURE OVER TO STRUCTURAL ENGINEERS DETAILS

BOUNDARY

CONCRETE TILT UP PANELS TO STRUCTURAL ENGINEERS DETAILS WITH SELECTED PAINT FINISH

2 DA08

LANDSCAPING TO LANDSCAPE ARCHITECTS DETAIL

2 DA06

WANNEROO ROAD

LEGEND:

HOMEWARE: 51.4%

HARDWARE: 35.6%

GARDEN CENTRE: 13.0%

NO PLANNING ADVICE HAS BEEN SOURCED FROM COUNCIL AND LOCAL AUTHORITIES IN THE PREPARATION OF THIS SITE MASTERPLAN.

ALL SETBACKS, PLOT RATIOS, LANDSCAPE AREAS, CAR PARKING NUMBERS AND THE LIKE ARE SUBJECT TO COUNCIL APPROVAL

ENTRIES, EXITS & CAR PARKING LAYOUTS ARE PRELIMINARY ONLY AND SUBJECT TO TRAFFIC ENGINEERS DESIGN. SITE ACESS POINTS SUBJECT TO MAIN ROAD WA INPUT.

SITE BOUNDARIES AND SITE AREAS INDICATIVE ONLY & SUBJECT TO CONFIRMATION BY LICENSED SURVEYOR.

TOTAL SITE AREA	**= 22,445 SQM**
GROSS FLOOR AREAS:	
MAIN FLOOR	= 8,424 SQM
ADMIN, AMENITIES,BASEMENT LOBBY & ENTRY	= 910 SQM
GARDEN CENTRE	= 1,960 SQM
INTERNAL TRADE CENTRE	= 1086 SQM
EXTERNAL TRADE CENTRE	= 857 SQM
RECEIVING	=661 SQM
TOTAL HARDWARE GFA	**= 13,898 SQM**
SITE COVERAGE	**= 61.9%**

CARPARKING	
DISABLED	= 8
PARENTS + PRAMS	= 8
TRAILERS	= 4
ORDINARY	= 338
TOTAL CAR SPACES	**= 358**
	= 1:39

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Ground Floor Plan

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BRISBANE 2 - 290 BOUNDARY ST SPRING HILL QLD 4004 T:+61 7 31235544

SCALE 1:250 (0 5 10 15 20 25)

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588 DATE: 31/07/14 DRAWN: JAB
DWG NO. DA03 I REV.

LEFFLER SIMES ARCHITECTS

green building council australia MEMBER

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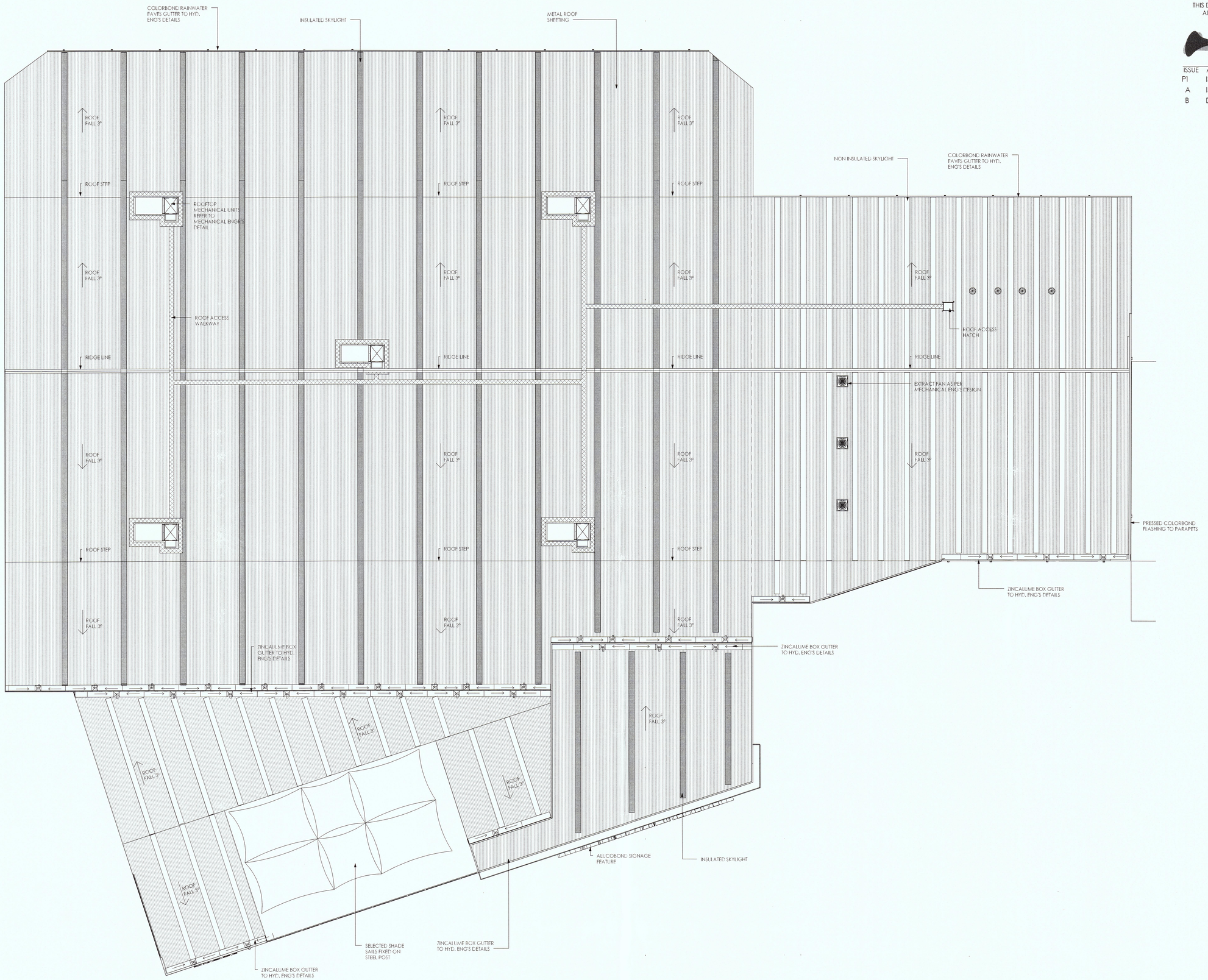
ISSUE	AMENDMENT	DATE	CHK'D
P1	ISSUE FOR REVIEW	05-08-14	
A	ISSUE FOR DA	25-09-14	
B	DA AMENDMENT	17-10-14	



Roof Plan

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SCALE 1:250 (0 5 10 15 20 25)

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588
DATE: 31/07/14
DRAWN: JAB
DWG NO. DA04
REV. B

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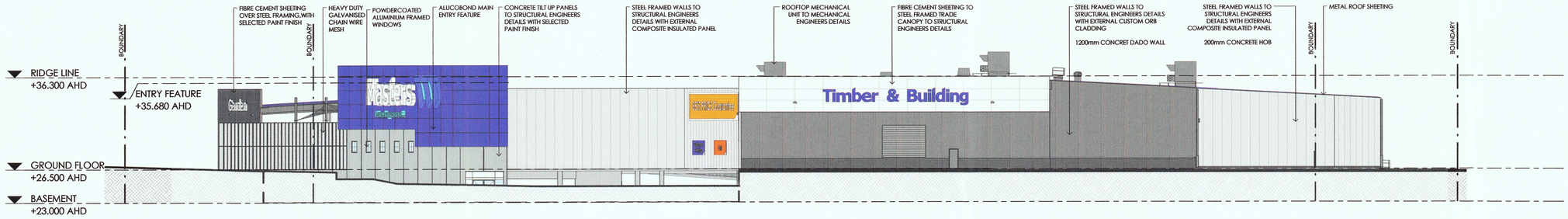
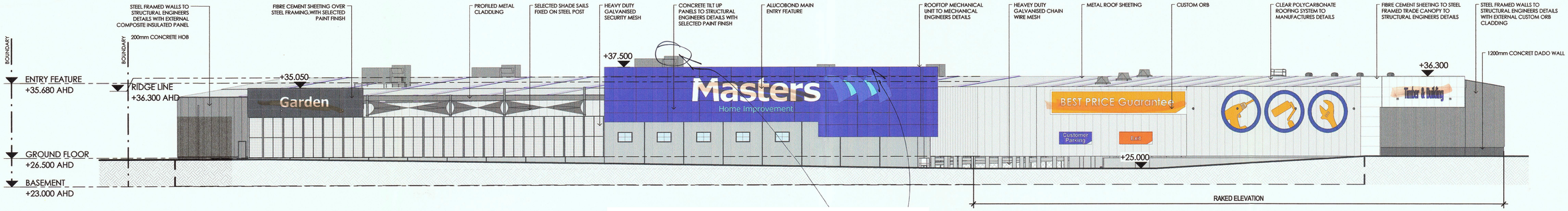
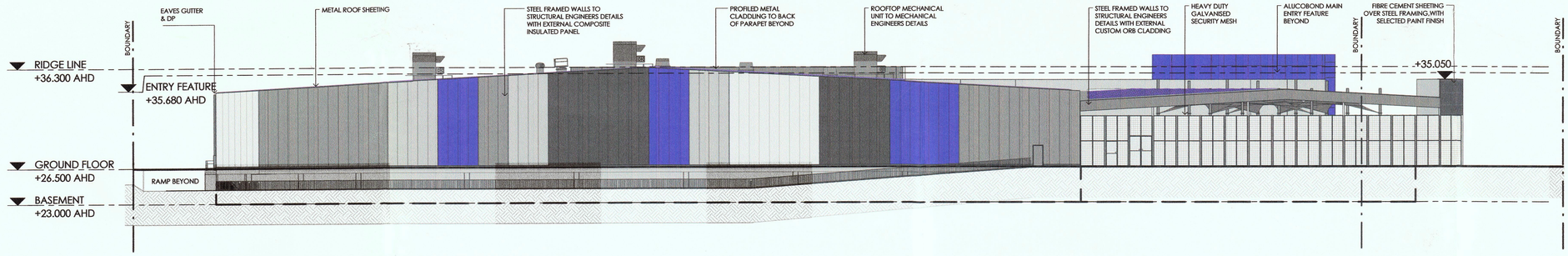
ISSUE	AMENDMENT	DATE	CHK'D
P1	ISSUE FOR REVIEW	05-08-14	
P2	GARDEN HOB WALL AMENDED	26-08-14	
P3	ISSUE FOR REVIEW	18-09-14	
A	ISSUE FOR DA	25-09-14	
B	DA AMENDMENT	17-10-14	
C	SERVICE ROAD LEVEL ADMENDED & CAFE	23-10-14	



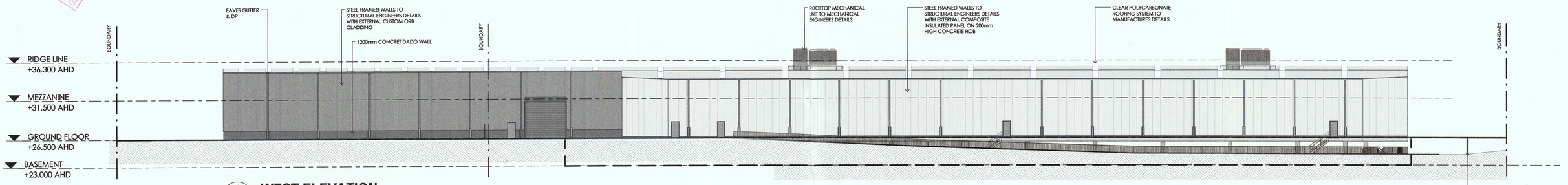
1 NORTH ELEVATION
Scale: 1 : 250



2 EAST ELEVATION (WANNEROO ROAD)
Scale: 1 : 250



3 SOUTH ELEVATION (VICKERS STREET)
Scale: 1 : 250



4 WEST ELEVATION
Scale: 1 : 250

Elevations

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SCALE 1:250 (0 5 10 15 20 25)

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588
DATE: 07/31/14
DRAWN: DG
DWG NO. DA05 C
REV.

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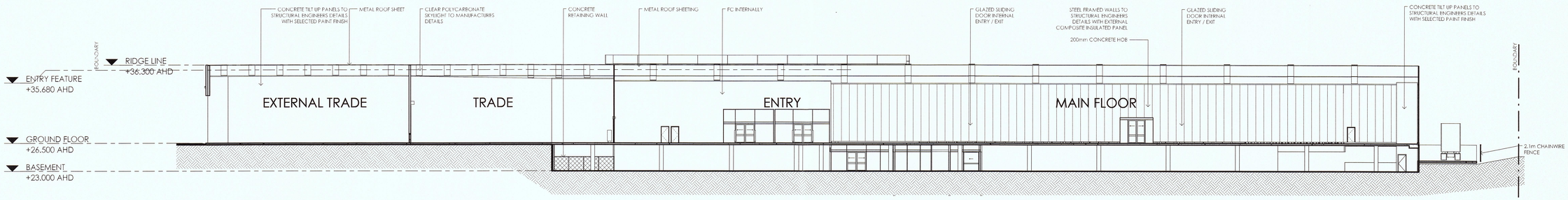
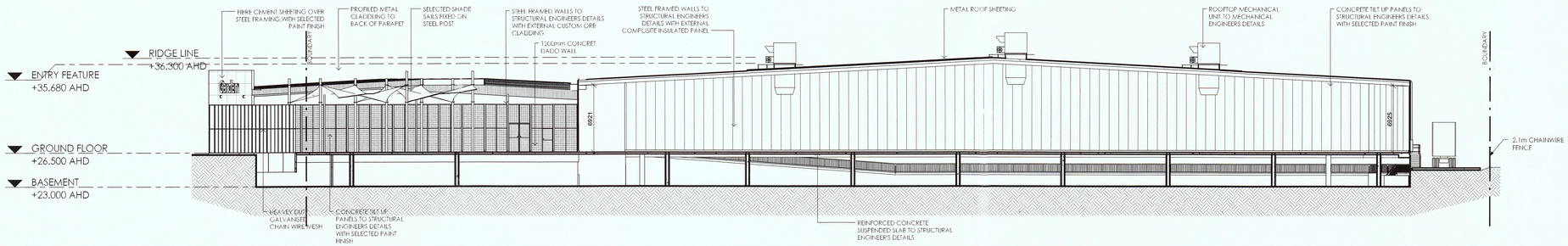
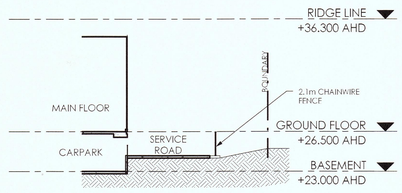
C	SERVICE ROAD LEVEL ADMENDED & CAFE	23-10-14	



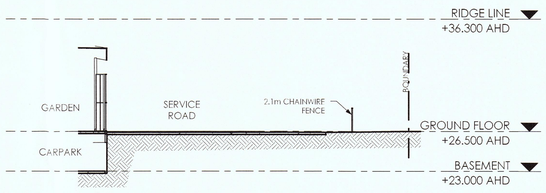
1 DA02 **SECTION A-A**
Scale: 1 : 250



2 DA02 **SECTION B-B**
Scale: 1 : 250



3 DA03 **SOUTHERN BOUNDARY SECTION 1**
Scale: 1 : 250



4 DA03 **SOUTHERN BOUNDARY SECTION 2**
Scale: 1 : 250

Sections

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SCALE 1:250 (0 5 10 15 20 25)

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588 DWG NO. DA06 REV. C
DATE: 07/31/14
DRAWN: JAB

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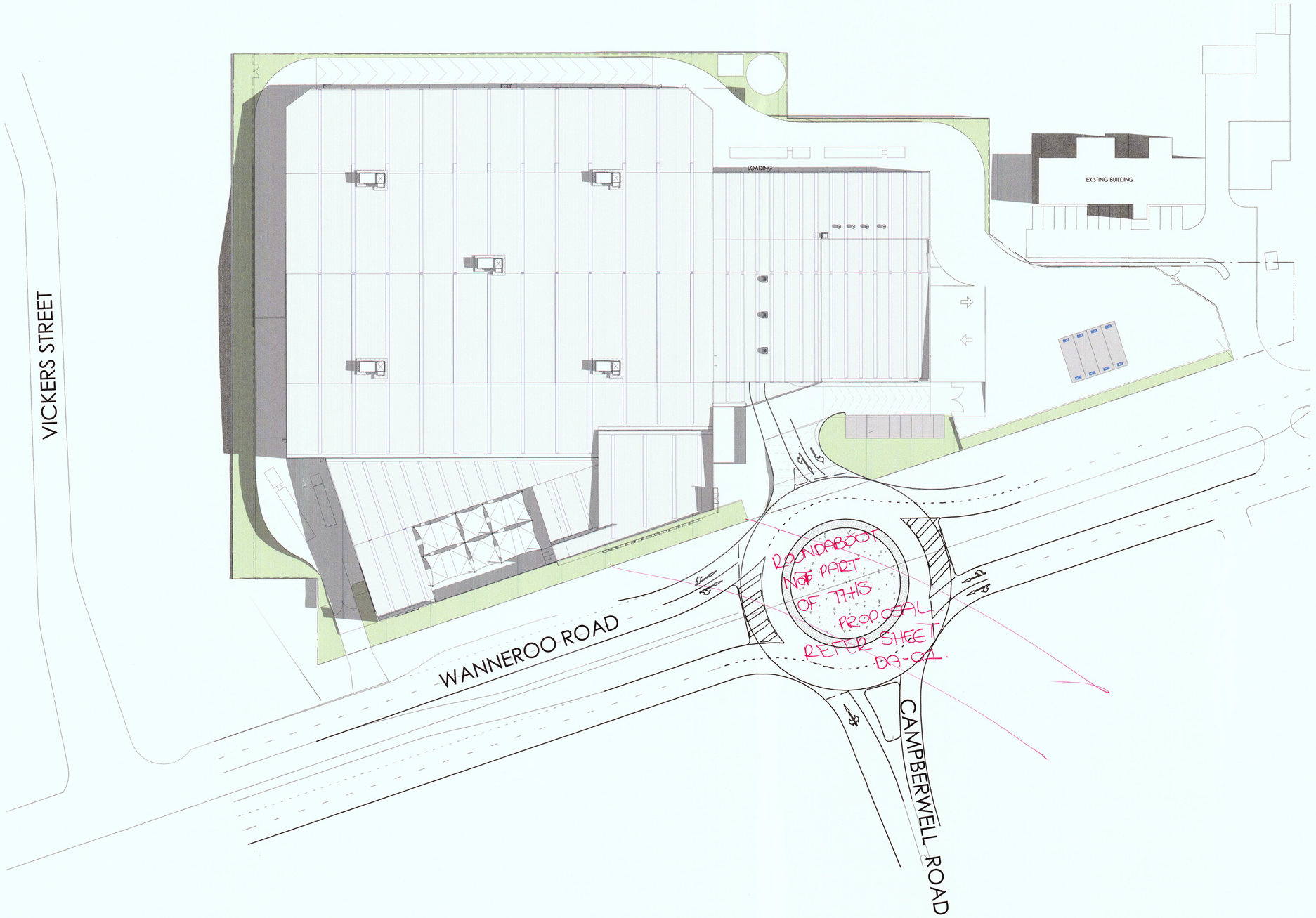
C	SERVICE ROAD LEVEL ADMENDED & CAFE	23-10-14	



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AMENDED PLAN

Shadow Diagram Midday
21st June

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SCALE 1:500
0 10 20 30 40 50

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588
DATE: 09/25/14
DRAWN: DG
DWG NO. DA07
REV. C

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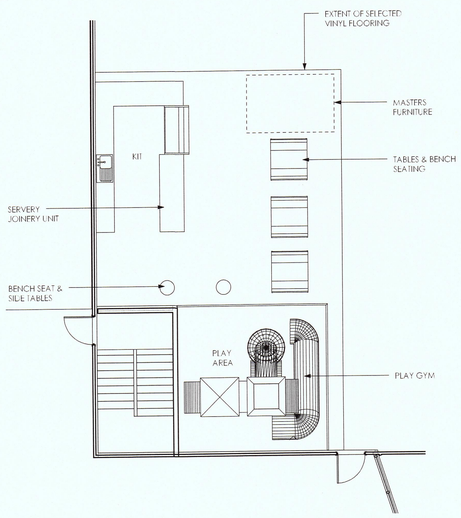
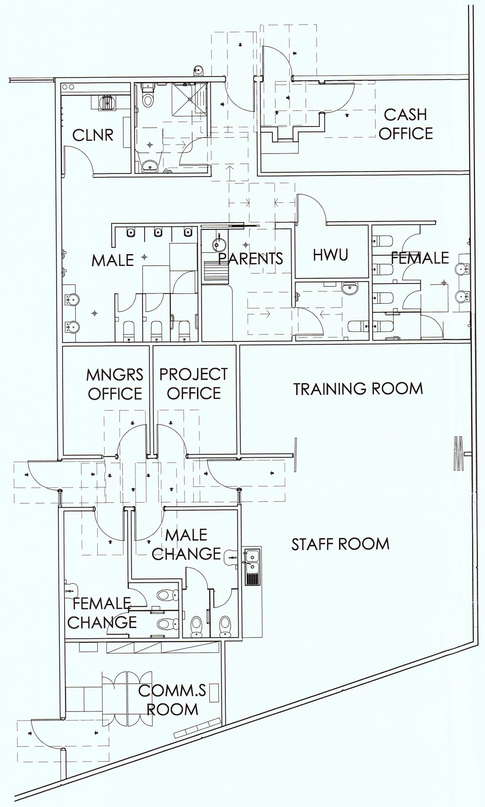
ISSUE	AMENDMENT	DATE	CHK'D
A	SERVICE ROAD LEVEL ADMENDED & CAFE	23-10-14	



1 DA03 **CAFE**
Scale: 1 : 100

Cafe area = 8.1 x 7.7 = 62.37m²



2 DA03 **AMENITIES & ADMINISTRATION**
Scale: 1 : 100

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AMENDED PLAN

Enlarged Plans

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SCALE 1:100 (0 2 4 6 8 10)

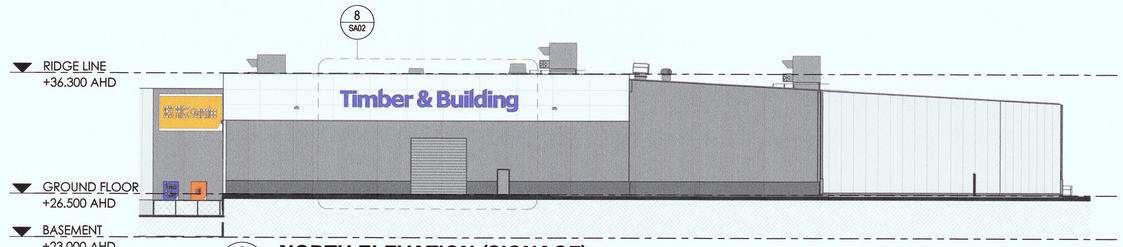
PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588
DATE: 10/22/14
DRAWN: DG
DWG NO. DA08
REV. A

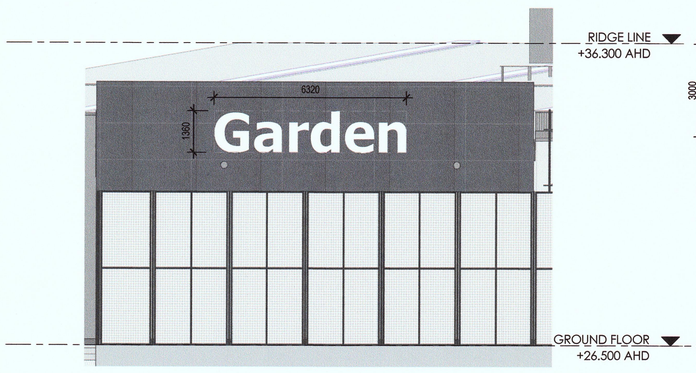
LEFFLER SIMES ARCHITECTS

1 **EAST ELEVATION (SIGNAGE)**
Scale: 1 : 250

2 **EAST ELEVATION (SIGNAGE) CONT.**
Scale: 1 : 250

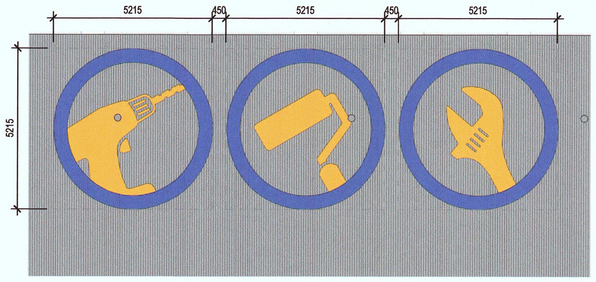


3 **NORTH ELEVATION (SIGNAGE)**
Scale: 1 : 250



4 SA02 **GARDEN SIGNAGE DETAIL**
Scale: 1 : 100 **NON-ILLUMINATED**

GARDEN
- 125mm THICK FABRICATED OPAL ACRYLIC LETTERS. RETURNS PAINTED IN 2 PACK PAINT TO MATCH COLOR OF MOUNT
- INDIVIDUAL LETTERS SIT ON ACM MOUNT (APPROX. 50mm DEEP) MOUNT COLORED TO MATCH COLORBOND IRONESTONE A40W

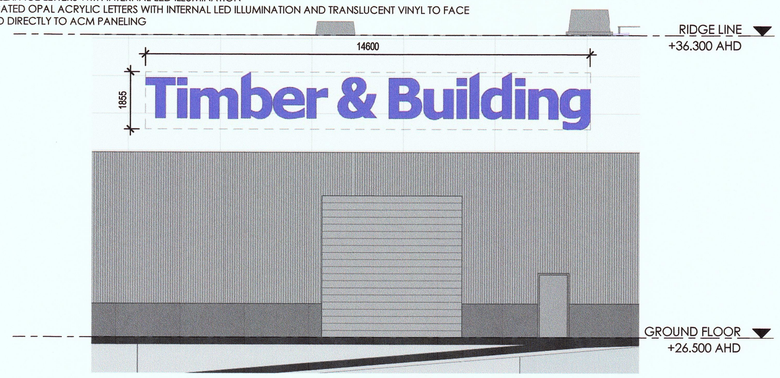


7 SA02 **ICONOGRAPHY**
Scale: 1 : 100

ICONOGRAPHY
- SINGLE SIDED VINYL BANNER SUITABLE FOR EXTERNAL USE
- NON-ILLUMINATED

5 SA02 **MAIN SIGNAGE DETAIL**
Scale: 1 : 100 **INTERNALLY-ILLUMINATED**

25000mm HORIZONTAL ICON
- FABRICATED POLYCARBONATE ICON WITH INTERNAL LED ILLUMINATION AND TRANSLUCENT VINYL TO FACE. RETURNS PAINTED TO MATCH ALUCOBOND ULTRAMARINE BLUE
- MAIN WORDMARK IS FABRICATED FLEXFACE LETTERS WITH INTERNAL LED ILLUMINATION
- SECONDARY WORDMARK IS FABRICATED OPAL ACRYLIC LETTERS WITH INTERNAL LED ILLUMINATION AND TRANSLUCENT VINYL TO FACE
- INDIVIDUAL LETTERS AND ICON FIXED DIRECTLY TO ACM PANELING

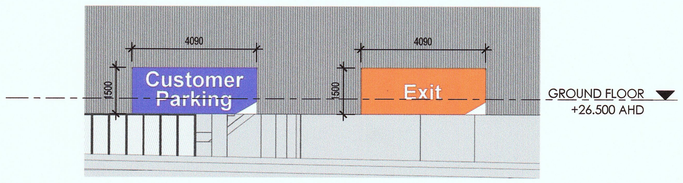


8 SA02 **TIMBER & BUILDING SIGNAGE DETAIL**
Scale: 1 : 100

TIMBER & BUILDING
- 125mm THICK FABRICATED OPAL ACRYLIC LETTERS WITH BLUE VINYL TO FACE. RETURNS PAINTED TO MATCH WATTYL "RAIN SPLASH"
- INDIVIDUAL LETTERS FIXED DIRECTLY TO FACADE

6 SA02 **VALUE SIGNAGE DETAIL**
Scale: 1 : 100 **NON-ILLUMINATED**

17000mm HORIZONTAL ICON
- WHITE TEXT ON STANDARD MASTERS ORANGE (PMS 158)
- SINGLE SIDED VINYL BANNER SUITABLE FOR EXTERNAL USE
- NON-ILLUMINATED VINYL PRINT SIGNAGE



9 SA02 **CARPARK ENTRY/EXIT SIGNAGE**
Scale: 1 : 100 **NON-ILLUMINATED**

PARKING SIGNAGE
- 2mm FLAT PAINTED ALUMINIUM PANEL WITH REFLECTIVE VINYL GRAPHICS TO FACE, PAINT PANEL TO MATCH ALUCOBOND ULTRAMARINE BLUE
- SCREWFIX SIGN PANEL TO ALUMINIUM ANGLE. SIGN PANEL TO BE FOLDED ON ALL SIDES. PAINT SCREW HEADS TO MATCH SIGN COLOUR

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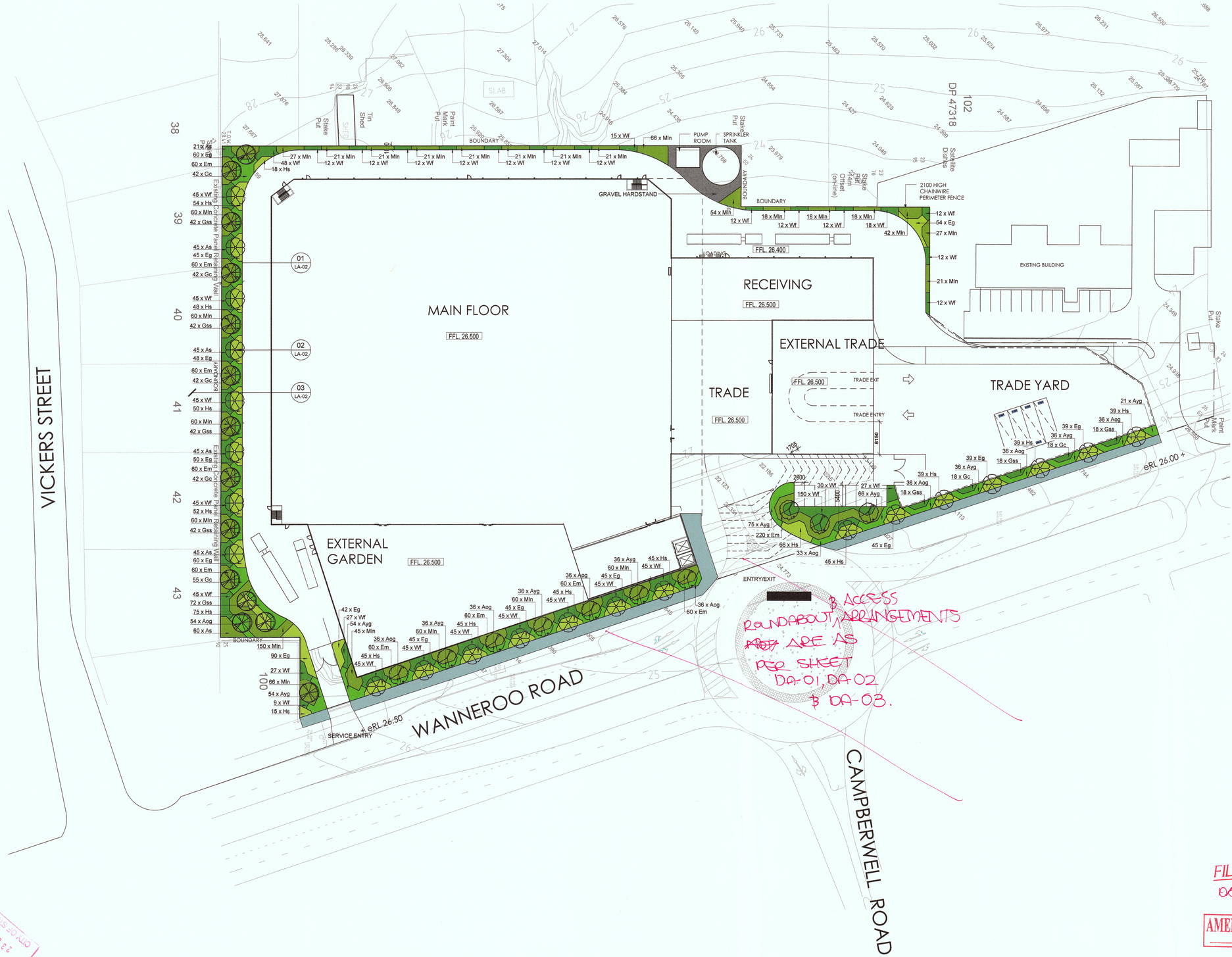
SCALE @ 0

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588
DATE: 11/18/14
DRAWN: SJ
DWG NO. SA02
REV. A

BUILDING SIGNAGE

LEFFLER SIMES ARCHITECTS



LEGEND

- PROPOSED TREE (VERGE 01) — CORYMBIA FICIFOLIA
- PROPSED TREE (VERGE 02) — EUCALYPTUS VICTRIX
- PROPSED TREE (SCREENING) — CORYMBIA CALOPHYLLA
- PROPOSED GROUNDCOVERS
- PROPOSED SHRUB PLANTING
- VERGE TURF AREAS — TO BE RETAINED
- GRAVEL
- PAVING/ FOOTPATH — REFER TO ARCHITECTURAL DETAILS

DRAWING NOTES

1. **EDGE RESTRAINTS.** ALL AREAS OF TURF AND GRAVEL THAT ADJOIN PLANTING BEDS ARE TO BE EDGED WITH A SUITABLE EDGE RESTRAINT. TYPICALLY A 150mm WIDE EXTRUDED CONCRETE PRODUCT.
2. **TURF.** THE CONTRACTOR SHALL INSTALL TURF ON A 50mm BED OF CONDITIONED SOIL AND TO A LEVEL THAT IS BETWEEN 0-25mm BELOW FINISHED KERB HEIGHT, TO SUPPLIERS INSTRUCTIONS
3. **GRAVEL.** SELECTED GRAVEL SHALL BE INSTALLED TO A DEPTH NO LESS THAN 50mm, OVER A SUITABLE GEO-TEXTILE FABRIC, WHICH IS TO BE APPROVED BY THE CLIENT PRIOR TO COMMENCING INSTALLATION.

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND / OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **VERGE LANDSCAPING:** VERGE LANDSCAPING OUTSIDE OF SITE BOUNDARY TO BE COMMISSIONED AS PART OF THE OVERALL LANDSCAPING WORKS, AND IN ACCORDANCE WITH RELEVANT REGULATIONS. MAINTENANCE & IRRIGATION TO VERGE LANDSCAPING BE COMPLETED IN ASSOCIATION WITH ON SITE WORKS AND COMMISSIONED BY THE LANDOWNER.

LANDSCAPE NOTES

1. **TREE PROTECTION.** ALL TREES TO BE RETAINED ARE TO BE SUITABLY PROTECTED. MAINTAIN EXISTING GROUND LEVELS AT THE INTERFACE BETWEEN GROUND AND THE TREE TRUNK.
2. **SOIL PREPARATION.** ALL BUILDING RUBBLE AND DEBRIS TO BE REMOVED FROM SUB-BASE. TOPSOIL TO BE RIPPED TO A DEPTH OF 200mm IN PLANTING AREAS.
3. **LEVELS / DRAINAGE / SETOUT.** ALL AREAS TO BE FINE GRADED EVENLY TO CONFORM TO KERB LEVELS AND SURROUNDING FINISHES. GROUND LEVELS IN LANDSCAPE AREAS SHOULD ASSIST DRAINAGE AWAY FROM BUILDINGS AND HARDSTAND AREAS.
4. **PLANTING.** ALL PLANTS AND TREES TO BE TRUE TO SPECIES, HEALTHY, FREE FROM PESTS AND DISEASE. ALL PLANTING TO BE WATERED UNTIL SATURATION.
5. **IRRIGATION.** ALL PLANTING AND TURFING TO BE IRRIGATED VIA A FULLY AUTOMATED SYSTEM. IRRIGATION SYSTEM TO SHALL BE DUAL PROGRAM TO ALLOW TURF AND PLANTING AREAS TO BE WATERED SEPARATELY.

PROJECT
PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA WA

CLIENT
ACURE ASSET MANAGEMENT
LEVEL 7, 140 ST GEORGES TCE, PERTH WA

DRAWING
LANDSCAPE PLAN

DRAWING NUMBER
LA-01

REVISION
A

ISSUE
DEVELOPMENT APPLICATION

SCALE		DATE	DESIGNED	DRAWN	APPROVED
1:500	(A1)	25/09/14	PT	PT	PT

AMENDMENTS

REV	DATE	BY	DESCRIPTION
A	25/09/14	PT	PRELIMINARY LANDSCAPE LAYOUT FOR APPROVAL

LEFFLER SIMES ARCHITECTS
Level 2, 18 Oliver Lane, Melbourne Vic 3000
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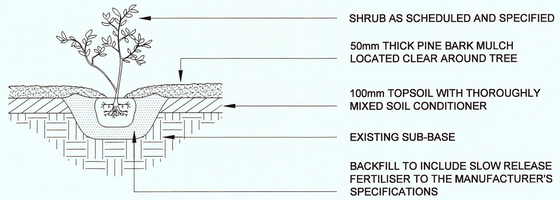
F (08) 9654 8244
E sje@lefflersimes.com.au

PETER TREND
LANDSCAPE ARCHITECTURE
37 Burroughs Road, Karrinyup WA 6018
T 041 346 5600
E peter.trend@live.com.au

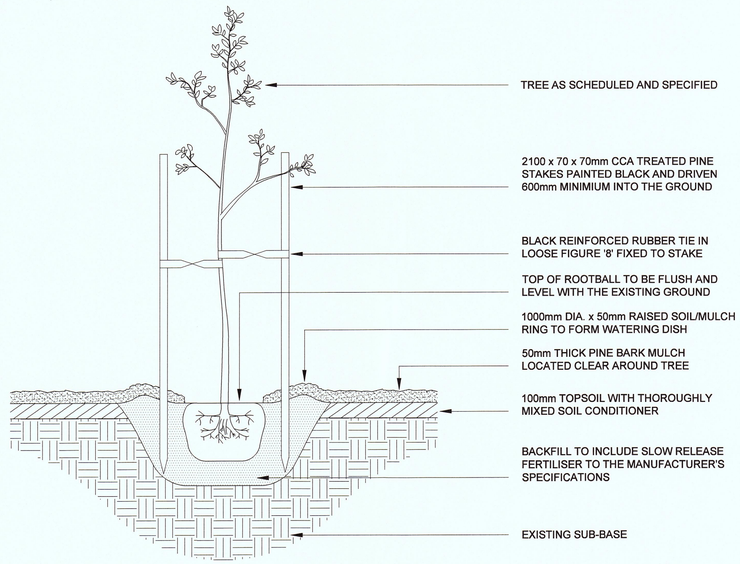


01 LA-01 TYPICAL SHRUB PLANTING DETAIL

SECTION 1:20

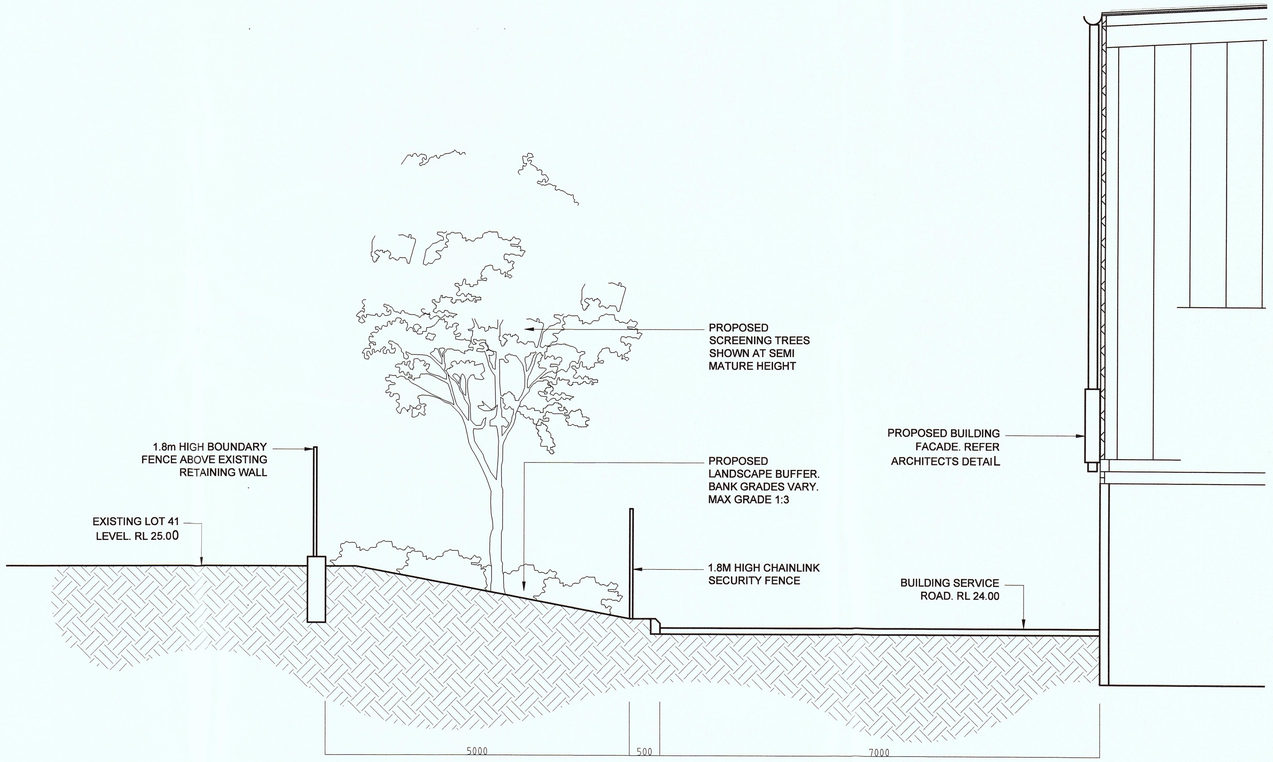
PLANTING SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	POT SIZE	QUANTITY
Trees				
Cc	Corymbia calophylla	Marri	400Lt	14
Cf	Corymbia ficifolia	Red Flowering Gum	30/45Lt	10
Ev	Eucalyptus victrix	Coolabah	30/45Lt	22
Shrubs				
Aog	Anigozanthus 'Orange Gem'	Kangaroo Paw	140mm	303
Ayg	Anigozanthus 'Yellow Gem'	Kangaroo Paw	140mm	450
As	Adenanthos sericeus	Woolly Bush	140mm	261
Em	Eremophila maculata	Emu Bush	140mm	760
Mln	Melaleuca 'Little Nessie'	Little Nessie	140mm	1119
Wf	Westringia fruticosa 'Smokey'	Coastal Rosemary	140mm	1047
Groundcovers				
Eg	Eremophila glabra	Kalbarri Carpet	140mm	707
Gc	Grevillea crithmifolia	Green Carpet	140mm	259
Gss	Grevillea preisii	Grevillea Sea Spray	140mm	294
Hs	Hibbertia scandens	Snake vine	140mm	720



02 LA-01 TYPICAL TREE PLANTING DETAIL

SECTION 1:20



03 LA-01 TYPICAL DETAIL TO SOUTHERN LOT BOUNDARY

SECTION 1:50

PROJECT
PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA WA

CLIENT
ACURE ASSET MANAGEMENT
LEVEL 7, 140 ST GEORGES TCE, PERTH WA

DRAWING
LANDSCAPE DETAILS

DRAWING NUMBER
LA-02

REVISION
A

ISSUE
DEVELOPMENT APPLCATION

SCALE	DATE	DESIGNED	DRAWN	APPROVED
VAR (A1)	25/09/14	PT	PT	PT

AMENDMENTS

REV	DATE	BY	DESCRIPTION
A	25/09/14	PT	DETAILS FOR DEVELOPMENT APPLICATION APPROVAL

LEFFLER SIMES ARCHITECTS
Level 2, 18 Oliver Lane, Melbourne Vic 3000
T (03) 9654 6344
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E sje@lefflersimes.com.au

PETER TREND
LANDSCAPE ARCHITECTURE
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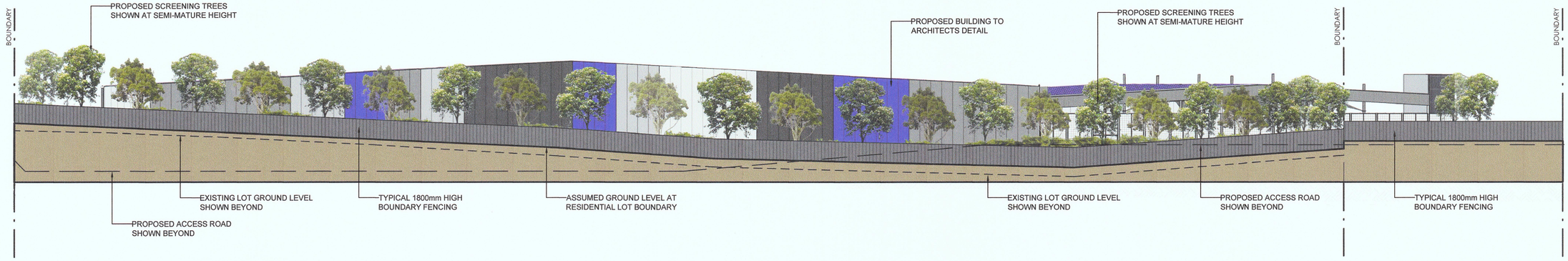
E peter.trend@live.com.au



01 LA-03

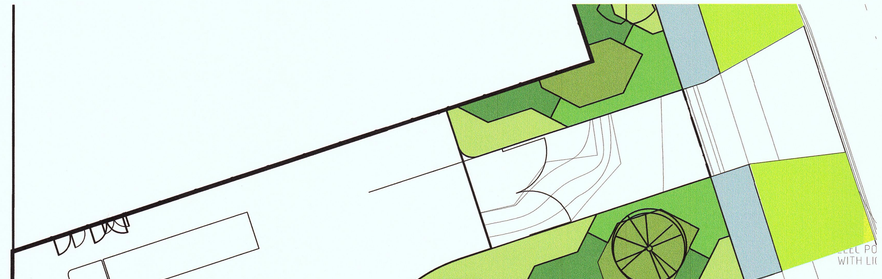
SOUTHERN BOUNDARY INDICATIVE ELEVATION

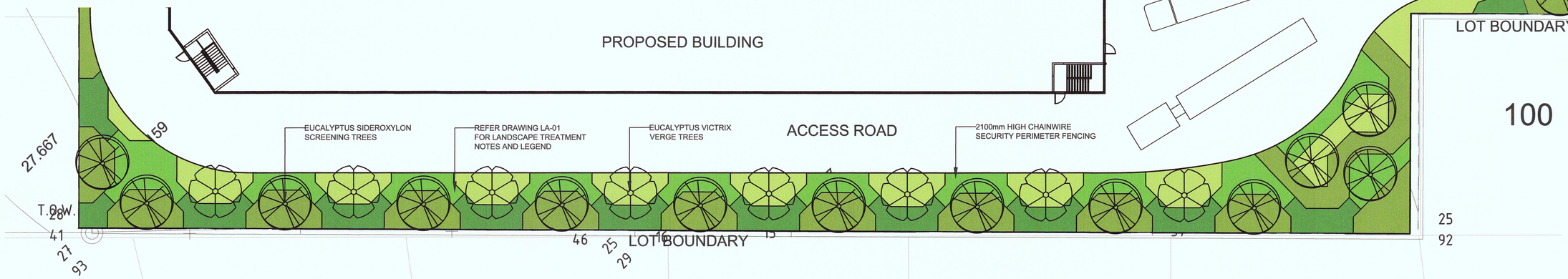
DETAIL 1:200

02 LA-03

PERSPECTIVE FROM RESIDENTIAL LOT

NOT TO SCALE





03 LA-03

SOUTHERN BOUNDARY DETAIL PLAN

DETAIL 1:200

RECEIVED
25 NOV 2014
CITY OF STIRLING

PROJECT: PROPOSED DEVELOPMENT, WANNEROO RD, BALCATTA WA	DRAWING: SOUTHERN BOUNDARY	ISSUE: DEVELOPMENT APPLICATION	
CLIENT: ACURE ASSET MANAGEMENT, LEVEL 7, 140 ST GEORGES TCE, PERTH WA	DRAWING NUMBER: LA-03	REVISION: C	

SCALE		DATE	DESIGNED	DRAWN	APPROVED
1:200	(A1)	20/11/14	PT	PT	PT

AMENDMENTS

REV	DATE	BY	DESCRIPTION
C	20/11/14	PT	AMENDED TREE SPECIES FOR APPROVAL
B	05/10/14	PT	ISSUE FOR COMMENT
A	03/10/14	PT	PRELIMINARY ELEVATION FOR APPROVAL

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LANDSCAPE ARCHITECTURE
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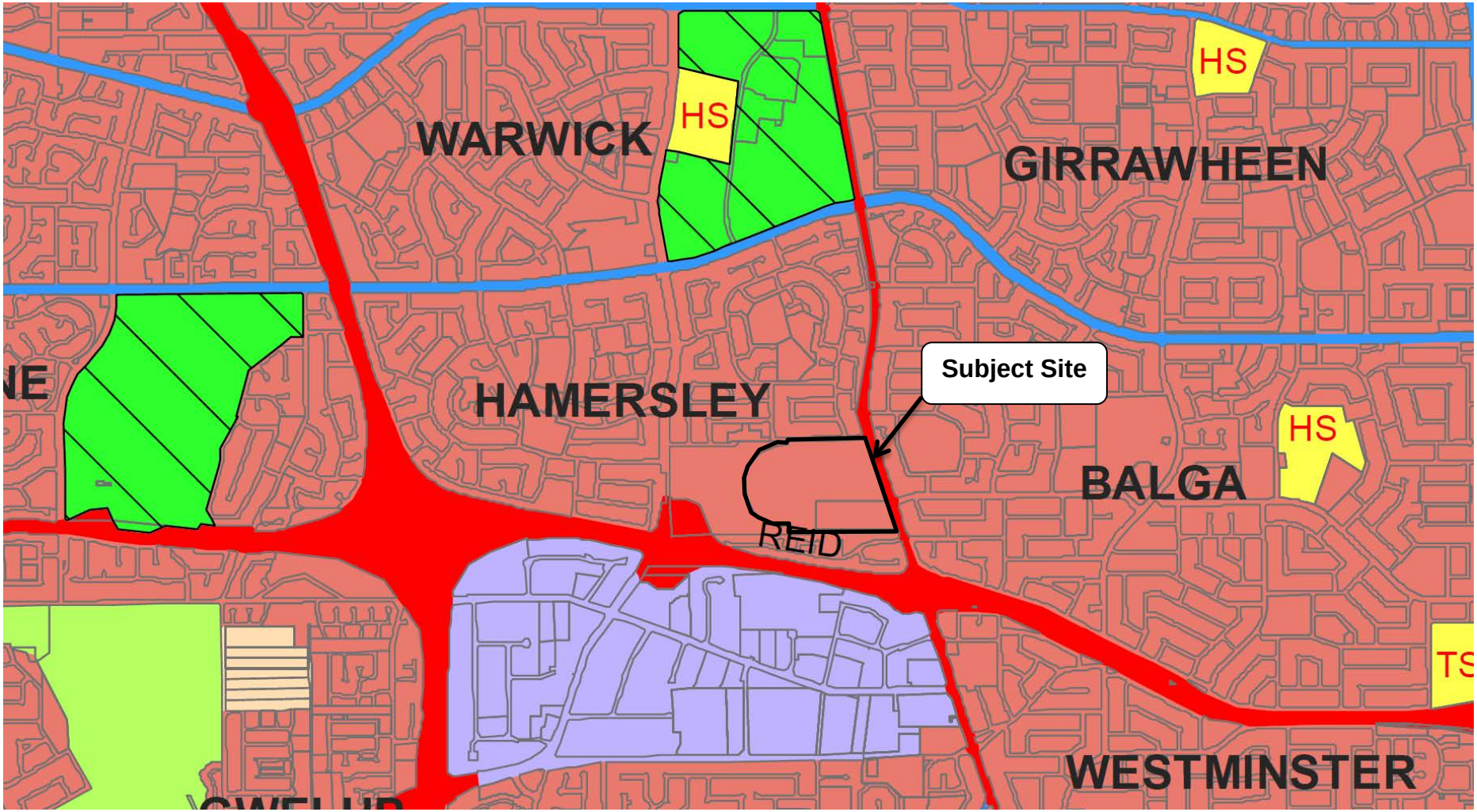
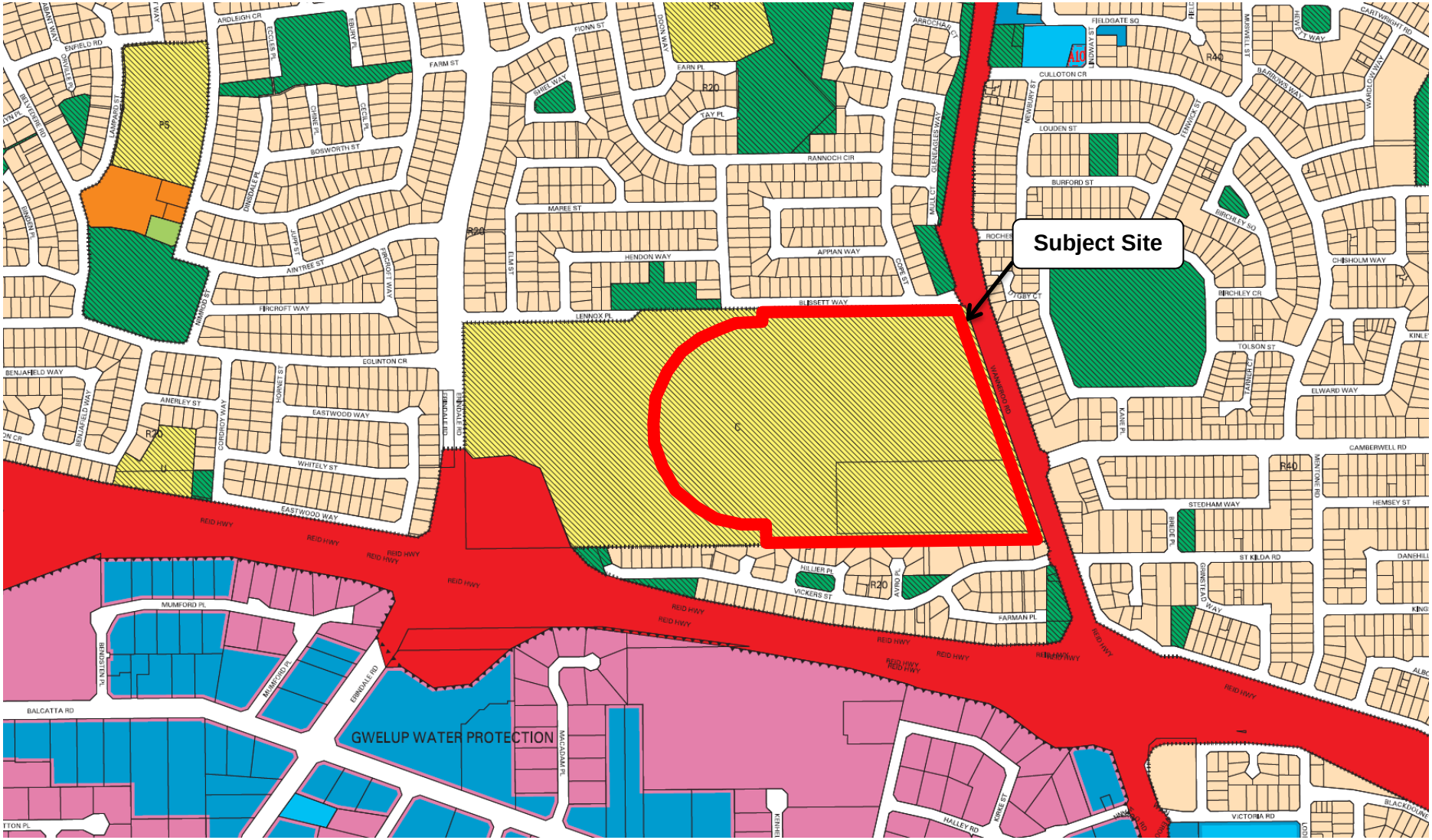
T 041 346 5600
E peter.trend@live.com.au

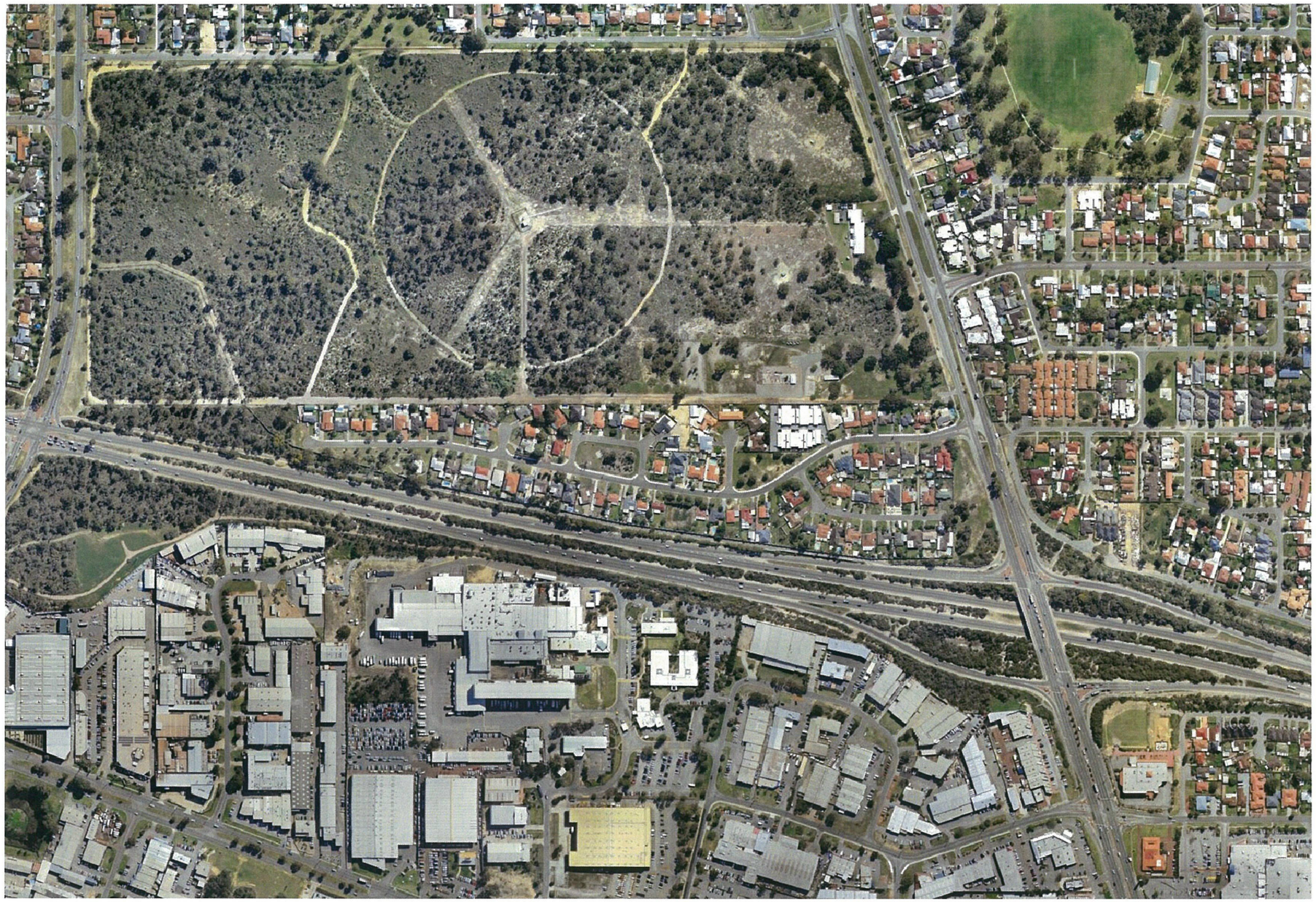
ATTACHMENT 2 – AERIAL LOCATION PLAN

ATTACHMENT 3 – METROPOLITAN REGION SCHEME (MRS) ZONING



ATTACHMENT 4 – CITY OF STIRLING LPS3 ZONING MAP





PROPOSED MASTERS HOME IMPROVEMENT STORE

LOTS 1 & 102 WANNEROO ROAD HAMERSLEY

For

BROADCAST AUSTRALIA Pty Ltd

and ACURE ASSET MANAGEMENT

MGA
TOWN PLANNERS

PETER TREND
LANDSCAPE ARCHITECTURE

SHAWMAC

LEFFLER SIMES ARCHITECTS

City of Stirling
26 SEP 2014
RECEIVED

Executive Summary

This town planning report has been prepared by MGA Town Planners on behalf of Broadcast Australia Pty Ltd and Acure Asset Management in support a development application in respect of the local reserve located at 601 Wanneroo Road, Hamersley.

The proposal involves the establishment of a Master's store over a vacant portion of Lots 1 and 102. Currently, the subject land accommodates a 208 metre high ABC radio tower, which transmits 720 6WF AM radio throughout the Perth Metropolitan Region. The subject land is located within 11km north from the Perth CBD on Wanneroo Road, immediately north of Reid Highway and the Balcatta industrial area.

The proposal has been designed to deliver a desirable and orderly outcome with reference to the amenity criteria set out in Part 10 of the City's Local Planning Scheme No.3 (LPS3). This has been achieved in part through early engagement with the City and Main Roads WA.

The proposal will contribute to meeting the objectives of the Directions 2031 strategy through the provision of additional local employment opportunities and will provide an alternative large format hardware outlet enabling comparison shopping for consumers. Importantly, the proposal will ensure this underutilised land is put to its most productive use, while not adversely affecting residential and traffic amenity in the locality, or inhibiting ongoing use of the land for its current purpose, accommodating broadcasting communications infrastructure.

The proposal comprises the following buildings and land uses.

- A Masters hardware store, being 13,943m² GLA in area addressing Wanneroo Road including: an external garden centre, main floor retailing area, stock and storage rooms, upper mezzanine office, and external trading areas.

- Basement car parking including 365 bays providing shelter from the elements, to be accessed from Wanneroo Road, including 40 bicycle bays.

- Landscaping surrounding the perimeter of the building is to be established on the subject land, serving as a buffer to sensitive uses and enhancing streetscape amenity.

- A new round-about is to be established on Wanneroo Road, to manage traffic to and from the Masters store and residential areas on Campberwell Road as requested by Main Roads WA.

Traffic and parking studies have been undertaken demonstrating that the proposal will function in an orderly manner with respect to surrounding land use, future expected traffic volumes and parking demand.

The proposed development will result in the following orderly outcomes:

- A design facilitating orderly traffic movement throughout the subject land, particularly deliveries, via separate access to the subject land.

- Parking provision meeting with the requirements of LPS3 and the local planning policy framework.

- New employment opportunities, both in construction of the development and future long term employment positions.

- The subject land is located in close proximity to the Balcatta industrial area, which attracts similar business and shopping based traffic to the immediate locality. The proposal will therefore complement activity in the adjoining Balcatta industrial area.

- A contemporary design incorporating screening and streetscape improvements to ensure a visually desirable outcome.

A compliance and merit assessment of the proposal is included in this report, demonstrating the proposal meets with the principles of orderly and proper planning.

It is respectfully requested that the Development Assessment Panel, on advice from the City, gives favourable consideration and grants its consent to the proposal.

Table of Contents

Version	Prepared By	Date
Final	Jeff Malcolm	23 September 2014

Prepared by:

MGA

TOWN PLANNERS

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1.0 Introduction

This town planning report has been prepared by MGA Town Planners on behalf of Broadcast Australia Pty Ltd and Acure Asset Management, in support of a development application in respect of the local reserve located at 601 Wanneroo Road, Hamersley for the establishment of a Masters store.

The subject land is located within 11km north from the Perth CBD on Wanneroo Road, immediately north of Reid Highway and the Balcatta industrial area. Currently, the subject land accommodates a 208 metre high ABC radio tower established in 1939, which broadcasts AM stations to the Perth Metropolitan Region.

Justification for the proposal is provided in terms of its design and planning merit, through an assessment against the established planning framework, including State and local strategic and statutory policies. The proposal has been developed through ongoing consultation between the City and Main Roads WA to assist in delivering a desirable outcome.

This report demonstrates that the proposal and any variations sought will result in no loss of physical or functional amenity in the locality, and will result in a desirable addition to the City's retail offering and local employment opportunities.

The structure of the report is as follows:

Section 2 – Site Description

This section includes a description of the subject land, along with relevant opportunities and constraints.

Section 3 – Development Proposal

This section includes a description of the development and design.

Section 4 – Planning Framework and Development Assessment

This section provides an appraisal against the applicable statutory and strategic planning framework.

Section 5 – Planning Issues Assessment

This section provides an overview of matters, including a summary of those matters demonstrating the orderliness of the proposal addressing amenity criteria contained in LPS3.

Section 6 – Conclusion

Project Team

This development proposal has been prepared by a project team gathered to refine the development proposal and address any issues identified during the design phase. The project team members include the following:

- Leffler Simes – Architecture
- MGA Town Planners – Town Planning
- SHAWMAC – Traffic and Parking Assessment
- SHAWMAC – Drainage Plan
- Peter Trend - Landscape Design

2.0 Site Description

2.1 Subject Land

The subject land accommodates a 208 metre high ABC radio tower, which broadcasts AM stations to the Perth Metropolitan Region. That portion of the land to contain the Masters store is vacant and adjoins an existing building associated with the current use. The subject land may be described as follows:

- Lot 1 on Certificate of Title Volume 2624, Folio 437
- Lot 102 on Certificate of Title Volume 2671, Folio 272

Cardno Eppell Olsen have investigated the need for referral of the application to the Commonwealth under the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) through the consideration of potential environmental 'matters of significance' identified on site, which has been summarised in Section 5.

Refer to Appendix 1 – Certificate of Title Details

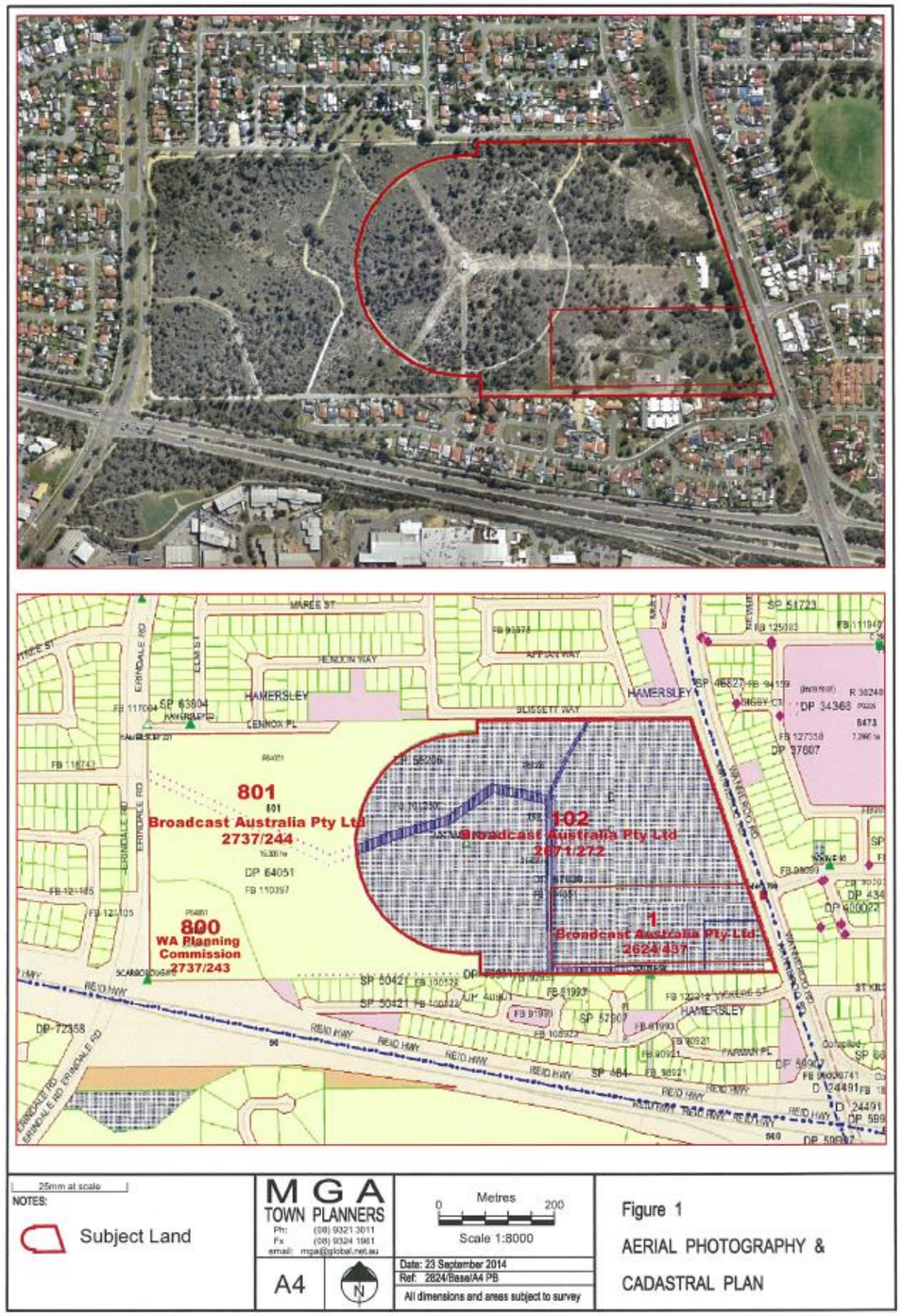


Figure 1 – Subject Land

2.2 Local Context

The subject land is bounded by residential development immediately to the south, including 6 lots each having their rear boundary adjoining the subject land, and each fronting Vickers Street. These lots are zoned R20 and have a depth in the order of 34m and average width at the rear of 23m. These lots feature a higher ground level than the subject land, being approximately 1.0m higher.

The proposed development is to be positioned 300m south from Blissett Way, and those residents to the north fronting this street therefore have a substantial distance buffer. Residential development exists at the eastern side of Wanneroo Road, including a grouped dwelling development with dwellings fronting an internal access-way (not Wanneroo Road). Five dwellings front the development site at the opposite side of Wanneroo Road.

2.3 Regional Context

Figure 2 shows the distribution of existing competing large format hardware stores, industrial areas and activity centres. It can be seen that the subject land is well positioned to complement similar activity in the Balcatta industrial area. Throughout the region identified, large format hardware stores are established either within activity centres, immediately adjacent to activity centres, or in industrial areas having good access to the regional road network.

The regional road system includes the Mitchell Freeway located approximately 2km to the west, which is a Primary Regional Road and the most significant transport route extending north from the Perth CBD. The land also adjoins the Reid Highway, which is also a Primary Regional road and the most prominent east - west connection extending from Midland to North Beach. Reid Highway does not function as a significant barrier for those residing to the south of it, given the development is located on Wanneroo Road, which passes over the Reid Highway. The subject land is therefore well connected via the regional road network, as is necessary for a retail development having a regional level of attraction.

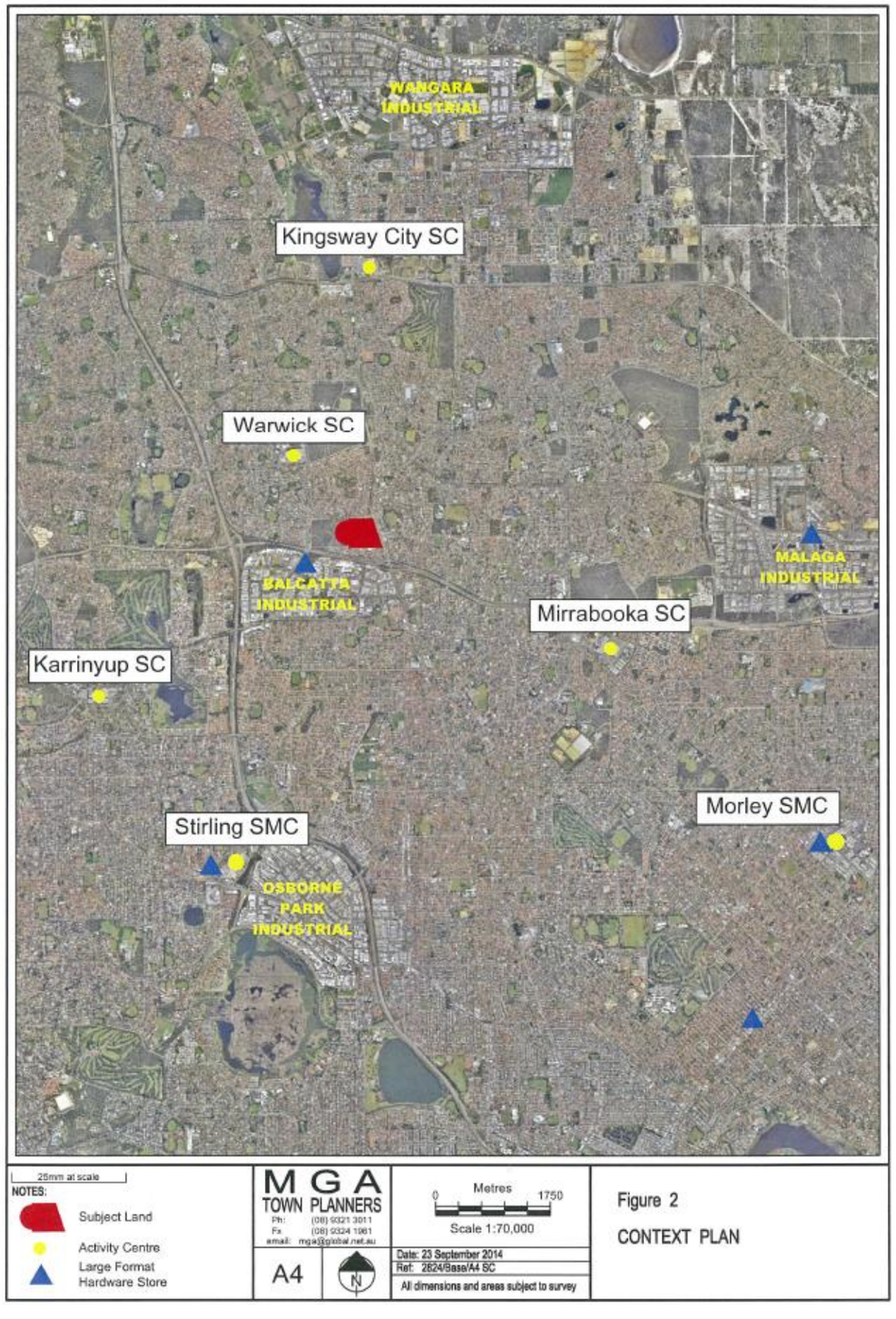


Figure 2 – Context Plan

2.4 Opportunities and Constraints

Identified relevant opportunities and constraints include the following:

Opportunities

- The subject land is within 300m from the Balcatta industrial area, which contains a large format hardware store among other light and service industrial activities. The proposal will complement the synergy of activity and attract similar consumer and business traffic.

- There is an established local resident population and regional customer base for similar existing stores in Balcatta, with a catchment extending to a wider region including the suburbs of Greenwood, Girrawheen, Nollamara, Carine and Karrinyup.

- The proposal will improve local employment self – sufficiency in the locality.

- The subject land is well serviced by existing bus services and there is a bus stop in front of the proposed development on Wanneroo Road. This will benefit shoppers making smaller purchases and employees of the store.

- Residents to the east of the subject land will have the benefit of improved access to and from Wanneroo Road through establishment of the proposed round – about linking Campberwell and Wanneroo Road.

Constraints

- Delivery vehicle access was identified as a constraint, given the undergrounding of parking. The proposed development separates delivery vehicles and customer traffic.

- The proximity of residential development to the south is the most prominent constraint. The development design is such that is ensures an acceptable outcome maintaining local residential amenity, as discussed in subsequent sections.

3.0 Development Proposal

3.1 Preamble

This section provides an overview of the proposed development, to be read in conjunction with the additional material included in the appendices to this report. This material includes architectural plans, elevations, site plans landscaping plans, and technical traffic studies.

Refer Appendix 2 – Leffler Simes Site Plans, Floor Plans and Elevations

3.2 Development Overview

The proposed development involves establishment of the following:

- A Masters hardware store, being 13,943m² GLA in area addressing Wanneroo Road including: an external garden centre, main floor retailing area, stock and storage rooms, upper mezzanine office, and external trading areas.

- Basement car parking including 365 bays providing shelter from the elements, to be accessed from Wanneroo Road.

- Landscaping surrounding the building is to be established, serving as a buffer to sensitive uses and enhancing streetscape amenity.

- A new round-about is to be established on Wanneroo Road, to manage traffic to and from the Masters store, and residential areas located to the east along Campberwell Road, as sought by Main Roads WA.

- A design facilitating orderly traffic movement on the subject land, particularly deliveries, via separate access to the subject land.

- Contemporary building design delivering a desirable built form outcome that is located so as to preserve the amenity of adjoining residents.

- The creation of an attractive public realm that will feature a high standard in landscaping.

See Figure 3 - Site Plan (Proposed Development)

Refer Appendix 2 –Site Plans, Floor Plans, Elevations, Landscaping and Drainage Plans

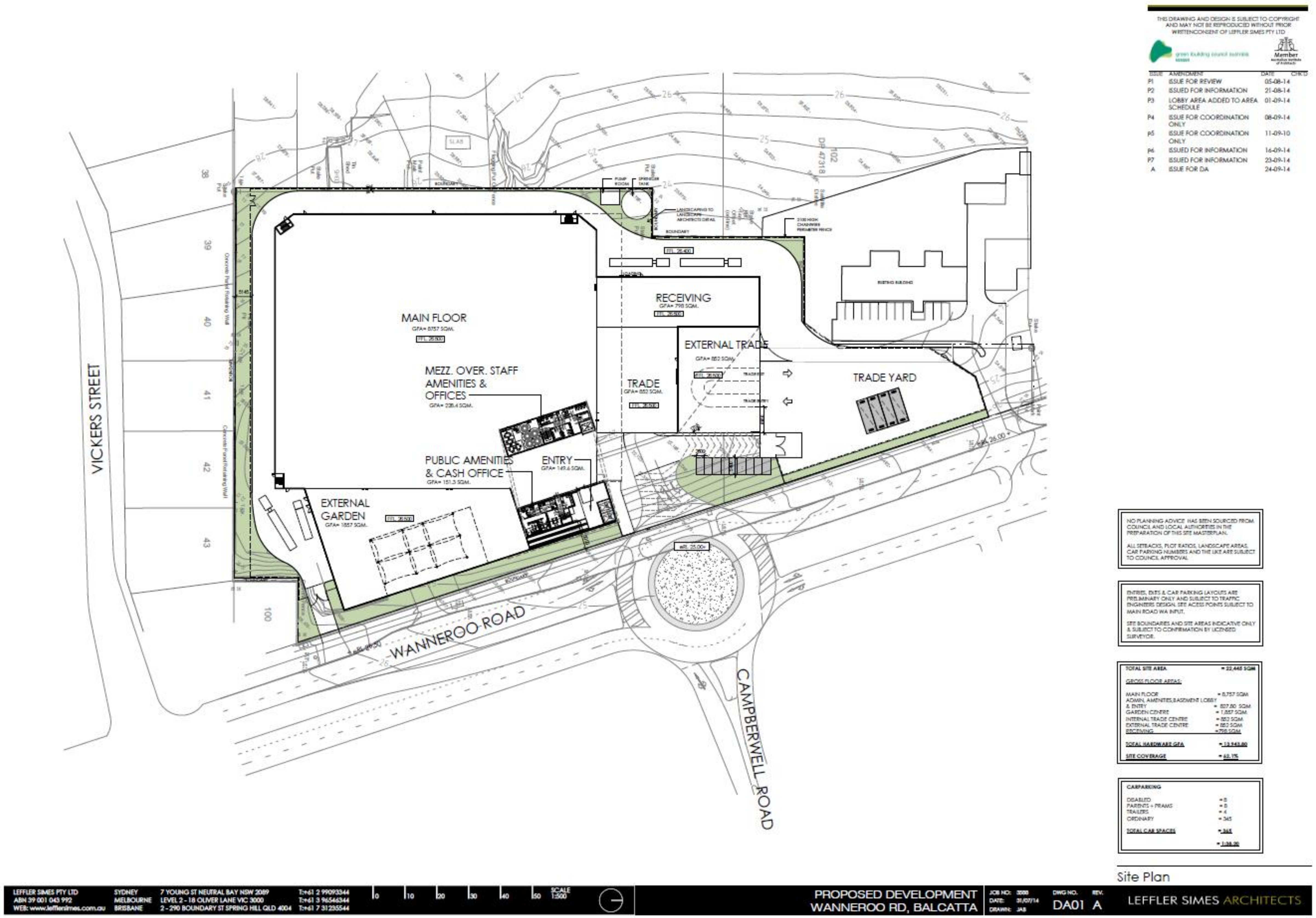


Figure 3 – Site Plan (not to scale)

4.0 Planning Framework and Development Assessment

4.1 Preamble

The following provides an analysis of the proposal with reference to the applicable State and local strategic and statutory planning framework.

4.2 State Strategic and Statutory Planning Framework

4.2.1 Metropolitan Region Scheme

The subject land is zoned 'Urban' under the provisions of the Metropolitan Region Scheme (MRS). This zoning identifies the land for a variety of urban purposes, including commercial and residential development. The proposed activity is appropriate based on the zoning of the land under the MRS.

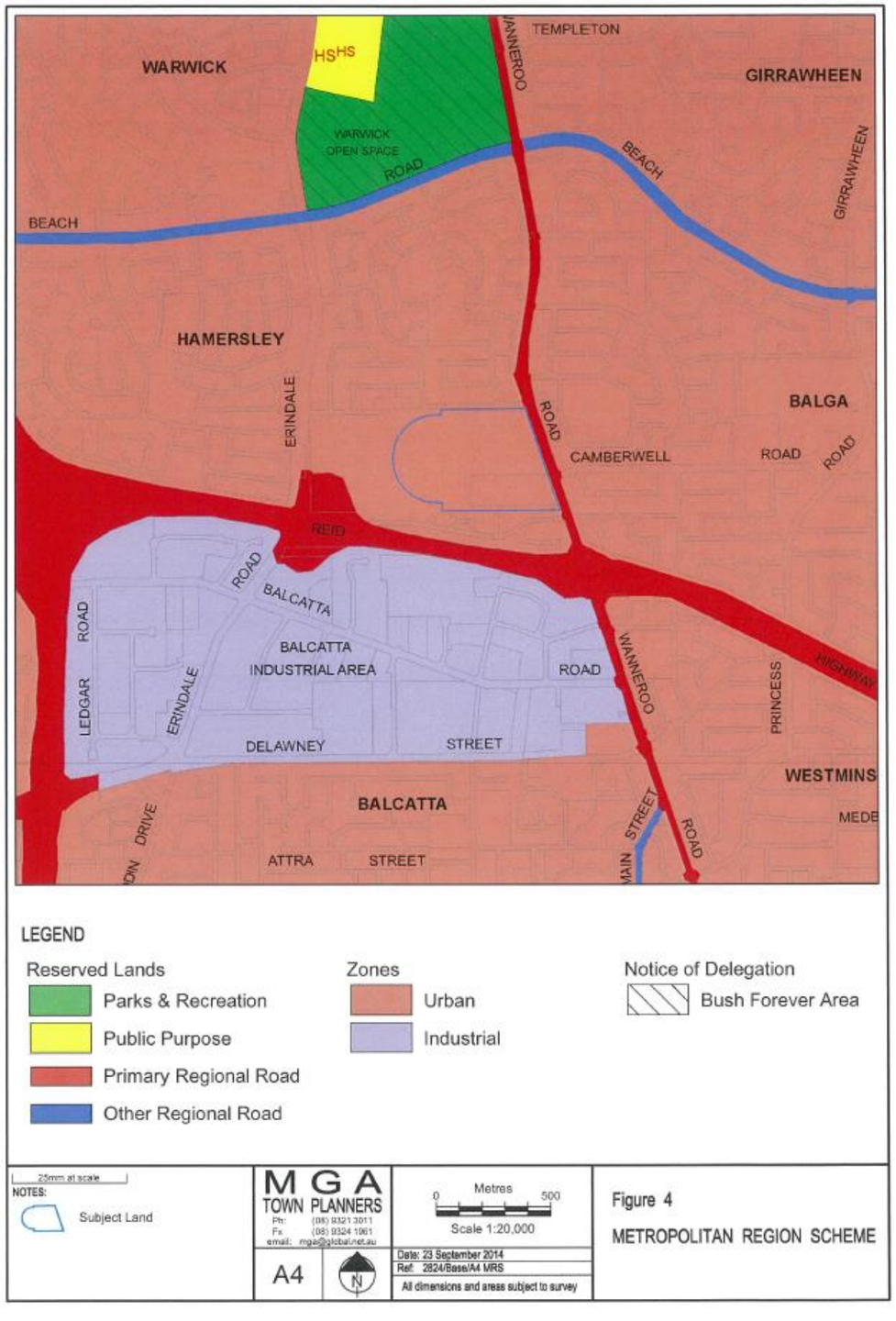


Figure 4 – MRS Zoning

4.2.2 Directions 2031

Objectives of the Directions 2031 strategy being of particular relevance to the subject land and proposed development include the following:

- *All people should be able to meet their education, employment, recreation, service and consumer needs within a reasonable distance of their home.*
- *Living in, or visiting our city should be a safe, comfortable and enjoyable experience.*
- *Ensuring that economic development and accessibility to employment inform urban expansion.*
- *Reducing energy dependency and greenhouse gas emissions.*

The proposal satisfies the above initiatives, on the basis of the following:

- The proposed development will result in the delivery of a safe environment, improving economic wellbeing and providing an attractive and accessible destination for consumers.

- The proposal will add to the level of employment provision in the locality, being an orderly location based on the frequency of public transport on Wanneroo Road and the proximity of Reid Highway.

- The proposal will improve access to competing large format hardware stores, enabling comparison shopping between similar stores by local consumers.

4.2.3 Activity Centres Policy for Perth and Peel (SPP4.2)

Purpose and Objectives

The Statement of Planning Policy - Activity Centres Policy for Perth and Peel (SPP 4.2) identifies the following objectives being of relevance to the proposed development:

- *Plan activity centres to support a wide range of retail and commercial premises, and promote a competitive retail and commercial market.*

- *Increase the range of employment in activity centres; and contribute to the achievement of sub - regional employment self - sufficiency targets.*

The proposed development will promote a competitive commercial environment through the establishment of an alternative hardware store improving the potential for comparison shopping, and employment opportunities for local residents.

In addition, clause 5.6.1 of SPP 4.2 includes the following relevant clauses in relation to bulky goods development and location:

(1) *The responsible authority should promote clusters of bulky goods retail adjacent to, or in close proximity to activity centres and the regional road and public transport networks. This should maximise the use of infrastructure, including the shared use of car parking; limit the number of car trips; and economically support other activity centre business.*

The subject land is positioned adjoining Reid Highway and is located 2km east from the Mitchell Freeway. Public transport frequency is also high on Wanneroo Road, and Reid Highway. The subject land is within 300m from other businesses in the Balcatta industrial area, and therefore the development would economically support these businesses.

(2) *The encroachment of bulky goods retail into residential and industrial zones should be avoided. Furthermore, locating such development in an ad - hoc manner or as ribbon development along regional roads is discouraged. Bulky goods retail should be developed with access and urban design controls so as not to interfere with traffic flow and safety, or detract from the amenity of public transport or the locality.*

The proposal may be treated as a logical extension to activity in the Balcatta industrial area, and this form of commercial development cannot be extended further north as ribbon development along Wanneroo Road given the residential zoning to the north.

Main Roads WA have been involved since project inception, to ensure appropriate access and egress arrangements are established, with a view to maintaining local traffic amenity and public transport efficiency.

(3) *Local governments should review the land use permissibility of bulky goods retail to reduce its potential dispersal throughout industrial zones. Such development should be directed to selected Mixed Business or equivalent zones with suitable road and public transport access. Local planning schemes and planning decision-making for bulky goods retail should include consideration of land requirements based on demonstrated future floor space needs and the need to retain affordable industrial land.*

(4) The preferred sequence of suitable locations is:

1. Edge-of-centre sites integrated with, but not within, the walkable catchment or core activity centre precincts.

2. Where it is demonstrated that sufficient suitable sites in or adjacent to activity centres are not available, out-of-centre mixed business or equivalent zones integrated with established and well-located bulky-goods nodes.

3. In limited circumstances where it is demonstrated that sufficient suitable sites in or adjacent to activity centres or within or integrated with existing bulky-goods nodes are not available, other out-of-centre mixed business or equivalent zones.

Acure Asset Management commissioned investigations to identify prospective sites for new Masters Hardware stores in the Perth and Peel Regions. Land having suitable area (2+ha) in the Balcatta, Hamersley, Karrinyup and Carine areas is generally unavailable. For example, land integrated within the core of an activity centre is not available given centres such as Karrinyup SC and Warwick SC do not have suitable land availability. Further, there is no suitably zoned land available in the Balcatta industrial area.

On this basis, as specified in point (3) above, development should be directed to selected Mixed Business or equivalent zones with suitable road and public transport access. The subject land clearly meets these criteria. In addition, the land also meets the criteria in point (4) 2 above, as an out-of-centre location that is closely integrated with the existing Balcatta industrial area.

Above, it is mentioned that planning decision-making for bulky goods retail should include consideration of land requirements based on demonstrated future floor space needs, and the need to retain affordable industrial land. The proposal will not result in further reduction to the stock of industrial land available for light / service industrial activity, as has occurred historically in other parts of the City.

4.3 Local Strategic and Statutory Planning Framework

4.3.1 City of Stirling Local Planning Scheme No.3 - Zoning and Land Use

The subject land is zoned 'Local Reserve' under the provisions of the City's Local Planning Scheme No.3 (LPS3).

A Local Scheme Reserve may be set aside for a variety of purposes including 'Public Open Space', for recreational activities, or 'Public Use'. Public Use reserves may be denoted as being set aside for Hospital, Police Station, Primary School, Commonwealth or Utility uses.

LPS3 states in clause 3.4.1 that: *A person must not* –

> *a) use a Local Reserve; or*
> *b) commence or carry out development on a Local Reserve, without first having obtained planning approval under Part 9 of the Scheme.*

Subsequently in Clause 3.4.2 LPS3 states that: *in determining an application for planning approval the Council is to have due regard to -*

> *a) the matters set out in Clause 10.2;*
> *b) the ultimate purpose intended for the Reserve.*

The compliance and merit assessment contained in this report addresses the matters included in Clause 10.2. Below, the matter of the ultimate purpose intended for the reserve is explored.

Reserve Purpose

The Commonwealth designation over the subject land does not specify a particular activity or Commonwealth ownership. The subject land is denoted as Commonwealth (C), based on the historic use of the land to accommodate the 720 6WF AM broadcasting tower.

Use of the subject land for the proposed commercial purposes will not impact on the broadcasting tower activity, or related buildings and uses. The owners of the land, Broadcast Australia Pty Ltd, have leased land to accommodate the Masters store, and have confirmed in writing that there are no planned expansions or modifications to the tower and associated buildings that would necessitate additional land being required.

The National Transmission Network Sale Act 1998 obliges Broadcast Australia Pty Ltd to continue to provide services required by the ABC, which is taken into consideration in determining future land requirements.

On this basis it is considered that the proposed use and its merits may be gauged through consideration against the amenity criteria contained in Clause 10.2 of LPS3.

See Appendix 3 – Legal Advice

See Appendix 4 – Broadcast Australia Advice

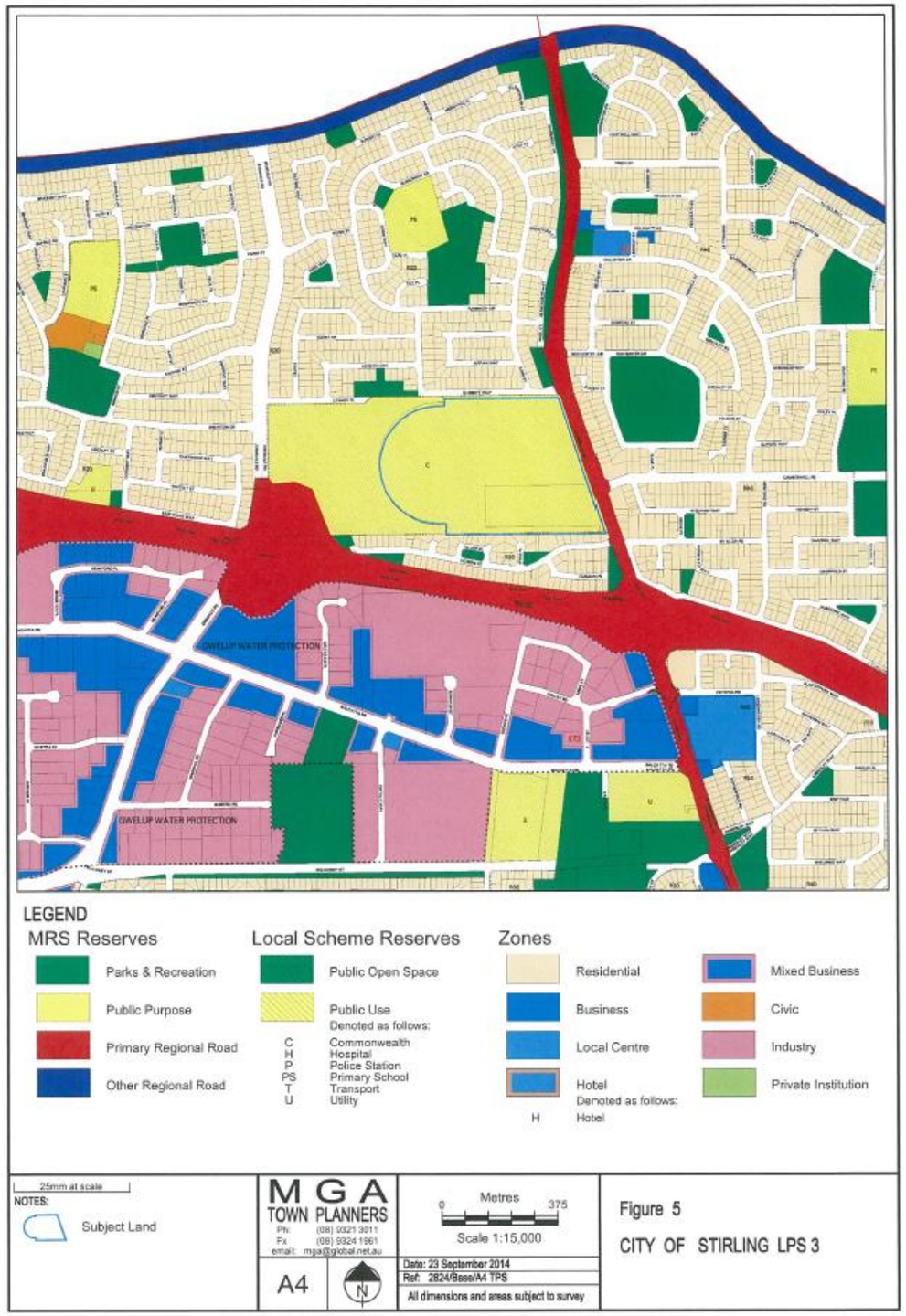


Figure 5 – LPS3 Zoning

4.3.2 Local Planning Policy Standards and Requirements

The following sections address requirements contained within local planning policies adopted under LPS3 applicable to the subject land and development. Local Planning Policies are guidelines used to assist decision making under the Scheme. In considering an application for planning approval, Council pays due regard to relevant Local Planning Policies as required under Clause 10.2.

4.3.2.1 Landscaping

The City's Local Planning Policy (LPP) 6.6 - Landscaping, aims to improve the visual appeal of development, screen service areas and provide a buffer to boundaries.

The total leased area is 22,034m² and the area to be landscaped is 2,270m², being 10.3% of the total leased site area accommodating the development.

The landscaping plans attached at Appendix 2 include a site plan showing the distribution of proposed planting and a set of cross sections showing the typical arrangement at the southern boundary. The cross section plans show a species list including the number of each species to be established.

4.3.2.2 Vehicle and Bicycle Parking

The City's Parking and Access LPP (6.7) and Bicycle Parking LPP (6.2) set out the requirements for vehicle and bicycle parking associated with particular land uses.

For showroom development there is a need to provide 1 bay per 30m² GLA.

Therefore, based on a total area of 13,943m², the theoretical parking supply required is 387 bays. As per the policy, a concession of 15% is able to be applied to car parking requirements where located on a high frequency bus route and an additional 5% due to the provision of 40 bicycle racks, resulting in a net requirement of 310 bays.

Bicycle parking and end-of-trip facilities will be provided at the site for staff and customers at a rate of 1 park per 400m² gross floor area. The attached site plans and basement floor plans show the location of bicycle parking.

4.3.2.3 Reserves & Other Zones Design Guidelines

The City's LPP (4.1) Reserves & Other Zones Design Guidelines set out requirements applicable to development on the City's Local Reserves. The policy aims to ensure that development is of a similar scale and bulk to surrounding properties, and that any new uses or development do not have an adverse impact on the amenity of surrounding properties.

Side and Front Setbacks

The development is setback from the street to an extent matching that of adjoining residential development to the south.

Rear Setbacks

The development adjoins residential properties to the south, and therefore the southern setback must be calculated in accordance with the Residential Design Codes. The following diagram (not to scale) is taken from **Appendix 2** (to scale) and depicts the setback of the proposed development from adjoining dwellings to the south, the position of landscaping and site levels.

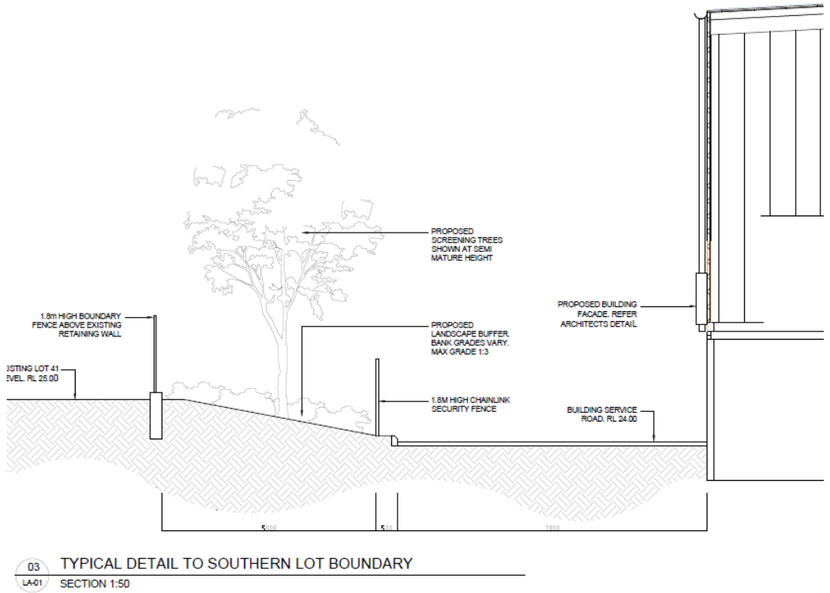


Figure 6 – Southern Boundary Section

Where measured at the property boundary, the proposed development features a wall height of 8.9m and length exceeding 25m. With reference to Table 2a of the Codes it is apparent that a setback of 4.3m is required. The maximum setback listed in Table 2a is 4.8m.

The proposed development features a setback of 12.5m from the southern boundary, being more than double the minimum required under the Codes.

Building Height

The policy requires that new buildings, additions and alterations shall be of similar height to adjoining sites.

The building has a height of 8.9m measured from natural ground level at the neighbouring properties to the south, and 9m is the nominal maximum height for the pitched roof of a residential development, as specified under Table 3 of the Codes.

Again, the proposed development features a setback of 12.5m from the southern boundary, being more than double the minimum required. The additional setback has the effect of reducing the perceived scale and mass of the building as experienced by adjoining residents to the south, appropriately ameliorating its impact in conjunction with landscaping.

Noise

The proposed Masters store will operate between the hours of:

- Monday to Friday - 8:00 am to 9:00pm [deliveries 8:00 am to 5:00 pm]
- Saturday - 8:00 am to 5:00pm
- Sunday - 11:00am to 5:00pm.

Deliveries to the store via the service road are to occur between 8:00am and 5:00pm weekdays only, and will therefore avoid the potential for any substantial adverse impact on adjoining residents resulting from trucks passing through the service lane.

Fencing & Gates

The policy indicates that where required, gates & fences shall be open style up to 1.8m high. Open style fencing being 1.8m high will contain the outdoor trade area at the front boundary, but will not extend forward of the main building frontage. Open style fencing will be established around the side and rear perimeter of the building, but set back from adjoining property boundaries as depicted in Figure 6.

5.0 Planning Issues

Previously, it was identified that in considering an application for planning approval the Council is to have due regard to the matters set out in Clause 10.2 of LPS3. These issues, among others not previously addressed above, are considered below.

5.1 Traffic Statement

SHAWMAC traffic consultants have prepared a Transport Impact Assessment (TIA) (**Appendix 5**) assessing the operational performance of intersections and vehicular access to the subject land. The result of this analysis is summarised below. Car parking was addressed previously in Section 4.3.

Public Transport, Pedestrian and Cycle Facilities

The subject land is currently served by Transperth Bus Route 346 (Noranda-Morley Bus Station via Emberson Road) and Route 347 (Noranda-Morley Bus Station via Cambon Road), which operate along Wanneroo Road.

Bus stops are within close walking distance to the proposed development. The nearest bus stop is located 70m south on the west side of Wanneroo Road and 190m south on the east side of the road, near the intersection with Vickers Road. Typical service ranges between 20 to 30 minutes during the weekday peak periods, and 30 to 60 minutes during the off-peak periods including evenings and weekends.

No changes to the existing public transport services and pedestrian infrastructure are anticipated as part of the development. The proposed development includes the provision of 40 bicycle racks plus associated end-of-trip facilities within the under-croft car parking area.

SIDRA Analysis

A traffic generation and distribution exercise has been undertaken to assess the potential traffic impacts associated with the proposed development. The aim of this exercise was to establish the traffic volumes that would be generated from the development, and to quantify the impact that the additional traffic has on the surrounding road network.

The operational performance of the accesses to the Masters Landsdale car park was assessed using the software program SIDRA Intersection 5.1. This was undertaken for the anticipated conditions using the traffic volumes and assumptions set out in Section 4.2 of the TIA.

The results of the SIDRA analysis under short term and long term proposed weekday peak hour conditions indicate that all of the proposed roundabout intersections will operate at very good Levels of Service during the future p.m. peak hour under existing traffic conditions, with minimal queuing and delays, and also under a scenario whereby the ambient traffic on Wanneroo Road increases by 15%. No delays are induced to existing Wanneroo Road traffic operations, with improved safety and efficiency associated with the inbound and outbound movements to and from Camberwell Road.

Vehicular Access

The proposed crossover arrangements will consist of a full movement roundabout intersection opposite Camberwell Road at Wanneroo Road, a left-in only for service vehicles near the southern boundary of the site approximately 85m south of Camberwell Road, and a left - out only access for service vehicles via the existing full movement un-signalised Broadcast Australia crossover approximately 120m north of Camberwell Road.

Service vehicles will enter and exit the site via a left turn only from and to Wanneroo Road via a westbound entry at the southern end of the site and then utilising a one-way system westbound and northbound to access the service and delivery area at the rear of the proposed development. Delivery vehicles will exit in a northbound and eastbound movement to Wanneroo Road.

A review of the proposed on-site circulation and car parking layout was undertaken to assess the adequacy of the proposed site access and circulation in addition to service/delay areas on the site. This review was undertaken using Auto Track to assess service/delivery vehicle manoeuvring into and out of the site, to and from Wanneroo Road including the one-way circulation area along the southern, western and northern boundaries of the site. The results of this review indicated that the proposed design and layout of the on-site circulation, loading areas and access points can accommodate vehicles up to 19m in length at the rear of the Masters Home Improvement Store and vehicles up to 12.5m in length within the trade area.

It was concluded therefore, that the boundary road intersections would function acceptably under future traffic conditions and that the proposed access, servicing and car parking arrangements associated with the proposal are in accordance with Austroads and traffic engineering standards. Therefore, considering the low impact of the traffic from the proposed development on the surrounding road network, good access/egress and circulation system within the development and adequate parking supply, traffic related issues should not form an impediment to the approval of the proposed development.

5.2 Stormwater Drainage

An assessment of drainage requirements in relation to the proposal has been undertaken and drainage plans are included in **Appendix 2.**

5.3 Overshadowing

Overshadowing diagrams have been prepared and are attached at Appendix 2, demonstrating that the extent of overshadowing at midday 22 June will not result in significant overshadowing impact.

5.4 Environmental Review

Cardno was engaged by Acure Asset Management to undertake a risk assessment to determine whether a referral is required to the Commonwealth under the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) **(Appendix 6).**

A desktop review was carried out to determine the likelihood of any Matters of National Environmental Significance (MNES) occurring within the proposed development area. The search identified eighteen EPBC listed species having the potential to occur within the site. Of these, only Carnaby's cockatoo was assessed as being likely to occur on the land.

In total 27 significant trees were identified within the site. Of these, only 8 are Eucalyptus marginata and the rest were introduced trees, predominately Tasmanian Blue Gum (Eucalyptus globulus). No evidence of hollows or Carnaby's cockatoo breeding was present within any of the identified trees.

5.5 Orderly and Proper Planning

The principles of orderly and proper planning dictate that development should provide a logical and efficient extension to existing activity, consistent with the planning vision or intent for the subject land. Further, there is a need to ensure the compatibility of uses within their setting. To this end, the proposal achieves the following:

- The proposal will aid in realising State planning initiatives, through facilitating more local employment opportunities and access to an improved range of goods and services for consumers normally resorting to the Warwick, Karrinyup and Balcatta retail precincts. The proposal will not result in the loss of industrial zoned land in the region, which ought to be set aside for service and light industrial uses.

- The proposed development will benefit from and lend support to existing public transport services.

- The proposal will facilitate orderly traffic movement throughout and surrounding the subject land via the round-about sought by Main Roads WA, and maintain a very good level of traffic service. Residents to the east utilising Campberwell Road will experience improved efficiency.

- The subject land is a 'Public Use' reserve and is denoted Commonwealth (C) under LPS 3. This designation simply reflects the historic use of the property, but does not limit use of the land for a range of purposes, as opposed to other Public Use reserves including Hospital, Police Station, or Primary School. The proposed use will not inhibit ongoing functioning of the broadcasting tower or access to associated buildings and is deemed to be compatible with existing development on the subject land and surrounding activity.

- The subject land is within 300m from the Balcatta industrial area, which contains a large format hardware store among other light and service industrial activities. The proposal will complement the synergy of activity and attract similar consumer and business traffic already visiting Balcatta via Wanneroo Road.

- The assessments undertaken demonstrates that the development has been designed and will function in a manner that avoids or ameliorates potential adverse impacts on adjoining residential development to the south, through generous setbacks and landscaping, and the considerate operating and delivery hours proposed.

6.0 Conclusion

This town planning report has been prepared by MGA Town Planners on behalf of Broadcast Australia Pty Ltd and Acure Asset Management, in support a development application in respect of the local Public Use reserve at 601 Wanneroo Road, Hamersley for the establishment of a Masters hardware store.

The proposal represents a significant opportunity to deliver additional retail and employment opportunities in a timely manner for the benefit of local residents and consumers.

The proposal comprises the following buildings and uses:

- A Masters hardware store, being 13,943m² GLA in area addressing Wanneroo Road, including: an external garden centre, main floor retailing area, stock and storage rooms, upper mezzanine office and amenities, and external trading areas.

- Basement car parking including 365 bays to be accessed from Wanneroo Road, also accommodating 40 bicycle bays.

- Landscaping surrounding the perimeter of the building is to be established, serving as a buffer to the south and enhancing streetscape amenity. Open style fencing surrounding the perimeter of the building is to be set back from adjoining property boundaries, and limited to the external trade area at the street frontage.

- A new round-about is to be established on Wanneroo Road, to manage traffic to and from the Masters store and residential areas on Campberwell Road, as sought by Main Roads WA.

The proposal addressed within this development application requires consideration by the City and subsequently the discretion of the Development Assessment Panel in granting approval to the proposal, with reference to the criteria contained in Clause 10.2 of LPS3.

The assessment and justifications presented in this report demonstrate that the proposed buildings and uses are of a nature being consistent with the intent of local planning controls and in keeping with relevant State statutory and strategic documents, including the Directions 2031 Strategy. The proposal is demonstrated to represent orderly and proper planning, making highest and best use of the land while ensuring compatibility with existing surrounding development.

On the basis of the above, it is respectfully requested that following consideration of the proposal, the Development Assessment Panel grants approval to the application.

Appendix 1 – Certificates of Title

WESTERN AUSTRALIA

REGISTER NUMBER	
1/D9162	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
2	15/6/2006

RECORD OF CERTIFICATE OF TITLE

VOLUME 2624 FOLIO 437

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 1 ON DIAGRAM 9162

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

BROADCAST AUSTRALIA PTY LTD OF LEVEL 10, 799 PACIFIC HIGHWAY, CHATSWOOD, NEW SOUTH WALES
(T H297290) REGISTERED 1 DECEMBER 1999

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. THE LAND THE SUBJECT OF THIS CERTIFICATE OF TITLE EXCLUDES ALL PORTIONS OF THE LOT DESCRIBED ABOVE EXCEPT THAT PORTION SHOWN IN THE SKETCH OF CANCELLED TITLE VOLUME 1891 FOLIO 449.
2. A722205 EASEMENT BURDEN TO METROPOLITAN WATER SUPPLY SEWERAGE AND DRAINAGE BOARD FOR SEWERAGE PURPOSES REGISTERED 12.9.1973.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: D9162.
PREVIOUS TITLE: 1891-449.
PROPERTY STREET ADDRESS: 601 WANNEROO RD, HAMERSLEY.
LOCAL GOVERNMENT AREA: CITY OF STIRLING.

NOTE 1: K743049 DEPOSITED PLAN 57638 LODGED

LANDGATE COPY OF ORIGINAL NOT TO SCALE Tue Aug 6 16:36:10 2013 JOB 42460049

WESTERN AUSTRALIA

REGISTER NUMBER	
102/DP55206	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
1	10/10/2007

RECORD OF CERTIFICATE OF TITLE

VOLUME 2671 FOLIO 272

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 102 ON DEPOSITED PLAN 55206

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

BROADCAST AUSTRALIA PTY LTD OF LEVEL 3 , 655 PACIFIC HIGHWAY, ST LEONARDS, NEW SOUTH WALES
(AF K353177) REGISTERED 24 SEPTEMBER 2007

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. EASEMENT BURDEN CREATED UNDER SECTION 167 P. & D. ACT FOR SEWERAGE PURPOSES TO WATER CORPORATION - SEE DEPOSITED PLAN 55206

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: DP55206.
PREVIOUS TITLE: 2624-436, 1362-198.
PROPERTY STREET ADDRESS: 601 WANNEROO RD, HAMERSLEY.
LOCAL GOVERNMENT AREA: CITY OF STIRLING.

NOTE 1: K743049 DEPOSITED PLAN 57638 LODGED

LANDGATE COPY OF ORIGINAL NOT TO SCALE Tue Aug 6 16:36:10 2013 JOB 42460049

Appendix 2 –Site Plans, Floor Plans, Elevations, Landscaping

Appendix 3 – Legal Advice

Flint Moharich.
Planning + Environment Law

Suite 3
70 Angelo Street
SOUTH PERTH WA 6151
PO Box 8243
Angelo Street
SOUTH PERTH WA 6151
P +61 8 9367 5559
www.flintmoharich.com.au

BY EMAIL

Our ref: 15-016
Your ref: -

26 September 2014

Mr Jeff Malcolm
MGA Planners
26 Mayfair Street
WEST PERTH WA 6005
By email:
jeffmalcolm.mga@globaldial.com

Dear Jeff

601 Wanneroo Road Hamersley

1 You have asked for my advice regarding the planning approval process for land at 601 Wanneroo Hamersley.

2 You have particularly requested my advice in relation to the classification of the land under *City of Stirling Local Planning Scheme No.3* (**LPS3**) as 'Local Reserve – Public Use – Commonwealth'.

3 The land is zoned Urban under the *Metropolitan Region Scheme* (**MRS**), and you have advised that you require no further guidance in relation to the MRS.

Local Planning Scheme

4 Clause 3.4.1 of LPS3 makes it clear that planning approval is required for any development on a Local Reserve.

5 Clause 3.4.2 advises the way in which applications are to be considered. As you would know, this is because where land is 'reserved' as opposed to being zoned under planning schemes, there is no zoning table which prescribes the uses to which the land can be put.

6 Clause 3.4.2 is in the following terms:

> '3.4.2 In determining an application for planning approval the Council is to have due regard to -
>
> a) the matters set out in Clause 10.2;
>
> b) the ultimate purpose intended for the Reserve.'

7 The reference to clause 10.2 is a reference to the normal considerations (such as traffic, aesthetics, compatibility of use and amenity) which must be taken into account in all applications.

8 It should also be noted that clause 3.4.3 requires that consultation occur with the public authority upon whose behalf the land is reserved, prior to determining the planning application.

9 The time within which a decision on an application for planning approval must be made under LPS3 is 60 days where the application is not advertised, and 90 days where it is.

Observations regarding reservations

10 You have specifically asked me whether the reservation of the land under LPS3 is an impediment to the proposed development application being approved.

11 First, it should be noted that the decision-maker (whether that be the City, or the JDAP) has a very broad discretion in relation to land reserved under LPS3. That is, there are no uses which are expressly prohibited, meaning that any use can be considered.

12 I also note that 'reservations' under both local planning schemes and the MRS can either be:

12.1 aspirational (that is, land that the local government or the WAPC would like to own in order to implement a public infrastructure facility); or

12.2 evidentiary (that is, reflecting what the land is actually being used for at the time).

13 This land would certainly fall within the latter category. That is, the land has simply been earmarked in the way it has because it was owned by the Commonwealth who operated a public service from the site.

14 I would not see this latter type of reservation holding the City or the JDAP to only approving a particular type of development in circumstances where the landowner has advised that the land is superfluous to its needs.

Conclusion

15 For this reason, as long as the proposal satisfies the more general planning assessment criteria, and fits into the broad objectives that the City has for the area, then there are no impediments to approving the application pursuant to LPS3.

Regards

Belinda Moharich
Director

Appendix 4 – Broadcast Australia Pty Ltd Advice

BROADCASTAUSTRALIA

Level 10, Tower A, 799 Pacific Highway
Chatswood NSW 2067
Australia

PO Box 1212
Crows Nest NSW 1585
Australia

t: +61 (0) 2 8113 4666
f: +61 (0) 2 8113 4646

www.broadcastaustralia.com.au

24 September 2014

City of Stirling
25 Cedric Street
Stirling WA 6021

Dear Sir/Madam,

Re: 601 Wanneroo Road, Hamersley WA 6022

Broadcast Australia is the owner of Lot 1 on Diagram 9162 and Lot 102 on Deposited Plan 55206, Wanneroo Road, Hamersley.

The company owns and operates one of the most extensive terrestrial broadcast transmission networks in the world. We manage transmission services for radio and television broadcasters and offer site sharing, co-hosting and infrastructure services to the telecommunications, emergency services and broadcasting industries.

Broadcast Australia provides the ABC Local Radio, Radio National and NewsRadio transmission services from the Hamersley site. These services are important to our customer and will be required for years to come. Furthermore, under the National Transmission Network Sale Act 1998 (*Cth*) (the Act) these are nominated services and Broadcast Australia is obliged to maintain these facilities at this site for the provision of services required by the ABC. In view of our commitment to our existing customer and the provisions of the Act, we confirm that BA has no further plans for the Hamersley site other than its use as a communications facility.

We wish to confirm we have provided our consent and will provide support for the application from Acure Funds Management for planning approval to develop a Masters Home Improvement store on a 2.2h portion of the land at 601 Wanneroo Road Hamersley, which is surplus to our communication facility requirements.

We trust this advice is of assistance to the City in supporting the consideration of a development application.

Yours Sincerely

Gary Wallis
General Manager – Property
Broadcast Australia

Broadcast Australia Pty Ltd
ABN 99 086 048 562
Trading as Broadcast Australia

Appendix 5 – SHAWMAC Traffic and Parking Study

Appendix 6 – Cardno Environmental Assessment

MGA TOWN PLANNERS

26 Mayfair Street
West Perth, 6005
Western Australia
PO Box 104
West Perth 6872

Telephone: (08) 9321 3011
Fascimile: (08) 9324 1961
Email: mga@global.net.au

25 November 2014

City of Stirling
Locked Bag 2506
Perth, WA 6001

Attention: Greg Bowering - Manager Planning Services

Proposed Masters Store – Lot 101, 601 Wanneroo Road, Hamersley. DA14/2483

We refer to the above-mentioned development application currently under consideration by the City, the summary of public comments sent to us on 18 November 2014, and those matters raised by the City and relevant agencies during assessment of the proposal, provided to us in writing on 14 November 2014.

Acure Asset Management and Masters have collated additional information and sought modifications to ensure matters raised during the assessment process are appropriately addressed. Those matters raised by the City, relevant government agencies, and the public are addressed below:

Please find a set of modified plans attached herewith in both hard copy and electronic format, along with a modified traffic impact assessment.

1. Main Roads Western Australia (MRWA) Comments

Based on advice received from MRWA following advice provided post - lodgement, the modified development plans attached now depict an alternative access arrangement from Wanneroo Road. The revised access arrangement has been reviewed by MRWA in conjunction with Shawmac. MRWA indicated to us on 25 November 2014 that:

- *The concept proposed accords generally with our intent by utilizing maximum offset between Camberwell and the access driveway.*
- *Concept does not accord with our advised requirement to provide a third lane through this location in the future (refer attached sketch) – please modify concept such that future third lane can be implemented with minimal disruption.*
- *Southbound traffic on site will cause a headlight hazard to northbound traffic on Wanneroo Road – please propose mitigation in general area indicated on attached sketch with red line.*

- *We would also like to understand if the access to the basement car park could still match into a signalized intersection in the long term (including the third lane and a left turn lane) – if signals were ultimately required at Camberwell Rd.*

The attached development plans are being amended at this time to address the above potential future scenarios, but this will not alter the access arrangement now proposed.

2. Local Planning Policy 4.1 (LPP4.1) – Reserves and other Zones Design Guidelines

The City has requested additional information addressing the intent and objectives of this policy, which guides the consideration of development on Reserves. The policy has the intent of ensuring reasonable levels of amenity are preserved for surrounding properties, where new uses and development are proposed.

Matters were raised in connection with the requirements of LPP 4.1, which are addressed as follows:

Building Height

LPP4.1 requires that new buildings, alterations and additions should be of a similar height to adjoining sites. This is to ensure reasonable levels of amenity are preserved for existing residents adjoining development on reserves.

The proposed Masters building ranges between 12.0m - 14.4m in height. This exceeds the nominal height limit of 9.0m applicable to adjoining residential zoned land to the east (R40) and south (R30) under the Residential Design Codes of Western Australia. The 9.0m height limit listed in Table 4 of the Codes is applied unless varied by a Scheme, and a proposal may be considered 'deemed to comply' if meeting this criteria.

The Codes do not however preclude variations to the nominal 9.0m height limit, and the following design criteria in part 6.1.2 of the Codes guides the consideration of building height variations against various amenity criteria that are also relevant and applicable to this application. Noting that from ground level of the Adjoining land (Vickers Street) to the ridgeline on the Southern elevation is less than 10metres

Building height that creates no adverse impact on the amenity of adjoining properties or the streetscape, including road reserves and public open space reserves, and where appropriate maintains:

- *Adequate access to direct sun into buildings and appurtenant open spaces.*

The proposal does not inhibit the sun directly accessing buildings and open space. The overshadowing diagram lodged with the application demonstrates the very minor overshadowing pattern affecting adjoining lots to the south.

- *Adequate daylight to major openings into habitable rooms.*

The proposal will not result in a loss of sunlight to habitable rooms of adjoining dwellings.

LPP4.1 also requires that development on reserves should be set back according to the requirements of the Codes where adjoining residential properties.

Where measured from ground level of neighbouring properties at the southern boundary, the development features a wall height of 8.9m and length exceeding 25m. With reference to Table 2a of the Codes, a setback of 4.3m is required.

The proposed development features a setback of 12.5m from the southern boundary, being three times the minimum required under the Codes.

The proposal satisfies the requirements of the Codes and therefore LPP 4.1, in ensuring the compatibility of the proposal with surrounding properties.

The prevailing natural ground level at the southern boundary and large setback therefore ameliorate building bulk, along with the extensive plantings to be established at the southern boundary. The attached landscaping plans City of Stirling demonstrate this.

- *Access to views of significance.*

The proposal will not inhibit access to any existing views of significance.

- *Buildings present a human scale for pedestrians.*

Currently, the subject land contributes very little to the streetscape, with no housing being present. Only fencing and trees currently exist at the street boundary. While the building is slightly higher than average dwelling height, the development would improve personal safety for pedestrians travelling past the subject land.

The building is to be positioned opposite a group dwelling development on Wanneroo Road. These dwellings do not front Wanneroo Road or the proposed building. View impacts on these residents directly opposite are considered to be negligible. Three dwellings fronting Wanneroo Road are positioned opposite the proposed Garden centre component, however the distance of the dwellings from the Garden centre is 50m or greater and private outdoor living areas associated with these dwellings are well screened from the proposed building, being positioned behind each dwelling.

- *Building façade designs need to reduce the perception of height through design measures.*

The increased setback on the southern side of the building, as discussed previously, provides a generous landscape buffer to the residential buildings to the south, screening the building.

The use of a range of alternative building materials and colours on the Masters building are arranged to help break down the bulk and scale of the building. (painted concrete panels, prefinished insulated composite panels, painted fibre cement sheets with expressed joints, powder coated aluminium framed & glazed windows, colorbond metal cladding). The building incorporates an architectural theme and colour scheme consistent with Masters' national branding. Most importantly, blank walls are minimised to Wanneroo Road.

The building is designed to provide a contemporary and attractive premises to attract customers. The blue alucobond signage feature; the white "timber & building" signage feature, and grey "Garden" signage have been located to provide Masters' branding identity and to assist visitor orientation.

Noise

The proposed Masters store will operate between the hours of:

- Monday to Friday - 8:00am to 9:00pm [deliveries 8:00am to 5:00pm].
- Saturday - 8:00am to 5:00pm.
- Sunday - 11:00am to 5:00pm.

Deliveries to the store via the service road are to occur during opening hours only, to avoid the potential for significant noise impact on adjoining residents from trucks passing adjacent the southern boundary.

A noise impact assessment has been provided to the City to demonstrate the proposal will not result in excessive noise impacts.

Odour, Dust and Vibration

The Masters store will not incorporate activities resulting in the generation of significant odour, dust or vibration. Further, the cafeteria premises will serve food prepared elsewhere and not on-site.

3. Advertising Signage

The City and MRWA have sought to determine the extent of lighting and signage, including the level of illumination associated with the proposed signage. The new application plans show signage dimensions and details. Signage will be illuminated consistently, that is the signs will not flash.

The "Masters" signage text is to consist of fabricated flex-face letters with internal LED illumination. Lux levels for the 'Masters' signs is 438 Lux @ 3000mm distance and 610 Lux @100mm distance.

The 'Home Improvement' signage text is to consist of fabricated opal acrylic letters with internal LED illumination and translucent vinyl to the face. Lux levels for the 'Home Improvement' signage text is 83 Lux @ 3000mm distance and 150 Lux @100mm distance.

4. Local Planning Policy 6.2 – Bicycle Parking

The modified plans show 40 bicycle racks, as do the previous plans.

Further to the City's request the bicycle racks are now closer to the main entrance. Three showers are now provided (male, female and uni-sex) with 40 lockers among other amenities in proposed end of trip staff facilities.

It should be noted that cyclists and pedestrians will be able to access the proposed development via a walkway from Wanneroo road directly into the basement car parking area**.**

5. Local Planning Policy 6.3 – Bin Storage

All waste is to be accommodated internally in the 'receiving area' shown on the proposed plans. Masters have a contract with Visy for all waste and recycling.

The refuse trucks will follow the same path as the delivery trucks, stopping adjacent the 'receiving' area shown on the attached modified site plan, and leaving the site at the northern egress onto Wanneroo Road.

6. Local Planning Policy 6.7 – Parking and Access

The City has classified the premises as 'Hardware Showroom', 'Restaurant', and 'Garden Centre', and calculated the parking requirements on this basis.

In fact, the nature and composition of goods sold in Master's stores is predominantly 'Homewares', which best fit the definition of "Showroom" under LPS3, as opposed to 'Hardware Showroom'. In particular, Masters sells Homewares; whitegoods and appliances such as ovens, washing machines, fridges and freezers; kitchen designing and accessories; home décor; lighting and pendants; carpets and floor coverings; bbq and camping; and seasonal gifts such as Christmas supplies etc.(refer sample photos provided)

The Department of Commerce have classified Masters as 'Homewares', and exclude Masters from trading during standard Hardware store trading hours.

For example, the opening hours for Hardware stores such as Bunnings are 7am – 7pm on Saturday's and Sunday's, and 7am – 9pm weekdays.

Masters Home Improvement opening hours are Saturday 8am -5pm, Sunday 11am – 5pm, and 8am – 9pm weekdays. The typical floor layout for the Masters store trading area comprises the following:

- Showroom 49%
- Hardware Showroom (include trade areas) 31%
- Garden Centre 13%
- Café 0.5%
- Admin & amenities, Entry/Exits/ Lobby's/Lifts (Balance)

This proposal also incorporates a Café (restaurant) component being 63m2. The attached photographs evidence the type of bulky goods sold at Masters stores.

On the basis that Masters stores allocate such a large floor area component to the sale of goods best fitting the definition of 'Showroom' under LPS3, it is considered necessary that parking demand and traffic generation be determined accordingly. A modified parking assessment prepared by Shawmac is attached.

7. Engineering Approvals Business Unit Comments

Comments prepared by the City's engineers are addressed as follows:

Basement Car Park

- *'Only having one entry / exit point to the 360 + parking bays has the potential for delays, and a second access point should be investigated'.*

The amended proposed layout now has traffic entering and exiting the basement car park on a straight alignment which will facilitate more effective transfer of traffic into and out of the carpark area. With a peak hour flow of about 160 vehicles exiting the car park from a number of parking aisles off the main basement access road against an entering flow of similar magnitude, sufficient gaps are expected to be available and delays minimal and within an acceptable range.

- *'The initial 90 degree left hand turn into the carpark is not ideal, and an alternative solution should be investigated.'*

The amended proposed layout now has traffic entering and exiting the basement car park on a straight alignment which will facilitate more effective transfer of traffic into and out of the carpark area.

- 'The main north south driveway leading from the entry point forces drivers to make a left or right turn part way along. This has causes some problems in other parking facilities, as it confuses drivers. An alternative design should be investigated. Adequate signage and pavement markings will need to be implemented in order to advise drivers of the road geometry'.

The amended proposed layout now has traffic entering and exiting the basement car park on a straight alignment which will facilitate more effective transfer of traffic into and out of the carpark area.

- *'Column locations should comply with AS/NZS 2890.1:2002 figure 5,1.'*

Agreed and documentation will comply with codes

- *"Pedestrians need to be guided to safe pathways and crossing points throughout the facility. These pathways need to be adequately signed and have good sightlines, and suitable for trolleys to be pushed along".*

Agreed, this will be detailed as part of the working drawings and submitted to the City for review and approval.

- *'Access to the bicycle racks appears to be quite restricted'.*

Agreed, this will be detailed as part of the working drawings and submitted to the City for review and approval.

- *'A trolley bay should be located at the foot of the travelators'.*

Agreed, this will be detailed as part of the working drawings and submitted to the City for review and approval.

Ground Level Parking Outside of the Trade Area Gates

- *'This would be considered a 'blind aisle' and so a 'turning bay' will be required to allow vehicles to turn and leave the area in a forward gear'.*

Access options are being reviewed pending consideration by MRWA. Dependent on the outcome this may not be an issue – if blind aisles are created a turning area will be provided. – This will be detailed as part of the working drawings and submitted to the City for review and approval.

- *'Personnel doors exiting into the service driveway need protection'.*

Agreed, this will be detailed as part of the working drawings and submitted to the City for review and approval.

- *'Service vehicle wheel movements need to be indicated through the site, from leaving Wanneroo Road through to entering Wanneroo Road'.*

Agreed, this will be detailed as part of the working drawings and submitted to the City for review and approval.

- *'Speed humps required at strategic locations to slow vehicle speeds'.*

Agreed, this will be detailed as part of the working drawings and submitted to the City for review and approval.

- *'More finished levels required where ramps are located'.*

Agreed, this will be detailed as part of the working drawings and submitted to the City for review and approval.

8. Engineering Design Business Unit Comments

Comments prepared by the City's drainage engineers are addressed as follows:

- *'All stormwater runoff generated within the property shall be contained onsite and infiltrated to the ground water table using RC soakwells in accordance with standard City of Stirling approval conditions. A review of the Town Planning Report Appendix 2 has found that the proposed internal drainage design for the proposed development site is based upon the Rational Method. Whilst the Rational Method is considered acceptable for estimating peak flows in drainage conduits it is not considered appropriate for estimating required runoff storage and infiltration requirements. The proposed storage requirements are generally found to be low and will require review in accordance with City of Stirling requirements'.*

Soakwell / Atlantis cell capacities have been based on providing storage based on the formula 'Storage vol = Impervious area X 0.0125'. This is similar to the City's stated requirement of 'Storage vol = Impervious area X 0.0122'. The Rational Method was used to model a 100 year storm to ascertain storage volumes for that return frequency, and as such the assessment is considered to be appropriate.

- *'It is noted that the u se of Atlantis Cells is proposed to supplement soakwell storages within the development site. Atlantis Cells and similar modular "crate" systems are not supported by the City due primarily to their inability to be accessed for ongoing maintenance. In the even that such systems become contaminated with foreign water borne materials and/or exhibit diminished infiltration performance overtime, there is little alternative other than to replace the entire system. This can be costly for the owners, cause disruption to operations, and may even result in internal flooding of the site'.*

The use of Atlantis tanks is common practice and while the City does not support their use, we believe that in conjunction with the use of soak-wells in paved areas and with cells located in garden areas, the risk alluded to by the City is low.

Notwithstanding this, the drainage will be reviewed in conjunction with the City's officers as part of the development of working drawings.

9. Health and Compliance Business Unit Comments

We have addressed the South Elevation (Vickers Street) with substantial landscaping and screening (attached herewith) to provide a better visual.

10. Parks and Architect Business Unit Comments

Corymbia Callophylla has been substituted with an alternative species, as shown on the revised landscaping plans attached herewith.

11. Management Plans

The following Management plans, and various examples are attached herewith for perusal by the City, and will utilised by the builder and developer including the following:

- Waste Management Plan
- Emergency Response Management Plan
- Health and Safety Management Plan
- Quality Management Plan
- Environmental Management Plan

12. RF Investigation

We have attached the RF investigation undertaken to inform the Federal safety assessment process. We also note that offices have been located on the site for many years.

We trust the advice presented is sufficient to inform the remainder of the assessment process and look forward to your positive consideration of the above information.

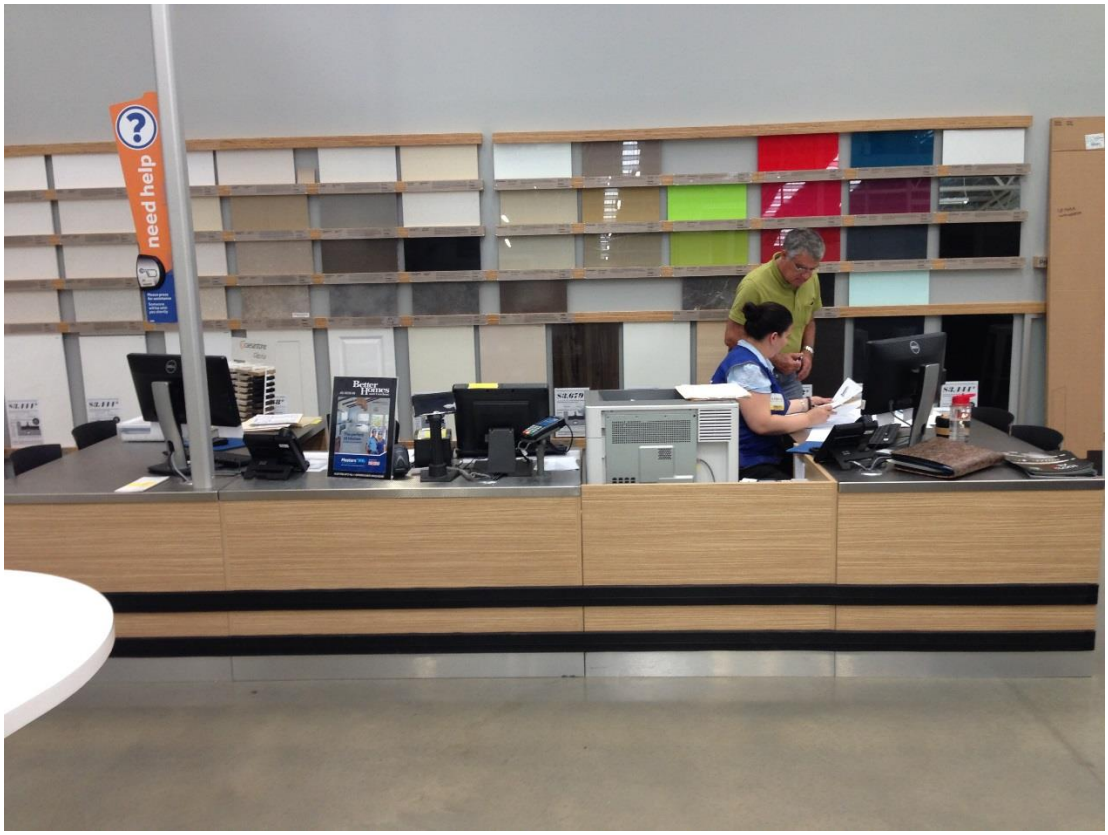
Please contact me on 9321 3011, or Malcolm Purcell of Acure Asset Management on 9322 5448 should you wish to discuss any matter in any greater level of detail.

Yours faithfully,

Jeff Malcolm
MGA TOWN PLANNERS

Internal Photo Samples


BEST PRICE
2 great kitchen ranges to inspire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26 November 2014

City of Stirling
Locked Bag 2506
Perth, WA 6001

Attention: Greg Bowering - Manager Planning Services

Proposed Masters Store – Lot 101, 601 Wanneroo Road, Hamersley. DA14/2483

We refer to the abovementioned development and the meeting held at the City's offices yesterday on 25 November 2014 with the City's planning staff.

Main Roads WA Comments

Further to our discussions, Acure Asset Management have modified the proposed development site plan to accommodate changes requested by Main Roads WA on 25th November 2014, viz;

- *The concept proposed accords generally with our intent by utilizing maximum offset between Camberwell and the access driveway.*
- *Concept does not accord with our advised requirement to provide a third lane through this location in the future (refer attached sketch) – please modify concept such that future third lane can be implemented with minimal disruption.*
- *Southbound traffic on site will cause a headlight hazard to northbound traffic on Wanneroo Road – please propose mitigation in general area indicated on attached sketch with red line.*
- *We would also like to understand if the access to the basement car park could still match into a signalized intersection in the long term (including the third lane and a left turn lane) – if signals were ultimately required at Camberwell Rd.*

Main Roads WA have been provided with the attached modified plans, and will communicate their decision on the alterations made to ourselves and the City in the near future.

Distribution of Land Use

We described the general distribution of land use throughout Masters stores in our letter dated 25 November 2014, including ratios for Showroom, Hardware, Garden Centre and Café activities in Masters stores. This formed the basis for the parking assessment prepared by Shawmac provided on 25 November 2014.

Following our discussion, the attached modified plans now include a land use plan, showing the location and extent of the Showroom, Hardware, Café and Garden Centre components more definitively.

The extent of Showroom development is 51.4%, which slightly exceeds the standard 49% assumed in the parking study. However, as Showrooms have a slightly lower parking ratio applicable, the Shawmac assessment may be deemed conservative. The Shawmac parking assessment also assumed a 'Warehousing' component, as an industry standard, given the extent of storage occurring throughout the Showroom and Hardware areas.

We trust the modified site plan and land use distribution plan is satisfactory and of assistance to the City.

Please contact me on 9321 3011, or Malcolm Purcell of Acure Asset Management on 9322 5448 should you wish to discuss any matter in any greater level of detail.

Yours faithfully,

Jeff Malcolm
MGA TOWN PLANNERS

CONSULTING CIVIL & TRAFFIC ENGINEERS, RISK MANAGERS

Project:	**Transport Impact– V5** **Masters Hamersley** Proposed Home Improvement Superstore
Client:	**Pride Projects**
Author:	Heidi Lansdell
Signature:	
Date:	12th January 2015

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Document Status.

Ver. No.	Author	Reviewed by	Date	Issued for	Signature	Date
1	H. Lansdell	P. Nguyen	23/09/14	FINAL		24/09/14
2	H. Lansdell	P. Nguyen	29/10/14	REV		29/10/14
3	H. Lansdell		20/11/14	REV		20/11/14
4	H. Lansdell		24/11/14	REV		24/11/14
5	H. Lansdell	T Shaw	12/01/15	REV		12/01/15

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CONTENTS

1. INTRODUCTION AND BACKGROUND

1.1. Overview

This Transport Impact Assessment has been prepared by Shawmac Pty Ltd, on behalf of Pride Projects, with regard to a proposed Masters Home Improvement store proposed to be located on the west side of Wanneroo Road, between North Beach Road and Reid Highway, opposite the existing Wanneroo Road/Camberwell Road unsignalised intersection, in the City of Stirling. The subject land is currently owned and used by Broadcast Australia.

1.2. Site Location

The subject site is within the suburb of Balcatta, in the City of Stirling, located approximately 11.5km north of Perth CBD. The development is proposed to be located on the western side of Wanneroo Road, opposite the existing unsignalised intersection with Camberwell Road, on lands owned by Broadcast Australia. Existing Broadcast Australia operations to the north of the subject site is proposed to continue operating at offices located to the north of the site. Existing access to the lands consists of two crossovers with a left-in/left-out located approximately 85m south of Camberwell Road and a full movements unsignalised access 105m north of Camberwell Road providing direct access to the Broadcast Australia offices. The site is surrounded by residential uses to the south and west, and various residential and commercial uses to the north and east. The location of the site is shown in Figure 1.

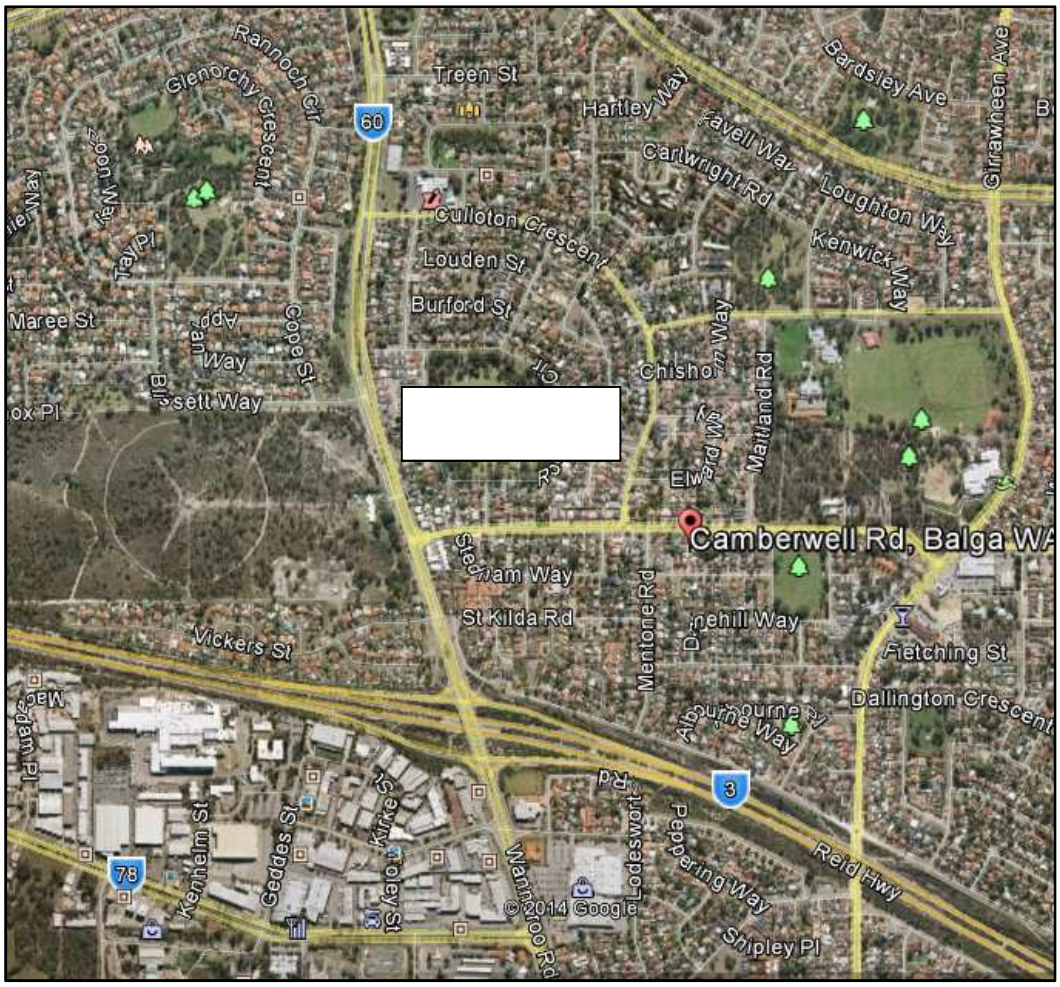


Figure 1 - Aerial View of Subject Site

The metropolitan context of the site is shown in Figure 2.

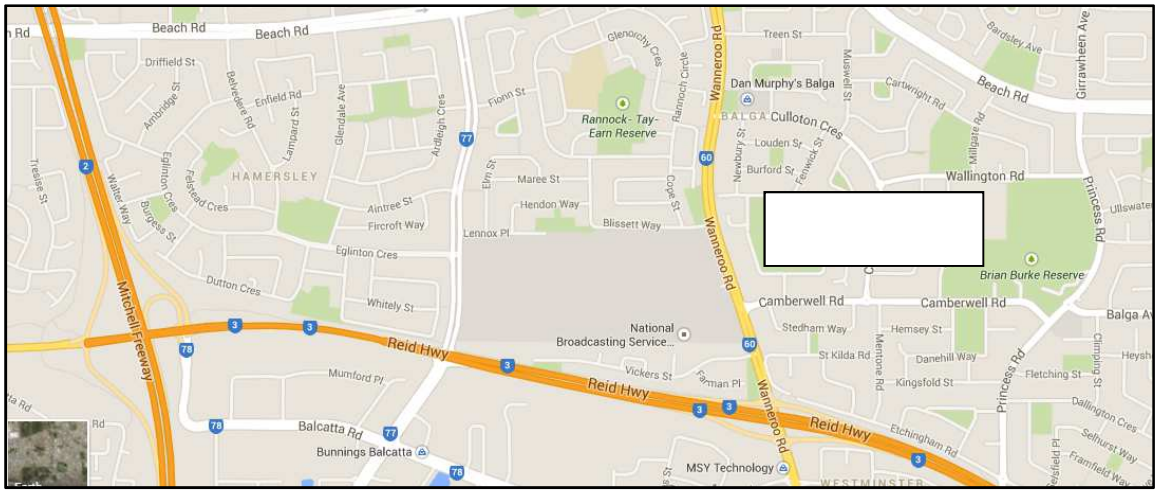


Figure 2 - Metropolitan Context

1.3. Scope of Assessment

This report has been prepared in accordance with the Western Australian Planning Commission's *Transport Assessment Guidelines for Developments: Volume 4 – Individual Developments* (2006), the City of Stirling's *Parking and Access Policy 6.7* and in consultation with both Main Roads Western Australia and the City of Stirling.

Specifically, this report aims to assess the impacts of the proposed development on the adjacent road network and the intersection of the prosed access with Wanneroo Road. In addition, the assessment considers the proposed internal circulation, service/delivery arrangements and parking on the site.

For this purpose, the traffic operations at the proposed un-signalised T-intersection of Wanneroo Road/Northern Access (120m north of Camberwell Road) has been assessed under future proposed traffic conditions with regard to the potential impacts from additional traffic generated by the proposed development of the site.

2. PROPOSED SITE PLAN

The proposed site is located within the suburb of Balcatta in the City of Stirling. The site plan for the proposed development has been prepared by Leffler Simes as shown in **Appendix A.**

2.1. Proposed Land Uses

The subject site is proposed to be located on Commonwealth land currently occupied by Broadcast Australia on the west side of Wanneroo Road between Beach Road and Reid Highway. The proposal consists of a Masters Home Improvement store to include a homewares area and café, garden centre, hardware showroom, trade area and ancillary facilities to be served by three (3) crossovers to Wanneroo Road and an undercroft car parking area.

According to the site plans provided, the proposal consists of the development of a Masters Home Improvement Store consisting of the following elements:

Use	Component	% of Total Area	Area M^2
Showroom	Homewares (including Café 62.27 m2) less Warehouse component	49%	4,767
Hardware Showroom	Hardware less Warehouse Component	32%	3,113
Garden Centre	Garden Centre	13%	1,807
	Warehouse		3,377
	Admin, Amenities Public / Staff	6%	834
	Entry & Exit Lobby, Lifts, Travelators		
	Total Area		**13,897**

The proposed crossover arrangements will consist of a full movements un-signalised T- intersection located near the northern boundary of the site, approximately 120m north of Camberwell Road, and a left-in only for service vehicles near the southern boundary of the site (at the location of the existing left-in/left-out crossover approximately 85m south of Camberwell Road). Service vehicles will enter the site via a left turn only from Wanneroo Road via a westbound entry at the southern end of the site utilising a one-way system westbound and northbound to access the service and delivery area at the rear of the proposed development and then exiting at the northern access to Wanneroo Road.

2.2. Existing Road Network

Wanneroo Road

Wanneroo Road is classified as a *Primary Distributor* road which is defined as a road which *"…connects to other Primary and Distributor roads and facilitates the movement of interregional and/or cross-city road traffic."* In the vicinity of the site, Wanneroo Road has been constructed as a dual divided carriageway. It is operated under a posted speed limit of 70kph and is owned and maintained under the jurisdiction of Main Roads Western Australia (MRWA).

Reid Highway

Reid Highway is classified as a *Primary Distributor* road which is defined as a road which *"…connects to other Primary and Distributor roads and facilitates the movement of interregional and/or cross-city road traffic."* In the vicinity of the site, Reid Highway has been constructed as a dual divided *Control-of-Access* carriageway. It is operated under a posted speed limit of 90kph and is owned and maintained under the jurisdiction of Main Roads Western Australia.

Camberwell Road

Camberwell Road is classified as a *Local Distributor* road which is defined as a road which *"…plays a minor network role in the boundary road network and connects Distributor roads to Access roads as well as facilitating movement of traffic within local areas."* In the vicinity of the site, Camberwell Road has been constructed as a single wide divided carriageway flaring on approach to Wanneroo Road. It operates under a speed limit of 50 kph and is owned and maintained by the City of Stirling.

Figure 3 shows the existing road hierarchy and functional classification for the roads in the vicinity of the site.

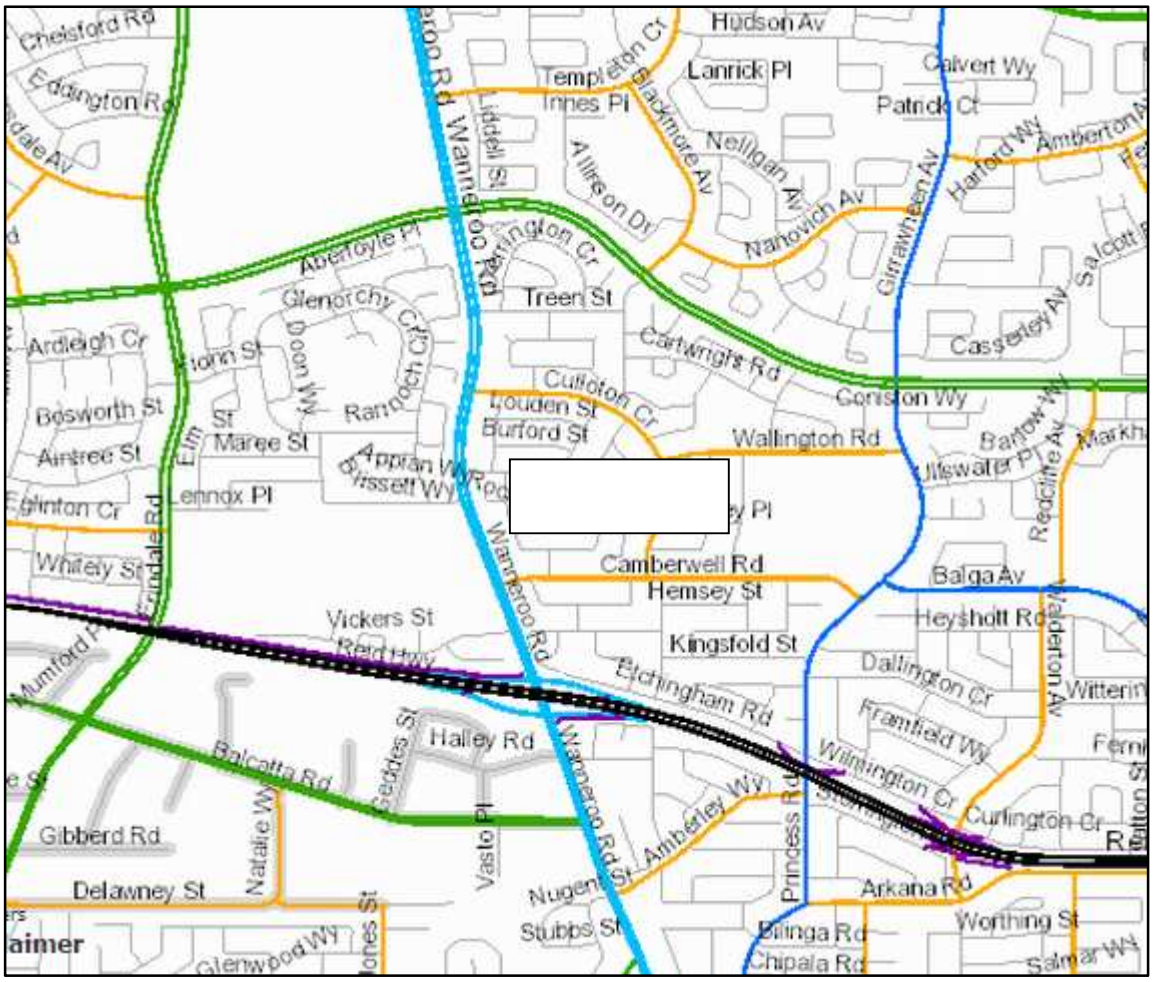


Figure 3 - Main Roads Functional Road Hierarchy

2.3. Intersections

Reid Highway/Wanneroo Road

The Reid Highway/Wanneroo Road intersection is a grade-separated intersection with full interchanges to and from the north/south and the east/west. Off- and on-ramps are controlled by traffic signals on the Reid Highway approaches to the intersection.

Wanneroo Road/Camberwell Road

The Wanneroo Road/Camberwell Road intersection is currently an unsignalised T-intersection with stop control in place on the Camberwell Road approach to the intersection. A dedicated right-turn pocket is in place on the northbound approach to the intersection with a fully channelised southbound left-turn lane in place on the southbound approach. A raised 10m central median is currently in place on Wanneroo Road with a 2m raised median in place on the Camberwell Road approach accompanied by a flared cross-section to accommodate simultaneous right- and left-turn outbound movements.

2.4. Traffic Volumes and Flows

Existing traffic data obtained from Main Roads WA (MRWA) is shown in Table 1.

Table 1 – Existing Traffic Volumes

Road	Existing ADT (vpd)	Source/Date
Wanneroo Road (Between Beach Road and Reid Highway)	40,400 vpd	MRWA (2014)
Reid Highway (West of Wanneroo Road)	45,200 vpd	MRWA (2013)
Reid Highway (East of Wanneroo Road)	53,100 vpd	MRWA (2014)
Camberwell Road (East of Wanneroo Road	4,100 vpd	MRWA (2005)

The road classification for each road surrounding the proposed development site is shown in Table 2 below based on information obtained from Main Roads WA and the City of Stirling.

Table 2 –Existing Road Network: Practical Capacity vs. Existing Traffic Volumes

Road Category	Road Name	Desirable Max Traffic	Daily Volume	Thursday PM Peak Hour Volume
Primary Distributor	Wanneroo Road	35,000 to 50,000 vpd (dual carriageway)	40,400 vpd	3375 vph
Primary Distributor	Reid Highway	70,000 to 80,000 vpd (dual carriageway)	45,200 to 53,100 vpd	3180 to 4100 vpd
Local Distributor	Camberwell Road	5,000 to 7,000 vpd	4,100 vpd	340 vph

Traffic surveys were also undertaken for the intersection of Wanneroo Road/Camberwell Road between 4:00pm and 7:00 pm on Thursday 13th March 2014. The results of these turning movement surveys for the Thursday afternoon peak hour are shown in Figure 4.

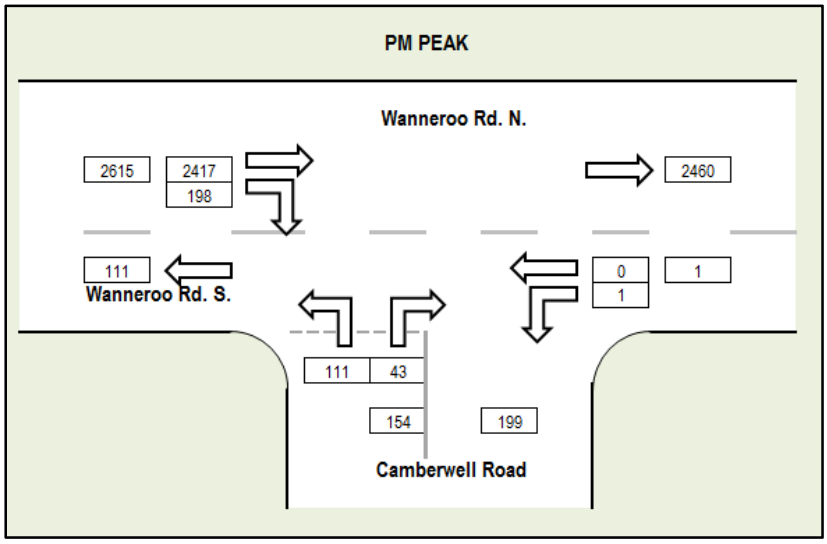


Figure 4 - Wanneroo Road/Camberwell Road: Existing P.M. Peak Hour Traffic

2.5. Existing Public Transport, Pedestrian, and Cyclist Facilities

The site is currently served by Transperth Bus Route 346 (Noranda-Morley Bus Station via Emberson Road) and Route 347 (Noranda-Morley Bus Station via Cambon Road) which operates along Wanneroo Road adjacent to the site with bus stops in place within close walking distance to the proposed development. The nearest bus stop is located approximately 70m south on the west side of Wanneroo Road and 190 m south on the east side of the road just south of the intersection with Vickers Road. Typical service ranges between 20 to 30 minutes during the weekday peak periods and 30 to 60 minutes during the off-peak periods including evenings and weekends.

The public transport network in the vicinity of the site is shown in Figure 5 below.

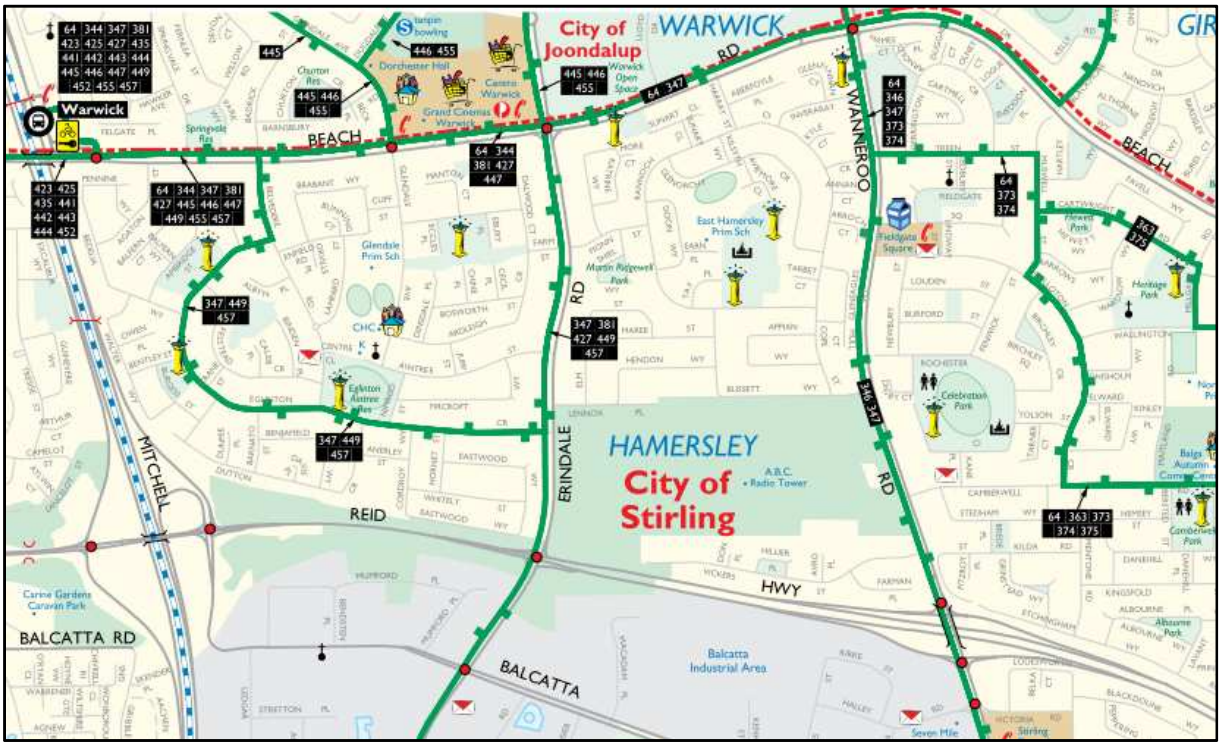


Figure 5 - Public Transport Network in Vicinity of Subject Site

The closest train station to the site, Warwick Railway Station, is located approximately 2.7km north-west of the site. Although this exceeds the general limit of 800m which people are generally willing to walk to access a train service, the existing line haul bus routes on Wanneroo Road, adjacent to the site, provide a direct connection to the railway station.

There is generally satisfactory pedestrian infrastructure in place in the surrounding precinct to provide suitable pedestrian access to the proposed development site. Dual use paths are in place on both sides of Wanneroo Road adjacent to the site with a Principal Shared Path (as part of the *Perth Bicycle Network)* in place on Camberwell Road. Further to the south, there is a dual use path in place on the north side of Reid Highway.

The existing pedestrian and cycling transport infrastructure in the vicinity of the site is shown in Figure 6. It should be noted that cyclists and pedestrians will be able to access the proposed development via an access ramp off Wanneroo Ramp directly into the basement car parking area.

Figure 6 - Local Pedestrian and Bicycle Network

3. CHANGES TO SURROUNDING TRANSPORT NETWORKS

3.1. Road Network

No changes to the surrounding existing road network are anticipated to coincide with the proposed development; however the road reservation widths indicate that at some point in the future, Wanneroo Road may be upgraded to a triple divided carriageway. However, it should be noted that no programming, planning or funding is currently in place for these works and these upgrades are considered to be a long-term proposition (10+ years).

3.2. Access, Service/Delivery and Car Parking Arrangements

The proposed access arrangements are shown on the site plan and consist of the following:

- A full movements unsignalised T-intersection access located on the west side of Wanneroo Road at the northern boundary of the site with the intersection.
- A left-in movements only driveway on the west side of Wanneroo Road for service vehicles only near the southern boundary of the site.

3.3. Public Transport, Pedestrian, and Cyclist Facilities

No changes to the existing public transport services and pedestrian and cyclist infrastructure are anticipated as part of the development. The proposed development includes the provision of 40 bicycle racks plus associated end-of-trip facilities within the undercroft car parking area.

4. TRANSPORT ANALYSIS

A traffic generation and distribution exercise was undertaken to assess the potential traffic impacts associated with the proposed development. The aim of this exercise was to establish the traffic volumes which would be generated from the development and to quantify the impact that the additional traffic has on the surrounding road network, specifically on the operations at the crossover to Wanneroo Road in the context of the designed practical capacity of the boundary road network. Also, the traffic generation exercise aimed to establish the volume and functionality of traffic through the key proposed site development crossovers, including traffic anticipated to be generated by the proposed development of the subject site.

4.1. Trip Generation

The traffic generated by the proposed development has been estimated by applying trip generation rates derived from the Institute of Transportation Engineers' (ITE) publication *Trip Generation 8th Edition*.

The trip generation rates applied for the purposes of this assessment were *Home Improvement Superstores (Category 862).* The proposed directional distribution was also derived from the ITE rates. The impact of trips generated is assessed in terms of both volume and the time at which peak generation occurs. A summary of the calculations for a typical Thursday p.m. peak hour which would represent the 'worst case' scenario for traffic operations along Wanneroo Road is shown in Table 3 below.

Table 3 - Weekday Trip Generation and Directional Distribution

Weekday					Estimated Generation					
	Generation Rate		Unit	Quantity	Daily			Thursday P.M. Peak Hour		
Land Use	Daily	PM Peak			In	Out	Total	In	Out	Total
Home Improvement Superstore	31.04	2.63	GFA (m^2)	13 943	2164	2164	**4328**	196	170	**366**

In order to test the integrity of the traffic generation prediction, surveys of two existing Master's stores at Bayswater and Bibra Lake were undertaken on the Saturday and Monday and Sunday and Tuesday respectively in the week prior to Christmas.

Both sites have equivalent floor areas to that proposed at Balcatta and it is reasonable for the purposes of this report to assume that the traffic generation rate would be similar. Based on surveys, the peak traffic generation rates on a Monday to Friday are expected to occur between 0900 and 1000 in the morning and 1500 and 1600 in the afternoon.

Volumes expected to be generated are:

- 70 entering and 62 exiting between 0900 and 1000;
- 80 entering and 84 exiting between 1500 and 1600.

Morning peak flows are indicated as being lower than that predicted by the ITE rates (132 recorded versus 196 predicted) while the afternoon peak flows were similar, a small disparity was identified (164 recorded versus 170 predicted).

A review of SCATS counts for the Reid Highway – Wanneroo Road intersection indicates that peak period on the adjacent road network is likely to occur between 0730 and 0830 in the morning and 1630 and 1730 in the afternoon. During these periods, based on the pattern at the other two sites, traffic expected to enter and leave the site is as below:

- 32 entering and 23 exiting between 0730 and 0830;
- 38 entering and 44 exiting between 1630 and 1730.

During the PM peak period on the adjacent road network, survey evidence suggests that measurably less traffic will be generated from the site than that indicated by the Institute of Transportation Engineers' (ITE) *Trip Generation 8th Edition*.

4.2. Trip Distribution

Based upon the existing traffic patterns in the area and the spatial distribution of the adjacent land uses, the following distribution for the proposed development generated traffic has been assumed:

- 40% to and from the north;
- 10% to and from the east;
- 15% to and from the south-west via Reid Highway;
- 15% to and from the south-east via Reid Highway; and
- 20% to and from the south via Wanneroo Road through the Reid Highway intersection.

The anticipated site-generated traffic based on ITE predicted flows from a typical Thursday weekday p.m. peak hour (which represents the worst case scenario) was assigned onto the boundary road system and gives the following indicative patterns:

- Reid Highway (West)
    - Weekday Daily: +649 vehicular trips
    - Weekday P.M. Peak Hour: +55 vehicular trips
- Reid Highway (East)

  - Weekday Daily: +649 vehicular trips
  - Weekday P.M. Peak Hour: +55 vehicular trips
- Wanneroo Road (South)
  - Weekday Daily: +2164 vehicular trips
  - Weekday P.M. Peak Hour: +183 vehicular trips
- Wanneroo Road (North)
  - Weekday Daily: +1731 vehicular trips
  - Weekday P.M. Peak Hour: +146 vehicular trips
- Camberwell Road
  - Weekday Daily: +433 vehicular trips
  - Weekday P.M. Peak Hour: +37 vehicular trips

For the purpose of assessment of the intersection of the proposed access and Wanneroo Road, flows based on those surveyed at the Bayswater and Bibra Lake sites were adopted together with the following assumptions.

- Traffic accessing and egressing the site will be evenly split to and from the north and south;
- Gap acceptance values adopted are based on those recommended by Austroads;
- Other Sidra default values are adopted; that is the modelling is uncalibrated;
- No heavy vehicles will enter the site via this entrance and based on truck numbers recorded as part of the survey, truck volumes exiting will be assumed to represent 1% of the total flow.

4.3. Intersection and Crossover Assessment

The operational performance of the proposed access to the Masters car park was assessed using the software program SIDRA Intersection 5.1. This was undertaken for the anticipated conditions using the traffic volumes as detailed below which includes the addition of the development generated traffic (as detailed in Section 4.2), for the operation of the full-movement access to the development.

SIDRA is a commonly used intersection modelling tool used by traffic engineers for all types of intersections. Outputs for four standard measures of operation performance can be obtained, being Degree of Saturation (DoS), Average Delay, Queue Length, and Level of Service (LoS).

- Degree of Saturation is a measure of how much physical capacity is being used with reference to the full capability of the particular movement, approach, or overall intersection. A DoS of 1.0 equates to full theoretical capacity although in some instances this level is exceeded in practice. SIDRA uses maximum acceptable DoS of 0.90 for signalised intersections for its Design Life analysis. Design engineers typically set a maximum DoS threshold of 0.95 for new intersection layouts or modifications.
- Average Delay reports the average delay per vehicle in seconds experienced by all vehicles in a particular lane, approach, or for the intersection as a whole. For severely congested intersections the average delay begins to climb exponentially.

- Queue Length measures the length of approach queues. In this document we have reported queue length in terms of the length of queue at the 95th percentile (the maximum queue length that will not be exceeded for 95 percent of the time). Queue lengths provide a useful indication of the impact of signals on network performance. It also enables the traffic engineer to consider the likely impact of queues blocking back and impacting on upstream intersections and accesses.
- Level of Service is a combined appreciation of queuing incidence and delay time incurred, producing an alphanumeric ranking of A through F. A LoS of A indicates an excellent level of service whereby drivers delay is at a minimum and they clear the intersection at each change of signals or soon after arrival with little if any queuing. Values of B through D are acceptable in normal traffic conditions. Whilst values of E and F are typically considered undesirable, within central business district areas with significant vehicular and pedestrian numbers, corresponding delays/queues are unavoidable and hence, are generally accepted by road users.

4.4. Sidra Results

The results of the uncalibrated SIDRA analysis under proposed weekday peak hour conditions are detailed below.

4.4.1. Road Network Peak Hour Assessment.

Network AM Flows.

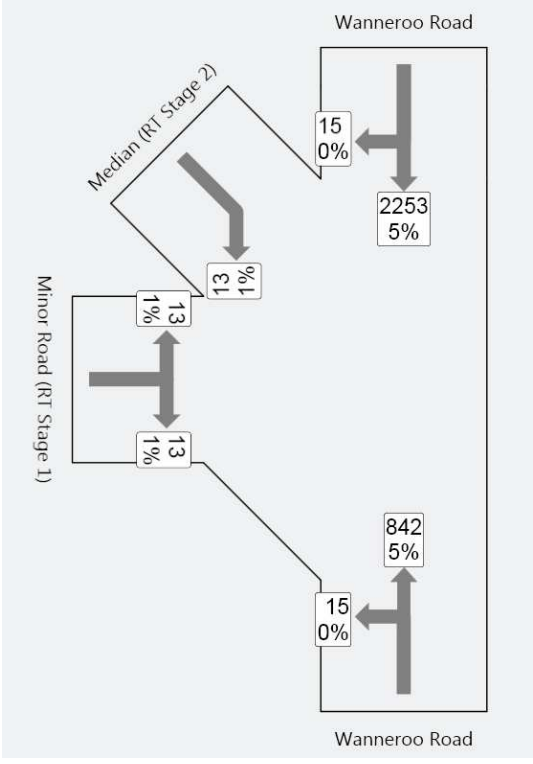


Figure 7 - AM Peak Flows (07:30 to 08:30)

Network AM Modelling Results.

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: Wanneroo Road											
4	L	15	0.0	0.008	7.2	LOS A	0.0	0.0	0.00	0.64	48.7
5	T	842	5.0	0.223	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		857	4.9	0.223	0.1	NA	0.0	0.0	0.00	0.01	59.8
North: Wanneroo Road											
11	T	2253	5.0	0.596	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R	15	0.0	0.019	10.3	LOS B	0.1	0.5	0.60	0.71	45.2
Approach		2267	5.0	0.596	0.1	NA	0.1	0.5	0.00	0.00	59.9
North West: Median (RT Stage 2)											
32	R	13	1.0	0.083	22.2	LOS C	0.2	1.3	0.92	0.94	12.2
Approach		13	1.0	0.083	22.2	LOS C	0.2	1.3	0.92	0.94	12.2
West: Masters Access Road (RT Stage 1)											
1	L	13	1.0	0.028	15.1	LOS C	0.1	0.7	0.63	0.95	24.7
3	R	13	1.0	0.016	12.2	LOS B	0.1	0.5	0.60	0.86	27.1
Approach		25	1.0	0.028	13.6	LOS B	0.1	0.7	0.62	0.91	25.8
All Vehicles		3162	4.9	0.596	0.3	NA	0.2	1.3	0.01	0.02	59.5

Figure 8 - AM Peak Assessment (07:30 to 08:30)

The results indicate that the proposed intersection will operate at acceptable Levels of Service during the a.m. peak hour under existing traffic demands for most movements with the Masters access exit movements at lower LOS due to the predicted delays. Limited delays are induced to Wanneroo Road traffic operations.

Network PM Flows.

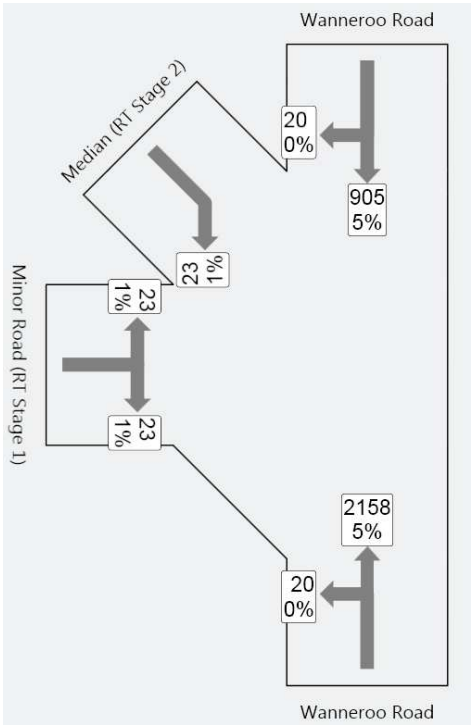


Figure 1 PM Peak Flows (16:30 to 15:30)

Network PM Modelling Results.

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: Wanneroo Road											
4	L	20	0.0	0.011	7.2	LOS A	0.0	0.0	0.00	0.64	48.7
5	T	2158	5.0	0.571	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		2178	5.0	0.571	0.1	NA	0.0	0.0	0.00	0.01	59.9
North: Wanneroo Road											
11	T	905	5.0	0.240	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R	20	0.0	0.154	36.1	LOS E	0.5	3.4	0.94	0.98	28.6
Approach		925	4.9	0.240	0.8	NA	0.5	3.4	0.02	0.02	58.7
North West: Median (RT Stage 2)											
32	R	23	1.0	0.024	3.5	LOS A	0.1	0.4	0.48	0.54	28.3
Approach		23	1.0	0.024	3.5	LOS A	0.1	0.4	0.48	0.54	28.3
West: Masters Access Road (RT Stage 1)											
1	L	23	1.0	0.482	109.6	LOS F	1.4	9.8	0.98	1.05	6.0
3	R	23	1.0	0.181	39.5	LOS E	0.6	4.0	0.94	1.01	13.5
Approach		46	1.0	0.482	74.6	LOS F	1.4	9.8	0.96	1.03	8.2
All Vehicles		3173	4.8	0.571	1.4	NA	1.4	9.8	0.02	0.03	57.7

Figure 2 PM Peak Assessment (16:30 to 17:30)

The results indicate that the proposed intersection will operate at acceptable Levels of Service during the p.m. peak hour under existing traffic demands for most movements; however the right turn from Wanneroo Road into the site is expected to experience delays of up to 36 seconds. Notwithstanding this, the predicted queue length is less than one vehicle and no adverse impacts are expected. The Masters access exit movements are predicted to be lower due to the predicted delays; however queue lengths are not expected to exceed 2 vehicles.

4.4.2. Site Peak Hour Assessment.

Site AM Flows.

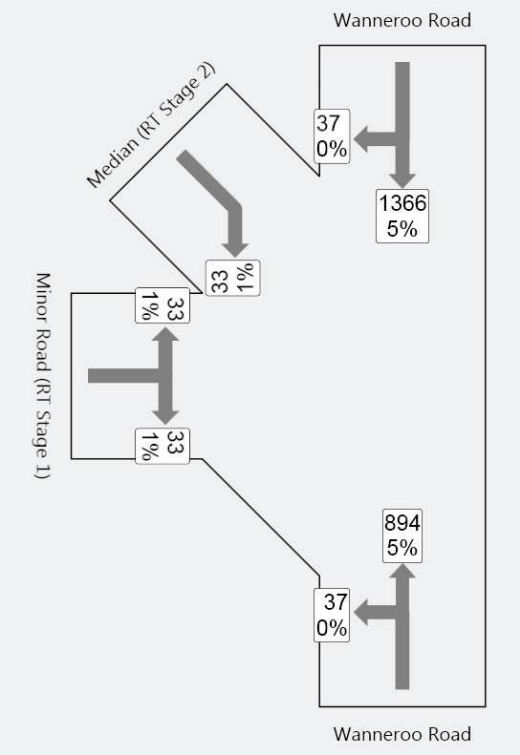


Figure 3 AM Peak Flows (09:00 to 10:00)

Site AM Modelling Results.

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: Wanneroo Road											
4	L	37	0.0	0.020	7.2	LOS A	0.0	0.0	0.00	0.64	48.7
5	T	894	5.0	0.237	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		931	4.8	0.237	0.3	NA	0.0	0.0	0.00	0.03	59.5
North: Wanneroo Road											
11	T	1366	5.0	0.362	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R	37	0.0	0.050	10.9	LOS B	0.2	1.4	0.62	0.78	44.6
Approach		1403	4.9	0.362	0.3	NA	0.2	1.4	0.02	0.02	59.5
North West: Median (RT Stage 2)											
32	R	33	1.0	0.054	6.0	LOS A	0.2	1.0	0.68	0.76	24.2
Approach		33	1.0	0.054	6.0	LOS A	0.2	1.0	0.68	0.76	24.2
West: Masters Access Road (RT Stage 1)											
1	L	33	1.0	0.079	16.2	LOS C	0.3	1.9	0.67	1.00	23.9
3	R	33	1.0	0.046	12.9	LOS B	0.2	1.3	0.63	0.93	26.4
Approach		65	1.0	0.079	14.5	LOS B	0.3	1.9	0.65	0.96	25.1
All Vehicles		2432	4.7	0.362	0.7	NA	0.3	1.9	0.04	0.06	58.5

Figure 4 AM Peak Assessment (09:00 to 10:00)

The results indicate that the proposed intersection will operate at acceptable Levels of Service during the a.m. peak hour under existing traffic demands for all movements.

Site PM Flows.

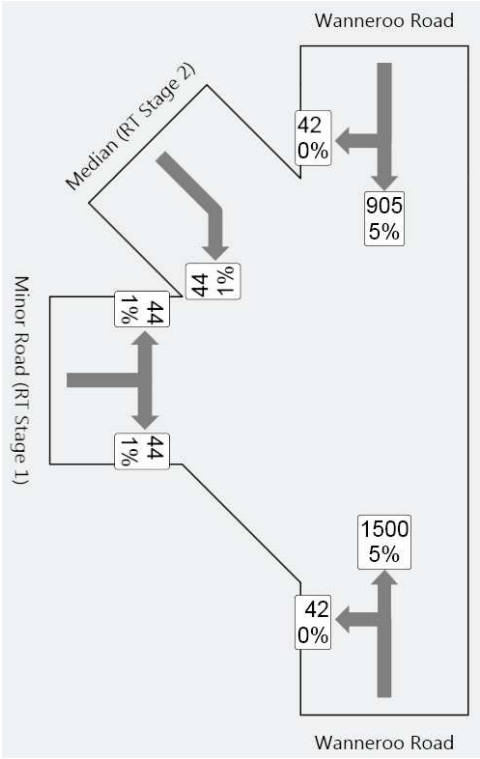


Figure 5 PM Peak Flows (15:00 to 16:00)

Site PM Modelling Results.

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: Wanneroo Road											
4	L	42	0.0	0.023	7.2	LOS A	0.0	0.0	0.00	0.64	48.7
5	T	1500	5.0	0.397	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1542	4.9	0.397	0.2	NA	0.0	0.0	0.00	0.02	59.7
North: Wanneroo Road											
11	T	905	5.0	0.240	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R	42	0.0	0.123	17.8	LOS C	0.4	3.1	0.83	0.93	38.6
Approach		947	4.8	0.240	0.8	NA	0.4	3.1	0.04	0.04	58.7
North West: Median (RT Stage 2)											
32	R	44	1.0	0.046	3.6	LOS A	0.1	0.9	0.49	0.57	28.2
Approach		44	1.0	0.046	3.6	LOS A	0.1	0.9	0.49	0.57	28.2
West: Masters Access Road (RT Stage 1)											
1	L	44	1.0	0.269	33.2	LOS D	0.9	6.2	0.90	1.04	15.5
3	R	44	1.0	0.133	20.0	LOS C	0.5	3.3	0.84	1.00	21.2
Approach		88	1.0	0.269	26.6	LOS D	0.9	6.2	0.87	1.02	17.9
All Vehicles		2622	4.6	0.397	1.4	NA	0.9	6.2	0.05	0.07	57.5

Figure 6 PM Peak Assessment (15:00 to 16:00)

The results indicate that the proposed intersection will operate at acceptable Levels of Service during the a.m. peak hour under existing traffic demands for all movements.

The addition of traffic onto the Wanneroo Road carriageway from the development during the a.m. and p.m. peaks has the potential to impact on the operation of the Wanneroo Road – Camberwell Road intersection and

as such analysis of that intersection was also undertaken. From previous traffic counts undertaken in March 2014 during the Thursday p.m. peak hour, flows were determined to be as shown on Figure 4. Based on these flows the intersection was assessed using Sidra Intersection 5.1 and gave the following results.

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	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Wanneroo Road											
11	T	2544	5.0	0.674	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R	208	5.0	0.382	16.6	LOS C	1.9	13.9	0.79	0.99	41.4
Approach		2753	5.0	0.674	1.3	NA	1.9	13.9	0.06	0.08	58.0
South East: Median (RT Stage 2)											
32	R	45	5.0	0.430	65.1	LOS F	1.6	10.3	0.98	1.08	5.3
Approach		45	5.0	0.430	65.1	LOS F	1.6	10.3	0.98	1.08	5.3
East: Camberwell Road											
1	L	117	5.0	0.394	25.6	LOS D	1.6	11.6	0.83	1.07	36.3
3	R	45	5.0	0.104	21.8	LOS C	0.4	2.8	0.78	1.00	41.0
Approach		162	5.0	0.394	24.6	LOS C	1.6	11.6	0.82	1.05	37.4
North: Wanneroo Road											
4	L	61	5.0	0.034	8.4	LOS A	0.0	0.0	0.00	0.67	49.0
5	T	1112	5.0	0.294	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1173	5.0	0.294	0.4	NA	0.0	0.0	0.00	0.03	59.3
All Vehicles		4133	5.0	0.674	2.6	NA	1.9	13.9	0.08	0.11	56.1

Figure 7 Wanneroo Road – Camberwell Road PM Peak Assessment

Based on the worst case scenario (p.m. peak with ITE predicted generated flows) and allowing a 25% pass by rate[1] flows are expected to increase by the following volumes:

Northbound through + 56 vph

Southbound through + 54 vph

Southbound left turn + 10 vph

Camberwell right turn + 14 vph

Based on adjusted figures the intersection of Wanneroo Road and Camberwell Road is expected to perform as shown on Figure 11.

[1] The adopted daily pass-by rate of 25% is reported by the Department of Transport, Florida in the publication *Trip Generation Characteristics of Emerging Land Uses* and is considerably lower than the 48% average for ITE Land Use 862, as reported in the ITE Trip Generation Handbook.

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: Wanneroo Road											
11	T	2601	5.0	0.689	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R	208	5.0	0.416	18.0	LOS C	2.1	15.3	0.82	1.02	40.4
Approach		2809	5.0	0.689	1.3	NA	2.1	15.3	0.06	0.08	57.9
South East: Median (RT Stage 2)											
32	R	60	5.0	0.672	111.5	LOS F	2.7	17.3	0.99	1.19	3.3
Approach		60	5.0	0.672	111.5	LOS F	2.7	17.3	0.99	1.19	3.3
East: Camberwell Road											
1	L	117	5.0	0.434	28.0	LOS D	1.8	12.8	0.86	1.08	35.0
3	R	60	5.0	0.149	22.8	LOS C	0.6	4.0	0.80	1.00	40.1
Approach		177	5.0	0.434	26.2	LOS D	1.8	12.8	0.84	1.05	36.4
North: Wanneroo Road											
4	L	72	5.0	0.040	8.4	LOS A	0.0	0.0	0.00	0.67	49.0
5	T	1171	5.0	0.310	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1242	5.0	0.310	0.5	NA	0.0	0.0	0.00	0.04	59.2
All Vehicles		4288	5.0	0.689	3.7	NA	2.7	17.3	0.09	0.12	54.6

Figure 8 Wanneroo Road – Camberwell Road PM Peak Assessment – Predicted Flows

5. VEHICULAR ACCESS AND PARKING

5.1. On-Site Queuing, Circulation and Service/Delivery Access

The proposed crossover arrangements will consist of a full movements unsignalised intersection at the northern boundary at Wanneroo Road and a left-in only for service vehicles near the southern boundary of the site (at the location of the existing left-in/left-out crossover approximately 85m south of Camberwell Road). Service vehicles will enter and exit the site via a left-turn only from and to Wanneroo Road via a westbound entry at the southern end of the site utilising a one-way system westbound and northbound to access the service and delivery area at the rear of the proposed development and then exiting to Wanneroo Road.

A review of the proposed on-site circulation and car parking layout was undertaken to assess the adequacy of the proposed site access and circulation in addition to service/delay areas on the site. This review was undertaken using AutoTrack to assess service/delivery vehicle manoeuvring into and out of the proposed service/delivery crossovers to and from Wanneroo Road into the one-way circulation area along the southern, western and northern boundaries of the site. The results of this review indicate that the proposed design and layout of the on-site circulation, loading areas and access points can accommodate vehicles up to 19m in length at the rear of the Masters Home Improvement Store and vehicles up to 12.5m in length within the trade areas of the site.

The amended proposed access arrangements consist of traffic entering and exiting the basement car park on a straight alignment which will facilitate an efficient and effective transfer of vehicular traffic into and out of the car parking area. Based upon a peak hour flow of about 80 vehicles exiting the car park from a number of parking aisles off the main basement access road against an entering flow of similar magnitude, sufficient gaps are expected to be available and delays minimal and within an acceptable range while maximising effective, efficient

and safe ingress to and egress from the car parking area on the site.

5.2. Parking Demand and Supply.

The total off-street car parking proposed for the subject site is detailed in a separate report which forms an appendix to this report.

6. CONCLUSIONS .

This Transport Impact Assessment has been prepared by Shawmac Pty Ltd, on behalf of Pride Projects, with regard to a proposed Masters Home Improvement store proposed to be located on the west side of Wanneroo Road, between North Beach Road and Reid Highway, opposite the existing Wanneroo Road/Camberwell Road unsignalised intersection, in the City of Stirling. The subject land is currently owned and used by Broadcast Australia.

The proposed crossover arrangements will consist of a full movements unsignalised T-intersection located on the northern boundary of the site at Wanneroo Road, approximately 120m north of Camberwell Road, and a left-in only for service vehicles near the southern boundary of the site (at the location of the existing left-in/left-out crossover approximately 85m south of Camberwell Road). Service vehicles will enter the site via a left turn only from Wanneroo Road via a westbound entry at the southern end of the site utilising a one-way system westbound and northbound to access the service and delivery area at the rear of the proposed development and then exiting to Wanneroo Road.

A detailed SIDRA analysis was undertaken and the results of this assessment indicated that with the development generated traffic, the upgraded Wanneroo Road Masters Access intersection will generally operate at acceptable Levels of Service with acceptable queuing and delays under weekday a.m. and p.m. peak hour conditions.

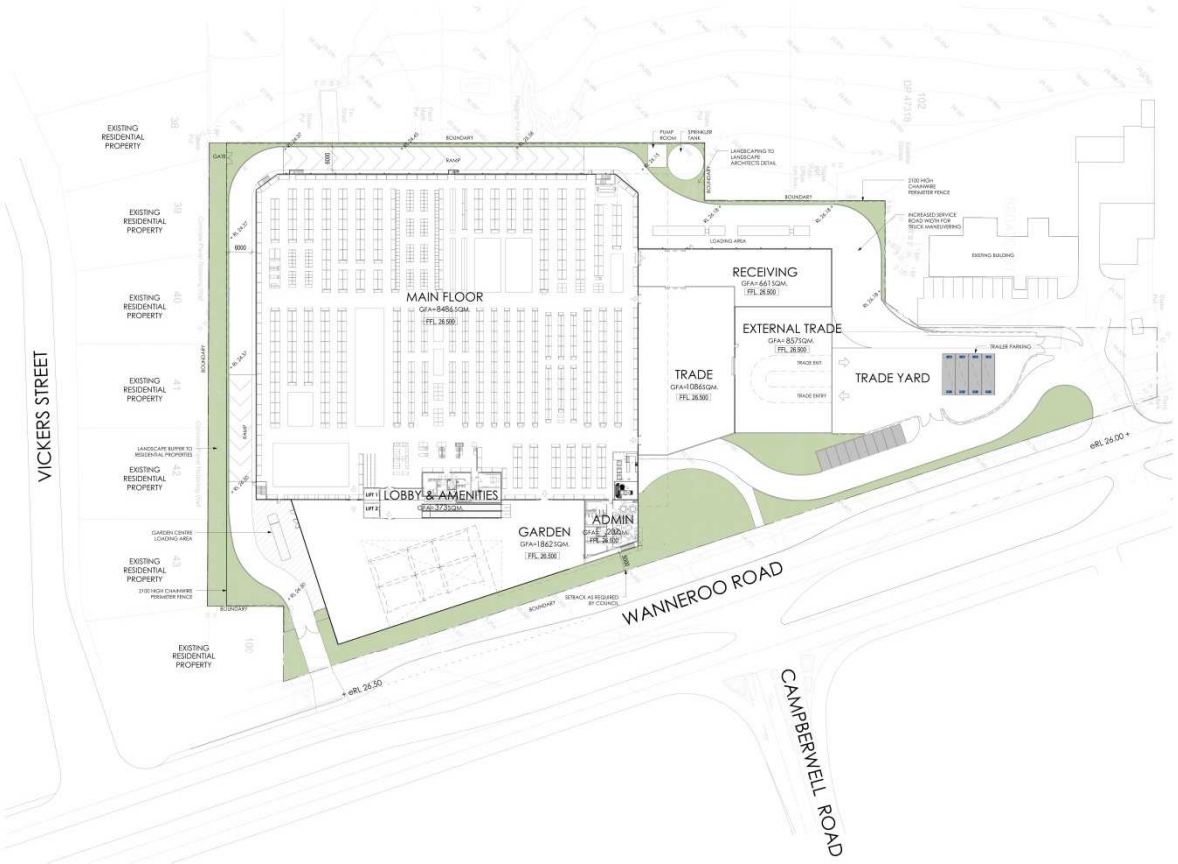
A review of the proposed on-site circulation and car parking layout was undertaken to assess the adequacy of the proposed site access and circulation in addition to service/delay areas on the site. This review was undertaken using AutoTrack to assess service/delivery vehicle manoeuvring into and out of the proposed service/delivery crossovers to and from Wanneroo Road into the one-way circulation area along the southern, western and northern boundaries of the site. The results of this review indicate that the proposed design and layout of the on-site circulation, loading areas and access points can accommodate vehicles up to 19m in length at the rear of the Masters Home Improvement Store and vehicles up to 12.5m in length within the trade areas of the site.

The amended proposed access arrangements consist of traffic entering and exiting the basement car park on a straight alignment which will facilitate an efficient and effective transfer of vehicular traffic into and out of the car parking area. Based upon a peak hour flow of about 80 vehicles exiting the car park from a number of parking aisles off the main basement access road against an entering flow of similar magnitude, sufficient gaps are

expected to be available and delays minimal and within an acceptable range while maximising effective, efficient and safe ingress to and egress from the car parking area on the site.

Based upon the results of the traffic impact assessment for the proposed Masters Home Improvement store to be located on Wanneroo Road at Camberwell Road, Hamersley, in the City of Stirling, it is concluded that the boundary road intersections would function acceptably under all traffic conditions and that the proposed access, servicing and car parking arrangements associated with the proposal are in accordance with Austroads and traffic engineering standards. Therefore, considering the acceptable impact of the traffic from the proposed development on the surrounding road network, good access/egress and circulation system within the development and adequate parking supply, traffic related issues should not form an impediment to the approval of the proposed development.

APPENDIX A –SITE PLAN



ISSUE	AMENDMENT	DATE	CHK'D
P3	LOBBY AREA ADDED TO AREA SCHEDULE	01-09-14	
P	ISSUE FOR COORDINATION ONLY	08-09-14	
P4	ISSUE FOR COORDINATION ONLY	11-09-10	
P5	ISSUED FOR INFORMATION	16-09-14	
P6	ISSUED FOR INFORMATION	23-09-14	
7	ISSUE FOR DA	25-09-14	
PA	CARPARK ENTRY & LINEMARKING REVISED.	30-09-14	
PB	DA AMENDMENT	17-10-14	
C	SERVICE ROAD LEVEL ADMENDED & CAFE	23-10-14	
D	REVISED MASTERS RACKING ADDED, TRAVELATORS, LIFTS & LOBBY MOVED, ADMIN & AMENITIES REVISED.	11-11-14	
E	WALL BETWEEN TRADE & RECEIVING MOVED.	13-11-14	
F	TRAVELATOR, LIFT & LOBBY POSITIONS REVISED, AMENITIES & ADMIN AREAS REVISED, ACCESS ARRANGEMENTS REVISED. ISSUE FOR REVIEW.	21/11/14	
G			

NO PLANNING ADVICE HAS BEEN SOURCED FROM COUNCIL AND LOCAL AUTHORITIES IN THE PREPARATION OF THIS SITE MASTERPLAN.

ALL SETBACKS, PLOT RATIOS, LANDSCAPE AREAS, CAR PARKING NUMBERS AND THE LIKE ARE SUBJECT TO COUNCIL APPROVAL

ENTRIES, EXITS & CAR PARKING LAYOUTS ARE PRELIMINARY ONLY AND SUBJECT TO TRAFFIC ENGINEERS DESIGN. SITE ACCESS POINTS SUBJECT TO MAIN ROAD WA INPUT.

SITE BOUNDARIES AND SITE AREAS INDICATIVE ONLY & SUBJECT TO CONFIRMATION BY LICENSED SURVEYOR.

TOTAL SITE AREA	**= 22,445 SQM**
GROSS FLOOR AREAS:	
MAIN FLOOR	= 8,486 SQM
ADMIN, AMENITIES BASEMENT LOBBY & ENTRY	= 945 SQM
GARDEN CENTRE	= 1,862 SQM
INTERNAL TRADE CENTRE	= 1086 SQM
EXTERNAL TRADE CENTRE	= 857 SQM
RECEIVING	= 661 SQM
TOTAL HARDWARE GFA	**= 13,897 SQM**
SITE COVERAGE	**= 61.9%**

CARPARKING	
DISABLED	= 8
PARENTS + PRAMS	= 8
TRAILERS	= 4
ORDINARY	= 347
TOTAL CAR SPACES	**= 367**
	= 1:38

Site Plan

LEFFLER SIMES PTY LTD ABN 39 001 043 992 WEB: www.lefflersimes.com.au
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MELBOURNE LEVEL 2 - 18 OLIVER LANE VIC 3000 T+61 3 96546344
BRISBANE 2 - 290 BOUNDARY ST SPRING HILL QLD 4004 T+61 7 31235544

SCALE 1:500

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588 DWG NO. DA01 REV. G
DATE: 31/07/14
DRAWN: JAB

LEFFLER SIMES ARCHITECTS

green building council australia

Member Australian Institute of Architects

ISSUE	AMENDMENT	DATE	CHK'D
P2	ISSUED FOR INFORMATION	21-08-14	
P3	LOBBY AREA ADDED TO AREA SCHEDULE	01-09-14	
P 4	ISSUE FOR COORDINATION ONLY	08-09-14	
P 5	ISSUE FOR COORDINATION ONLY	11-09-10	
P A	ISSUE FOR DA	25-09-14	
B	CARPARK ENTRY & LINEMARKING REVISED.	30-09-14	
C	DA AMENDMENT	17-10-14	
D	SERVICE ROAD LEVEL AMENDED & CAFE	23-10-14	
E	REVISED MASTERS RACKING ADDED, TRAVELATORS, LIFTS & LOBBY MOVED, ADMIN & AMENITIES REVISED.	11-11-14	
F	WALL BETWEEN TRADE & RECEIVING MOVED.	13-11-14	
G	PARALLEL PARKING ADDED ADJACENT LOBBY	17/11/14	
H	TRAVELATOR, LIFT & LOBBY POSITIONS REVISED, CARPARK REVISED, ACCESS ARRANGEMENTS REVISED. ISSUE FOR REVIEW.	21/11/14	

NO PLANNING ADVICE HAS BEEN SOURCED FROM COUNCIL AND LOCAL AUTHORITIES IN THE PREPARATION OF THIS SITE MASTERPLAN.

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MAIN FLOOR	= 8,486 SQM
ADMIN, AMENITIES,BASEMENT LOBBY & ENTRY	= 945 SQM
GARDEN CENTRE	= 1862 SQM
INTERNAL TRADE CENTRE	= 1086 SQM
EXTERNAL TRADE CENTRE	= 857 SQM
RECEIVING	= 661 SQM
TOTAL HARDWARE GFA	**= 13,897 SQM**
SITE COVERAGE	**= 61.9%**

CARPARKING	
DISABLED	= 8
PARENTS + PRAMS	= 8
TRAILERS	= 4
ORDINARY	= 347
TOTAL CAR SPACES	**= 367**
	= 1:38

LEFFLER SIMES PTY LTD ABN 39 001 043 992 WEB: www.lefflersimes.com.au
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BRISBANE: 2 - 290 BOUNDARY ST SPRING HILL QLD 4004 T:+61 7 31235544

SCALE 1:250

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588
DATE: 07/31/14
DRAWN: JAB
DWG NO: DA02
REV: H

Basement Plan

LEFFLER SIMES ARCHITECTS

CONSULTING CIVIL & TRAFFIC ENGINEERS, RISK MANAGERS

Project: **Car Parking Assessment – V4**

Masters Hamersley

Proposed Home Improvement Superstore

Client: **Pride Projects**

Author: Heidi Lansdell

Signature:

Date: 24th November 2014

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Document Status.

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2	H. Lansdell	P. Nguyen	23/10/14	FINAL		23/10/14
3	H. Lansdell	T. Shaw	24/11/14	FINAL		21/11/14
3	H. Lansdell	T. Shaw	25/11/14	FINAL		25/11/14

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CONTENTS

1. INTRODUCTION AND BACKGROUND

1.1. Overview

This Car Parking Assessment has been prepared by Shawmac Consulting Engineers, on behalf of Pride Projects, with regard to a proposed Masters Home Improvement store proposed to be located on the west side of Wanneroo Road, between North Beach Road and Reid Highway, opposite the existing Wanneroo Road/Camberwell Road unsignalised intersection, in the City of Stirling. The subject land is currently owned and used by Broadcast Australia.

1.2. Site Location

The subject site is within the suburb of Hamersley, in the City of Wanneroo, located approximately 11.5km north of Perth CBD. The development is proposed to be located on the western side of Wanneroo Road, opposite the existing unsignalised intersection with Camberwell Road, on lands owned by Broadcast Australia. Existing Broadcast Australia operations to the north of the subject site is proposed to continue operating at offices located to north of the site. Existing access to the lands consists of two crossovers with a left-in/left-out located approximately 85m south of Camberwell Road and a full movements unsignalised access 105m north of Camberwell Road providing direct access to the Broadcast Australia offices. The site is surrounded by residential uses to the south and west, and various residential and commercial uses to the north and east. The location of the site is shown in Figure 1.

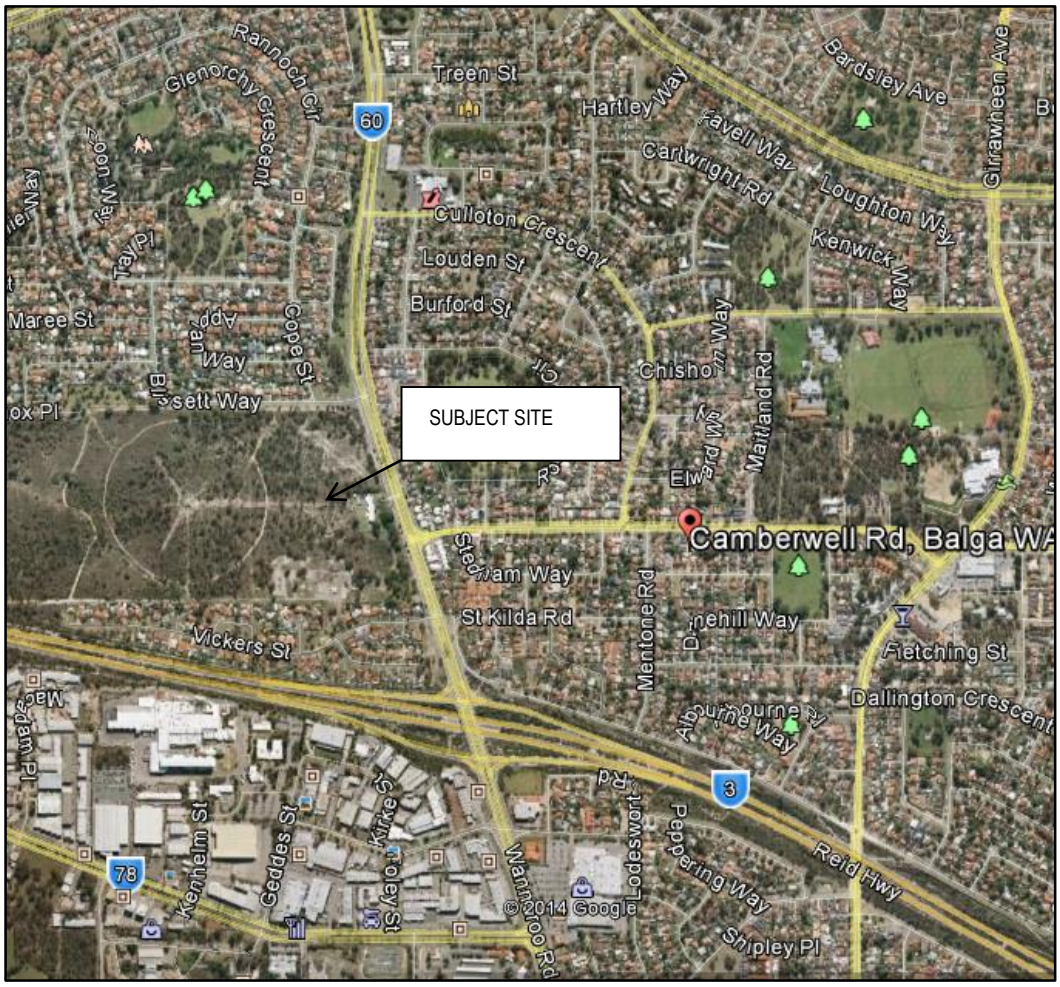


Figure 1 – Aerial View of Subject Site

The metropolitan context of the site is shown in Figure 2.

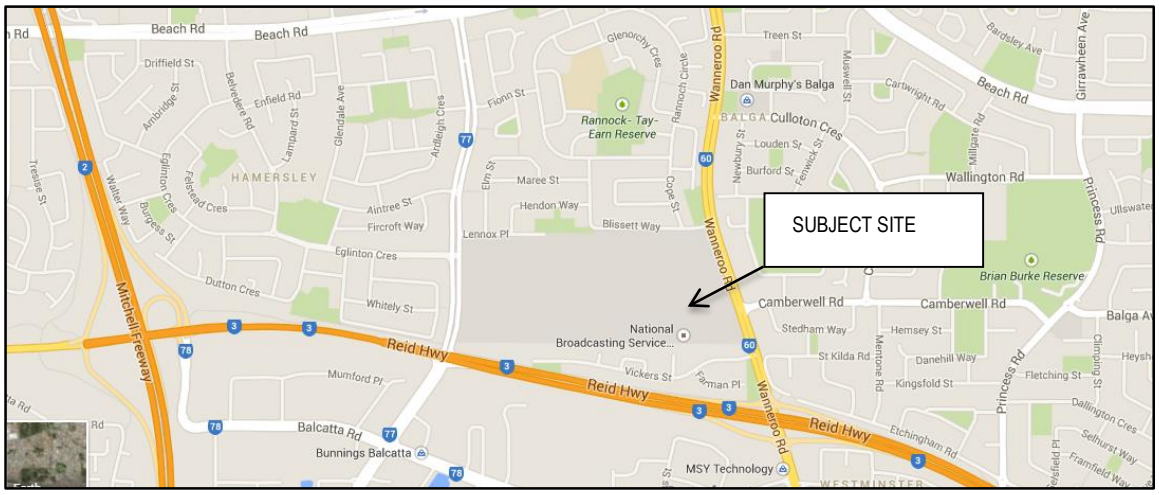


Figure 2 – Metropolitan Context

1.3. Scope of Assessment

Specifically, this assessment aims to assess the adequacy of the proposed on-site car parking supply associated with the development proposal.

1.4. Proposed Site Plan

The proposed site is located within the suburb of Hamersley in the City of Stirling. The site plan for the proposed development has been prepared by Leffler Simes as shown in **Appendix A.**

1.5. Proposed Land Uses

The subject site is proposed to be located on Commonwealth land currently occupied by Broadcast Australia on the west side of Wanneroo Road between Beach Road and Reid Highway. The proposal consists of a Masters Home Improvement store to include homewares and cafe, garden centre, hardware showroom, trade area and ancillary facilities to be served by two (2) crossovers to Wanneroo Road and an undercroft car parking area.

According to the site plans provided, the proposal consists of the development of a Masters Home Improvement Store:

- Homewares: 4,704 m^2;
- Hardware: 3.113 m^2
- Garden Centre: 1,807 m^2
- Warehouse: 3,377 m2
- Administration and Amenities: 834 m^2
- Café: 62 m^2

Total Gross Floor Area: 13,897 m^2

The proposed crossover arrangements will consist of a full movements signalised T- intersection 120m north of Camberwell Road at the location of the existing Broadcast Australia crossover to Wanneroo Road and a left-in only for service vehicles near the southern boundary of the site (at the location of the existing left-in/left-out crossover approximately 85m south of Camberwell Road). Service vehicles will enter and exit the site via a left turn only from and to Wanneroo Road via a westbound entry at the southern end of the site utilising a one-way system westbound and northbound to access the service and delivery area at the rear of the proposed development and then exiting in a northbound and eastbound movement to Wanneroo Road.

The proposed on-site car parking supply is to consist of the following:

- 347 conventional car parking bays;
- 4 trailer parking bays;
- 8 ACROD bays; and
- 8 Parents With Pram bays
- 12 bays in external trade

TOTAL: 379 bays

2. CAR PARKING ASSESSMENT

2.1. Background References

The following industry standard guidelines and references were utilised in this assessment:

- *Land Use Traffic Generation Guidelines*, March 1987 - Director General of Transport, South Australia;
- *Guide to Traffic Generating Developments Version 2.2*, October 2002 – Roads and Traffic Authority, New South Wales;
- City of Stirling *Local Planning Policy 6.7: Parking and Access;* and
- City of Stirling *District Planning Scheme No. 3.*

2.2. Parking Demand Surveys – Bunnings Warehouse Stores.

Based on a survey of several existing West Australian Bunnings Warehouse stores, car park availability was determined as shown in Table 1.

Table 1: Parking Availability at Similar Sites

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

Operation size comparisons between the Bunnings sites and the proposed Masters Store are shown in Table 2.

Table 2 : Land Size Comparison

Suburb location	Hardware	Garden	Building Materials + Receiving	Total Area)	Bays provided	m^2 per bay
Cannington	5,000m^2	1,600m^2	3,100m^2	9,700 m^2	352	27
Midland	9,690m^2	1,250m^2	3,400m^2	14,340 m^2	330	44
Morley	6,350m^2	925m^2	2,300m^2	9,575 m^2	200	48
Rockingham	8,700m^2	2,800m^2	4,700m^2	16,200 m^2	461	35
					Average	38.5

The relevant car parking supply using the above rates would therefore be 361 bays.

2.3. RTA Rates

Reference to the parking generation guidelines published by the Roads and Traffic Authority, New South Wales 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 (1 bay per 52 m^2) and that the parking demand calculated using the RTA guidelines a GFA of 13,897 m^2 would be 268 bays.

2.4. TPS Requirements

The total on-site car parking proposed for the subject site is in the order of 379 bays (including 12 bays in the trade yard). According to the City of Stirling's *Parking and Access Policy 6.7*, the theoretical required parking supply is noted below in Table 3 and outlines the parking requirements in relation to each of the proposed land uses in the development proposal in the context of the standards outlined in the District Centre Plan.

Table 3: Car Parking Standards as Outlined in City of Stirling Parking and Access Policy 6.7

Land Use	Parking Guidelines	Floor Space (m^2)	Total Theoretical Parking Bays Required
Homewares	1 bay per 30m^2 GLA	4,704	157
Hardware	1 per 20m^2 GLA	3,113	156
Garden Centre	1 bay per 50m^2 GLA	1,807	36
Warehouse	1 bay per 50m^2 GLA	3,377	67
Administration & Amenities + Entry/Exit/Lobby/Lifts, Travelator	N/A	834	0
Café	1 bay per 7m^2	62	9
TOTAL REQUIRED:			425 CAR PARKING BAYS

Table 4 outlines the theoretical car parking supply required to service the site, without taking into account joint use/reciprocity, overlapping/coincident demand and trip chaining/multi-purpose trip making. This theoretical parking supply requirement includes a separate parking allocation for the on-site café which will be primarily used by customers of the development which would not typically generate additional car parking demand; however, the separate parking supply has been used in calculating the number of car parking bays as per the City's Policy 6.7.

As per the policy, a concession of 20% can be applied to car parking requirements due to its location on a high frequency bus route resulting in a net requirement of 340 bays. Bicycle parking and end-of-trip facilities would also be provided at the site for staff and customers.

2.5. Current Review.

In order to establish a more likely parking demand generation rate, a survey was undertaken on car park usage at the four operating Masters Stores over two Saturdays to measure and record the level of actual parking demand at each store. Raw results from the surveys can be found in Appendix A. The survey relied on personnel recording the number of vacant bays in designated areas on half hourly intervals. From this a profile of parking was established together with site specific and overall average, maximum and minimum demand rates.

Figures 3 and 4 indicate the aggregated outcomes from the survey which determined that typical peak demand for parking occurred around 11:00AM to 12:00 Midday when up to 50% of bays were occupied, and that maximum demand rate was 1 bay for every 67 square metres of combined floor area over all store land uses. Applying this rate to a GFA of 13,897 m^2 indicates a net need for 208 bays.

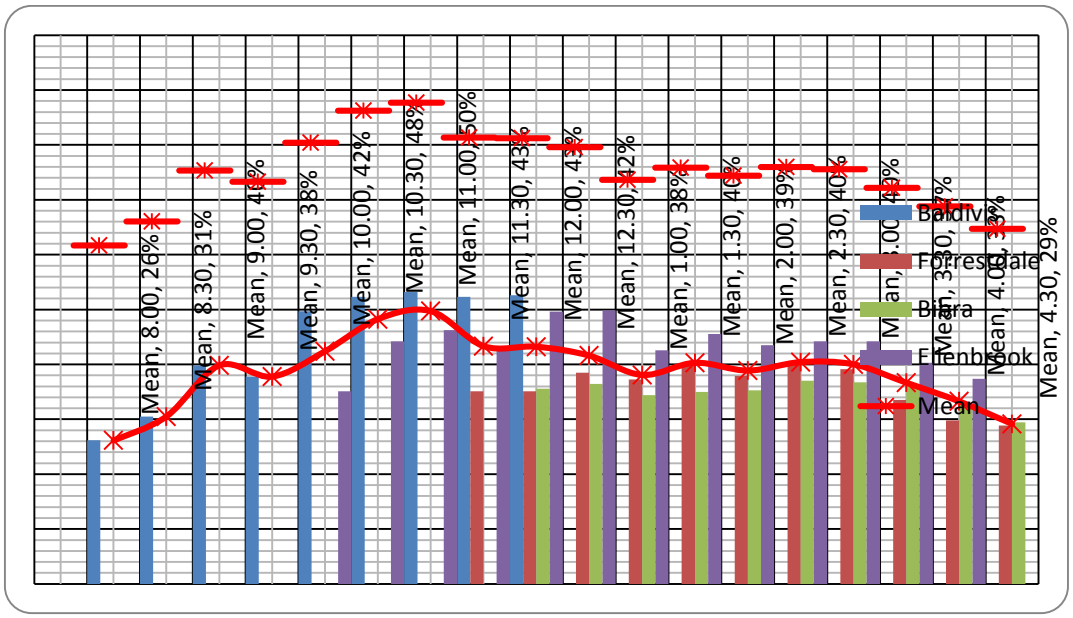


Figure 3: Parking Bay Occupation (% of total available)

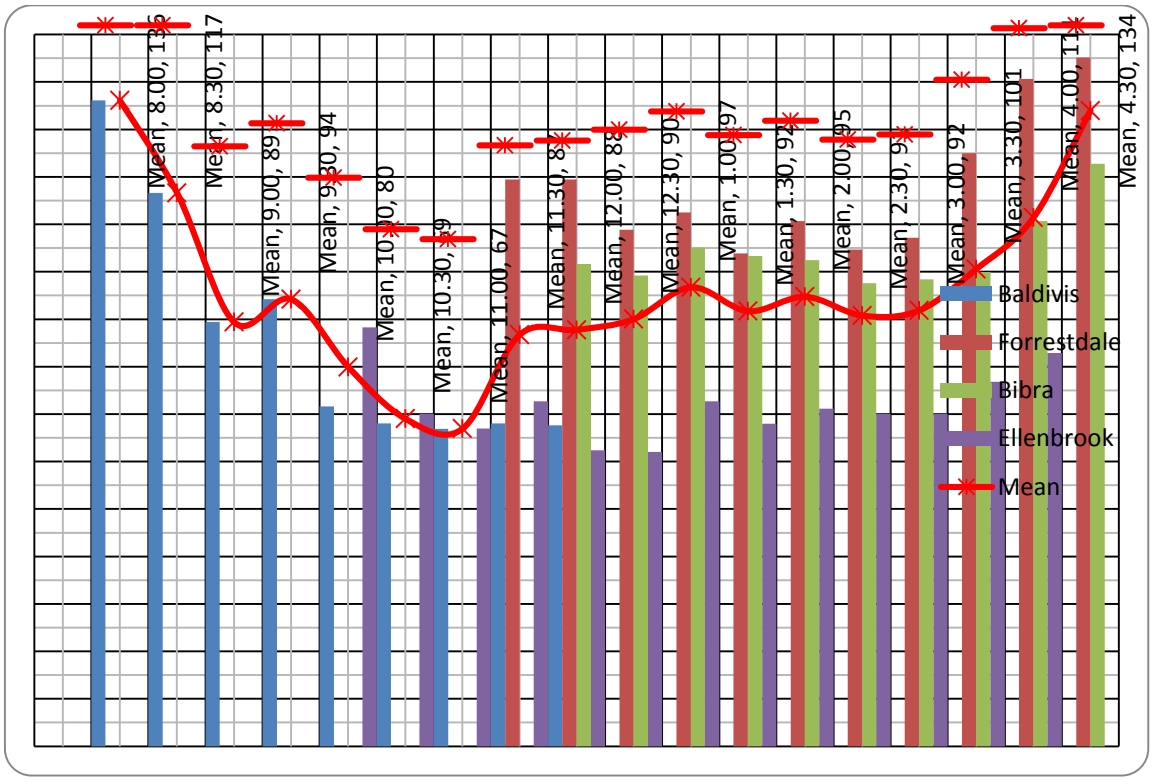


Figure 4: Parking Bay Demand (based on GFA ex Admin/Amenities + Foyer)

3. OTHER STUDIES.

Subsequent to the initial review of parking demand rates, additional studies were sourced to provide comparison and to further strengthen the demand review. These included reported survey results from both local and eastern state sites and are summarised below.

3.1. Proposed Bunnings Store – Joondalup.

As part of the DA approval for a proposed Bunnings Store in Joondalup, the applicant provided data to support a reduction in the number of parking bays to be provided. That information, which the JDAP panel accepted is summarised below.

Parking surveys conducted across six existing Eastern states stores to evaluate the anticipated peak parking demand 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 (1 bay per 67m^2) – Adjacent to Princess Highway (Primary Distributor Road).

Bunnings (North Parramatta) – 2 car bays per 100sqm (1 bay per 50m^2) – Adjacent to Cumberland Highway and Windsor Road (Primary Distributor / District Distributor Roads).

Bunnings (Minchinbury) – 2.2 car bays per 100sqm (1 bay per 47 m^2) – Adjacent to Great Western Highway (Primary Distributor Road).

Bunnings (Altona) – 2.33 spaces per 100sqm (1 bay per 43m^2) – Adjacent to Millars Road (District Distributor Road).

Bunnings (Scoresby) – 2.51 car bays per 100sqm (1 bay per 40m^2) - Adjacent to Fern Tree Gully Road (District Distributor Road).

Bunnings (Bankstown) – 2.57 car bays per 100sqm (1 bay per 39m^2) - Adjacent to Milpeerra Road (District Distributor Road).

The applicant has suggested that the average car parking ratio of 2.185 spaces per 100sqm (1 bay per 45.7m^2) should be used[1]. Based on these results, the car parking requirements would be 304 bays.

[1] Metro North-West Joint Development Assessment Panel Agenda, 29 August 2012, 2:00pm

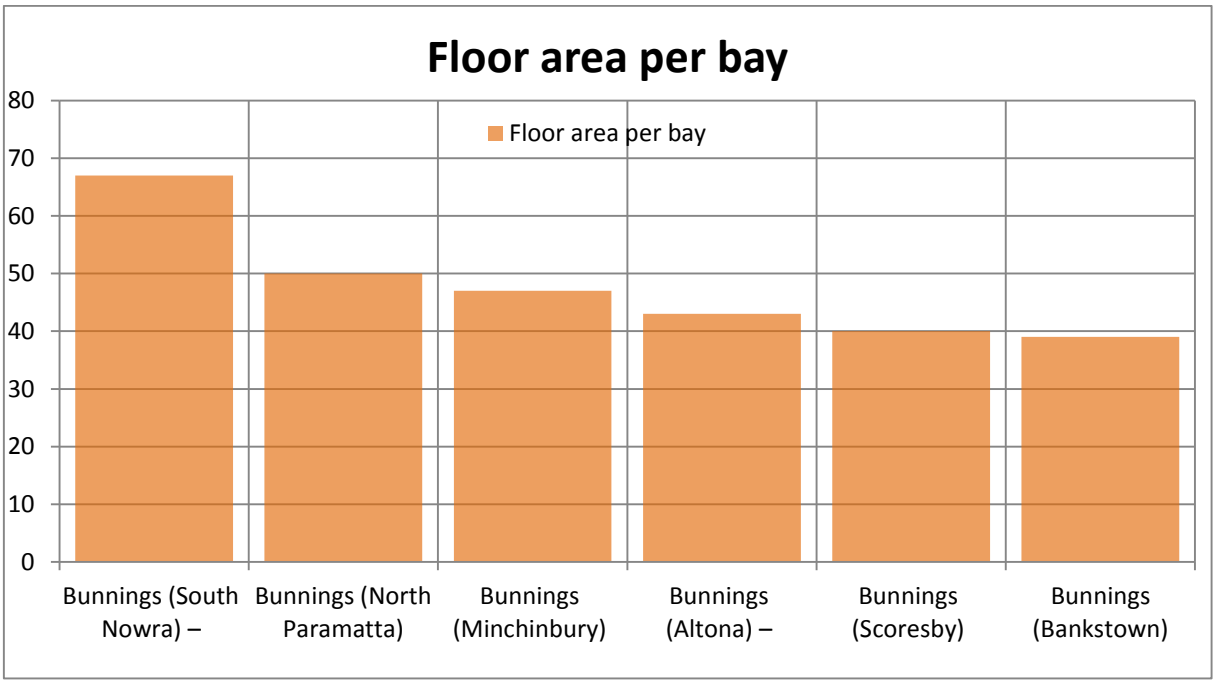


Figure 5 – Results of Eastern States Parking Demand Surveys

3.2. Proposed Bunnings Showroom and Garden Centre, Harrisdale

In a report prepared by RPS Koltasz Smith to support a Bunnings development in Harrisdale, a reduction in parking bay provision was sought and was largely based on survey results from other Bunnings Stores in Western Australia. In part, the submission indicated the following[2]:

The graph shown in Figure 6 illustrates the area of floor space per car bay provided for a range of Bunnings developments in Western Australian.

[2] Proposed Showroom and Garden Centre (Including Signage) and External Showroom and Retail Development Lot 801 Ranford Road and Lot 802 Wright Road, Harrisdale RPS Koltasz Smith, December 2008

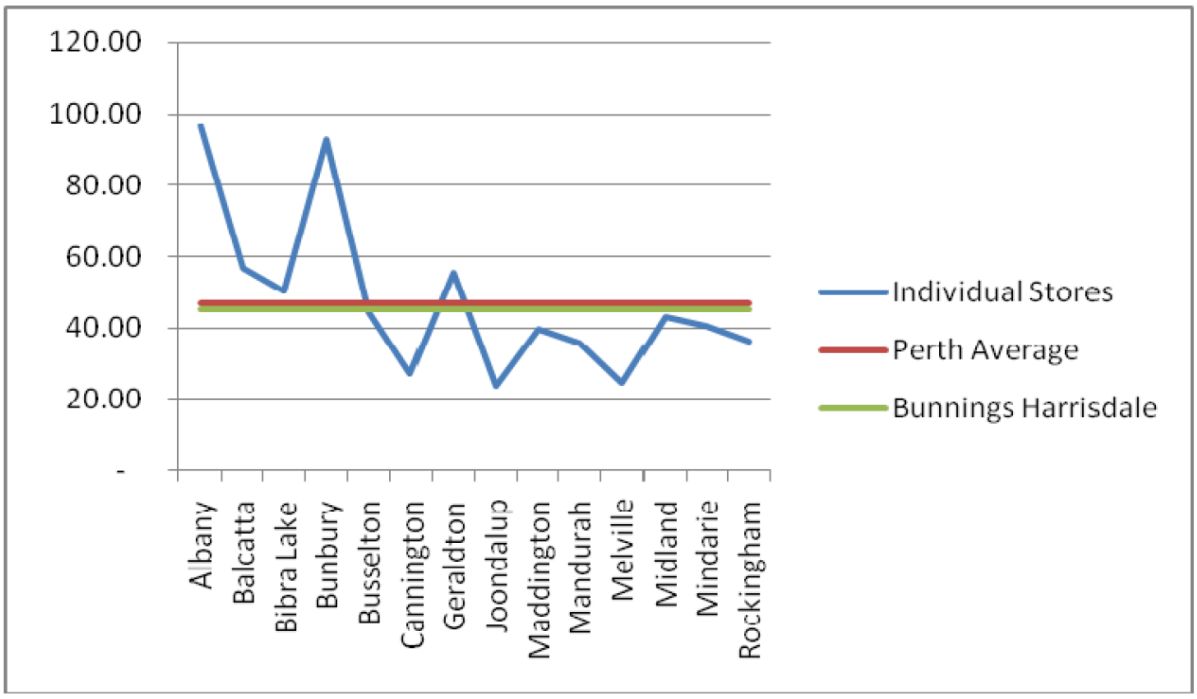


Figure 6: Parking Provision – Various Bunnings Stores

The average area of floor space per car bay illustrated above was reported as being 47 m^2.

An approximate breakdown onto Metropolitan, Outer Metropolitan and Country is shown in Figure 7.

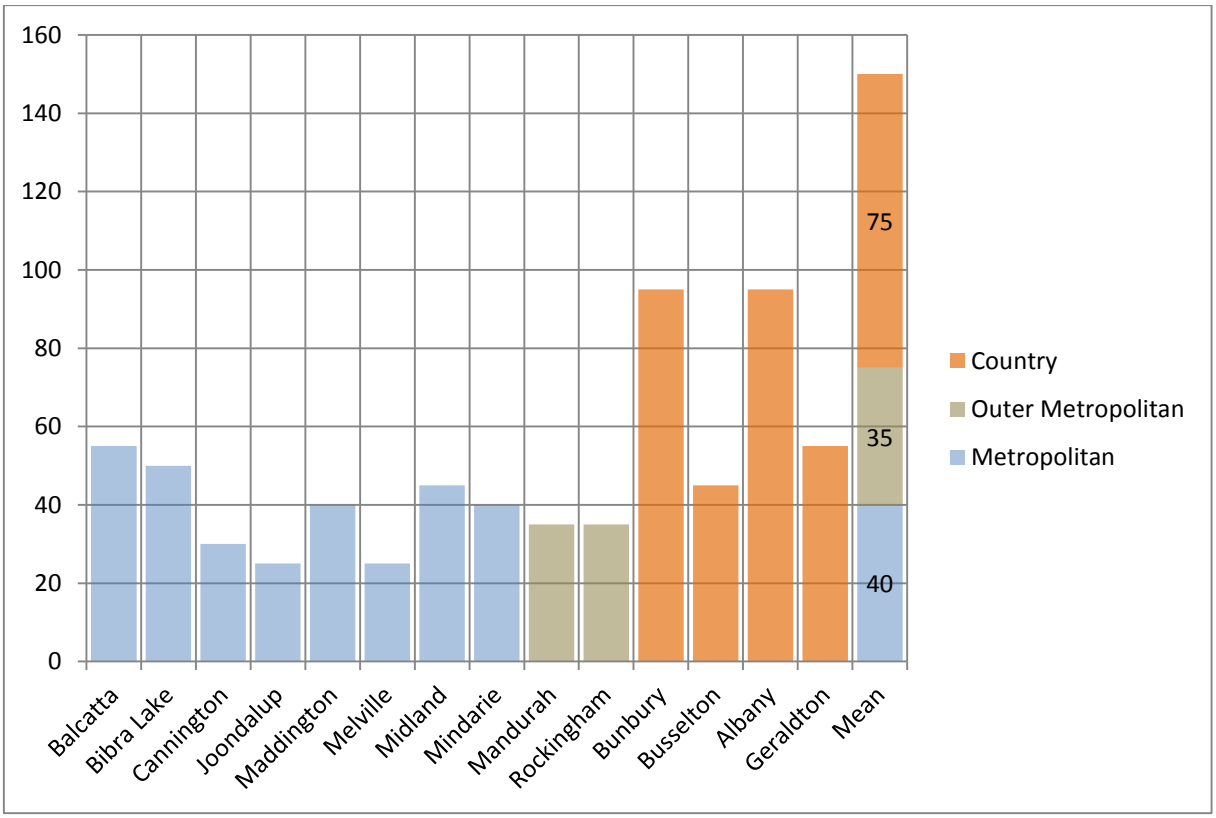


Figure 7: Parking Provision – Various Bunning Stores by Location Category

3.3. Comparison to Other Approved Masters in Western Australia

Table 4 outlines the results of detailed parking surveys undertaken at other approved Masters sites in WA.

Table 4: Parking Survey Results – Approved Masters Sites in WA

	Floor space (GFA)	Council Requirement	Comparative Floor Area per Bay (Excluding Showrooms and shops)
Joondalup Masters + Showrooms (5 of) +Shops (1 of)	13,600m² 4,310m² 575 m²	408 131 18 557 Total	33 m² per bay
Baldivis Masters + Shop (1of)	13,403m² 500m²	1:40m² (maximum provision) 348 1:60m² (minimum provision) 232	40 m² per bay
Bibra Lake Masters	13,197m² (1:50 GLA)	264	50 m² per bay
Ellenbrook Masters	13,592m²	439	30 m² per bay
Forestdale Masters	13,500m²	256	53 m² per bay
Butler Masters + Showrooms (7 of) + Shops (1of)	13,641m² 5,750m² 150 m²	(1:50) 273 (1:50) 118 391	50 m² per bay
Average			43 m² per bay
Hamersley Requirement based on average rate			323 bays.

4. PARKING DEMAND REVIEW

On a combined total floor area across all land uses proposed for the Hamersley site, and assuming that parking demand parallels that recorded as being typical for the other 4 Masters stores and surveyed Bunning's Stores, likely demand can be assessed as below:

A comparison of the various methods of determining bay demand is summarised in Table 6.

Table 5: Parking Bay Demand Comparison - Summary

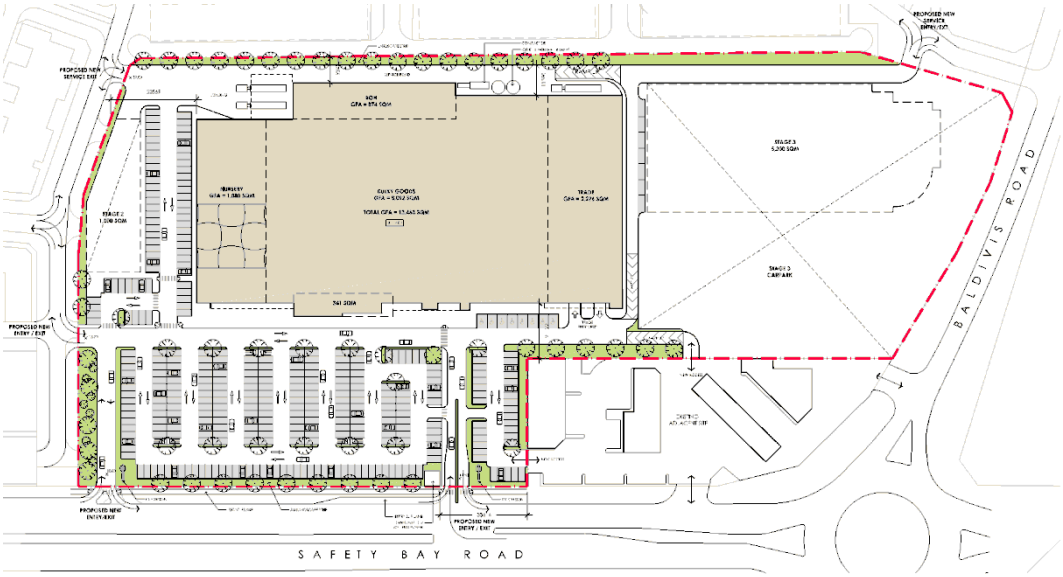
Assessment Method	Bays determined to be required
Comparison to Bunnings Stores	304 to 361 bays
Application of RTA rates	268 bays
Application of City of Stirling TPS rates	340 bays
Application of Masters Survey Rates	208 bays
Approved Masters Sites	323 bays

5. CONCLUSION

Based on the assessment of the site and cognizant of the relevance of the Masters Home Improvement Store parking surveys, other documented parking surveys and previous assessments and surveys of similar sites, it is considered that the provision of 379 car bays as proposed for the development will adequately cater to the peak parking demands associated with the site.

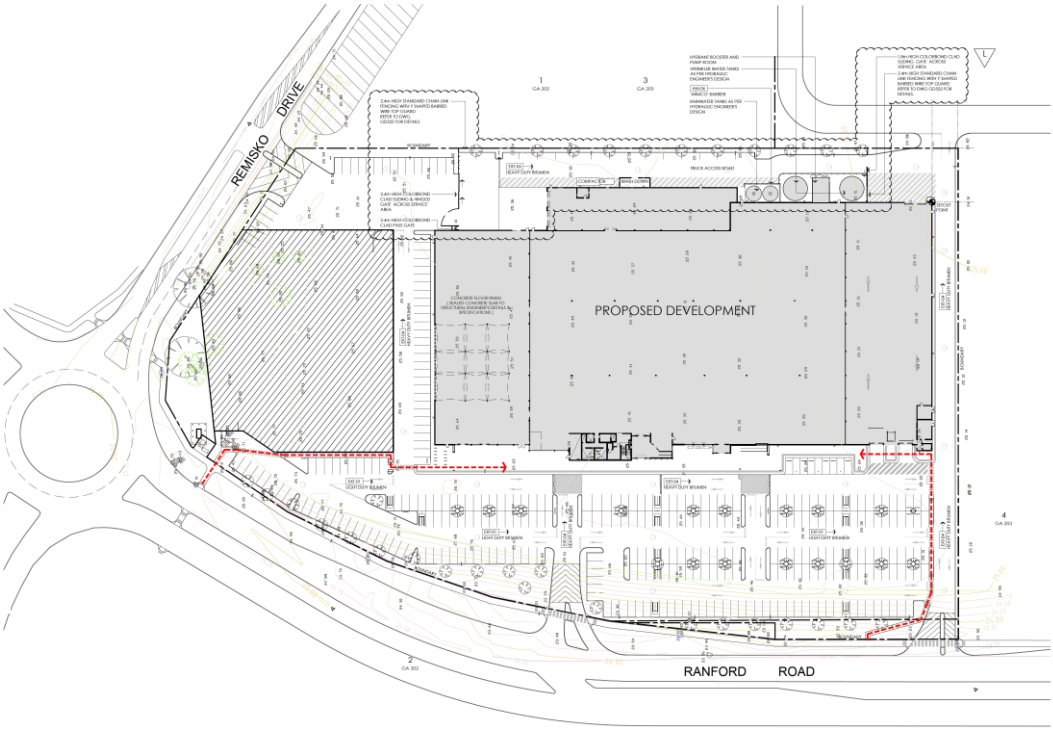
6. APPENDIX A – SURVEY RESULTS

6.1. Baldivis.



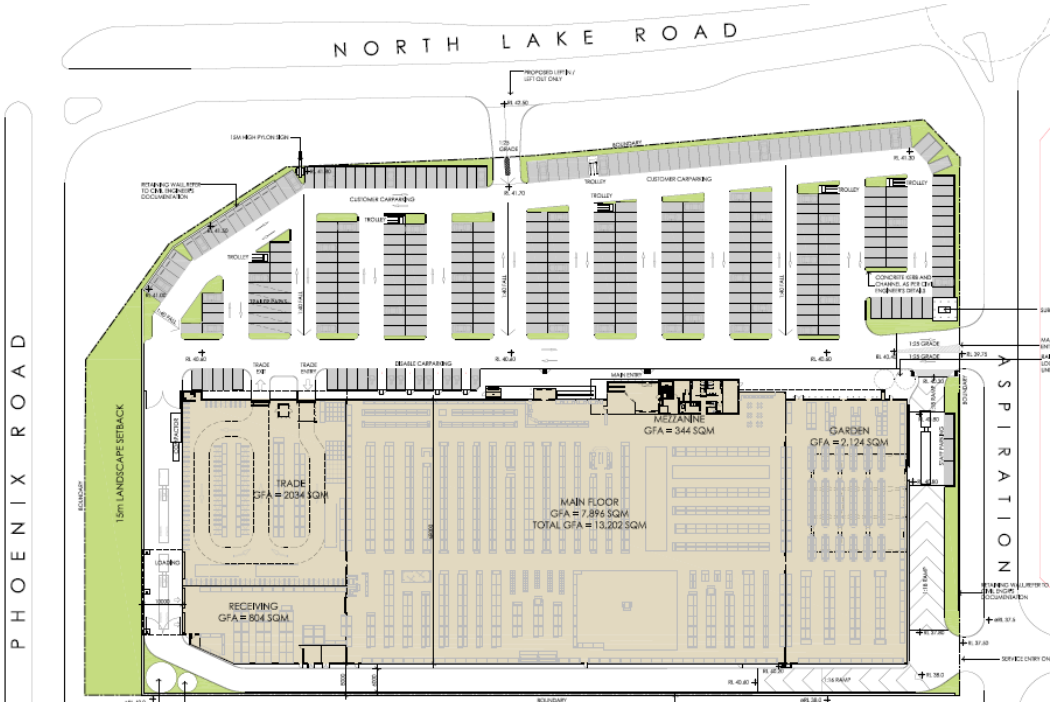
Time	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7	Block 8	Bays occupied	Bay / m2	% Occupied
8.00	36	32	37	36	31	27	31	24	90	136	26%
8.30	30	25	28	34	38	31	35	18	105	117	31%
9.00	25	23	30	29	36	29	33	2	137	89	40%
9.30	32	29	30	31	30	19	21	22	130	94	38%
10.0	34	26	27	23	22	13	8	20	171	72	50%
10.30	28	24	27	20	14	17	14	20	180	68	52%
11.00	25	24	30	22	21	11	13	15	183	67	53%
11.30	27	25	25	25	22	11	11	18	180	68	52%
12.00	26	26	25	24	21	13	11	17	181	68	53%
									Avge	87	
									Max	136	
									Min	67	

6.2. Forrestdale



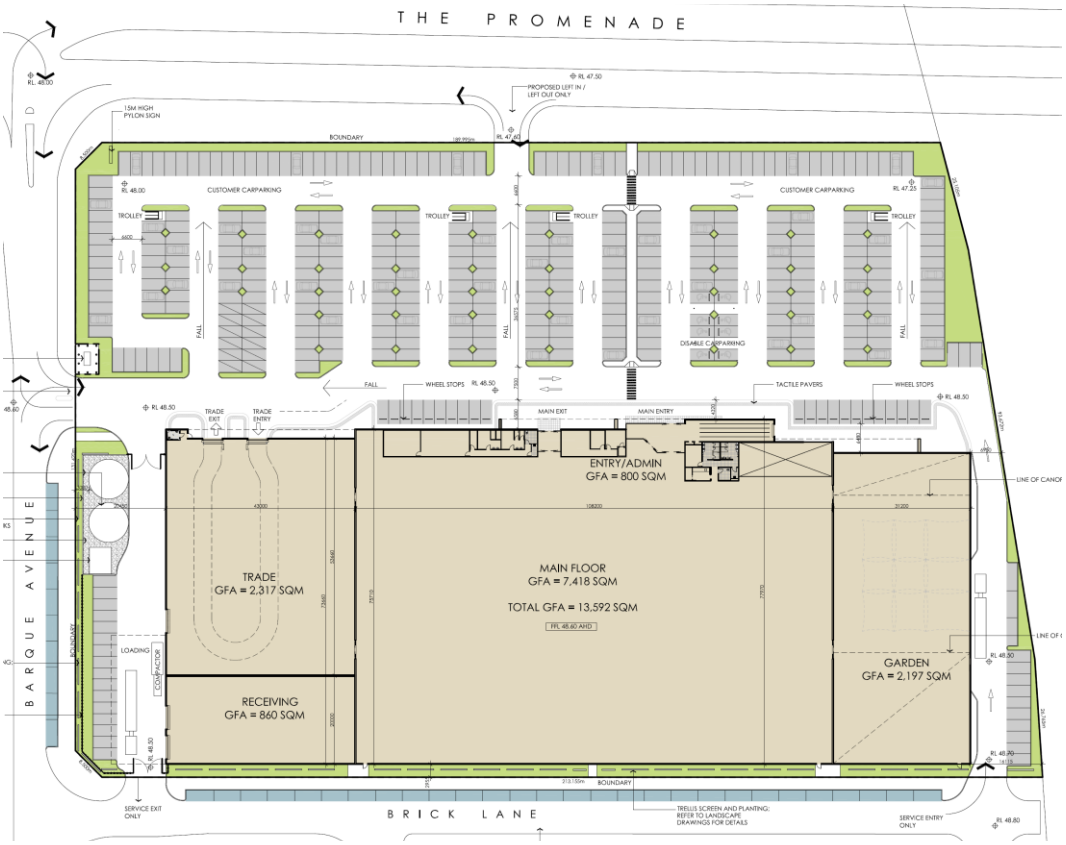
Time	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7	Bays occupied	Bay / m2	% Occupied
	48	73	74	23	35	38	31	322	42	100%
11.30	20	36	72	5	18	34	24	113	119	35%
12.00	21	36	72	5	18	34	23	113	119	35%
12.30	22	29	64	5	21	34	23	124	109	39%
1.00	24	29	64	6	22	34	23	120	113	37%
1.30	20	29	65	6	16	34	22	130	104	40%
2.00	20	35	66	8	17	33	21	122	111	38%
2.30	20	35	57	9	17	34	21	129	105	40%
3.00	20	41	57	11	17	34	16	126	107	39%
3.30	23	45	67	11	18	34	16	108	125	34%
4.00	24	48	75	13	19	31	16	96	141	30%
4.30	24	46	78	13	19	34	15	93	145	29%
								Avge	118	
								Max	145	
								Min	104	

6.3. Bibra Lake



Time	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Bays occupied	Bay / m2	% Occupied
	44	26	103	98	51	21	343	36	100%
12.00	37	11	62	54	45	12	122	102	36%
12.30	35	12	61	53	45	12	125	99	36%
1.00	35	13	60	55	48	14	118	105	34%
1.30	33	15	59	52	48	16	120	103	35%
2.00	33	15	57	54	48	15	121	102	35%
2.30	32	15	56	48	51	14	127	98	37%
3.00	32	15	56	48	51	15	126	98	37%
3.30	32	16	55	48	52	16	124	100	36%
4.00	33	17	60	55	51	15	112	111	33%
4.30	34	18	64	60	51	15	101	123	29%
							Avge	104	
							Max	123	
							Min	98	

6.4. Ellenbrook



Time	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7	Block 8	Bays occupied	Bay / m2	% Occupied
10:00	45	50	30	28	41	25	40	26	154	88	35%
10:30	44	48	21	12	33	25	41	21	194	70	44%
11:00	43	51	16	13	31	24	40	18	203	67	46%
11:30	44	46	21	15	35	22	42	27	187	73	43%
12:00	45	43	18	13	24	23	32	23	218	62	50%
12:30	43	33	21	16	30	23	32	22	219	62	50%
13:00	45	40	25	22	36	24	33	27	187	73	43%
13:30	43	44	27	14	29	25	36	21	200	68	46%
14:00	43	45	29	12	39	25	34	21	191	71	44%
14:30	45	45	23	13	37	25	38	19	194	70	44%
15:00	44	44	27	15	37	25	31	22	194	70	44%
15:30	43	51	30	22	32	25	40	19	177	77	40%
16:00	44	48	31	25	36	25	44	22	164	83	37%
									Avge	72	
									Max	88	
									Min	62	

7. APPENDIX B – PROPOSED SITE PLAN


VICKERS STREET
WANNEROO ROAD
CAMPBERWELL ROAD
EXISTING RESIDENTIAL PROPERTY
MAIN FLOOR
RECEIVING
EXTERNAL TRADE
TRADE
TRADE YARD
LOBBY & AMENITIES
GARDEN
ADMIN
ISSUE AMENDMENT DATE CHKD
P3 LOBBY AREA ADDED TO AREA SCHEDULE 01-09-14
p4 ISSUE FOR COORDINATION ONLY 08-09-14
p5 ISSUE FOR COORDINATION ONLY 11-09-10
p6 ISSUED FOR INFORMATION 16 09 14
7 ISSUED FOR INFORMATION 23-09-14
PA ISSUE FOR DA 25-09-14
PB CARPARK ENTRY & LINEMARKING REVISED. 30-09-14
C DA AMENDMENT 17 10 14
D SERVICE ROAD LEVEL ADMENDED & CAFE 23-10-14
E REVISED MASTERS RACKING ADDED. TRAVELATORS, LIFTS & LOBBY MOVED. ADMIN & AMENITIES REVISED. 11-11-14
F WALL BETWEEN TRADE & RECEIVING MOVED. 13-11-14
G TRAVELATOR, LIFT & LOBBY POSITIONS REVISED. AMENITIES & ADMIN AREAS REVISED. ACCESS ARRANGEMENTS REVISED. ISSUE FOR REVIEW. 21/11/14
TOTAL SITE AREA = 22,445 SQM
TOTAL HARDWARE GFA = 13,897 SQM
SITE COVERAGE = 61.9%
CARPARKING
DISABLED = 8
PARENTS + PRAMS = 8
TRAILERS = 4
TOTAL CAR SPACES = 367
= 1:38
Site Plan
PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA
DA01 G
LEFFLER SIMES ARCHITECTS

ISSUE	AMENDMENT	DATE	CHK'D
P2	ISSUE FOR INFORMATION	21-08-14	
P3	LOBBY AREA ADDED TO AREA SCHEDULE	01-09-14	
P 4	ISSUE FOR COORDINATION ONLY	08-09-14	
P 5	ISSUE FOR COORDINATION ONLY	11-09-10	
P A	ISSUE FOR DA	25-09-14	
B	CARPARK ENTRY & LINEMARKING REVISED.	30-09-14	
C	DA AMENDMENT	17-10-14	
D	SERVICE ROAD LEVEL ADMENDED & CAFE	23-10-14	
E	REVISED MASTERS RACKING ADDED. TRAVELATORS, LIFTS & LOBBY MOVED. ADMIN & AMENITIES REVISED.	11-11-14	
F	WALL BETWEEN TRADE & RECEIVING MOVED.	13-11-14	
G	PARALLEL PARKING ADDED ADJACENT LOBBY	17/11/14	
H	TRAVELATOR, LIFT & LOBBY POSITIONS REVISED. CARPARK REVISED. ACCESS ARRANGEMENTS REVISED. ISSUE FOR REVIEW.	21/11/14	

NO PLANNING ADVICE HAS BEEN SOURCED FROM COUNCIL AND LOCAL AUTHORITIES IN THE PREPARATION OF THIS SITE MASTERPLAN.

ALL SETBACKS, PLOT RATIOS, LANDSCAPE AREAS, CAR PARKING NUMBERS AND THE LIKE ARE SUBJECT TO COUNCIL APPROVAL.

ENTRIES, EXITS & CAR PARKING LAYOUTS ARE PRELIMINARY ONLY AND SUBJECT TO TRAFFIC ENGINEERS DESIGN. SITE ACESS POINTS SUBJECT TO MAIN ROAD WA INPUT.

SITE BOUNDARIES AND SITE AREAS INDICATIVE ONLY & SUBJECT TO CONFIRMATION BY LICENSED SURVEYOR.

TOTAL SITE AREA	**= 22,445 SQM**
GROSS FLOOR AREAS:	
MAIN FLOOR	= 8,486 SQM
ADMIN, AMENITIES,BASEMENT LOBBY & ENTRY	= 945 SQM
GARDEN CENTRE	= 1862 SQM
INTERNAL TRADE CENTRE	= 1086 SQM
EXTERNAL TRADE CENTRE	= 857 SQM
RECEIVING	= 661 SQM
TOTAL HARDWARE GFA	**= 13,897 SQM**
SITE COVERAGE	**= 61.9%**

CARPARKING	
DISABLED	= 8
PARENTS + PRAMS	= 8
TRAILERS	= 4
ORDINARY	= 347
TOTAL CAR SPACES	**= 367**
	= 1:38

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BRISBANE 2 - 290 BOUNDARY ST SPRING HILL QLD 4004 T:+61 7 31235544
SCALE 1:250

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588 DATE: 07/01/14 DRAWN: JAB
DWG NO. DA02 REV. H

Basement Plan

LEFFLER SIMES ARCHITECTS

Our Ref V14019
Contact Julia Morgan

5 August 2014

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Acure Asset Management
Level 7, 140 St Georges Terrace
Perth WA 6000

Attention: Marco Marramiero

Dear Marco

Subject: Hamersley EPBC Referral Advice

Background

Cardno has been engaged by Acure Asset Management to undertake a risk assessment of Part Lot 102, Erindale Road, Hamersley to determine whether a referral is required to the Commonwealth under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Part Lot 102 (the Site) is located on Commonwealth land and contains an existing National Broadcasting Service Transmission Station. Acure Asset Management, on behalf of Broadcast Australia, are seeking to expand the existing infrastructure in the south-east corner of Lot 102, requiring the clearing of 0.87 ha of native vegetation.

EPBC Act

The EPBC Act is the overarching legislation governing environmental protection in Australia. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places – defined in the EPBC Act as Matters of National Environmental Significance (MNES). Under the environmental assessment provisions of the EPBC Act, 'actions' (proposals/projects) that are likely to have a significant impact to one or more MNES protected under the EPBC Act are subject to an assessment and approvals process by the Commonwealth Department of the Environment (DOTE).

Methodology

Desktop Review

A desktop review was carried out for the Site, involving an EPBC protected matters search to determine the likelihood of any MNES occurring within the proposed development area.

The EPBC Protected Matters database search (Attachment 3) identified eighteen EPBC listed species as having the potential to occur within the Site (Table 1). Of

these, only Carnaby's cockatoo (*Calyptorhynchus latirostris*) has been assessed as likely to occur within the Site.

Table 1 EPBC listed species potentially occurring within the Site

Species	Common Name	Likelihood of occurrence
Birds		
Calyptorhynchus latirostris	Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo	**Likely.** The Site contains suitable habitat for this species.
Leipoa ocellata	Malleefowl	Unlikely. Suitable habitat for this species does not occur within the Site.
Rostratula australis	Australian Painted Snipe	Unlikely. This species is a wading bird. No suitable habitat is present within the Site.
Sternula nereis nereis	Australian Fairy Tern	Unlikely. This species is primarily coastal and around water. It does not regularly visit inland areas and therefore is unlikely to occur within the Site.
Mammals		
Dasyurus geoffroii	Chuditch, Western Quoll	Unlikely. Given the small size and isolated position of the remnant native vegetation this species is unlikely to utilise the Site.
Pseudocheirus occidentalis	Western Ringtail Possum, Ngwayir	Unlikely. This species is associated with Peppermint forests, which do not occur within the Site.
Plants		
Caladenis huegelii	King Spider-orchid, Grand Spider-orchid, Rusty Spider-orcid	Unlikely. Small amount (<1ha) of potential habitat identified on site, but this is fragmented and degraded from weed incursion.
Centrolepis caespitosa	-	Unlikely, as this species requires salt flats and/or wet areas.
Diuris micrantha	Dwarf Bee-orchid	Unlikely. Species not recorded within the Site.
Diuris purdiei	Purdie's Donkey-orchid	Unlikely. Species not recorded within the Site.
Drakaea elastica	Glossy-leafed Hammer-orchid, Praying Virgin	Unlikely, as this species requires winter-wet swamp habitat.
Drakaea micrantha	Dwarf Hammer-orchid	Unlikely. Small amount (<1ha) of potential habitat identified on site, but this is fragmented and degraded from weed incursion.
Migratory Marine Birds		
Apus pacificus	Fork-tailed Swift	Unlikely. This species is a largely aerial species and the impact of the clearing on this species is likely to be negligible.
Migratory Terrestrial Species		
Haliaeetus leucogaster	White-bellied Sea-Eagle	Unlikely, as site is not in a coastal location.
Merops ornatus	Rainbow Bee-eater	Unlikely, due to lack of soft sand for nesting habitat.
Migratory Wetland Species		
Ardea alba	Great Egret, White Egret	Unlikely. May fly over the Site.
Ardea ibis	Cattle Egret	Unlikely. May fly over the Site.
Rostratula benghalensis (sensu lato)	Painted Snipe	Unlikely. May fly over the Site.

Site Visit

A brief site visit was conducted by Kelby Jennings (Consultant Ecologist) on 4th August 2014. During this visit the extent and type of native vegetation proposed to be cleared was evaluated to determine the likelihood of any significant impacts to threatened species listed under the EPBC Act. A significant tree assessment was also undertaken concurrently to identify and assess any significant trees (>500 mm DBH) located within the site to determine their suitability for Carnaby's cockatoo habitat.

Results

The site visit confirmed that the habitat of the site consists primarily of open parkland with amenity trees. A small pocket (0.87ha) of remnant bushland was identified, consisting of:

> scattered *Eucalyptus marginata* and *Banksia prionotes* over *Xanthorrhoea preissii* and *Calytrix fraseri* over *Stirlingia latifolia* and **Ehrharta calycina* in the north; and
> **Leptosperma erubescens* and *Jacksonia sternbergiana* over *Xanthorrhoea preissii* over **Ehrharta calycina* in the south.

In the northern vegetation community *Eucalyptus marginata*, *Banksia prionotes* and *Hakea prostrata* are considered potential foraging species for Carnaby's cockatoo. This community occupies approximately 0.41 ha, refer to Attachment 1: Site Photographs.

In total 27 significant trees (>500 mm DBH) were identified within the Site (Attachment 2: Significant Tree Plan). Of these, only 8 are *Eucalyptus marginata*, and the rest are introduced amenity trees, predominately Tasmanian Blue Gum (*Eucalyptus globulus*). No evidence of hollows or Carnaby's cockatoo breeding was present within any of the identified trees.

Assessment of impact on Carnaby's cockatoo

The proposal may potentially impact upon Carnaby's cockatoos; as such there are two relevant Commonwealth policy documents which identify triggers for referral of proposals to DOTE for assessment under the EPBC Act. These are:

1. Department of Sustainability, Environment, Water, Population and Communities (2012) *Referral Guidelines for three threatened black cockatoo species*; and
2. Department of the Environment, Water, Heritage and the Arts (2009) *Matters of National Environmental Significance, Significant impact guidelines 1.1*.

Table 2 assesses the proposal against referral triggers identified in the Referral Guidelines for three threatened black cockatoo species (DSEWPaC 2012).

Table 2 Assessment of the proposal against the Black cockatoo Referral Guidelines

Referral trigger	Assessment of proposal against referral trigger
Clearing of any known nesting tree	No known nesting trees are located within the Site.
Clearing of more than 1 ha of quality foraging habitat	Approximately 0.41 ha of foraging habitat will be cleared as a result of the proposed expansion. This is less than the 1 ha referral trigger and in the majority consists of scattered trees over a degraded understorey.
Clearing or degradation (including pruning the top canopy) of a known night roosting site	No known night roosting trees have been recorded within the Site, and no evidence of clippings, feather moulting's or droppings have been observed beneath trees, which would indicate use of trees for overnight roosting.
Creating a gap of more than 4 km between patches of black cockatoo habitat (breeding, foraging or roosting)	The Site is located in close proximity to a number of existing reserves/open spaces containing potential cockatoo habitat, including Warwick Open Space, Koondoola Regional Bushland and Lake Careniup. As such the proposed clearing will not create a gap of more than 4 km between patches of habitat.

Referral trigger	Assessment of proposal against referral trigger
Clearing or disturbance in areas surrounding breeding, foraging or roosting habitat that has the potential to degrade habitat	No known roosting or nesting sites are located within the Site. Therefore clearing is unlikely to degrade breeding or roosting habitat.
Actions that have the potential to increase competitors for nest hollows	The clearing of habitat within the Site is unlikely to contribute to an increase in competition for nest hollows as no known breeding hollows have been identified within the Site.
Actions that have the potential to introduce known plant diseases such as *Phytophythora cinnamomii* (Dieback)	A dieback survey has not been undertaken for the site, however given the level of disturbance currently existing within the site, it is unlikely that the proposed clearing will have the potential to introduce known plant diseases.

Table 3 provides a further assessment of the potential impacts from the proposed clearing to Carnaby's cockatoo against the criteria established in the Significant Impact Guidelines 1.1.

Table 3 Assessment of potential impacts to Carnaby's cockatoo against significant impact criteria

Significant impact criterion	Comment
Will the action lead to a long-term decrease in the size of a population?	A total of 27 significant trees (DBH >500mm) have been identified within the Site, although only 8 are species suitable for Carnaby's cockatoo breeding habitat. It is noted that none of the significant trees identified contain hollows or any evidence of use by Carnaby's cockatoos for breeding or roosting purposes. The proposed clearing will not lead to a long-term decrease in the size of Black Cockatoo populations due to: • the residual presence of large areas of vegetation within the locality and region of the Site (including Warwick Open Space, Koondoola Regional Bushland and Lake Careniup); and • the nature of Carnaby's cockatoo populations, which are highly mobile with extensive ranges.
Will the action reduce the area of occupancy of the species?	Given the small scale of the clearing required, the proposed action is unlikely to significantly reduce the area of occupancy of Carnaby's cockatoo.
Will the action fragment an existing population into two or more populations?	The Site is located in an existing residential area which is not known to provide roosting or breeding habitat for Carnaby's cockatoos and is unlikely to provide important foraging habitat. The proposed clearing is therefore unlikely to fragment an existing population.
Will the action adversely affect habitat critical to the survival of a species?	While the Site contains potential foraging habitat for Carnaby's cockatoo, there are no known breeding or roosting sites within the Site. As such the action will not adversely affect habitat critical to the survival of the species.
Will the action disrupt the breeding cycle of a population?	A total of 8 significant trees (DBH>500mm) have been identified within the Site suitable for Carnaby's cockatoo habitat. However, none of these trees contain hollows suitable for breeding by Carnaby's cockatoo. On this basis the proposed clearing will not disrupt the breeding cycle of a population.
Will the action result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat?	The Site is surrounded by existing residential development; as such it is unlikely the proposed clearing will result in any new invasive species becoming established.
Will the action introduce disease that may cause the species to decline?	The proposed clearing will not involve any actions that may cause the introduction of new diseases Carnaby's cockatoos.
Will the action modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline?	The proposed clearing is unlikely to modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

Significant impact criterion	Comment
Will the action interfere with the recovery of the species?	The proposed clearing is unlikely to interfere with the recovery of Carnaby's cockatoos as areas of foraging, nesting and roosting habitat are retained close to the Site within Warwick Open Space, Koondoola Regional Bushland and Lake Careniup.

Recommendations

Based on the above assessment, it is strongly arguable that a referral to the Commonwealth is unnecessary for this specific project. The likely impact on MNES, in particular Carnaby's cockatoo habitat as a result of the development is very limited.

References

Department of Environment and Conservation (DEC) (2012), *Plants Used by Carnaby's Black-Cockatoo, [Online], Government of Western Australia*, Available from: http://www.dec.wa.gov.au/content/view/5983/2006/ [August 2014].

Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) (2011), *Environment Protection and Biodiversity Conservation Act 1999 draft referral guidelines for three threatened black cockatoo species: Carnaby's cockatoo (endangered), Calyptorhynchus latirostris Baudin's cockatoo (vulnerable), Calyptorhynchus baudinii Forest red-tailed black cockatoo (vulnerable) Calyptorhynchus banksii naso*, [Online], Australian Government, Available from: http://www.environment.gov.au/epbc/publications/pubs/referral-guidelines-wa-black-cockatoo.pdf [August 2014]

Yours sincerely,

Julia Morgan
Team Leader - Environment
for Cardno
Direct Line +61 8 9273 3848
Email: julia.morgan@cardno.com.au

Enc:
Attachment 1 – Site Photographs
Attachment 2 – Significant Tree Plan
Attachment 3 – Protected Matters Search Results

ATTACHMENT 1: Site Photographs

Plate 1: Remnant vegetation including potential Carnaby's cockatoo foraging habitat.

Plate 2: Cleared parkland with significant trees (>500mm DBH)

ATTACHMENT 2: Significant Tree Plan

10 0 10 20 30 40 50m
1:1000

Scale 1:1,000 (A3)

FIGURE 1

Site Location and Significant Tree Species

Rev: 0 | Drawn: JC | Checked: JM | Date: 05/08/2014

Project No.: V14020

Accure Asset Management

PRINT DATE: 05 August, 2014 - 4:30pm

CAD FILE: G:\ESPLA\Environment & Water\Projects\V14019 - HAMERSLEY EPBC REFERRAL ADVICE\05.TECHNICAL\03. DRAWINGS & IMAGES\DWG's\V14019 FIG01 (Site Location Plan 05.08.14).dwg
XREF's:

ATTACHMENT 3: Protected Matters Search Results

Australian Government

Department of the Environment

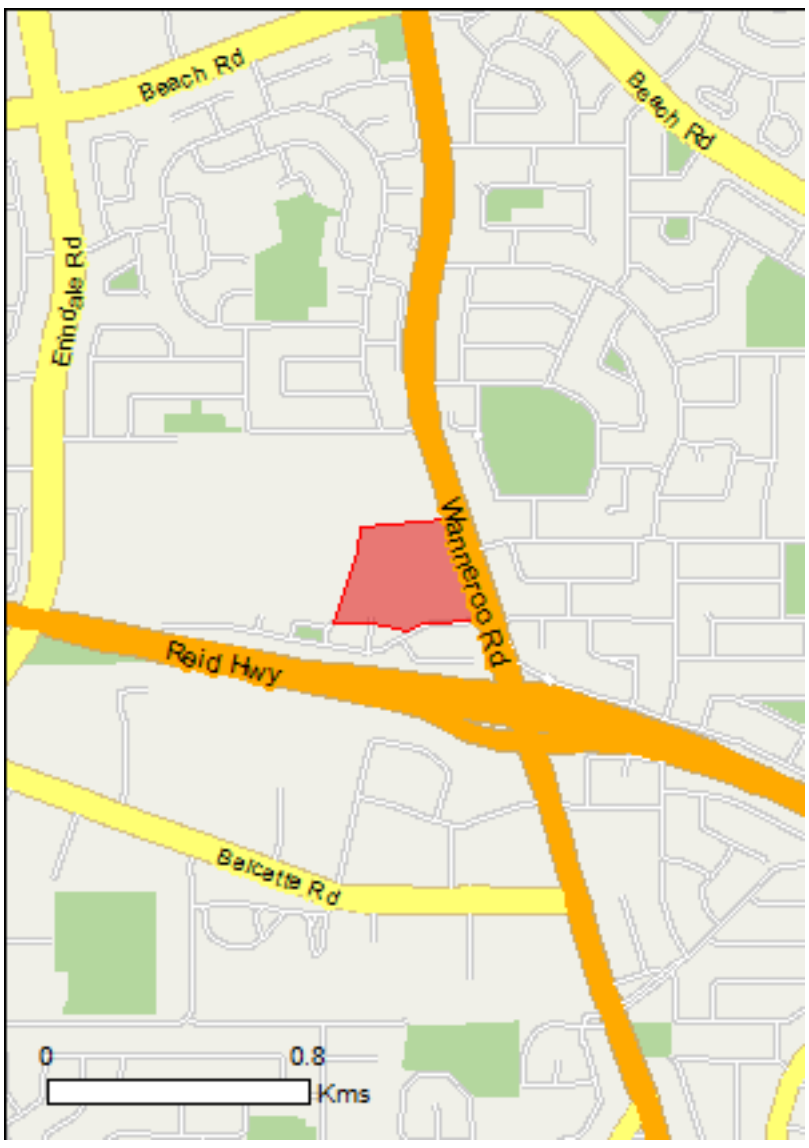
EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

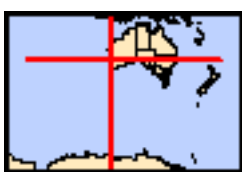
Report created: 04/08/14 12:31:58



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

Coordinates

Buffer: 0.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Areas:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	12
Listed Migratory Species:	6

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place and the heritage values of a place on the Register of the National Estate.

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	7
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

Place on the RNE:	None
State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	40
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Calyptorhynchus latirostris Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Species or species habitat likely to occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area
Mammals		
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area
Pseudocheirus occidentalis Western Ringtail Possum, Ngwayir [25911]	Vulnerable	Species or species habitat likely to occur within area
Plants		
Caladenia huegelii King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat likely to occur within area
Centrolepis caespitosa [6393]	Endangered	Species or species habitat may occur within area
Diuris micrantha Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat likely to occur

Name	Status	Type of Presence
		within area
Diuris purdiei		
Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat may occur within area
Drakaea elastica		
Glossy-leafed Hammer-orchid, Praying Virgin [16753]	Endangered	Species or species habitat likely to occur within area
Drakaea micrantha		
Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Haliaeetus leucogaster		
White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Merops ornatus		
Rainbow Bee-eater [670]		Species or species habitat may occur within area
Migratory Wetlands Species		
Ardea alba		
Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato)		
Painted Snipe [889]	Endangered*	Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba		
Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat likely to occur within area
Haliaeetus leucogaster		
White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Merops ornatus		
Rainbow Bee-eater [670]		Species or species habitat may occur within area
Pandion haliaetus		
Osprey [952]		Species or species habitat may occur within area
Rostratula benghalensis (sensu lato)		
Painted Snipe [889]	Endangered*	Species or species habitat may occur within area

Extra Information

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis		
Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos		
Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis		
European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia		
Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus		
House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus		
Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Streptopelia chinensis		
Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Streptopelia senegalensis		
Laughing Turtle-dove, Laughing Dove [781]		Species or species habitat likely to occur within area
Sturnus vulgaris		
Common Starling [389]		Species or species

Name	Status	Type of Presence
		habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Funambulus pennantii Northern Palm Squirrel, Five-striped Palm Squirrel [129]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Asparagus declinatus Bridal Veil, Bridal Veil Creeper, Pale Berry Asparagus Fern, Asparagus Fern, South African Creeper [66908]		Species or species habitat likely to occur within area
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Brachiaria mutica Para Grass [5879]		Species or species habitat may occur within area
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area

Name	Status	Type of Presence
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Olea europaea Olive, Common Olive [9160]		Species or species habitat may occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Protasparagus plumosus Climbing Asparagus-fern, Ferny Asparagus [11747]		Species or species habitat likely to occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area
Ramphotyphlops braminus Flowerpot Blind Snake, Brahminy Blind Snake, Cacing Besi [1258]		Species or species habitat likely to occur within area

Coordinates

-31.857062 115.825106,-31.857135 115.824763,-31.85719 115.823969,-31.857208 115.823561,-31.857372 115.823175,-31.85719 115.822145,-31.85719 115.821566,-31.857226 115.821094,-31.855513 115.821759,-31.854984 115.821866,-31.854802 115.824269, -31.857062 115.825106,-31.857062 115.825106

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World Heritage and Register of National Estate properties, Wetlands of International Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Department of Environment, Climate Change and Water, New South Wales
-Department of Sustainability and Environment, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment and Natural Resources, South Australia
-Parks and Wildlife Service NT, NT Dept of Natural Resources, Environment and the Arts
-Environmental and Resource Management, Queensland
-Department of Environment and Conservation, Western Australia
-Department of the Environment, Climate Change, Energy and Water
-Birds Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-SA Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Atherton and Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
-State Forests of NSW
-Geoscience Australia
-CSIRO
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

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GEORGIOU GROUP

MASTERS STORE
HAMERSLEY

PRELIMINARY ENVIRONMENTAL ACOUSTIC ASSESSMENT

NOVEMBER 2014

OUR REFERENCE: 18489-1-14235

DOCUMENT CONTROL PAGE

ENVIRONMENTAL ACOUSTIC ASSESSMENT

MASTERS STORE - HAMERSLEY

Job No: 14235

Document Reference: 18489-1-14235

FOR

GEORGIOU GROUP

DOCUMENT INFORMATION			
Author:	George Watts	**Checked By:**	Tim Reynolds
Date of Issue :	3 November 2014		

REVISION HISTORY

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1	1	Georgiou Group		✓

CONTENTS

APPENDICIES

1. INTRODUCTION

Herring Storer Acoustics were commissioned by Georgiou Group to undertake an acoustic assessment of noise emissions associated with the proposed Masters Store to be located on Wanneroo Road, Hamersley.

The objective of this study was to assess noise emissions from delivery vehicles and mechanical services at the noise sensitive surrounding the proposed site for compliance with the requirements of the *Environmental Protection (Noise) Regulations 1997*.

The assessment was undertaken to inform the design development team of the store and accompany the development application.

Supplied architectural drawings are attached in Appendix A.

2. SUMMARY

Noise emissions associated with the proposed Masters store have been determined to comply with the Environmental Protection (Noise) Regulations at all relevant times.

It is noted that the above is on the basis of the following assumptions :

Mechanical Plant only operates during trading hours.
Deliveries only occur during trading hours (but not Sundays).
Trading hours are proposed to be 0800 – 1800 hours, Monday – Saturday and 1100 – 1600 hours on Sundays.

3. CRITERIA

3.1 ENVIRONMENTAL PROTECTION (NOISE) REGULATIONS 1997

The *Environmental Protection (Noise) Regulations 1997* stipulate the allowable noise levels at any noise sensitive premises from other premises. The allowable noise level is determined by the calculation of an influencing factor, which is added to the baseline criteria set out in Table 1 of the Regulations. The baseline assigned noise levels are listed in Table 3.1.

TABLE 3.1 – ASSIGNED NOISE LEVELS

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		$L_{A\ 10}$	$L_{A\ 1}$	$L_{A\ max}$
Noise sensitive premises within 15 metres of a dwelling (Highly Sensitive Areas)	0700 - 1900 hours Monday to Saturday	45 + IF	55 + IF	65 + IF
	0900 - 1900 hours Sunday and Public Holidays	40 + IF	50 + IF	65 + IF
	1900 - 2200 hours all days	40 + IF	50 + IF	55 + IF
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	35 + IF	45 + IF	55 + IF
Commercial Premises	All Hours	60	75	80

Note: The L_{A10} noise level is the noise that is exceeded for 10% of the time.
The L_{A1} noise level is the noise that is exceeded for 1% of the time.
The L_{Amax} noise level is the maximum noise level recorded.

It is a requirement that noise from the site be free of annoying characteristics (tonality, modulation and impulsiveness) at other premises, defined below as per Regulation 9.

"impulsiveness" means a variation in the emission of a noise where the difference between L_{Apeak} and $L_{Amax\ Slow}$ is more than 15dB when determined for a single representative event;

"modulation" means a variation in the emission of noise that –

(a) is more than 3dB $L_{A\ Fast}$ or is more than 3dB $L_{A\ Fast}$ in any one-third octave band;
(b) is present for more at least 10% of the representative assessment period; and
(c) is regular, cyclic and audible;

"tonality" means the presence in the noise emission of tonal characteristics where the difference between –

(a) the A-weighted sound pressure level in any one-third octave band; and
(b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands,

is greater than 3 dB when the sound pressure levels are determined as $L_{Aeq,T}$ levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as $L_{A\ Slow}$ levels.

Where the above characteristics are present and cannot be practicably removed, the following adjustments are made to the measured or predicted level at other premises.

TABLE 3.2 – ADJUSTMENTS FOR ANNOYING CHARACTERISTICS

Where tonality is present	Where modulation is present	Where impulsiveness is present
+ 5 dB	+ 5 dB	+ 10 dB

The following locations have been determined to require an assessment of noise level emissions.

The receiver locations considered are shown below in Figure 3.1

FIGURE 3.1 – RECEIVER POINTS

The influencing factor at the proposed residential premises has been estimated as follows :

- R1 – R4

Major Road within the inner circle;
Wanneroo Road + 6 dB

Commercial Premises within the inner circle;
20 % + 1 dB

Industrial Premises within the outer circle;
10 % + 1 dB

Hence, the influencing factor is estimated at 8 dB :

- R5 – R7

Major Road within the outer circle;
Wanneroo Road + 2 dB
Reid Highway + 2 dB

Commercial Premises within the inner circle;
20 % + 1 dB

Industrial Premises within the outer circle;
10 % + 1 dB

Hence, the influencing factor is estimated at 6 dB.

Based on the above influencing factors, the assigned outdoor noise levels are listed in Table 3.3.

Table 3.3 - Assigned Outdoor Noise Level

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		$L_{A\ 10}$	$L_{A\ 1}$	$L_{A\ max}$
R1 – R4	0700 - 1900 hours Monday to Saturday (Day)	53	63	73
	0900 - 1900 hours Sunday and Public Holidays (Sundays)	48	58	73
	1900 - 2200 hours all days (Evening)	48	58	63
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	43	53	63
R5 – R7	0700 - 1900 hours Monday to Saturday (Day)	51	61	71
	0900 - 1900 hours Sunday and Public Holidays (Sundays)	46	56	71
	1900 - 2200 hours all days (Evening)	46	56	61
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	41	51	61
Commercial Premises	All Hours	60	75	80

Note: L_{A10} is the noise level exceeded for 10% of the time.
L_{A1} is the noise level exceeded for 1% of the time.
L_{Amax} is the maximum noise level.

4. PROPOSED DELIVERIES

The use of the delivery dock is understood to accommodate 19m articulated delivery trucks, consist of 5 – 6 trucks per day (accommodating only 1 at any time). Deliveries occur only during trading hours with the exception of Sundays where no deliveries occur.

Trading hours extend from 0800 – 1800 hours, Monday to Saturday and 1100 – 1600 hours on Sundays/Public Holidays.

5. MECHANICAL PLANT

Mechanical plant details has been based on the provided “Principal’s Project Requirements (PPR) Revision E, Part H, Mechanical Services Oct 2013” document (attached in Appendix B). This document makes allowance for the air conditioning, for each Masters Store, to consist of up to five 140kw or 180kw variable air volume roof top package units. Approved manufacturers for the units are Daikin, Mitsubishi Electric and MHI.

6. METHODOLOGY

Noise modelling of the noise propagation from the site was carried out using the environmental noise modelling computer program, "SoundPlan". Single point calculations were undertaken.

Input data for computer modelling included:

- EPA standard weather condition for the day and night periods (see Table 6.1).
- Sound power levels, as summarised in Table 6.2 and 6.3.

TABLE 6.1 - WEATHER CONDITIONS

Condition	Day Period	Night Period
Temperature	20 °C	15 °C
Relative humidity	50%	50%
Pasquil Stability Class	E	F
Wind speed	4 m/s*	3 m/s*

* From source to receiver

TABLE 6.2 – SOUND POWER LEVELS OF DELIVERY VEHICLES

DESCRIPTION	dB(A)
19m articulated delivery truck	92

TABLE 6.3 – SOUND POWER LEVELS OF MECHANICAL PLANT

DESCRIPTION	dB(A)
180 kW Roof top Package Unit	85

For the above sound power levels, single point calculations were undertaken for the following scenarios :

Scenario 1 : Delivery vehicles traveling on site.

Scenario 2 : Mechanical Plant.

Notes :

1 Noise levels associated with delivery vehicles passing along the on site road have been assessed against the L_{A1} criteria. This is a considered a reasonable assumption based on trucks travelling at 20km/hr, noise levels are determined to be present for approximately 30 seconds per truck, less than 10% of a representative period and therefore the L_{A1} parameter.

2 The drawings provided indicate a concrete panel retaining wall to the south of the development (on the boundary between the development and the neighbouring residential premises). This has been assumed to be 2m high in our assessment of the noise impact.

7. RESULTS

Single point calculations were undertaken for all locations shown in Figure 3.1.

TABLE 7.1 – RESULTANT NOISE LEVEL

Receiver Location	Scenario / Calculated Noise Level, (dB(A))	
	Scenario 1	Scenario 2
R1	49	39
R2	50	35
R3	49	36
R4	49	38
R5	47	39
R6	43	39
R7	46	40
C1	57	27

Given the location and the nature of the noise emissions, noise received at the neighbouring residences are likely to be tonal and the +5 dB(A) penalty has been added to the assessable noise level. Therefore, Table 7.2 lists the assessable noise level for each scenario (including the adjustment for tonality).

TABLE 7.2 – ASSESSABLE NOISE LEVELS

Receiver Location	Scenario / Calculated Noise Level, (dB(A))	
	Scenario 1	Scenario 2
R1	54	44
R2	55	40
R3	54	41
R4	54	43
R5	52	44
R6	48	44
R7	51	45
C1	62	32

Tables 7.3 compares the assessable noise level for deliveries against the relevant L_{A1} Assigned Noise Levels.

TABLE 7.3 – ASSESMENT OF NOISE LEVEL – SCENARIO 1 –TRUCK DELIVERIES

Receiver Location	Assessable Noise Level, dB(A)	Assigned Noise Level, L_{A1} dB		Exceedance to Assigned Noise Level
	Scenario 1	Time of Day	L_{A1} dB	
R1	54	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	+ 1
R2	55	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	+ 2
R3	54	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	+ 1
R4	54	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	+ 1
R5	52	Day	61	Complies
		Sundays	56	Complies
		Evening	56	Complies
		Night	51	+ 1
R6	48	Day	61	Complies
		Sundays	56	Complies
		Evening	56	Complies
		Night	51	Complies
R7	51	Day	61	Complies
		Sundays	56	Complies
		Evening	56	Complies
		Night	51	Complies
C1	62	All Hours	75	Complies

TABLE 7.4 – ASSESMENT OF NOISE LEVEL – SCENARIO 2 – MECHANICAL PLANT

Receiver Location	Assessable Noise Level, dB(A)	Assigned Noise Level, L_{A10} dB		Exceedance to Assigned Noise Level
	Scenario 1	Time of Day	L_{A10} dB	
R1	44	Day	53	Complies
		Sundays	48	Complies
		Evening	48	Complies
		Night	43	Complies
R2	40	Day	53	Complies
		Sundays	48	Complies
		Evening	48	Complies
		Night	43	Complies
R3	41	Day	53	Complies
		Sundays	48	Complies
		Evening	48	Complies
		Night	43	Complies
R4	43	Day	53	Complies
		Sundays	48	Complies
		Evening	48	Complies
		Night	43	Complies
R5	44	Day	51	Complies
		Sundays	46	Complies
		Evening	46	Complies
		Night	41	+ 3
R6	44	Day	51	Complies
		Sundays	46	Complies
		Evening	46	Complies
		Night	41	+ 3
R7	45	Day	51	Complies
		Sundays	46	Complies
		Evening	46	Complies
		Night	41	+ 4
C1	32	All Hours	60	Complies

Noise levels associated with truck deliveries have been calculated to comply at all times other than the night period where a marginal exceedance is calculated during the night period. Deliveries are understood to only occur Monday – Saturday, 0800 – 1800 hours, which is outside the night period. Hence, compliance is calculated to be achieved at all relevant times.

Noise levels associated with the mechanical plant has been calculated to comply at all times, with the exception of R5, R6 and R7 where a marginal exceedance is calculated during the night period. It is noted that the store is not proposed to operating during the night period: hence, mechanical plant complies at all relevant times.

APPENDIX A

Architectural Plans

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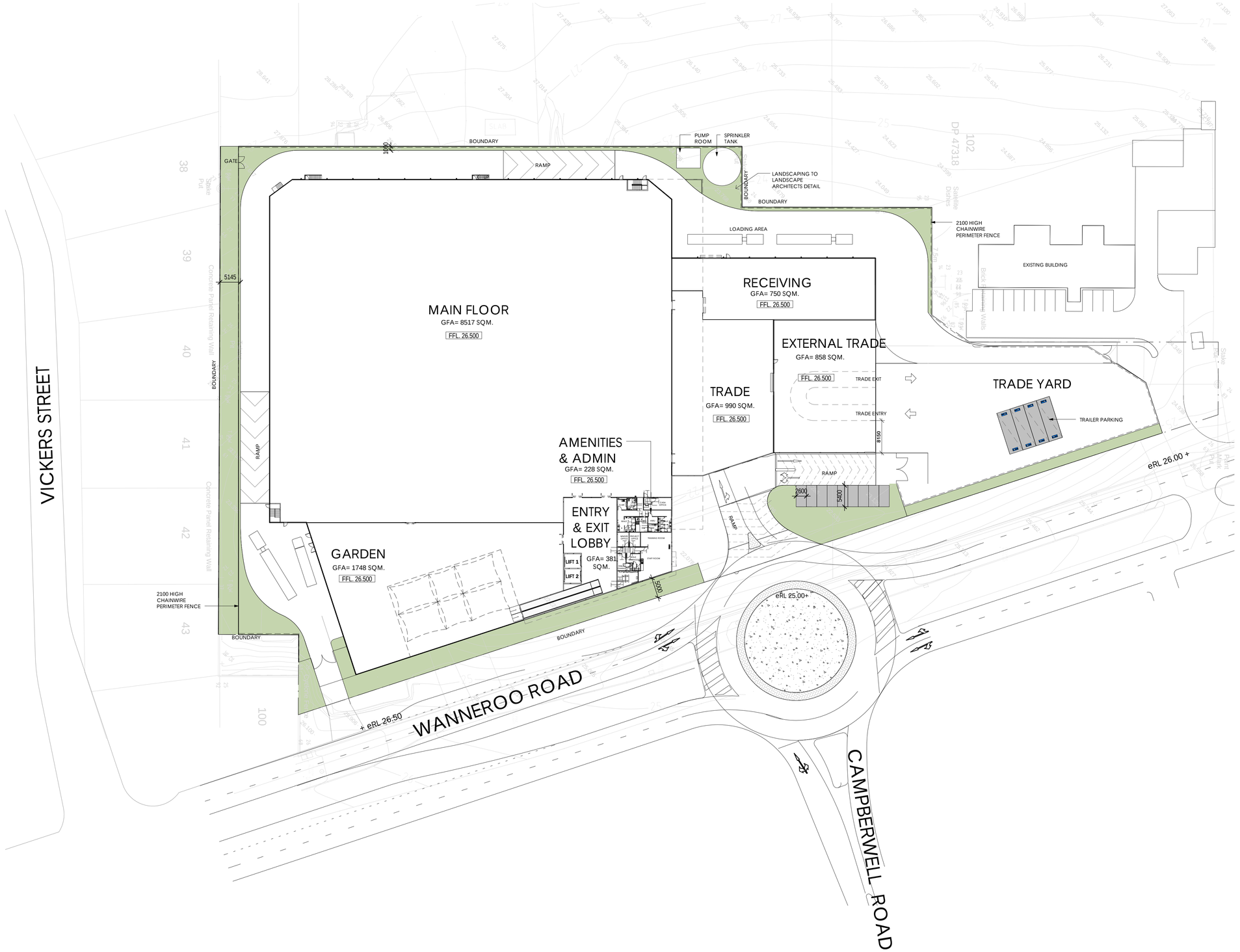
ISSUE	AMENDMENT	DATE	CHK'D
P1	ISSUE FOR REVIEW	05-08-14	
P2	ISSUED FOR INFORMATION	21-08-14	
P3	LOBBY AREA ADDED TO AREA SCHEDULE	01-09-14	
P4	ISSUE FOR COORDINATION ONLY	08-09-14	
P5	ISSUE FOR COORDINATION ONLY	11-09-10	
P6	ISSUED FOR INFORMATION	16-09-14	
P7	ISSUED FOR INFORMATION	23-09-14	
A	ISSUE FOR DA	25-09-14	
B	CARPARK ENTRY & LINEMARKING REVISED.	30-09-14	
C	DA AMENDMENT	17-10-14	



NO PLANNING ADVICE HAS BEEN SOURCED FROM COUNCIL AND LOCAL AUTHORITIES IN THE PREPARATION OF THIS SITE MASTERPLAN.

ALL SETBACKS, PLOT RATIOS, LANDSCAPE AREAS, CAR PARKING NUMBERS AND THE LIKE ARE SUBJECT TO COUNCIL APPROVAL

ENTRIES, EXITS & CAR PARKING LAYOUTS ARE PRELIMINARY ONLY AND SUBJECT TO TRAFFIC ENGINEERS DESIGN. SITE ACESS POINTS SUBJECT TO MAIN ROAD WA INPUT.

SITE BOUNDARIES AND SITE AREAS INDICATIVE ONLY & SUBJECT TO CONFIRMATION BY LICENSED SURVEYOR.

TOTAL SITE AREA	**= 22,445 SQM**
GROSS FLOOR AREAS:	
MAIN FLOOR	= 8,517 SQM
ADMIN, AMENITIES,BASEMENT LOBBY & ENTRY	= 866 SQM
GARDEN CENTRE	= 1,748 SQM
INTERNAL TRADE CENTRE	= 990 SQM
EXTERNAL TRADE CENTRE	= 858 SQM
RECEIVING	=750 SQM
TOTAL HARDWARE GFA	**= 13,729 SQM**
SITE COVERAGE	**= 61.1%**

CARPARKING	
DISABLED	= 8
PARENTS + PRAMS	= 8
TRAILERS	= 4
ORDINARY	= 342
TOTAL CAR SPACES	**= 362**
	= 1:37.9

Site Plan

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ABN 39 001 043 992
WEB: www.lefflersimes.com.au

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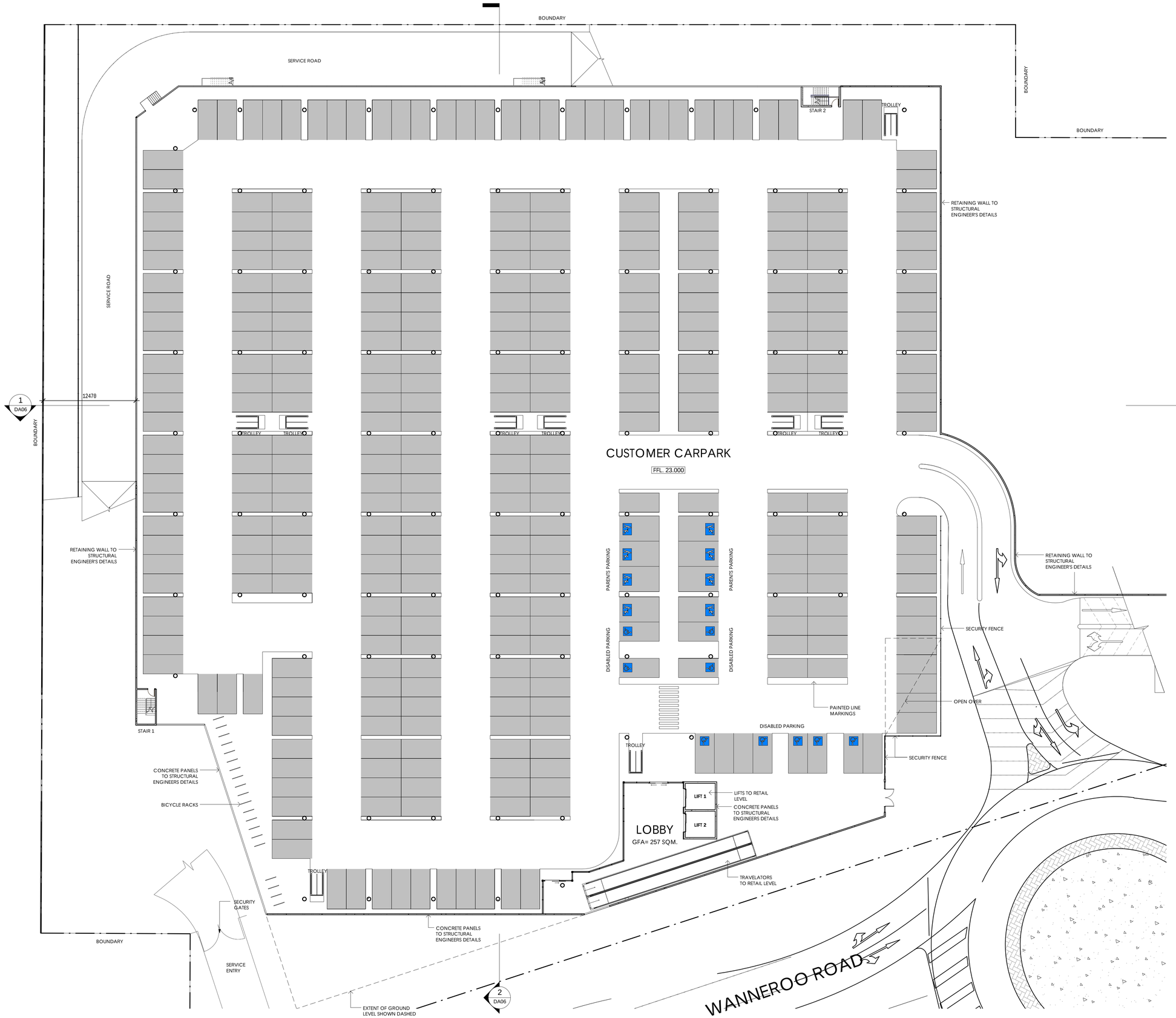
MELBOURNE LEVEL 2 - 18 OLIVER LANE VIC 3000 T:+61 3 96546344
BRISBANE 2 - 290 BOUNDARY ST SPRING HILL QLD 4004 T:+61 7 31235544

SCALE 1:500 (0 10 20 30 40 50)

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588
DATE: 31/07/14
DRAWN: JAB
DWG NO. DA01
REV. C

LEFFLER SIMES ARCHITECTS



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B	CARPARK ENTRY & LINEMARKING REVISED.	30-09-14	
C	DA AMENDMENT	17-10-14	

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TOTAL HARDWARE GFA	**= 13,729 SQM**
SITE COVERAGE	**= 61.1%**

CARPARKING	
DISABLED	= 8
PARENTS + PRAMS	= 8
TRAILERS	= 4
ORDINARY	= 342
TOTAL CAR SPACES	**= 362**
	= 1:37.9

Basement Plan

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BRISBANE 2 - 290 BOUNDARY ST SPRING HILL QLD 4004 T:+61 7 31235544

SCALE 1:250

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588
DATE: 07/31/14
DRAWN: JAB

DWG NO. DA02 REV. C

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P6	ISSUED FOR INFORMATION	23-09-14	
A	ISSUE FOR DA	25-09-14	
B	CARPARK ENTRY & LINEMARKING REVISED.	30-09-14	
C	MASTERS RACKING LAYOUT ADDED.	07-10-14	
D	DA AMENDMENT	17-10-14	

BOUNDARY

LANDSCAPING TO LANDSCAPE ARCHITECTS DETAIL

SERVICE ROAD

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL COMPOSITE INSULATED PANEL OVER

RAMP UP 1:12

EXIT

EXIT

EXIT

STAIR 2

PUMP ROOM

SPRINKLER TANK

LANDSCAPING TO LANDSCAPE ARCHITECTS DETAIL

BOUNDARY

2100mm HIGH CHAINWIRE PERIMETER FENCE

BOUNDARY

1800mm HIGH CHAINWIRE PERIMETER FENCE

3 DA06

SERVICE ROAD

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL COMPOSITE INSULATED PANEL OVER

200mm CONCRETE HOB

100795

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL COMPOSITE INSULATED PANEL OVER

200mm CONCRETE HOB

LOADING

EXIT

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH COMPOSITE INSULATED PANEL

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL CUSTOM ORB CLADDING OVER

1200mm CONCRET DADO WALL

51020

RECEIVING

GFA= 750 SQM.

REINFORCED CONCRETE SLAB DESIGNED TO STRUCTURAL ENGINEER'S DETAILS & SPECIFICATIONS

CONCRETE FLOOR FINISH & SEALER

FFL. 26.500

15295

RAPID ROLLER SHUTTER

MAIN FLOOR

GFA= 8517 SQM.

REINFORCED CONCRETE SLAB DESIGNED TO STRUCTURAL ENGINEER'S DETAILS & SPECIFICATIONS

POLISHED CONCRETE FLOOR FINISH

FFL. 26.500

INTERNAL ENTRY / EXIT

1 DA06

BOUNDARY

86065

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL COMPOSITE INSULATED PANEL OVER

200mm CONCRETE HOB

EXTENT OF BASEMENT BELOW

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL CUSTOM ORB CLADDING OVER

1200mm CONCRET DADO WALL

EXTERNAL TRADE

GFA= 858 SQM.

FFL. 26.500

EXIT

MOTORIZED ROLLER SHUTTER

TRADE EXIT

CANOPY OVER

33155

TRADE

GFA= 990 SQM.

REINFORCED CONCRETE SLAB DESIGNED TO STRUCTURAL ENGINEER'S DETAILS & SPECIFICATIONS

CONCRETE FLOOR FINISH & SEALER

FFL. 26.500

TRADE ENTRY

STEEL FRAMED CANOPY OVER

RAMP UP 1:12

INTERNAL ENTRY / EXIT

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL COMPOSITE INSULATED PANEL OVER

200mm CONCRETE HOB

STAIR 1

EXIT

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL COMPOSITE INSULATED PANEL OVER

200mm CONCRETE HOB

INTERNAL ENTRY / EXIT

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL COMPOSITE INSULATED PANEL

CLNR

CASH OFFICE

MALE

FEMALE

HWU

CLNR

MALE

FEMALE

ENTRY & EXIT LOBBY

GFA= 381 SQM.

FFL. 26.500

AMENITIES & ADMINISTRATION

GFA= 228 SQM.

MNGRS OFFICE

PROJECT OFFICE

TRAINING ROOM

FFL. 26.500

LANDSCAPING TO LANDSCAPE ARCHITECTS DETAIL

EXIT

GARDEN

GFA= 1748 SQM.

REINFORCED CONCRETE SLAB DESIGNED TO STRUCTURAL ENGINEER'S DETAILS & SPECIFICATIONS

CONCRETE FLOOR FINISH & SEALER

FFL. 26.500

SELECTED SHADE SAILS & STEEL POSTS

STEEL FRAMED WALLS TO STRUCTURAL ENGINEERS DETAILS WITH EXTERNAL CUSTOM ORB CLADDING OVER

LINE OF ROOF OVER

LINE OF ROOF OVER

LIFT 1

LIFT 2

LIFTS TO CAR PARK

MALE CHANGE

FEMALE CHANGE

STAFF ROOM

TRAVELATORS TO/FROM CARPARK LEVEL

CONCRETE TILT UP PANELS TO STRUCTURAL ENGINEERS DETAILS WITH SELECTED PAINT FINISH

PROPOSED MAIN CUSTOMER ENTRY / EXIT

4 DA06

LINE OF ROOF OVER

LANDSCAPING TO LANDSCAPE ARCHITECTS DETAIL

BOUNDARY

SECURITY GATES

EXTENT OF BASEMENT BELOW

LINE OF ALUCOBOND AWNING FEATURE OVER TO STRUCTURAL ENGINEERS DETAILS

BOUNDARY

CONCRETE TILT UP PANELS TO STRUCTURAL ENGINEERS DETAILS WITH SELECTED PAINT FINISH

eRL 25.00+

LANDSCAPING TO LANDSCAPE ARCHITECTS DETAIL

2 DA06

SERVICE ENTRY

WANNEROO ROAD

NO PLANNING ADVICE HAS BEEN SOURCED FROM COUNCIL AND LOCAL AUTHORITIES IN THE PREPARATION OF THIS SITE MASTERPLAN.

ALL SETBACKS, PLOT RATIOS, LANDSCAPE AREAS, CAR PARKING NUMBERS AND THE LIKE ARE SUBJECT TO COUNCIL APPROVAL

ENTRIES, EXITS & CAR PARKING LAYOUTS ARE PRELIMINARY ONLY AND SUBJECT TO TRAFFIC ENGINEERS DESIGN. SITE ACESS POINTS SUBJECT TO MAIN ROAD WA INPUT.

SITE BOUNDARIES AND SITE AREAS INDICATIVE ONLY & SUBJECT TO CONFIRMATION BY LICENSED SURVEYOR.

TOTAL SITE AREA	**= 22,445 SQM**
GROSS FLOOR AREAS:	
MAIN FLOOR	= 8,517 SQM
ADMIN, AMENITIES,BASEMENT LOBBY & ENTRY	= 866 SQM
GARDEN CENTRE	= 1,748 SQM
INTERNAL TRADE CENTRE	= 990 SQM
EXTERNAL TRADE CENTRE	= 858 SQM
RECEIVING	=750 SQM
TOTAL HARDWARE GFA	**= 13,729 SQM**
SITE COVERAGE	**= 61.1%**

CARPARKING	
DISABLED	= 8
PARENTS + PRAMS	= 8
TRAILERS	= 4
ORDINARY	= 342
TOTAL CAR SPACES	**= 362**
	= 1:37.9

Ground Floor Plan

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SCALE 1:250

0 5 10 15 20 25

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588
DATE: 31/07/14
DRAWN: JAB

DWG NO. DA03 REV. D

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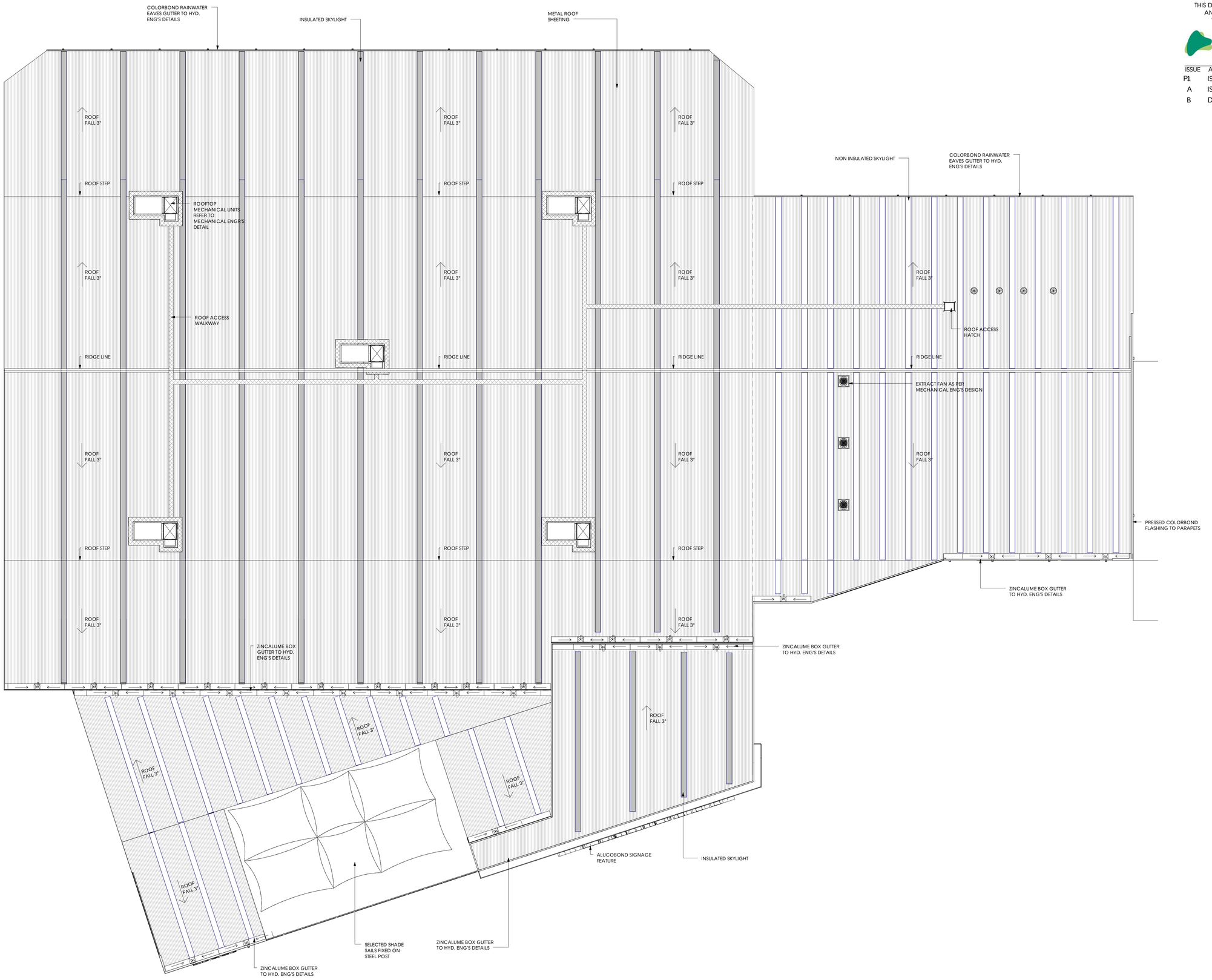
ISSUE	AMENDMENT	DATE	CHK'D
P1	ISSUE FOR REVIEW	05-08-14	
A	ISSUE FOR DA	25-09-14	
B	DA AMENDMENT	17-10-14	



Roof Plan

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0 5 10 15 20 25 SCALE 1:250

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

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DWG NO. DA04
REV. B

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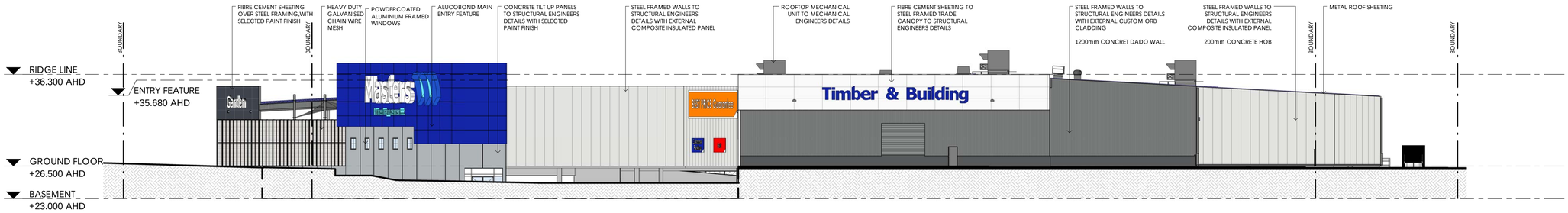
P2	GARDEN HOB WALL AMENDED	26-08-14	
P3	ISSUE FOR REVIEW	18-09-14	
A	ISSUE FOR DA	25-09-14	
B	DA AMENDMENT	17-10-14	



1 NORTH ELEVATION
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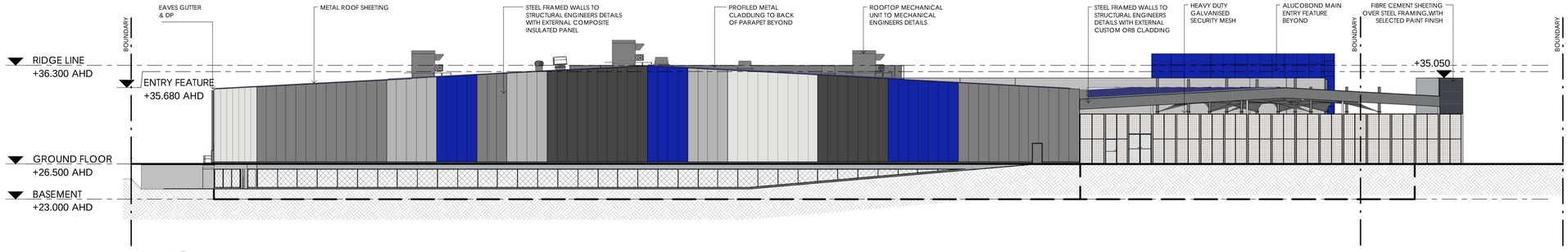
2 EAST ELEVATION (WANNEROO ROAD)
Scale: 1 : 250



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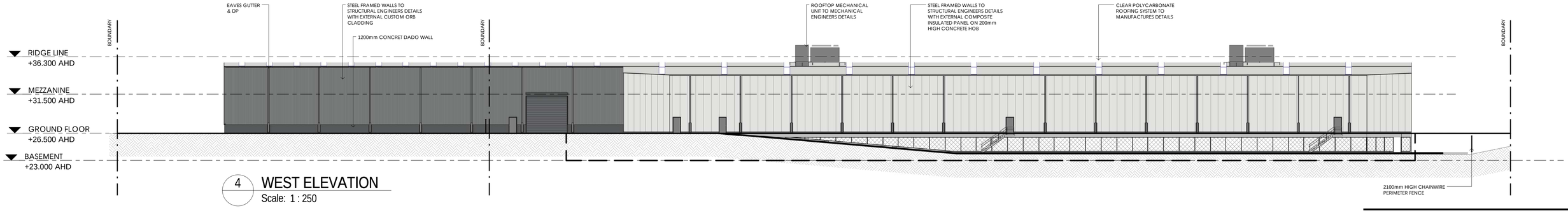

4 WEST ELEVATION
Scale: 1 : 250

FOR COMMENT

Elevations

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SCALE 1:250 (0 5 10 15 20 25)

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588
DATE: 07/31/14
DRAWN: Author
DWG NO. DA05
REV. B

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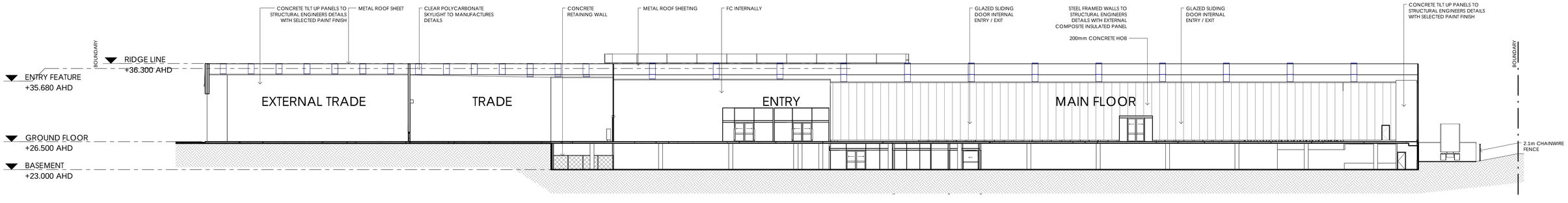

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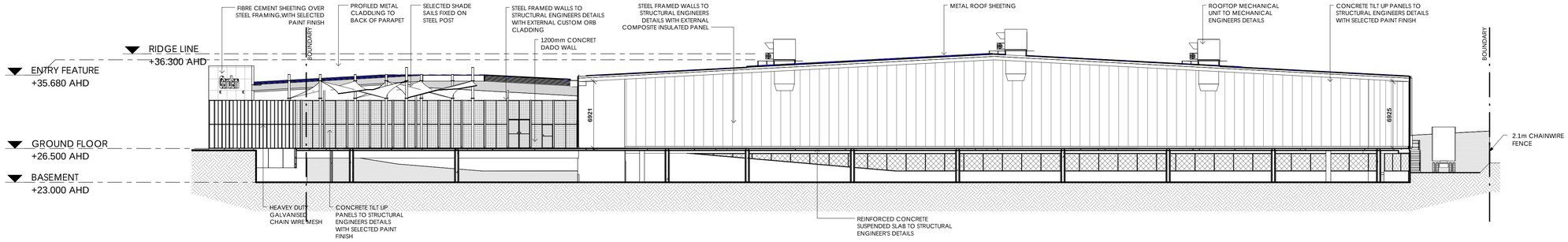

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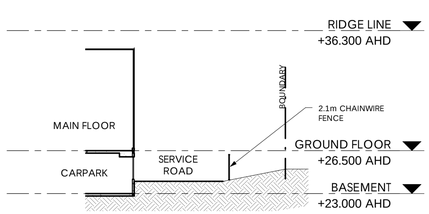

3 DA03 **SOUTHERN BOUNDARY SECTION 1**
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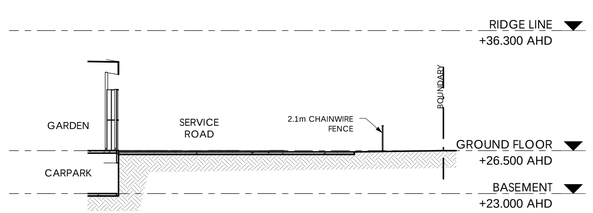

4 DA03 **SOUTHERN BOUNDARY SECTION 2**
Scale: 1 : 250

SECTIONS

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SCALE 1:250 (0 5 10 15 20 25)

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588
DATE: 07/31/14
DRAWN: JAB
DWG NO. DA06
REV. B

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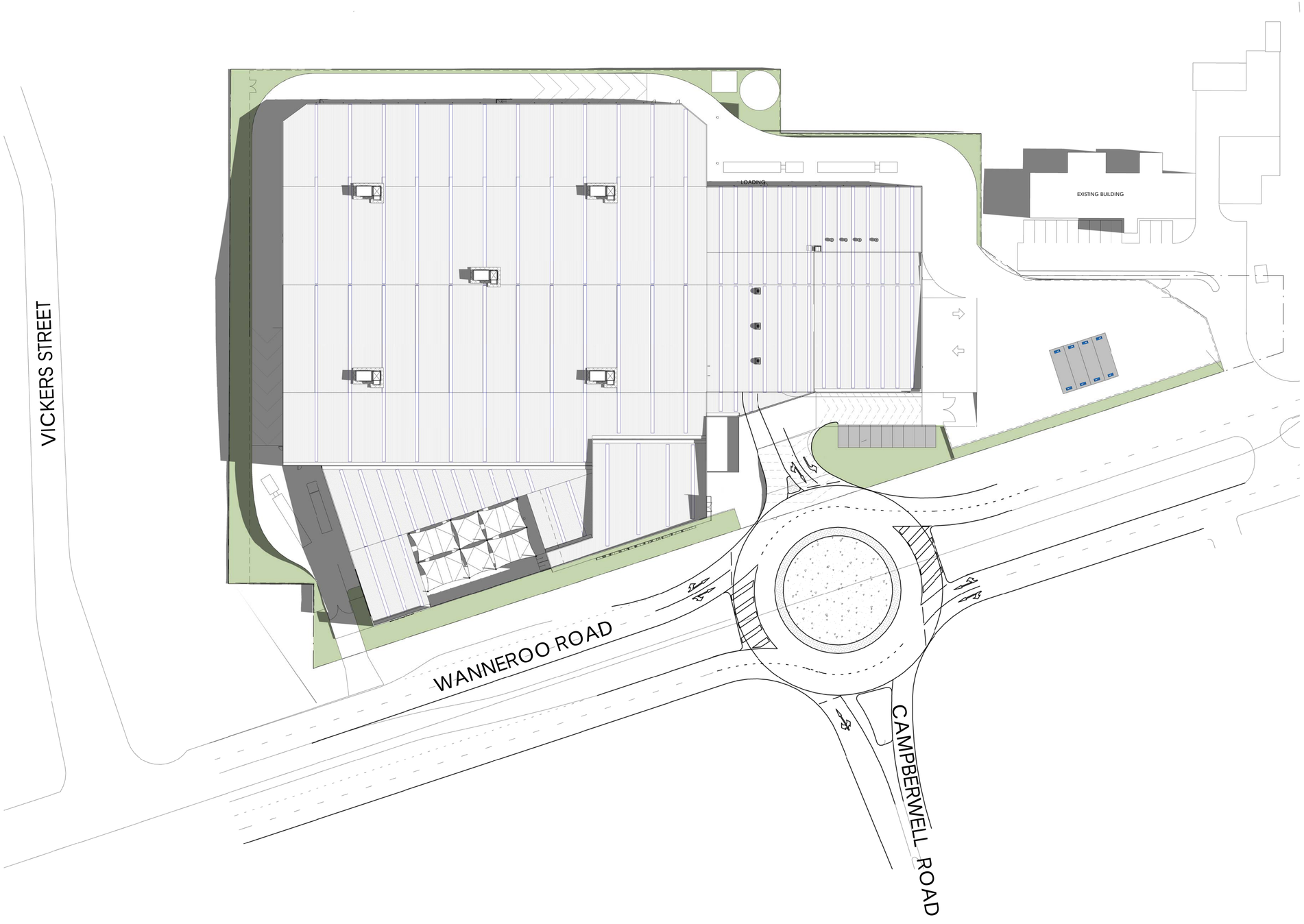
B	DA AMENDMENT	17-10-14	



Shadow Diagram_Midday
21st June

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SCALE 1:500
0 10 20 30 40 50

PROPOSED DEVELOPMENT
WANNEROO RD, BALCATTA

JOB NO: 3588
DATE: 09/25/14
DRAWN: Author
DWG NO. DA07
REV. B

LEFFLER SIMES ARCHITECTS

APPENDIX B

Mechanical Plant Schedule

Masters
Home Improvement

PRINCIPAL'S PROJECT REQUIREMENTS (PPR)

REVISION E

Part H

MECHANICAL SERVICES

Oct 2013

TABLE OF CONTENTS

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H-1 SCOPE - MECHANICAL

H-1-1 INTENT

The intent of the Air Conditioning and Mechanical Design and Construct Specification is to define the air conditioning and mechanical ventilation services requirements for Masters Stores based on Fusion Mechanical and Electrical PPR E drawings.

H-1-1-1 EXTENT OF AIR CONDITIONING & MECHANICAL VENTILATION SYSTEMS

(a) AIR CONDITIONING SYSTEMS

The retail area air conditioning system shall consist of four or five (dependant on climate zone) off 140KW **or** 180KW variable air volume (VAV) Roof Top Package units (PAC). Air shall be distributed throughout the retail floor space via non VAV swirl diffusers.

Reverse Cycle DX Inverter high wall split systems shall serve the following areas:

(a) Staff Dining
(b) Open Office
(c) Cash Office
(d) Training Room
(e) Receiving Office

Cooling only, inverter, stand alone, wall mounted, air cooled split system shall serve the UPS/Communications Room.

A separate AC split shall be provided to the main switch room in certain geographic locations only. Refer to the map in Appendix E

Approved manufacturers are Daikin, Mitsubishi Electric & MHI

(b) VENTILATION SYSTEMS

A ventilation system shall be supplied and installed to serve the following areas:

(a) Public & staff toilet exhausts ventilation system for each male and female toilet area.
(b) Receiving area (by others)
(c) External Trade exhaust
(d) Timber Trade Wood Cutting Exhaust (by others)
(e) Staff Dining Kitchen Exhaust
(f) Switch Room Ventilation by louvered doors (by others)

(c) SMOKE EXHAUST

A site specific fire engineering report will need to be prepared & supplied (by others) for each site to ascertain make-up air volumes for smoke exhaust operations.

Typically smoke spill exhaust shall be provided to the following areas:

(a) Retail area – via 8 off single speed smoke spill fans (mounted on the side of the 4 PAC units) providing a maximum exhaust volume of $5m^3/s$ each. One additional stand alone fan if required will be supplied to extract a further $10m^3/$
(b) Trade area – via 2 off single speed roof mounted smoke spill fans providing a maximum exhaust volume of $15m^3/s$ each.

Smoke Spill and/or Smoke Exhaust system for Retail area shall consist of plate mounted axial fans mounted on the fire rated box connected to the return air side of the rooftop PAC units. Timber Trade area Smoke Exhaust system shall have roof mounted fans located in positions approximately as shown on the Fusion Masters PPR E air conditioning layout.

Make-up air strategy (refer to architectural drawings for typical louvre sizes and locations). However each site will need to be reviewed independently

(a) Doors to the External Trade and Garden Centre will automatically open on GFA (general fire alarm).
(b) Receiving – The rapid roller door to the retail area will automatically open on GFA to allow make up air via a low level louver (External wall approx. free area 4.5m^2) and roof ventilators
(c) Trade – a large open louver will be provided between the two entry roller doors (External wall approx. free area 11 m^2)

NOTE:

(a) Smoke spill and/or smoke exhaust systems operate and run independently of any air conditioning system and equipment after receipt of signal from fire alarm system (GFA).
(b) All individual smoke fans shall have a separate fire rated sub main (MIMS or Radox only) installed from the centre main electrical Essential Services DB, controlled via 'Smoke Spill Fans' control panel (FIP).This control panel shall be provided by the fire contractor.
(c) All fire control logic is provided within the FIP
(d) Roof mounted smoke exhaust fan isolators are to be locked in the "on" position and labelled as such in accordance with AS 1668.1.
(e) Status indication shall be provided as per AS 1668.1.

H-1-2 DESIGN

Site specific design drawings & specifications will be prepared for each site by Fusion. The mechanical drawings provided with this PPR document are for a generic store only.

H-2 SCOPE - ELECTRICAL FOR MECHANICAL

H-2-1 INTENT

The intent of the Electrical for Mechanical Design and Construct Specification is to define the electrical design and construct requirements for air conditioning and mechanical ventilation services for Masters Stores based on Fusion Mechanical and Electrical PPR D drawings.

The intention is that the principal electrical contractor carries out **all** of power, control & communication wiring for all mechanical services.

The electrical contractor is responsible for checking and shall bring to the attention of the engineer, any discrepancy between the Consultant's drawing/specifications and Fusion's HVAC drawings/specifications at time of tender for clarification.

The electrical contractor is responsible for all cable sizing for a maximum total installation voltage drop of 5%. Cable sizing will clearly be identified on contractor's working drawings and shall be submitted for approval prior to installation.

H-2-2 DESIGN

Site specific design drawings & specifications will be prepared by Fusion for each site. The mechanical drawings provided with this PPR document are for a generic store only.

H-2-3 TASKS

- Fusion energy management system (EMS) software and programming will be provided.
- Site control system commissioning.
- Development of HVAC and BMS electrical drawing set.
- Supply of BMS Free Issue Equipment

H-2-4 DOCUMENT CONTROL

Fusion will supply the following documentation:

- Electrical for Mechanical(E4M) "For Construction" set of drawings
- Fusion HVAC Specification
- Fusion Mechanical "For Construction" set of drawings

It must be noted that this documentation will be made available to the site specific builder only. Delivery of the documents to other contractors for coordination will the responsibility of the principal contractor. Fusion HVAC will not take responsibility for any revised documents failing to be passed onto contractors. In the event that revisions are required these will be carried out and submitted to the principal contractor.

H-2-5 EQUIPMENT

The Main Electrical Contractor will provide all equipment in the form of

- Contactors,
- Relays,
- Surge arrestors,
- Phase fail or phase sequence relays,
- Terminals,
- Door openers,
- Enclosures,
- Wire,
- Duct,
- Din rail,
- G rail,
- Power supplies,
- Transformers,
- Circuit breakers,
- Fuses,
- Labels,
- Switches,
- Cable racking or tray,
- Cable of any sort,
- Isolators,
- Busbar,

- Current transformers,
- Meters (must be Emerson E50 Type)
- Switch boards,
- Distribution boards,
- Circuit breaker chassis',
- Main switches,
- Lugs,
- Wire numbers,
- Indication lights,
- Signage,
- Network equipment such as managed or unmanaged switches or any other type of electrical or communications equipment.

Necessary equipment types and makes along with their respective part numbers will be shown on the Fusion HVAC electrical drawing set for the supply by the successful electrical contractor. The contractor must not provide alternatives unless specifically approved by Fusion HVAC in writing.

H-2-6 FREE ISSUED EQUIPMENT

Fusion HVAC will supply the following free issued items to site upon written request. It must be noted that a delivery delay of up to four (4) weeks must be allowed:

- Eleven (11) of photo electric sensors.
- E2 Front End Controller
- CO sensors.
- Relative Humidity/Temperature/C02 sensors
- Thermostats.
- AC Split system wall Controllers.
- All Emerson Multiflex PLC Relay boards for DB's

On delivery the free issue items will be signed for by the electrical contractor who will be solely responsible for their security, protection from both environmental and mechanical damage up to and including installation/final commissioning. Any lost or damaged goods after receipt from the electrical contractor will only be replaced POA.

H-3 WORKS BY OTHERS

H-3-1 BY PRINCIPAL CONTRACTOR

(a) Provision of openings and access hatches in the roof and plasterboard ceilings.
(b) Provision of acoustic and sight screen around mechanical plant (if required).
(c) Provision of pipe / duct droppers in walls and partitioning where required.
(d) Provision of all external and internal louvres.
(e) Provision of all roof ventilators for the receiving areas (6 off).
(f) Provision of roof access and walkways to all mechanical plant (during/after construction).
(g) Provision of temporary protection to all walls, panels, ceilings, floors, doors and fittings during construction.
(h) Provision of temporary fire services during construction.
(i) Provision of roof mounted structural supports and platforms for air conditioning units (PACs), split system condensing units and fans. Refer to mechanical drawings MB-01, 02, 31, 32 and 33. The builder must provide detailed fabrication drawings of the platforms for comment prior to fabrication and installation.
(j) Provision of roof up stands and under-flashing of roof penetrations.
(k) Provision of unloading of all the mechanical equipment from the truck into the position for cranage. Then, the cranage of all mechanical plant that is roof mounted, including 6 off air conditioning duct droppers that serve the Trade floor area. Refer to Fusion drawings for all plant locations on the roof. Refer to attached cranage work method statement in appendix A.
Please note for cranage details the weight of the AC roof top packaged units should be taken as 2900Kg's excluding spreader bars and chains. Allow for a 5m spreader bar.
(l) Marking, forming and/or cutting and making good of openings in roofs, ceilings, slabs, beams, walls and partitions for the passage of ducts, pipes and conduits and for the installation of fans, outlets and grilles.
(m) Installation only of door air transfer grilles in offices and amenities areas. (All air transfer grilles to be provided by the Contractor) in locations required in the design.
(n) Provision of toilet facilities and temporary power for hand tools and lighting, during the construction period
(o) Making good of fire wall or floor penetrations including 'fire rated' packing material having a fire rating not less than the fire rating of the walls or floor, except for fire dampers.
(p) Provision of safe storage on the site for mechanical plant and dropper modules should there be any delays outside of Fusions control. Fusion can/will provide lockable containers at cost.
(q) Responsibility and ensuring for works described in Appendix D are completed 1 week prior to Fusion commissioning. Note Fusion have allowed for a 7 days commissioning period only.
(r) Provision of suitable rubbish facility to dispose of packaging materials from the PAC units installation (Typically one full 10m2 skip bin)

H-3-2 BY ELECTRICAL CONTRACTOR AND/OR CONSULTANT

(a) Design, construct, supply and installation of all Distribution boards incorporating control equipment as shown in Fusion HVAC drawing set.

(b) Design, construct, supply and installation of Essential Services and generator distribution boards incorporating control equipment as shown in Fusion HVAC drawing set.

(c) Supply and installation of all cabling, conduits, cable ties, cable protection, roof penetrations, cable numbering, cable tray and/or rack(where necessary) for all equipment shown on the Fusion HVAC electrical drawing set.

(d) Termination and testing of all cabling for all equipment shown on the Fusion HVAC electrical drawing set.

(e) A cable schedule is provided with the electrical drawing set as a guide only. Actual cable sizes and lengths are to be determined by the site electrical contractor.

(f) Supply, installation, termination and labelling of smoke exhaust fan motor isolators. These must be lockable in both the on and off positions. Labelling must be in accordance with AS 1668 section 4 and the BCA.

(g) Supply, installation, termination and labelling of toilet and kitchen exhaust fan motor isolators.

(h) Supply, installation, termination and labelling of toilet and kitchen exhaust fan rheostat speed control units where shown.

(i) Supply, installation, termination and labelling of supply air fan exhaust fan motor isolators.

(j) Supply, installation, termination and labelling of split system air conditioning outdoor unit isolators.

(k) Supply, installation and termination of split system air conditioning control cabling between outdoor and indoor units.

(l) Supply, installation and termination of split system air conditioning wall controller cabling.

(m) Supply, installation and labelling of PAC Unit termination enclosures. These require locating at or in close proximity to the access hatch on the side of each PAC Unit duct dropper. The PAC supply cable from the Main Switchboard shall be terminated into this enclosure along with the flexible supply cable included as part of each PAC Unit. In order to retrieve the flexible PAC supply cable, the duct dropper access hatch will require removing. The cable will then need to be 'fished out' and properly glanded through the access panel, terminated into the aforementioned enclosure. Refer to Fusion HVAC drawing MASA-412. The access panel must be replaced securely.

(n) Supply and install earthing straps from the PAC unit base to the Galvanised up stand support connected to the roof structure as per Fusion drawing detail.

(o) Installation of free issued CO sensors where shown on Fusion HVAC drawings.

(p) Installation of free issued Relative Humidity/Temperature and CO2 combination sensor where shown on Fusion HVAC drawings.

(q) Installation of free issued photo-electric sensors where shown on Fusion HVAC drawings – positions of PE cells are as per Electrical engineer's lighting design. Light sensors should be mounted in the correct order as per Fusion drawings.

(r) Supply and installation of cabling between an allocated voltage free contact within the buildings security system and the BMS as indicated on Fusion HVAC drawings.

(s) Supply and installation of Managers Key Switch inclusive of cabling as indicated on Fusion HVAC drawings.

(t) Installation of free issued, wall mounted E2 Master Controller within communications room.

(u) Point to point testing of all installed cabling must be carried out and recorded. A record showing testing regime of each cable must be submitted prior to the commencement of powered commissioning.

(v) Supply and installation of Fusion HVAC specified power/energy meters & gateway in locations shown in electrical drawings either E4M or Electrical Consultants.

(w) Provision of all interconnecting fire shut down loop cabling to all mechanical plant (PAC units 1 to 4) and all distribution boards in fire rated cable or as required.

(x) Provision of a qualified electrician to be available during the commissioning of the mechanical services (AC, Fans and Controls commissioning)

(y) CO and RT/CO2/T sensors are required to be terminated temporarily prior to the commencement of any fit out work for commissioning purposes. Once the store fit out commences, the sensors will require disconnection until such times as all racking infrastructure is installed in which re-connection will then be required.

Please Note:
It is the Electrical Contractor's responsibility to ensure they are fully conversant with Fusion specification especially sections **H-1, H-2, H-6, H-8 & H-11 appendix B, C & D**. Tender check list in appendix C must be completed with tender submission.

H-3-3 BY HYDRAULICS CONTRACTOR

(a) Provision of tundishes 1m from all mechanical AC plant for condensate as required (must comply with local authorities and BCA requirements)

H-3-4 BY FIRE CONTRACTOR

(a) Provision and installation of the fan smoke spill control panel and controls.

(b) Provision of failsafe fire signals (Volt free) to mechanical section of all distribution boards.

(c) Provision of failsafe fire signals (Volt free) to main BMS control panel

(d) Provision of failsafe fire signals (Volt free) to all PAC units, must be run in parallel not in series, individual shut down of each PAC unit required to meet fire specification

(e) Provision of failsafe fire signals (Volt free) to office central air conditioning controller if applicable.

(f) Provision of failsafe fire signals (Volt free) to receiving area rapid roller door.

(g) Provision of failsafe fire signals (Volt free) to all auto doors excluding main entrance

(h) Termination and testing of internally installed duct dropper fire wire located in return air grill.

(i) Provision for completion of all works described in Appendix D.

(j) All fire system testing and commissioning to be undertaken and certified by Fire Contractor with assistance from Fusion HVAC only.

(k) Any labelling of plant controlled during fire.

H-4 GUARANTEES

Fusion shall guarantee the performance of the installation and operation

H-5 DESIGN CRITERIA

H-5-1 GENERAL

The Design criteria shown below have been used as the basis for preparing the typical air conditioning and mechanical ventilation systems design. Each site should confirm design criteria used during design.

H-5-2 AIR CONDITIONING

H-5-2-1 MAIN RETAIL AREA

(a) Active Heating and Cooling for all climate zones

H-5-2-2 OFFICES AND ADMIN AREA

(a) Active heating and cooling for all climate zones

H-5-2-3 INTERNAL DESIGN CONDITIONS

(a) Inside Design Conditions VIC/NSW/SA/WA/TAS/ACT

- Summer 24°C DB 60% RH (Max)
- Winter 21°C DB 60% RH (Max)

(b) Inside Design Conditions QLD/NT

- Summer 24°C DB 65% RH (Max)
- Winter 21°C DB 65% RH (Max)

(c) Lighting Load

- Office Areas 10 W/m²
- Retail Areas 5 W/m²
- Retail display lights 40Kw

(d) Electrical Equipment Load

- Systems Office Computer heat load = 3.0 kW
- Cashiers Office Computer heat load = 1.0 kW
- General Office Computer heat load =15 W/m²
- Ups/Comms Room Computer heat load = 5.0 KW (TBC by electrical engineer)
- Café 6 kW sensible/ 2 kW Latent
- Retail area General 1.5 W/m²

(e) Occupancy Density as per AS 1668.2 1991

- Retail area (net area) 3.5 m²/person
- Offices/cashier 10 m²/person
- Lunch Room 3.5 m²/person
- Training max of 25 persons
- Change Rooms 2.5 m2/person

(f) Outside Air Rate as per AS 1668.2 1991

- Retail area 10 l/s/person
- Offices 10 l/s/person
- Lunch Room 10 l/s/person
- Training 10 l/s/person
- Change Rooms 10 l/s/person

(g) People Loads

The people loads to be used are as follows:

Area	Activity Level	Sensible Heat (W/person)	Latent Heat (W/person)
Offices/General Areas	Office work	70	60
Retail Areas	Walking	80	75

(h) Infiltration allowance

- Infiltration provisions shall be 0.5 air change per hour.

(i) Cooling/Heating Load Calculation Retail Floor

- 1 person /8m2 (gross area)
- Fresh air rate 7.5l/s/p based on AS1668 2002.

(j) Roof/Ceiling Heat Transfer Coefficient

- Refer to Architectural Drawings R=3.2 (must comply with BCA 2010 requirements)
- Skylights of no more than 5% have been allowed with a shading coefficient of 0.4

H-5-3 DESIGN AIR CONDITIONING CALCULATIONS

Due to the high roll out and the total number of stores generic design for the Retail Area of each store will be the same including the size and type of equipment for each state. This will ensure standardisation and reduce overall costs in both the long and short term. Ongoing maintenance and spares will again ensure simplicity, standardisation and reduced costs.
Cooling and heating loads have been estimated using the Carrier Method of air conditioning load estimation:

Safety Factor
A safety factor of 10% has been allowed on any calculations.

Diversity for Air Conditioning Calculation

Lighting – Refer to table below (approximation for daylight harvesting provisions)

(a) Equipment 85%

(b) Population – 100%

Lighting Diversity	07:00 – 10:00	10:00 – 17:00	17:00-18:00	18:00-21:00	21:00-07:00
Trading Floor/Garden Centre/BOH (day lit areas)	30%	30	40%	100%	10%
Other areas	90%	100%	90%	50%	10%

H-6 DESIGN REQUIREMENTS

H-6-1 NOISE LEVELS

H-6-1-1 INTERNAL

The system has been designed to comply with the following noise levels:

Area	Max. Ambient Sound Pressure Level
Retail Area/Garden Centre	55 dB(A)
Offices	45 dB(A)
BOH store	50 dB(A)
External Trade Area	55 dB(A)

H-6-1-2 EXTERNAL

It is required that the air conditioning and all mechanical ventilation systems be designed and installed to ensure that noise transmitted to the outside of the building at boundaries be kept within the limits specified by the appropriate SAA code and/or as directed by the Local Authorities.

H-6-2 NATURAL VENTILATION

The receiving area will be naturally ventilated via wind assisted, roof mounted roof ventilators. The roof ventilators shall be capable of achieving a ventilation rate of 6 air changes per hour at a wind velocity of 10 km/hr and a temperature rise of 6° C. Roof ventilator to be supplied and installed by principle contractor as by Fusion drawings

H-6-3 HEATING

Heating shall be provided by the AC reverse cycle units only.

H-6-4 OUTSIDE AIR CONTROL

The outside air supplied to the store will be varied based on the exhaust requirements and occupancy levels, via CO_2 monitoring.

CO_2 monitoring shall modulate the outside air rate to maintain a maximum CO_2 concentration of 800ppm (which equates to a fresh air rate of approximately 7.5L/s/person).

H-6-5 ECONOMY CYCLE

An economy cycle will be provided on PAC units in all stores for fresh air optimisation and CO_2 control. This will also be used for night time purge cycles as energy efficiency initiatives.
Economy cycle mode shall operate based on an electronic differential enthalpy algorithm with minimum & maximum dry bulb and humidity set points. These shall be customised by the engineer for every site.
The economy cycle shall operate in cooling mode when the outside air dry bulb temperature is less than the return air temperature by 2° C and the return air enthalpy is greater than the outdoor air enthalpy. The economy cycle shall be disabled in heating mode.

H-7 BMS CONTROLS

H-7-1 GENERAL

Fusion HVAC energy management system will be provided:

(a) Fusion HVAC shall supply limited controls hardware for mechanical services. (See Section H-2) All other specified controllers located in Distribution Boards shall be supplied by the Electrical Contractor.

(b)

- Low-level room temperature and CO^2 sensor (control cable to be supplied and installed by the electrical contractor).
- Controls for each roof top unit, Dixel Ipro controllers.

(c) Supply of one (1) main control panel (Emerson E2) including hardware and software to control and monitor the following:

- Retail mechanical top heat pumps (communicates over Ethernet cables supplied & installed by the electrical contractor)
- Non-dimming stepping lighting control for 11 zones (Field digital & analogue hardwire, relays, contactors, switches, transformers etc supplied & installed by the electrical contractor) Based on electrical consultants design.
- Other general lighting control (Field digital & analogue hardwire, relays, contactors, switches & sensors supplied & installed by the electrical contractor) based on electrical consultants design.
- Power check meters (Schneider type communicate over a serial RS485 network provided by the electrical contractor) based on electrical consultants design and Fusion HVAC drawings.
- Water check meters (communicate with a pulse style meter provided by the electrical contractor) based on electrical consultants design and Fusion HVAC drawings.
- Timber Trade exhaust fan
- Timber Trade centre CO sensors & fans (Free Issue Sensors installed and cables supplied & installed by the electrical contractor)
- Generator monitoring.
- Pressure relief via entry and exit doors, smoke relief fans over Retail area.
- Miscellaneous vent fans (cables & contactors to be provided by the electrical contractor).
- Distribution Board Emerson Multiflex Controllers wired to terminals (Ready for electrical contractor to connect field cables) . Supplied free issue to electrical contractor to be built into the boards during board construction.
- Training.
- All circuit diagrams

- Commissioning

Main features are as follows but not limited to:

(a) Retail HVAC controls

- Optimized compressor staging with off-loading lead compressor.
- Optimization economizer free cooling
- Accurate refrigeration control & pressure monitoring.
- Optimization of inside fan control.
- Optimization of Temperature & Enthalpy.
- Standalone operation of RTPU's on communications failure.

(b) Main Store Controls

- Energy management & monitoring of Lighting
- Energy reporting & Load shedding
- Reporting & monitoring of alarm faults
- Ventilation fan controls.
- Common real time clock control
- Historical data storage
- Link to Central control via the WAN
- Ready for Historian interrogation.

H-8 LABELLING

H-8-1 LABELLING

(a) All mechanical equipment including indoor and outdoor units will be clearly labelled.

(b) All Fire and smoke dampers will be clearly labelled as per AS 1668.2.

(c) All electrical equipment shall be labelled as per the electrical specification.

(d) All labels shall be engraved laminated plastic with black letters on a white background. Lettering shall be not less than 12 mm high.

(e) All roof equipment under this specification shall also be suitably labelled with lettering of at least 25 mm high.

(f) An engraved laminated plastic label detailing the plant stop start and fault reset procedures shall be fixed to the face of the air conditioning switchboard by the electrical and fire services contractor providing the associated board and sensors.

(g) All labels shall be mechanically fixed using screws or rivets.

(h) Label shall only be fixed to permanently mounted equipment. Labels fixed to any removable or demountable protective guard, access panel, electrical duct covers or the like will be rejected.

(i) ONLY ENGRAVED LAMINATED PLASTIC LABELS MECHANICALLY FIXED TO PERMANENT FIXTURES WILL BE ACCEPTED.

H-9 COMMISSIONING

H-9-1 COMMISSIONING

The installation is to be commissioned in accordance with ASHRAE Guideline 1, and shall satisfy the following requirements:

(a) Preparation of Start-up, Pre-functional Checklists and Initial Checkout
(b) Functional Performance Testing
(c) Operation and Maintenance (O & M) Manuals
(d) Training of Owner Personnel
(e) Deferred (seasonal) Testing

H-10 ELECTRICAL SAFETY

H-10-1 GENERAL SAFETY

(a) A JSEA or Work Method Statement.
(b) A 'lock out' scheme is actively in place across all points of possible energisation. These include but are not limited to the Site Main Switchboard, Main Switch Board, all distribution boards etc.
(c) A site acceptance testing (SAT) procedure is recommended for the roll out of the commissioning stage. This would entail a safe staged approach to each item of plant requiring power.
(d) Warning and/or danger signage and barricading around live open panels or switchboards is recommended during commissioning.

On completion of the works Fusion will fully commission all components forming part of the Contract Works.

H-10-2 TESTING AND COMMISSIONING

After full commissioning of all services, the test results must be forwarded to the Principal.
The commissioning data shall include but not be limited to:

(a) Results of pressure and vacuum testing of each refrigerant circuit.
(b) That control wiring and systems have been checked and are fully operational.
(c) That all safety controls and high temperature safety cut-outs are fully operational.
(d) That air flows within 10% of the design quantities are being attained.
(e) That a general air balance with final air balance being a thermal balance has been completed. This shall include air volumes at each diffuser.
(f) That the outside air quantity has been adjusted to required design flow rate.
(g) That calibration of all automatic control equipment has been completed.
(h) That the design and as approved suction and discharge pressures have been achieved for the RTPUs.
(i) That the approved evaporator superheat has been attained.
(j) That the full load current of each electric (continued) motor has been checked and is within the name plate rating.

H-11 MAINTENANCE & SERVICE

H-11-1 GENERAL

Fusion has allowed in its price for maintenance and servicing from date of practical completion to the end of the maintenance and defects liability period, to comply with requirements of AS 3666, Local Authority and any other statutory body having jurisdiction.
Maintenance, in addition to rectification of faults, emergency service and carrying out of capacity tests as required, shall also include a minimum of four (4) preventative maintenance quarterly service visits .
Routine maintenance shall be deemed to be the regular maintenance of equipment as recommended by suppliers including but not limited to the following items:

(a) Check and adjustment of all belt drives and direct couplings.
(b) Oiling and greasing of all bearings as necessary including fans.
(c) Check of operating setting and calibration of all controls including heaters.
(d) Check of all motors for temperature rise, operating current leakage. Record all parameters.
(e) Cleaning of evaporator coil basins and flushing of drains.
(f) Check and replace dry filter media as required in air conditioning plant and make-up air systems (if applicable)
(g) Check, test and report on fire alarm relays and smoke fan exhaust systems (if applicable).

At the conclusion of each maintenance visit, a check list of items serviced shall be provided to the Store Manager and the service log book shall be completed and signed, and within seven days a report, together with a copy of check list shall be forwarded to the Store Manager, with cc copy to Masters.

H-12 OPERATING & MAINTENANCE INSTRUCTIONS

H-12-1 GENERAL

On completion of satisfactory performance tests Operating & Maintenance Instructions in accordance with Part D – Design & Construction Brief - Section D-19.shall be compiled by Fusion.

The Operating & Maintenance Instructions shall include a full description of the equipment and sufficient instruction for the efficient operation and maintenance of the installed plant.
The Operating & Maintenance Instruction manuals shall be neatly prepared in vinyl covered hard backed folders with stamped lettering on the front cover as follows:

OPERATING & MAINTENANCE INSTRUCTIONS
FOR
AIR CONDITIONING & MECHANICAL SERVICES
FOR MASTER "Store Name"

(ADDRESS AS APPROPRIATE)

H-12-2 INCLUSIONS

The Operating & Maintenance Instruction Manual shall include:

(a) As built drawings in accordance with Part D – Design & Construction Brief - Section D-19..
(b) Schematic Electrical Control Diagrams
(c) Commissioning Test Records
(d) A complete list of all components used in the installation Manufacturers information and parts lists.
(e) Service schedule
(f) Description of the air conditioning plant and control systems
(g) Equipment operating procedures
(h) Equipment test results
(i) Stop start and fault reset procedures

NOTE: An engraved laminated plastic label showing the stop/start and fault reset procedures shall also be fixed to the face of the switchboard. (See also Painting & Labelling).

H-13 APPENDIX A - CRANAGE PROCEDURE AND WORK METHOD STATEMENT

H-13-1 CRANAGE PROCEDURE

PACKAGED A/C UNIT
LIFTING GUIDANCE

STEP 1

The Packaged AC units are delivered to site on 3 Off flat bed trucks, the smoke spill fans are delivered on a separate truck c/w with pallets. A Franna (complete with a spreader bar) should be used to offload the equipment from the truck.

Once the Packaged AC units and fans have been offloaded into a safe location, the weatherproof cowls and smoke spill fans are bolted to the Packaged AC units ready for the main crane lift.

Please note that these works need to be carried out at least one day prior to the main lift. Fusion HVAC staff will be on site to assist during the crane lift.

FUSIONHVAC

STEP 2

The duct droppers are delivered on the day of the crane lift on 2 Off semi-trailer trucks. The droppers are offloaded with a Franna. The Franna is used to "tail" the dropper whilst the main crane begins to take the weight of the dropper. Tailing prevents the dropper from swinging in mid air.

FUSIONHVAC

STEP 3

The main crane will take the full weight of the dropper. From here the dropper is craned up onto the roof and guided into its final position on the steel frame.

FUSIONHVAC

STEP 4

Once the duct dropper is in place the Packaged AC unit is lifted into position using the main crane. A spreader bar is used (Please ensure that the weight of this along with the lifting chains and hook is accounted for in the crane selection)

FUSIONHVAC

USE 'ADJUSTABLE' SPREADER BAR WHEN LIFTING

1. **Spreader Bar should be longer than the overall length of the unit; recommend between 200 mm (smaller units) and 500 mm (larger units) at each side.**
2. **Lift from all lifting points.**
3. **Webbing slings recommended.**
4. **Use sling & shackle with capacity rating twice that of the unit weight (refer shipping label).**
5. **Use of two spreader bars is NOT recommended.**
6. **Adjust position of centre lift point on spreader bar to achieve correct balance.**

Follow the recognised safe codes of practise.

Not following the above instructions may lead to damage of the unit and void the warranty.

H-14 APPENDIX C - ELECTRICAL FOR MECHANICAL TENDER CHECK LIST

1.1 ELECTRICAL FOR MECHANICAL TENDER CHECK LIST

		Yes/No
1.	Has the contractor received Fusion HVAC tender Drawings for both Mechanical and Electrical for Mechanical as per attached drawing schedules?	☐
2.	Has the contractor received Fusion HVAC Specification?	☐
3.	Does the contractor understand that they will be provided the PLC controllersto be integrated within the associated local distribution board supplied by main Electrical contractor?	☐
4.	Has the contractor allowed for all internal wiring within the distribution boards to above mentioned controllers in item 3, including relays, contactors, switches, transformers, motor overloads, timers etc as per Fusion Wiring diagrams?	☐
5.	Has the contractor allowed for all field power, controls, comm's & fire controls shut down wiring to plant and Distribution Boards as Fusion's wiring diagrams and schedules?	☐
6.	Has the contractor allowed for supplying and installing all motor starters etc in the ESSB as per Fusion drawings	☐
7.	Has the contractor included a separate fire rated power supplies to the two smoke spill fans including a lockable isolator on each rooftop packaged unit in the retail space as per Fusion drawings as item 6 above?	☐
8.	Has the contractor read sections H-1, 2, 6, 8, 11 including appendix B, C & D	☐

And confirms that they fully understand the scope of the works and have included all aspects in their price.

Signed By ..... Date.....

Company.....

H-15 APPENDIX D - IMPORTANT COMMISSIONING INFORMATION FOR THE MAIN CONTRACTOR

The commissioning process on a standard store will take 7 working days prior to hand over and 1 day during fit out once racking is installed. This process cannot start until all the items in the following checklist have been completed.

You are required to provide Fusion with a minimum of one week's notice of completion of the items on the checklist.

If Fusion HVAC attend site and find that the items in the checklist are not complete after being advised that they were this may cause delays in the process. In addition there will be back charges if this causes the commissioning period to run over the all 7 days. The schedule of rate below is used to calculate the back charges.

Per day labour costs – $1500 per day
Per day general costs - $500 per day

Fusion Pre Commissioning Checklist

To be signed off by both the Electrical & Fire Contractor 1 week prior to Fusion attending site to commission the EMS and mechanical services

	Tick
PAC Units	
PAC Units power connected and tested	
PAC Units data connected	
PAC 5 has data back to E2 Controller	
All Pac units have fire signal to them and terminated into fire relay in unit	
Power cabling to SEF1-5 is complete and tested (ensure local isolator)	
DB's	
All boards have had all electrical wiring terminated	
All relays and contactors have been wired and tested	
All switches have been wired and tested	
Each Board has PLC installed	
Each board has RS485 Modbus cabling terminated into PLC	
Auto door control cable terminated	
E2 Controller	
Control panel is securely wall mounted	
RS485 Modbus network loop is terminated	
Offices	
Power cabling to KEF 1 is complete and tested (ensure local isolator)	
Power cabling to TEF 1 is complete and tested (ensure local isolator)	
Power cabling to SAF 2 (cash room) is complete and tested (ensure local isolator)	
Comms cabling to A/C 1-6 from BS 1-3 is complete	
Power cabling to A/C 1-6 and BS 1-3 is complete	
Comms cabling from BS1 to O/U 1 is complete	
Power cabling to O/U 1 (Office VRV) is complete and tested (ensure local isolator)	
A/C 1-6 (Office VRV) have wall controllers mounted and tested	
Power cabling to O/U 7 (Comms room) is complete and tested (ensure local isolator)	
Power cabling to A/C 7 (Comms room) is complete and tested (ensure local isolator)	
A/C 7 (Comms Room) has wall controller mounted and tested	
Trade area (If applicable)	
Power cabling to All Fans (SEF 7&8, SAF 3 & EAF 1) is complete and tested (ensure local isolator)	
Two carbon monoxide sensors fitted (requires racking fitted)	

BOH	
Power cabling to O/U 8 (Comms room) is complete and tested (ensure local isolator)	
Power cabling to A/C 8 (Comms room) is complete and tested (ensure local isolator)	
Power cabling to SAF 1 is complete and tested (ensure local isolator)	
General	
All light sensors have been fitted	
Temperature/Humidity/Carbon Dioxide sensor mounted in main retail area	
Control cables to auto doors is installed but **not terminated**	
Managers Key switch installed	
Fire	
All fire cables have been terminated and tested at distribution boards as required	
All fire control caballing has been terminated and tested at all mechanical plant	
All fire control caballing to auto doors including rapid roller door is terminated and tested	
FIP Board is complete and all software is installed and tested ready for smoke exhaust testing	
All fire relays to be installed and tested to ensure correct operation	
Fire wires have been installed and tested.	
General Info	
• **Testing of power cables at a minimum should include phase rotation testing and insulation testing.** • **Note that all equipment may sustain damage if local isolator is not first turned off prior to megering**	

Signed By ..... Date.....

Electrical Contractor.....

mainroads WESTERN AUSTRALIA

ABN: 50 860 676 021

Enquiries: J. McKirdy on 08 9323 4991
Our Ref: 14/7002 (D14#592122)
Your Ref: DA 14/2483

31 October 2014

Ms P Lang
Planning Officer
City Of Stirling
25 Cedric St
STIRLING WA 6021

ATTENTION: PACEY LANG

Dear Pacey

DA 14/2483 DAP - 601 WANNEROO RD, HAMERSLEY - MASTERS STORE

Thank you for your letter of 3 October 2014 referring the above development application for our review and comment. Main Roads has had a few discussions with representatives for this development. Main Roads has also been conducting a planning review, over the past four years, for Reid Highway from west of Mitchell Freeway to east of Wanneroo Road and is very familiar with the issues at hand.

Main Roads would like to firstly raise the concern that the development of this site, for this purpose may not be consistent with orderly and proper planning. It is noted that the applicant has addressed this issue and reached a positive conclusion. Main Roads requests that planning authorities make an independent assessment of this issue as the site sits in a predominantly residential precinct except for the communications reserve which could otherwise be considered undeveloped. Further, the proximity to the Balcatta Industrial Area considered as a justification by the applicant is somewhat tenuous given the two areas are separated by a control of access highway (Reid Highway) which clearly defines the industrial area.

Main Roads recognises the parcel of land in question is surplus to the requirements of Broadcast Australia and it would seem appropriate that a better use be made of this otherwise redundant land. The proposed use has considerable traffic generation implications which make it a less desirable prospect.

The applicant has made representations in their submission that Main Roads supports the access arrangements proposed. Main Roads would like to assert that no such support has been provided to the applicant. On the contrary, consistent advice has been provided that the access arrangements were not supported. Most recently (14 August), the discussion involved the applicant proposing a full movement intersection controlled by traffic signals. Main Roads queried if a roundabout had been considered. The meeting concluded with agreement that Shawmac would complete an analysis of a roundabout for comparative purposes and further consideration by Main Roads. This analysis was received on 15 September. Due to other priorities this assessment was not reviewed immediately by Main Roads. It is noted that the development application was submitted on 23 September.

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Main Roads has since reviewed the preliminary analysis provided on 15 September. We then reviewed the analysis provided with the DA and due to several inconsistencies, and a desire to understand broader impacts, a request was sent to Shawmac for the SIDRA files for further consideration. The files were provided on 29 October and subsequently assessed. It is interesting to note that Shawmac advised the "files have been recalibrated". On each occasion the results differed – the most recent results closer to what should have been determined. Upon further review of the analysis conducted, Main Roads found that several parameters used in the analysis by Shawmac were not consistent with Main Roads typical practice, resulting in a more favourable analysis result for the applicant.

Main Roads would like to confirm that analysis of the roundabout option has determined that this option is not appropriate and will not be suitable to cater for the traffic demands in this location. The analysis results show the degree of saturation is above 1 for both existing peak periods meaning the intersection demand would exceed available capacity. Level of Service overall could be reasonable (LOS C) in the evening peak but LOS F in the midweek morning peak. Most tellingly, the exit from Camberwell Rd in the morning peak would be very difficult with delays in the order of 10 minutes or more.

Main Roads has conducted analysis of the Reid Highway interchange, with the applicant's proposed four way intersection located at Camberwell Road, and found that traffic queues will likely extend for the full intermediate length during both midweek peak periods. This is regardless of what form of control is employed at a four way intersection. With the existing situation presenting problems it is clear that the longer term will be more problematic.

The consistent message from Main Roads to the applicant and their representatives at Shawmac is that a four way intersection is not supported as the anticipated impacts on the Reid Highway intersection some 370m to the south would likely be problematic – a concern which has been supported by more recent analysis.

It is clear that if this development proceeds then there will be a need for full movement connectivity due to the dispersed travel patterns generated by the site and the volume of demand involved. There was initial consideration of left in left out access but this would likely result in patrons making u turn movements at adjacent intersections which would be less desirable than a formalised access.

In the interests of trying to find a solution that could be acceptable to both the applicant and Main Roads we have questioned the following possibilities:

1. Connect to Blisset Way to the north – the response was that Broadcast Australia has infrastructure in the north east corner of the site which prevents the opportunity at this time but this may be a possibility in the longer term.

2. Connect via a full movement intersection approximately 100m north of Camberwell Road (approximately where the existing full movement crossover exists). The response was that this was not acceptable to Broadcast Australia due to emergency access requirements. It is not clear as to what elements of a combined access would hinder the emergency access requirements of BA and so it is thought this option may still be viable if the development was to proceed.

The proposal to locate a left in gated entry at the southern end of the site is not desirable but Main Roads is prepared to entertain such an access with the gated control. The left out access at the northern end of the site is in essence a full movement access and as per the comments above this should be used as the main entry and exit to the site.

Drainage issues appear to have been adequately considered with all site catchment contained within the site as would be expected. If a suitable access arrangement can be agreed then appropriate drainage of the road and surrounds would also need to be addressed.

There is no mention of lighting or signage which may impact the adjacent Wanneroo Road. Main Roads would request the opportunity to review such arrangements to ensure there will be no hazards created and that Main Roads signage guidelines are applied.

In consideration of the above issues, Main Roads advises that the application, as submitted, is not acceptable.

If you require any further information please contact me on 08 9323 4991.

Yours faithfully

Lindsay Broadhurst
MANAGER ROAD PLANNING

mainroads
WESTERN AUSTRALIA
ABN: 50 860 676 021

Enquiries: Joanne Cammack on 08 9323 4718
Our Ref: 14/7002 (D14#667473)
Your Ref: DA 14/2483

5 December 2014

Ms P Lang
Planning Officer
City Of Stirling
25 Cedric St
STIRLING WA 6021

ATTENTION: PACEY LANG

Dear Pacey

DA 14/2483 DAP - 601 WANNEROO RD, HAMERSLEY - MASTERS STORE - UPDATED ADVICE

Further to Main Roads letter of 31 October 2014, (Our ref D14#592122) Main Roads would like to submit additional comment on the proposed Masters development following further discussions with the developer.

As previously advised, Main Roads has reservations about the suitability of this site to accommodate an operation of this type. Nonetheless, in the event that the planning assessment for the site is favourable to the applicant, Main Roads will be obligated to allow access to the site.

Since our advice that a roundabout was not acceptable we have held further discussions with the applicant and their representative to determine a palatable outcome. This outcome is to locate a full movement access at the northern end of the site where the current crossover is located. (See attached concept). The concept as proposed accords generally with Main Roads intent by utilising the maximum offset between Camberwell Street and the access driveway.

The following points have been raised with the applicant and while measures have been taken to address these, Main Roads would like to ensure that they are included in the required conditions should planning approval be granted.

- Main Roads advised the applicant of the requirement to provide a third lane through this location on Wanneroo Road in the future. The concept has now been modified such that future third lane can be implemented with minimal disruption;

- Southbound traffic on site will cause a headlight hazard to northbound traffic on Wanneroo Road. Mitigation is required in the general area indicated on attached concept;

- Design to ensure the access to the basement carpark could still match into a signalised intersection in the long term (including the third lane and a left turn lane) if signals were ultimately required at Camberwell Rd.

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Email: enquiries@mainroads.wa.gov.au Website: www.mainroads.wa.gov.au

Traffic analysis shows that the access will perform poorly for those using the access. Main Roads independent analysis (attached) shows the intersection will perform considerably worse than the analysis provided by the applicant; however the analysis has used default criteria and so a slightly more favourable outcome may be possible if on site verification of traffic behaviours was undertaken.

Should the planning approval be granted, Main Roads requests the following conditions be applied:

1. All vehicle access to and from Wanneroo Road is restricted to the location as depicted on the attached concept;

2. The design ensures capability to provide a third lane on Wanneroo Road northbound;

3. Headlight glare from southbound vehicles on-site is mitigated for northbound vehicles on Wanneroo Road to Main Roads satisfaction as per the attached concept.

4. The design provides for a future access to the basement carpark to match into a signalised intersection in the long term (including the third lane and a left turn lane) should traffic signals be ultimately required at Camberwell Rd.

5. No stormwater drainage shall be discharged onto the Wanneroo Road reserve.

6. Main Roads approval for the construction drawings is required before any work is undertaken with the Wanneroo Road reservation. A detailed traffic management safety plan while working within the road reservation is to be submitted as part of this approval.

Advice to the Applicant:

1. The applicant must obtain approval from Main Roads before all works are undertaken within the Wanneroo Road reserve. The applicant seeking access to the Main Roads network will be required to submit an Application as outlined in the "Application Kit and Guidelines" for State Roads.

2. Application Kits can be found on the Main Roads website>"Using Roads">"Road and Traffic Information>"Works on Main Roads">State Roads>Application Kit and Guidelines for Complex Works **OR** Application Form for Low Complexity Works.

3. Any services, infrastructure or roadside furniture that requires relocation as a result of the applicant's works will be at the applicant's cost.

4. Separate Main Roads approval is required for signage.

5. The type of sign and location must comply with all relevant by-laws and planning schemes implemented by Council.

6. If the sign is to be illuminated, it must be of a low level not exceeding 300cd/m^2 and may not flash, pulsate or chase.

7. Main Roads agreement is to be obtained prior to any modifications.

8. The device shall not contain fluorescent, reflective or retro reflective colours or materials.

9. No unauthorised signage is to be displayed.

All enquiries related to Advice Notes 4 to 9 can be directed to the Technical Officer – Advertising on 9323 4237.

Main Roads personnel can be contacted at –

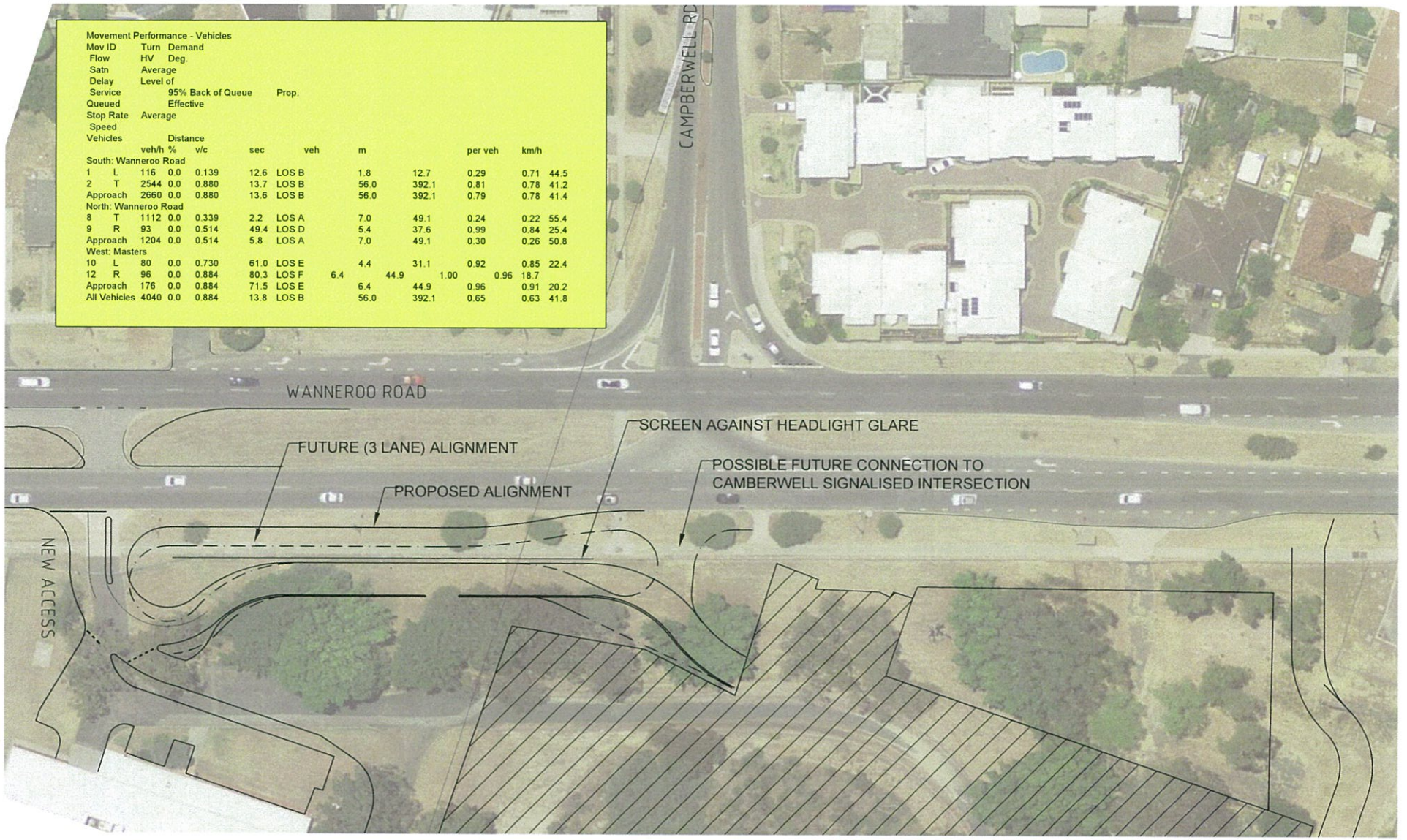
Main Roads WA
Waterloo Crescent
EAST PERTH WA 6004
Tel: 138 138
Fax: (08) 9323 4430

If you require any further information please contact me on 08 9323 4991.

Yours faithfully

Lindsay Broadhurst
MANAGER ROAD PLANNING
encl

- Concept - Masters Access
- Main Roads SIDRA analysis (Draft)



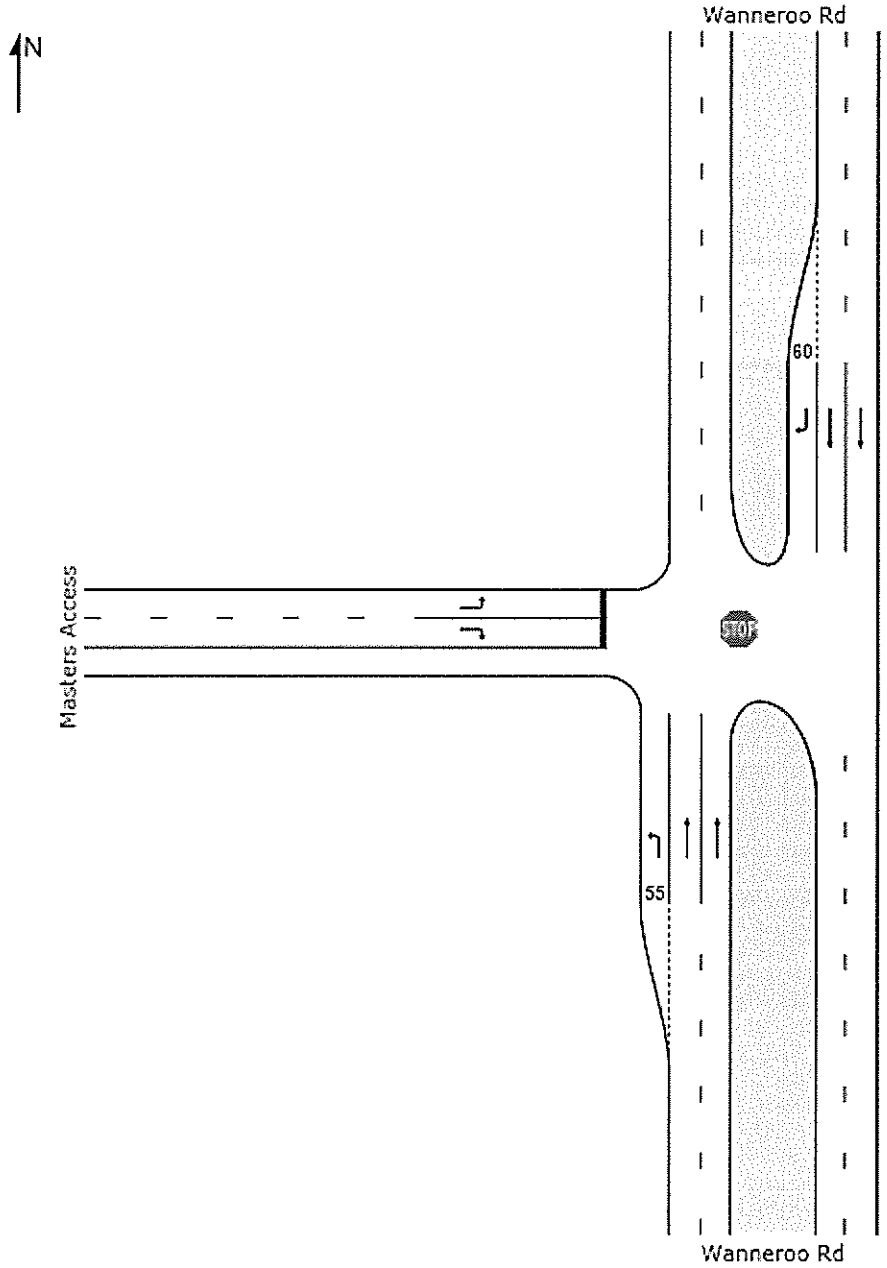
Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Queued veh	95% Back of Queue Queued m	Prop. Effective Queued	Average Stop Rate per veh	Average Speed km/h	
South: Wanneroo Road												
1	L	116	0.0	0.139	12.6	LOS B	1.8	12.7		0.29	0.71	44.5
2	T	2544	0.0	0.880	13.7	LOS B	56.0	392.1		0.81	0.78	41.2
Approach		2660	0.0	0.880	13.6	LOS B	56.0	392.1		0.79	0.78	41.4
North: Wanneroo Road												
8	T	1112	0.0	0.339	2.2	LOS A	7.0	49.1		0.24	0.22	55.4
9	R	93	0.0	0.514	49.4	LOS D	5.4	37.6		0.99	0.84	25.4
Approach		1204	0.0	0.514	5.8	LOS A	7.0	49.1		0.30	0.26	50.8
West: Masters												
10	L	80	0.0	0.730	61.0	LOS E	4.4	31.1		0.92	0.85	22.4
12	R	96	0.0	0.884	80.3	LOS F	6.4	44.9	1.00	0.96	18.7	
Approach		176	0.0	0.884	71.5	LOS E	6.4	44.9		0.96	0.91	20.2
All Vehicles		4040	0.0	0.884	13.8	LOS B	56.0	392.1		0.65	0.63	41.8

WANNEROO RD / MASTERS ACCESS

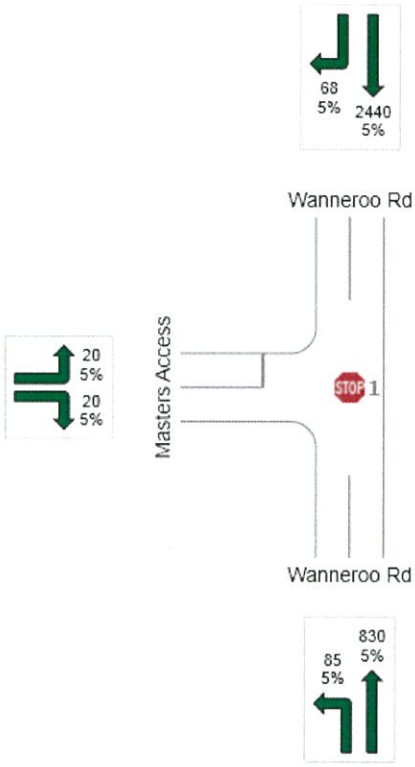
PRELIMINARY SIDRA ANALYSIS

PROPOSED GEOMETRY – STOP CONTROL

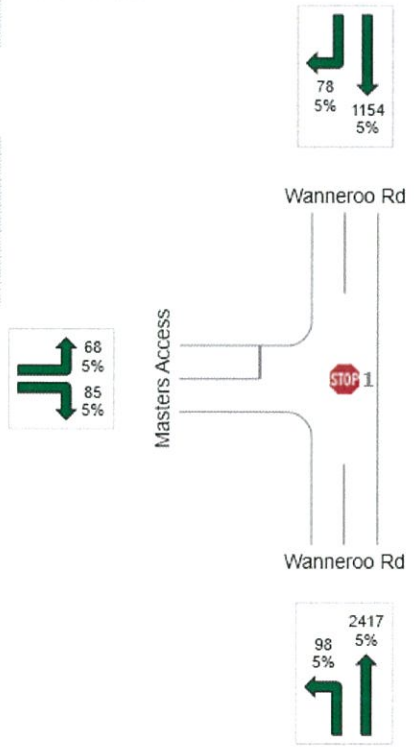


2014 TRAFFIC VOLUMES

AM PEAK



PM PEAK



MOVEMENT SUMMARY

Site: Wanneroo Rd/Masters Access OPTION 2 - Existing AM

Wanneroo Rd & Masters Access Option 2
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	ODMov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Wanneroo Rd											
1	L2	89	5.0	0.049	6.5	LOS A	0.0	0.0	0.00	0.61	51.9
2	T1	874	5.0	0.227	0.0	LOS A	0.0	0.0	0.00	0.00	69.9
Approach		963	5.0	0.227	0.6	NA	0.0	0.0	0.00	0.06	68.7
North: Wanneroo Rd											
8	T1	2568	5.0	0.666	0.2	LOS A	0.0	0.0	0.00	0.00	69.6
9	R2	72	5.0	0.278	20.9	LOS C	1.0	7.1	0.80	0.95	36.2
Approach		2640	5.0	0.666	0.7	NA	1.0	7.1	0.02	0.03	68.5
NorthWest: Masters Access (RT Stage 2)											
29a	R1	21	5.0	3.509	2840.3	LOS F	16.0	117.9	1.00	1.82	1.2
Approach		21	5.0	3.509	2840.3	LOS F	16.0	117.9	1.00	1.82	1.2
West: Masters Access (RT Stage 1)											
10	L2	21	5.0	0.059	12.6	LOS B	0.2	1.4	0.71	1.01	38.7
12	R2	21	5.0	0.251	49.5	LOS E	0.8	5.7	0.91	1.05	21.6
Approach		42	5.0	0.251	31.0	LOS D	0.8	5.7	0.81	1.03	28.0
All Vehicles		3666	5.0	3.509	17.4	NA	16.0	117.9	0.03	0.06	50.9

MOVEMENT SUMMARY

Site: Wanneroo Rd/Masters Access OPTION 2 - Existing PM

Wanneroo Rd & Masters Access Option 2
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	ODMov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Wanneroo Rd											
1	L2	103	5.0	0.057	6.5	LOS A	0.0	0.0	0.00	0.61	51.9
2	T1	2544	5.0	0.660	0.1	LOS A	0.0	0.0	0.00	0.00	69.6
Approach		2647	5.0	0.660	0.4	NA	0.0	0.0	0.00	0.02	69.1
North: Wanneroo Rd											
8	T1	1215	5.0	0.315	0.0	LOS A	0.0	0.0	0.00	0.00	69.9
9	R2	82	5.0	13.684	12049.2	LOS F	77.7	572.8	1.00	1.34	0.2
Approach		1297	5.0	13.684	762.9	NA	77.7	572.8	0.06	0.08	4.2
NorthWest: Masters Access (RT Stage 2)											
29a	R1	89	5.0	2.467	1467.3	LOS F	40.4	297.7	1.00	4.35	2.2
Approach		89	5.0	2.467	1467.3	LOS F	40.4	297.7	1.00	4.35	2.2
West: Masters Access (RT Stage 1)											
10	L2	72	5.0	8.024	6800.0	LOS F	57.9	427.1	1.00	2.30	0.3
12	R2	89	5.0	14.912	13051.4	LOS F	81.5	601.1	1.00	2.02	0.1
Approach		161	5.0	14.912	10273.0	LOS F	81.5	601.1	1.00	2.14	0.2
All Vehicles		4195	5.0	14.912	661.8	NA	81.5	601.1	0.08	0.22	4.7

TRAFFIC ASSUMPTIONS AND NOTES

This analysis has been conducted using a number of assumptions for traffic volumes and vehicle data; consequently these results should be taken as preliminary and not be used for design purposes.

1. A heavy vehicle percentage of 5.0% has been assumed for all intersection legs.

2. Analysis conducted has not been calibrated for average heavy vehicle lengths, a minimum length of 12.5m and spacing of 14.5m has been used for all movements.

3. Existing AM Peak volumes have been assumed from a reversal of PM turning movements, with total volumes on Wanneroo Rd derived from previous SIDRA analysis at the Reid Hwy/Wanneroo Rd interchange. As no data was estimated for AM traffic on the Masters Access approach, a volume of 20 vehicles was assumed for each movement.

Analysis has been conducted by Andrew Layton (Graduate Engineer) using SIDRA Intersection 6.0.24.4877 November 2014

Councillor Rod Willox disclosed an Impartial interest in Item 11.8 as he is a member of the JDAP which is to consider this application, and a Financial Interest in this Item as he has shares in Woolworths.

Councillor David Boothman disclosed an Impartial interest in Item 11.8 as he is a deputy for the JDAP which is to consider this application, and a Financial Interest in this Item as he has Woolworths shares in a self-managed super fund.

Councillor Samantha Jenkinson disclosed a Financial Interest in Item 11.8 as she has shares in Woolworths.

At 5.55pm Councillors David Boothman and Samantha Jenkinson left the meeting prior to consideration of Item 11.8.

11.8 LOTS 1 AND 102, HOUSE NUMBER 601, WANNEROO ROAD, HAMERSLEY - HARDWARE SHOWROOM, SHOWROOM, FAST FOOD OUTLET AND GARDEN CENTRE ("MASTERS") - DETERMINATION OF DEVELOPMENT APPLICATION BY THE METRO NORTH WEST JOINT DEVELOPMENT ASSESSMENT PANEL

Report Information

Location:	Lots 1 and 102, House Number 601, Wanneroo Road, Hamersley
Applicant:	MGA Town Planners
Reporting Officer:	Manager Approvals
Business Unit:	Approvals
Ward:	Hamersley
Suburb:	Hamersley

Authority/Discretion

Definition

☒	Advocacy	*when Council advocates on its own behalf or on behalf of its community to another level of government/body/agency.*
☐	Executive	*the substantial direction setting and oversight role of the Council. e.g. adopting plans and reports, accepting tenders, directing operations, setting and amending budgets.*
☐	Legislative	*includes adopting local laws, town planning schemes and policies.* Review *when Council reviews decisions made by Officers.*
☐	Quasi-Judicial	*when Council determines an application/matter that directly affects a person's right and interests. The judicial character arises from the obligation to abide by the principles of natural justice. Examples of Quasi-Judicial authority include town planning applications, building licences, applications for other permits/licences (eg under Health Act, Dog Act or Local Laws) and other decisions that may be appealable to the State Administrative Tribunal.*
☐	Information Purposes	*includes items provided to Council for information purposes only, that do not require a decision of Council (i.e. - for 'noting').*

Council Resolution

1214/029

Moved Councillor Michael, seconded Councillor Guilfoyle

That Council ENDORSE the City's Responsible Authority Report to the Metropolitan North West Joint Development Assessment Panel, in relation to the application for Hardware Showroom, Fast Food Outlet and Garden Centre ("Masters") at Lots 1 and 102, House Number 601, Wanneroo Road, Hamersley.

The motion was put and declared CARRIED (10/0).

For: Councillors Caddy, Guilfoyle, Italiano, Lagan, Michael, Proud, Re, Sargent, Stewart and Tyzack.
Against: Nil.

Recommendation

That Council ENDORSE the City's Responsible Authority Report to the Metropolitan North West Joint Development Assessment Panel, in relation to the application for Hardware Showroom, Fast Food Outlet and Garden Centre ("Masters") at Lots 1 and 102, House Number 601, Wanneroo Road, Hamersley.

Report Purpose

To seek Council's endorsement of the City's Responsible Authority Report in respect of the application for the Masters development at Lots 1 and 102, House Number 601, Wanneroo Road, Hamersley.

Relevant Documents

Attachments

Attachment - Responsible Authority Report – Lots 1 and 102, House Number 601, Wanneroo Road, Hamersley.

Available for viewing at the meeting

Nil.

Background

At its meeting on 8 July 2014, Council resolved (Council Resolution Number 0714/035):-

> *"That a 'call-in procedure' be ESTABLISHED for Responsible Authority Reports prepared by the City in relation to future Development Applications for the North Metro JDAP, similar to the call-in procedure used for Development Applications."*

This resolution was the result of concerns raised by Council that the current process of presenting Responsible Authority Reports directly to the Metro North-West Joint Development Assessment Panel (JDAP) did not allow Council or Elected Members to make formal comments on reports which support variations to policies and guidelines.

The City received a Development Assessment Panel application on 26 September 2014 for the development of a "Masters" outlet, comprising Hardware Showroom, Showroom, Fast Food Outlet and Garden Centre uses at Lots 1 and 102, House Number 601, Wanneroo Road, Hamersley.

The City's administration received a Councillor request to refer the application to Council on 10 October 2014, signed by Councillor Samantha Jenkinson and Councillor David Boothman.

The application was advertised in accordance with the City's Planning Consultation Procedure, with consultation concluding on 11 November 2014.

Comment

The City's officers undertook an assessment of the application against the relevant objectives of the City's Local Planning Scheme No.3, relevant Local Planning Polices and relevant matters to be considered by Council as outlined in Clause 10.2 of Local Planning Scheme No.3.

The Responsible Authority Report, which is attached to this report, contains a detailed assessment of the proposal, and includes the outcomes of the public consultation process that was required for this application.

The City's officers recommend refusal of the proposed development for the following reasons:-

1. The proposal is not consistent with the intended purpose of the Reserve.

2. The proposal does not satisfy the relevant matters to be considered by Council specified in Clause 10.2 of LPS3, and is therefore not in the interests of orderly and proper planning.

3. The proposal does not provide parking in accordance with the City's Local Planning Policy 6.7 – Parking and Access.

4. The proposed building height is not in accordance with the City's Local Planning Policy 4.1 – Reserves and Other Zones Design Guidelines.

5. The proposed vehicular access is not in accordance with the requirements of Main Roads WA.

The attached Responsible Authority Report is due to the Metro North-West JDAP on 11 December 2014. A meeting date for consideration of the application has not been set as yet.

Policy and Legislative Implications

Sections 171A to F of the *Planning and Development Act 2005* provide for the development of regulations that specify the powers and operations of Development Assessment Panels. The Planning and Development (Development Assessment Panels) Regulations 2011 make provisions for the operation, constitution and administration of Development Assessment Panels. These were gazetted on 24 March 2011.

Financial Implications

Nil.

Strategic Implications

Theme 1: Liveable City and Thriving Neighbourhoods.

Objective 4.3: Safer Roads.

SI 1.4.1: Build sense of security and confidence in the community.

Sustainability Implications

The following tables outline the applicable sustainability issues for this proposal:-

ENVIRONMENTAL	
Issue	**Comment**
Vegetation impact	The Masters development area will result in the need for existing trees and vegetation to be removed.

SOCIAL	
Issue	**Comment**
Amenity	The proposal is considered to have a detrimental impact on the amenity of the locality.
Transport and access	The proposal will have an adverse impact on the surrounding traffic network.

ECONOMIC	
Issue	**Comment**
Job creation	The proposed development will provide local employment opportunities for the area.

Conclusion

It is recommended that Council endorse the Responsible Authority Report that recommends refusal of the application for the reasons outlined in this report.

PUBLIC CONSULTATION

1	Roundabout	The proposed roundabout has now been deleted and a new access provided. (Refer updated plans and Shawmac's updated TIA regarding the issues raised by MRWA).
2	Traffic and Congestion Impacts	The new access will not result in traffic and congestion impacts (refer updated plans and Shawmac's updated TIA regarding the issues raised by MRWA).
3	Vehicle Access impacts to residents living within the surround area	The new design does not impact vehicle access to residents living within the area. (refer Shawmac notes to the City of Stirling regarding Point 1 MRWA)
4	Lack of adequate parking on site due to car parking shortfall	As per the Car Parking report by Shawmac, it is noted that based upon the assessment of the site, Masters Home Improvement parking surveys, previous assessments and surveys of similar sites, the car parking proposed for the development more than adequately caters to the peak parking demand associated with the site.
5	Development will have a negative impact to the surrounding residential amenity	See attached letter. The City's planning policies enable development on reserves where adjoining residential development. The proposal satisfies the objectives and performance criteria of the Codes, and incorporates appropriate measures to ameliorate perceived impacts on residential amenity.
6.	The development use is not aligned with surrounding residential uses	See attached letter. The City's planning policies enable development on reserves where adjoining residential development. The proposal satisfies the objectives and performance criteria of the Codes, and incorporates appropriate measures to ameliorate perceived impacts on residential amenity.
7	Building bulk and height	The use of a range of alternative building materials and colours on the Masters building are arranged to help break down the bulk and scale of the building. (painted concrete panels, prefinished insulated composite panels, painted fibre cement sheets with expressed joints, powder coated aluminium framed & glazed windows, colorbond metal cladding).
8	Poor Building design	The building incorporates an architectural theme and colour scheme consistent with Masters' national branding. Most importantly, blank walls are minimised at the Wanneroo Road frontage. The building is designed to provide a contemporary and attractive premises to attract customers. The blue alucobond signage feature, the white "timber & building" signage, and the grey "Garden" signage have been located to provide Masters' branding identity and assist visitor orientation.
9	Noise concerns due to the operation of the development such as truck movements and machinery	As per the independent Acoustic Report Carried out by Herring Storer (Nov 14) – previously submitted to the City: • Noise levels associated with truck deliveries have been calculated to comply at all times other than the night period where a marginal exceedance is calculated during the night period. Deliveries are understood to only occur Monday – Saturday, 0800 – 1800 hours, which is outside the night period. Hence, compliance is calculated to be achieved at all relevant times. • Noise levels associated with the mechanical plant has been calculated to comply at all times, • with the exception of R5, R6 and R7 where a marginal exceedance is calculated during the • night period. It is noted that the store is not proposed to operating during the night period: • hence, mechanical plant complies at all relevant times
10	Construction Noise	The builder will provide procedures that outlines how the builder will manage by monitoring and controlling noise and vibration during its activities. It applies to all Building operations. The builder will take reasonable measures to minimise the creation of noise (including vibration) from its operation for the comfort of its employees and protection to the surrounding environment.
11	Air pollution	The builder will provide procedure that outlines how the builder will protect air quality and minimise dust during its activities. It applies to all Building operations. The builder will take reasonable measures to minimise the impact to air quality (particulate matter and odours) from its operation for the comfort of its employees and protection to the surrounding environment.
12	Light pollution	The proposed signs will not feature lighting exceeding acceptable levels of illuminance (see attached letter). The distribution, extent and hours of operation of on-site lighting can be discussed and agreed with the City.
13	Security and Safety concerns due to the development	The following Management Plans will be provided and adhered to by the builder during the construction phase: • Emergency Response Management Plan. • Environmental Management Plan. • Quality Management Plan. • Health and Safety Management Plan *(sample attached).* Safety is one of Woolworths Limited's core values and is integral to the way they do business. Woolworths Corporate Responsibility Report provides more information about Safety Policies and practices and is available at www.woolworthslimited.com.au/CRReport/2013. Each Masters Home Improvement store utilises OH & S and Traffic Management policies and plans. The development will also comply with all relevant policies regarding security.
14	Clearing of bushing and impacts to wildlife in the area	As per the independent Environmental Report Carried out by Cardno (August 14) – that was previously submitted to the City. A desktop review was carried out for the site, involving an EPBC protected matters search to determine the likelihood of any MNES occurring within the proposed development area. The EPBC Protected Matters database search identified eighteen EPBC listed species as having the potential to occur within the Site Of

		these, only Carnaby's cockatoo (*Calyptorhynchus latirostris*) has been assessed as likely to occur on the land. A total of 27 significant trees (DBH >500mm) have been identified within the Site, although only 8 are species suitable for Carnaby's cockatoo breeding habitat. It is noted that none of the significant trees identified contain hollows or any evidence of use by Carnaby's cockatoos for breeding or roosting purposes. There is no evidence of clippings, feather moulting's or droppings have been observed beneath trees, which would indicate use of trees for overnight roosting. As are result of the development, approximately 0.41 ha will be cleared. This is less than the 1 ha referral trigger for threatened species and in the majority consists of scattered trees over a degraded understorey.
15	Impacts on Carnaby Cockatoos	Refer above
16	The development being metal will amplify the radiation emitted from the ABC towers to surrounding residential landowners	As per the Hazard Control document for Hamersley site (refer attached). This document contains information and procedures for controlling the risk of established hazards (heating and electro - stimulation) associated with the general public and occupational exposure to radiofrequency (RF fields) at this site. The RF exposures regulations and standards apply to this site and has been assessed for compliance with the general public and occupational levels to RF fields, exposure limits and hazard survey measurements. The RF hazard drawings within the report show areas on the site where the general public and occupational RF exposures may exceed the allowable levels stipulated within the standards and regulations. These areas are designated with different colour markings according to the level of access restriction and detailed within the report. We have attached an indicative plan showing the Masters Home Improvement building in relation to these areas. As per the report and plans, it can be seen that the Masters Home Improvement Building and public areas do not fall within any risk areas. The development has been designed with input from relevant consultants to comply relevant codes.
17	Radiation risk to employees at Masters	Refer above. It is noted that Broadcast Australia have been operating their offices from this site for nearly 50 years.
18	The development will lower property values	Not a planning consideration.
19	Concerns regarding consultation process	The City has guided the consultation process, which has occurred in accordance with the Scheme and the City's own instructions.

Government of **Western Australia**
Development Assessment Panels

State Administrative Tribunal Reconsideration

Responsible Authority Report

(Regulation 12)

Property Location:	Lot 803 (15) Hocking Parade, Sorrento (Sacred Heart College)
Application Details:	EDUCATIONAL ESTABLISHMENT (GYMNASIUM ADDITION)
DAP Name:	Metro North West JDAP
Applicant:	MGA Town Planners
Owner:	Roman Catholic Archbishop of Perth
LG Reference:	DA13/1505
Responsible Authority:	City of Joondalup
Authorising Officer:	Dale Page Director Planning and Community Development
Department of Planning File No:	DP13/00954
Report Date:	14 January 2015
Application Receipt Date:	20 November 2013
Application Process Days:	90 days
Attachment(s):	1: Location plan 2: Determination and approved development plans 3: Traffic management plan 4: Stormwater management plan 5: Amended landscaping and irrigation plan 6: Bin store location plan 7: Building perspectives and schedule of colours and materials

Officer Recommendation:

That the Metro North-West Joint Development Assessment Panel, pursuant to section 31 of the *State Administrative Tribunal Act 2004* in respect of SAT application DR 199 of 2014, resolves to:

Reconsider its decision dated 3 September 2014 and **approve** DAP Application reference DP13/00954 and amended plans and details as set out in attachments 2, 3, 4, 5, 6 and 7 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 approval. 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. The approved Traffic Management Plan (Version 5) shall be implemented for events held in the gymnasium at all times.

3. Stormwater runoff is to be contained on site in accordance with the Engineers Certification dated 5 November 2014 and plans H1 Rev F and H2 Rev D dated 30 October 2014.

4. The development shall only be used for college, or school community purposes. It shall not be used for any other purposes, including commercial purposes without the prior planning approval of the City.

5. Landscaping and reticulation shall be established in accordance with the approved landscaping and irrigation plans and details dated November 2014 and December 2014, Australian Standards and best trade practice prior to the development first being occupied and thereafter maintained to the satisfaction of the City.

6. No construction work including preliminary construction work and earthwork is to be undertaken until a building permit which provides for a construction management plan has been issued by the City.

7. Refuse associated with the gymnasium shall be contained within the bin store indicated on the Bin Store Location Plan ($SK2^{A}$) dated 13 September 2013.

8. Development shall be in accordance with the approved schedule of colours and materials shown on:

   - 'Sacred Heart College Gymnasium – View From North East 06.08.2014'
   - 'Sacred Heart College Gymnasium – View From North West 06.08.2014'
   - 'Sacred Heart College Gymnasium – View From South East 06.08.2014'
   - 'Sacred Heart College Gymnasium – View From South West 06.08.2014'
   - 'Sacred Heart College Gymnasium – North Elevation 06.08.2014'
   - 'Sacred Heart College Gymnasium – East Elevation 06.08.2014'
   - 'Sacred Heart College Gymnasium – South Elevation 06.08.2014'
   - 'Sacred Heart College Gymnasium – West Elevation 06.08.2014'
   - 'View 5 06.08.2014'
   - 'Report – External Material and Finishes dated 6 November 2014'

Advice notes

1. Further to condition 1, where an approval has so lapsed, no development shall be carried out without the further approval under District Planning Scheme No.2 having first being sought and obtained.

2. In regard to the Construction Management Plan, the 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 sand and dust during the construction process;
   - other matters likely to impact on the surrounding properties

3. The development has been defined as a public building and shall comply with the provisions of the Health Act 1911 relating to public building, and the Public Building Regulations 1992.

4. All construction works shall comply with the requirements of the Environmental Protection Act 1986 and the Environmental Protection (Noise) Regulations 1997.

5. All pipework shall be installed in accordance with the Water Services Regulations 2013.

6. The development shall comply with the Sewerage (Lighting, Ventilation and Construction) Regulations 1971.

7. On completion of the installation of any Mechanical Services, the applicant/builder shall provide a Mechanical Services Plan signed by a suitably qualified Mechanical services engineer or Air Conditioning Contractor. It shall certify that the mechanical ventilation of the development complies with and is installed in accordance with Australian Standard 1668.2, AS 3666 and the Health (Air Handling and Water Systems) Regulations 1994.

8. The applicant's electrical contractor shall submit a Form 5 Electrical Compliance Certificate on completion of the electrical works.

Background:

Insert Property Address:		Lot 803 (15) Hocking Parade, Sorrento (Sacred Heart College)
Insert Zoning	MRS:	Urban
	TPS:	Private Clubs/ Recreation
Insert Use Class:		Educational Establishment
Insert Strategy Policy:		Height of buildings within the coastal area (non-residential zones) SPP 2.6 - Coastal Planning
Insert Development Scheme:		District Planning Scheme No.2 (DPS2)
Insert Lot Size:		79,470.8m²
Insert Existing Land Use:		Educational Establishment
Value of Development:		$8.4 million

This report is for the reconsideration of conditions of development approval for a gymnasium addition at Sacred Heart College, approved by the JDAP at its meeting on 3 September 2014.

The subject site abuts West Coast Drive, near Hillary's Marina and Sorrento Beach. The Sorrento Sunset Estate development is located to the south and existing residential development is located to the north and east (Attachment 1 refers). The residential land surrounding the development site has a density code of R20.

The subject site is zoned 'Private Clubs/Recreation' under DPS2. Sacred Heart College is an existing secondary school, established in 1966 with its buildings being generally two storeys in height.

The initial application for the gymnasium addition to the site was considered by the JDAP at its meeting on 5 June 2014. The JDAP resolved to refuse the application. The applicant subsequently sought a review of this decision through the State Administrative Tribunal (SAT).

A revised proposal, which included locating the gymnasium further to the south and other building design changes, was considered by the JDAP at its meeting on 3 September 2014. The revised proposal was approved subject to conditions.

The applicant has sought a review of a number of conditions of this approval through the SAT. Through this process the applicant has provided additional information to address these conditions, which is the subject of this report.

Details: outline of development application

The two storey gymnasium is comprised of**:**

- Five new classrooms and a wet weather room
- Staff offices
- Two internal courts
- Male and female change rooms
- Biomechanics room
- Storeroom
- Weight room
- Kitchen/servery
- Six outdoor courts and a soccer field

A bridge connection between the existing and new gymnasium is proposed to allow for the flow of student traffic between the two buildings.

No additional car parking bays are proposed to be provided on site.

The development was approved by the JDAP at its meeting held on 3 September 2014 subject to conditions. The applicant has sought a review of these conditions through the SAT, which is the subject of this report. The complete list of conditions of approval is provided in Attachment 2, and the conditions under review are listed below:

2. *A traffic management plan shall be prepared to the satisfaction of the City. The approved traffic management plan shall detail how parking and traffic shall be managed for any events to be run from the proposed facility and shall be implemented as set out in the approved document.*

3. *An on-site 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. Plans showing the proposed stormwater drainage system are to be submitted to the City for approval, prior to the commencement of construction.*

5. *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.*

6. *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.*

7. *A Construction Management Plan being submitted and approved prior to the commencement of development. 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 sand and dust during the construction process;*
   - *other matters likely to impact on the surrounding properties.*

8. *A refuse management plan indicating the method of rubbish collection is to be submitted prior to the commencement of development, and approved by the City prior to the development first being occupied.*

9. *A full schedule of colours and materials for all exterior parts to the building is to be submitted and approved by the City prior to the commencement of development. Development shall be in accordance with the approved schedule and all external materials and finishes shall be maintained to a high standard to the satisfaction of the City.*

10. *The external surface of the gymnasium, including roofing, shall be finished in materials and colours that have low reflective characteristics, to the satisfaction of the City. The external surfaces shall be treated to the satisfaction of the City if it is determined by the City that glare from the completed development has a significant adverse effect on the amenity of adjoining or nearby neighbours.*

Legislation & policy:

Legislation

- *Planning and Development Act 2005*
- *Metropolitan Region Scheme (MRS)*
- *City of Joondalup District Planning Scheme No.2 (DPS2)*

State Government Policies

- *State Planning Policy 2.6 – State Coastal Planning* policy

The purpose of this policy is to provide guidance for decision making within the coastal zone including managing development and land use change, establishment of foreshore reserves, and protection, conservation and enhancement of coastal values.

Local Policies

- *Height of buildings within the coastal area (non-residential zones)* policy

The objective of this policy is to ensure that the height of all development within the coastal area (non-residential zones) is sympathetic to and protects and enhances the amenity and streetscape character of the surrounding area.

The policy sets out that buildings on non-residential zoned sites within 300 metres of the horizontal setback datum should not exceed a maximum height of 10 metres as measured from natural ground level.

The policy also promotes the following outcomes:

- Allowing the development of small community activity hubs near the coast that provide facilities for the local and wider community to enjoy, and that add to the social wellbeing of the community.
- Allowing small, low-rise activity nodes that will not lead to the overdevelopment of the coastal area, and that will assist in maintaining the unique coastal setting,
- Limiting the potential overshadowing of adjoining areas, including beach areas, and limiting the visual impact of development on the coastal strip,
- Attracting small businesses and additional employment opportunities to the area,
- Attracting visitors to the City of Joondalup.

- *Development Proposals before the State Administrative Tribunal* policy

The purpose of this policy is to ensure development matters that are brought before the State Administrative Tribunal and involve the City of Joondalup are dealt with in an open and accountable manner.

It is noted that the proposal was not readvertised in this instance. It was determined that readvertising is not necessary as the review related only to conditions of the development approval, and there were no physical changes to the development.

Consultation:

Public Consultation

The additional information provided and the modified conditions which are the subject of this report were not readvertised as the changes to the conditions were not considered to impact on nearby land owners and occupiers.

Correspondence has been received from a representative of the land owners adjoining the site on the northern side of the school, raising concerns regarding the proposed gymnasium. The key concerns raised relate to the impact of the height of the proposed development and its setback from Bahama Close and the surrounding dwellings. Comments were also made in regard to the quality of the application made by the school for the development.

As the review currently before the SAT relates to the conditions of approval (granted by the JDAP on 3 September 2014) rather than the development or a new proposal, these comments are unable to be taken into consideration.

Consultation with other Agencies or Consultants

This application was not required to be referred to any other agency or consultant.

Planning assessment:

The applicant has requested a review of the conditions of approval which relate to:

- Traffic management
- Stormwater management
- Construction management
- Landscaping
- Refuse management
- External colours and materials

Through the mediation process additional information in relation to these conditions was provided for consideration and assessment. The table below sets out the condition under review, the applicant's and City's comments, and recommendation:

Condition under review	Applicant's comments	City's comments	Recommendation
2. *A traffic management plan shall be prepared to the satisfaction of the City. The approved traffic management plan shall detail how parking and traffic shall be managed for any events to be run from the proposed facility and shall be implemented as set out in the approved*	Condition is opposed on the basis that it is uncertain and leaves the satisfaction to a third party. A Traffic Management Plan has been submitted (Attachment 3 refers)	As it is anticipated that the gymnasium would be used to facilitate school events that would result in significant traffic to the school site from time to time, it was considered necessary that a traffic management plan (TMP) be prepared and implemented. Through the mediation the applicant provided a TMP	Condition be modified to state: The approved Traffic Management Plan (Version 5) shall be implemented for events held in the gymnasium at all times.

Condition under review	Applicant's comments	City's comments	Recommendation
document.		developed on the basis of the gymnasium not being available for use by groups not associated with the school. The TMP has been assessed and is considered acceptable for the purpose of managing traffic when the gymnasium is used for school events.	
3. *An on-site 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. Plans showing the proposed stormwater drainage system are to be submitted to the City for approval, prior to the commencement of construction.*	Opposed on the basis that maintaining the stormwater drainage system into perpetuity is overly onerous. The applicant submits that the words 'maintained to the satisfaction of the City' should be replaced with 'all stormwater shall be contained on site'.	This is a standard condition which the City applies to most developments of this scale. The applicant through the mediation process has provided stormwater drainage detail which is considered to address this condition.	Condition be modified to state: Stormwater runoff is to be contained on site in accordance with the Engineers Certification dated 5 November 2014 and plans H1 Rev F and H2 Rev D dated 30 October 2014.
5. *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...*	Condition 5 is opposed on the basis that the Landscape Plans were submitted with the application and therefore further approval is not required. Further, as there is no new car parking proposed by the development, the requirement for tree planting in the car park is not valid as it does not relate to the proposed development.	This is a standard condition which the City applies to most non residential development where landscaping is proposed. The plan provided as part of the initial application was considered to be indicative only and was not sufficiently detailed to be assessed. Through the mediation process the applicant has provided additional information to address this condition which is deemed to be satisfactory (Attachment 5 refers).	This condition be deleted as landscaping plans have now been provided and will form part of the approval.

Condition under review	Applicant's comments	City's comments	Recommendation
6.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.	Condition 6 is opposed on the basis that it is uncertain, as the applicant is not aware of any relevant Australian Standards and trade practices.	This is a standard condition the City applies to development which ensures that an approved landscape plan is implemented and maintained for the life of the development. There are a number of Australian Standards relating to landscaping that could be applied to the site. Best trade practice refers to the landscaper having an understanding of the current best way of installing the landscaping for the environment, which ensures that the landscaping provides the desired amenity and minimises maintenance. This has been clarified with the applicant through mediation.	Condition be modified to state: Landscaping and reticulation shall be established in accordance with the approved landscaping and irrigation plans and details dated November 2014 and December 2014, Australian Standards and best trade practice prior to the development first being occupied and thereafter maintained to the satisfaction of the City.
7.A Construction Management Plan being submitted and approved prior to the commencement of development. 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*	Condition 7 is opposed on the basis that this requirement should be dealt with should be dealt with at the building permit stage.	This is a standard condition the City applies where sites may be constrained or where construction works have the potential to impact on the amenity of the surrounding area. The development application is the mechanism for requiring a construction management plan (CMP) which is considered to be necessary in this instance given the proximity of the development to nearby residential properties and	Condition be modified to state: No construction work including preliminary construction work and earthwork is to be undertaken until a building permit which provides for a construction management plan has been issued by the City.

Condition under review	Applicant's comments	City's comments	Recommendation
arrangements for the contractors and subcontractors; • *the management of sand and dust during the construction process;* • *other matters likely to impact on the surrounding properties.*		the potential impacts associated with the works. The CMP is required to be submitted prior to or with the building permit application to ensure it can be approved prior to the commencement of works .	
8.A refuse management plan indicating the method of rubbish collection is to be submitted prior to the commencement of development, and approved by the City prior to the development first being occupied.	Condition 8 is opposed on the basis that it is unnecessary and it leaves satisfaction to a third party. The applicant has provided documentation demonstrating how the college currently manages refuse.	This is a standard condition the City applies where refuse management has the potential to be problematic or impact on the amenity of the surrounding area. This condition was applied as the plans for the gymnasium include a kitchen/servery which will generate waste. Based on the information provided in the initial application it was unclear how this would be managed. The applicant, through the mediation process has provided further information including a plan demonstrating the location of a bin store area which will be used in the management of waste for the school site. This is considered satisfactory for the purposes of this condition. Further waste management can be controlled through the relevant regulations and local laws.	Refuse associated with the gymnasium shall be contained within the bin store indicated on the Bin Store Location Plan dated 13 September 2013.

Condition under review	Applicant's comments	City's comments	Recommendation
9.A full schedule of colours and materials for all exterior parts to the building is to be submitted and approved by the City prior to the commencement of development. *Development shall be in accordance with the approved schedule and all external materials and finishes shall be maintained to a high standard to the satisfaction of the City.*	Condition 9 is opposed on the basis that it leaves satisfaction to a third party. Plans were submitted to the respondent showing colours and materials which were endorsed by the respondent so this matter should not require further approval from the City of Joondalup.	This is a standard condition the City applies to non residential development. This condition was required to ensure the colours and materials approved were maintained for the building permit. It was also intended to ensure that for the life of the structure, the building was maintained to a high standard given its proximity and visibility from the coast. Notwithstanding, it is considered that the schedule of colours and materials previously provided by the applicant and additional information provided through mediation addresses this condition (Attachment 7 refers).	Development shall be in accordance with the approved schedule of colours and materials shown on: • 'Sacred Heart College Gymnasium – View From North East 06.08.2014' • 'Sacred Heart College Gymnasium – View From North West 06.08.2014' • 'Sacred Heart College Gymnasium – View From South East 06.08.2014' • 'Sacred Heart College Gymnasium – View From South West 06.08.2014' • 'Sacred Heart College Gymnasium – North Elevation 06.08.2014' • 'Sacred Heart College Gymnasium – East Elevation 06.08.2014' • 'Sacred Heart College Gymnasium – South Elevation 06.08.2014' • 'Sacred Heart College Gymnasium – West Elevation 06.08.2014' • 'View 5 06.08.2014' • 'Report – External Material and Finishes dated 6 November 2014'

Condition under review	Applicant's comments	City's comments	Recommendation
10. The external surface of the gymnasium, including roofing, shall be finished in materials and colours that have low reflective characteristics, to the satisfaction of the City. The external surfaces shall be treated to the satisfaction of the City if it is determined by the City that glare from the completed development has a significant adverse effect on the amenity of adjoining or nearby neighbours.	Condition 10 is opposed on the basis that it is unduly onerous and leaves satisfaction to a third party. During mediation the applicant agreed to reduce the gloss level down from 80% to 50% and this is recognised in the schedule of colours and materials endorsed by the respondent and should not require further approval of the City.	This is a standard condition the City applies where glare from the external finish of a building has the potential to impact on the amenity of adjoining properties. The purpose of this condition was to ensure that any glare from the external finish of the building would not impact on the amenity of the area. This condition also provided flexibility in case the materials were modified between the development approval and the building permit. As long as the materials minimised glare, any modifications could be dealt with through the building permit rather than requiring a new development application. Through the mediation process further clarification has been provided regarding the proposed materials, which indicates glare will be minimised. It is therefore considered that this condition can be deleted.	Condition be deleted.

Conditions 1, 4 and 11 are not being contested and will be retained. Through mediation the City sought legal advice regarding condition 4 which relates to the use of the gymnasium for school purposes only.

The legal advice indicated that regular use of the gymnasium by sporting and other groups for purposes unconnected with the College as an educational establishment would not fall within the use class 'educational establishment' or be incidental to the educational establishment use of the college.

Should the gymnasium be used by sporting and other groups for purposes unconnected with the College this would constitute a separate land use which would require approval under the City's DPS2.

Given only the conditions are being reviewed and not the development, further assessment against the City's DPS2 and local planning policies was not required.

Conclusion:

The additional information that has been provided by the applicant is considered to address the requirements of a number of conditions as outlined in this report. It is therefore recommended that pursuant to the invitation from the SAT for the JDAP to reconsider its decision in relation to this application that the additional information be included as part of the approval, and the conditions be modified as outlined in this report.


Subject site
15 Hocking Parade
Sorrento
N

Government of **Western Australia**
Development Assessment Panels

Planning and Development Act 2005

City of Joondalup District Planning Scheme No.2

Metro North-West Joint Development Assessment Panel

Determination on Development Assessment Panel Application for Planning Approval

Location: Lot 803 (15) Hocking Parade, Sorrento (Sacred Heart College)
Description of proposed Development: Educational Establishment (Gymnasium Addition)

Pursuant to section 31 of the *State Administrative Tribunal Act 2004*, the Metro North-West Joint Development Assessment Panel, at its meeting on 3 September 2014, has reconsidered its decision dated 5 June 2014 in respect to the above application, SAT Ref. DR199 of 2014 and has resolved to:

Approve DAP application reference DP13/00954 and amended plans as set out in attachment 6 in accordance with Clause 6.9 of the City of Joondalup District Planning Scheme No.2, subject to the following conditions:

1. This decision constitutes planning approval only and is valid for a period of two (2) years from the date of approval. 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 traffic management plan shall be prepared to the satisfaction of the City. The approved traffic management plan shall detail how parking and traffic shall be managed for any events to be run from the proposed facility and shall be implemented as set out in the approved document.

3. An on-site 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. Plans showing the proposed stormwater drainage system are to be submitted to the City for approval, prior to the commencement of construction.

4. The development shall only be used for college, or school community purposes. It shall not be used for any other purposes, including commercial purposes without the prior planning approval of the City.

5. 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;

Government of **Western Australia**
Development Assessment Panels

- 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.

6. 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.

7. A Construction Management Plan being submitted and approved prior to the commencement of development. 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 sand and dust during the construction process;
   - other matters likely to impact on the surrounding properties.

8. A refuse management plan indicating the method of rubbish collection is to be submitted prior to the commencement of development, and approved by the City prior to the development first being occupied.

9. A full schedule of colours and materials for all exterior parts to the building is to be submitted and approved by the City prior to the commencement of development. Development shall be in accordance with the approved schedule and all external materials and finishes shall be maintained to a high standard to the satisfaction of the City.

10. The external surface of the gymnasium, including roofing, shall be finished in materials and colours that have low reflective characteristics, to the satisfaction of the City. The external surfaces shall be treated to the satisfaction of the City if it is determined by the City that glare from the completed development has a significant adverse effect on the amenity of adjoining or nearby neighbours.

11. 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.

Advice Notes

1. Further to condition 1, where an approval has so lapsed, no development shall be carried out without the further approval under District Planning Scheme No. 2 having first being sought and obtained.

Government of **Western Australia**
Development Assessment Panels

2. The development has been defined as a public building and shall comply with the provisions of the *Health Act 1911* relating to public building, and the *Public Building Regulations 1992*.

3. All construction works shall comply with the requirements of the *Environmental Protection Act 1986 and the Environmental Protection (Noise) regulations 1997*.

4. All pipework shall be installed in accordance with the *Water Services Regulations 2013*.

5. The development shall comply with the *Sewerage (Lighting, Ventilation and Construction) Regulations 1971*.

6. On completion of the installation of any Mechanical Services, the applicant/builder shall provide a Mechanical Services Plan signed by a suitably qualified Mechanical services engineer or Air Conditioning Contractor. It shall certify that the mechanical ventilation of the development complies with and is installed in accordance with Australian Standard 1668.2, AS 3666 and the *Health (Air Handling and Water Systems) Regulations 1994*.

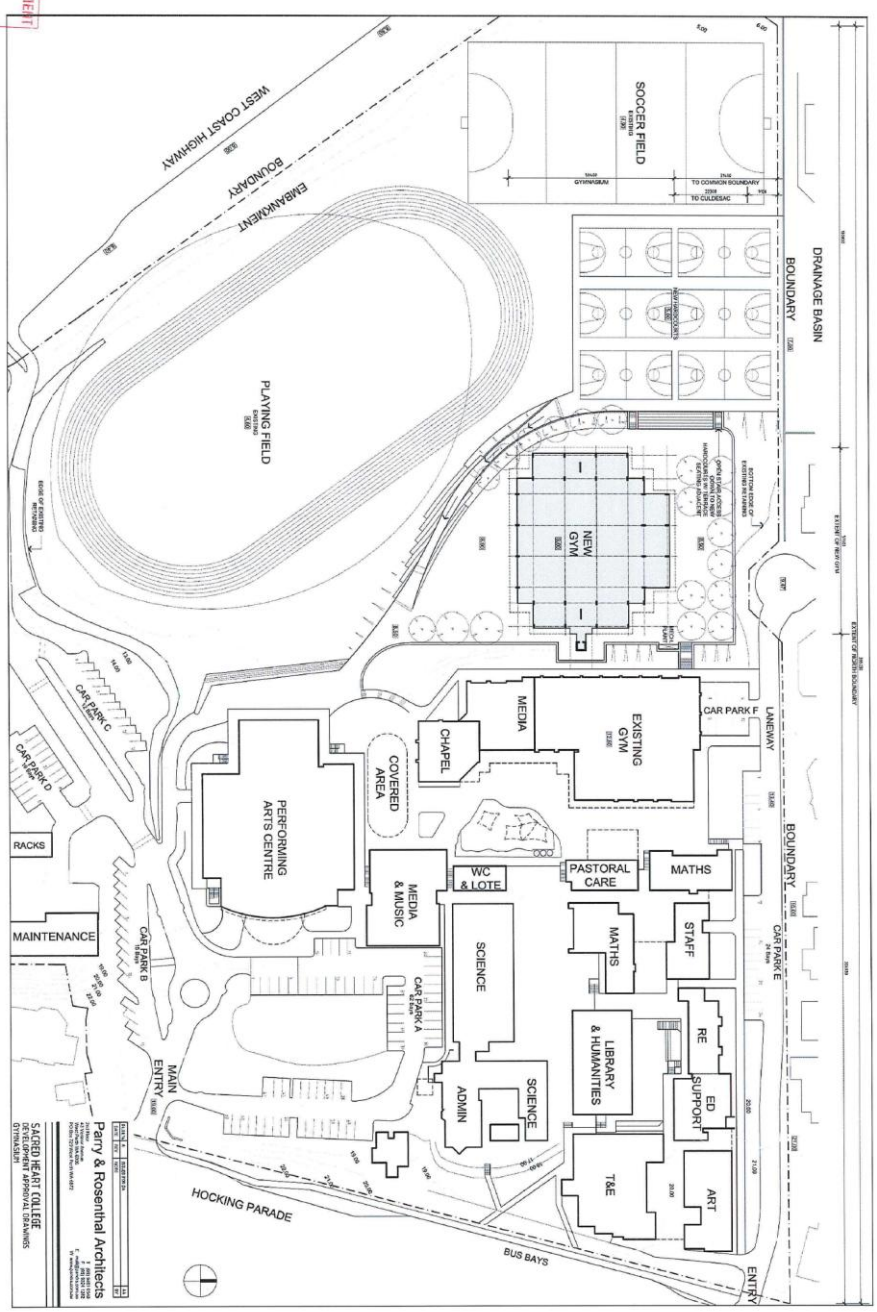
7. The applicant's electrical contractor shall submit a Form 5 Electrical Compliance Certificate on completion of the electrical works.

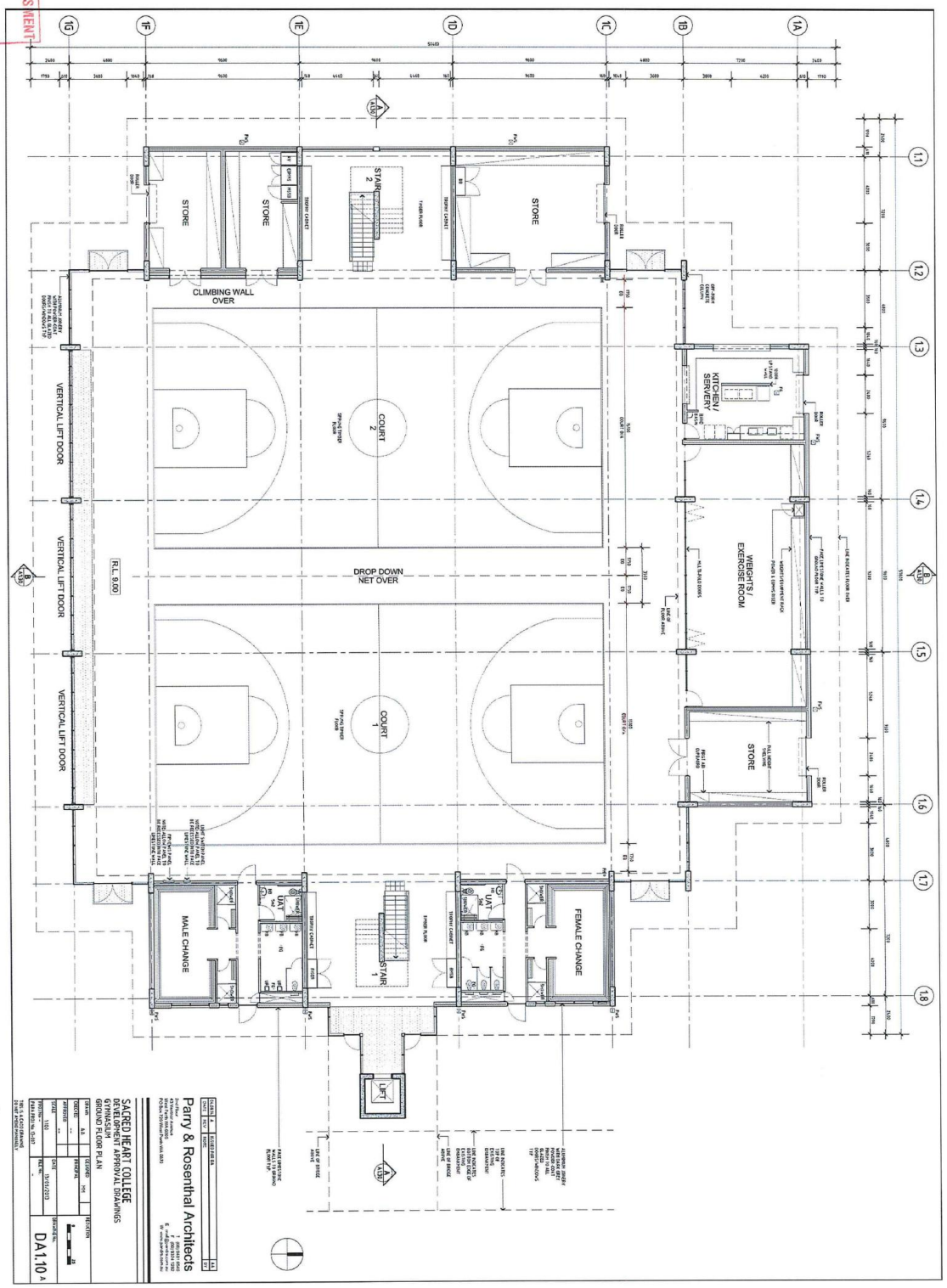
Where an approval has so lapsed, no development shall be carried out without further approval having first been sought and obtained, unless the applicant has applied and obtained Development Assessment Panel approval to extend the approval term under regulation 17(1)(a) of the *Development Assessment Panel Regulations 2011*.

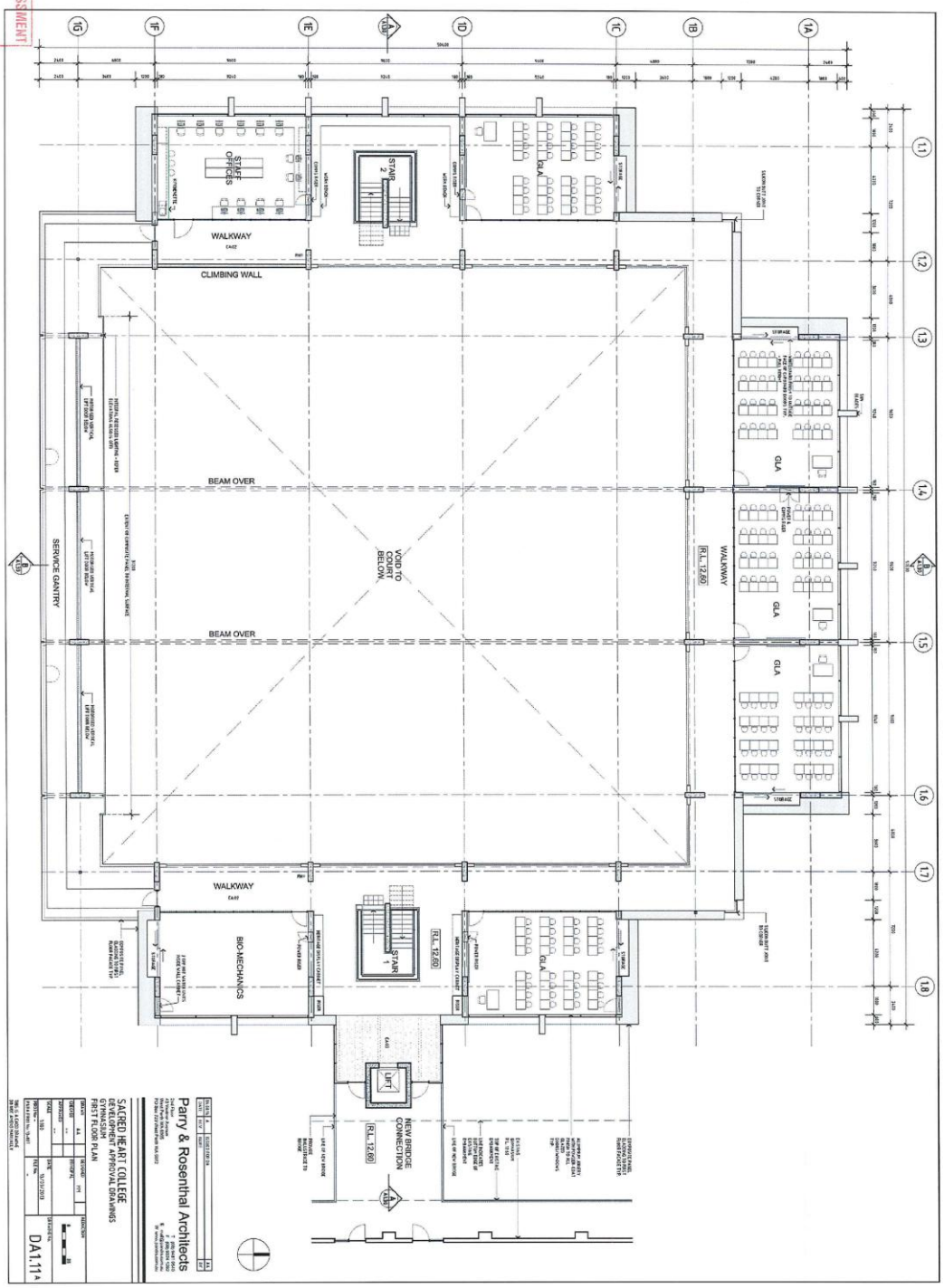
Amended Development Plans

Attachment 6

Page 1 of 6







DEVELOPMENT ASSESSMENT PANELS
03 SEP 2014
APPROVED

Amended Development Plans

Attachment 6

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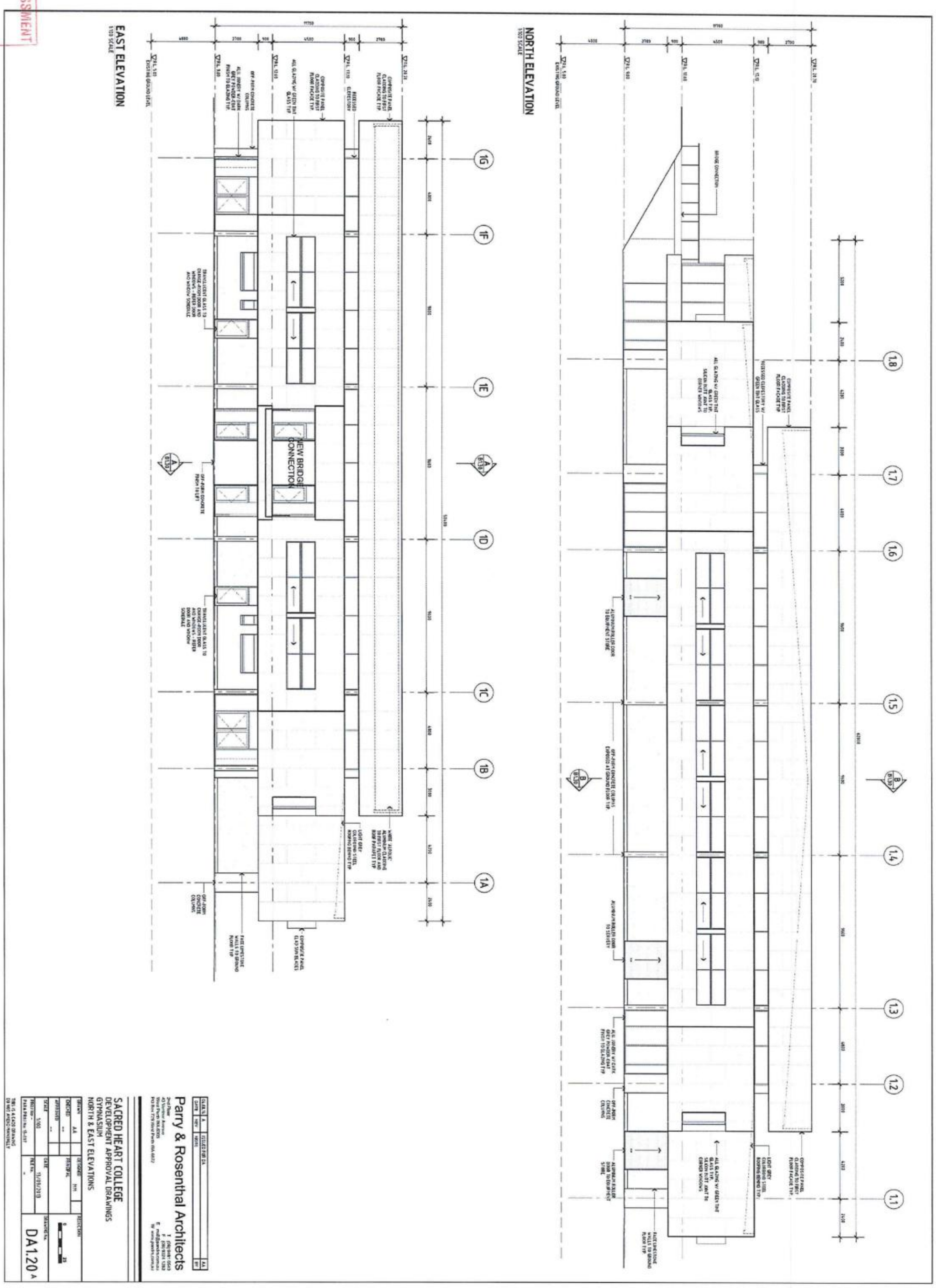

Amended Development Plans

Attachment 6

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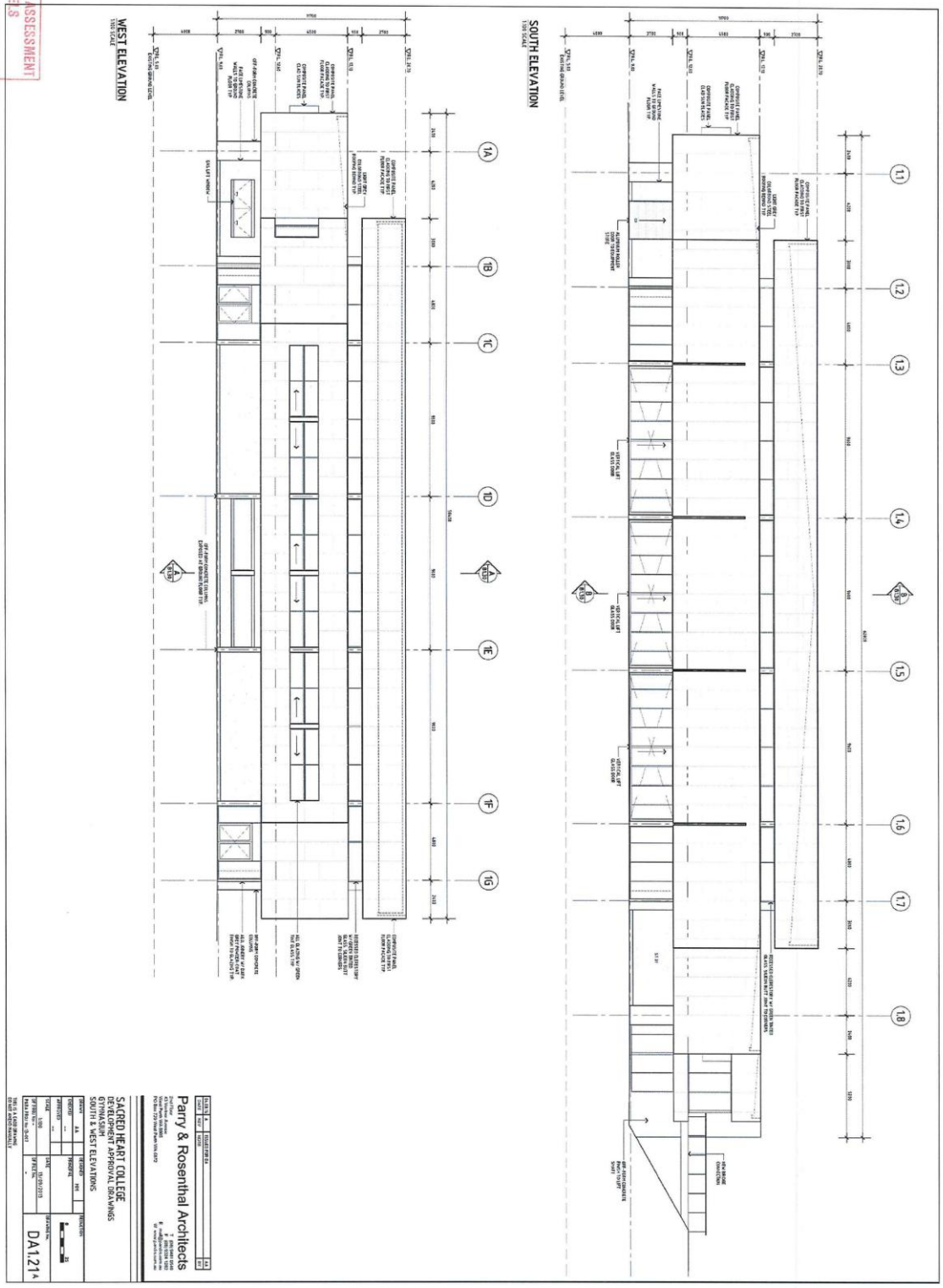

Amended Development Plans

Attachment 6

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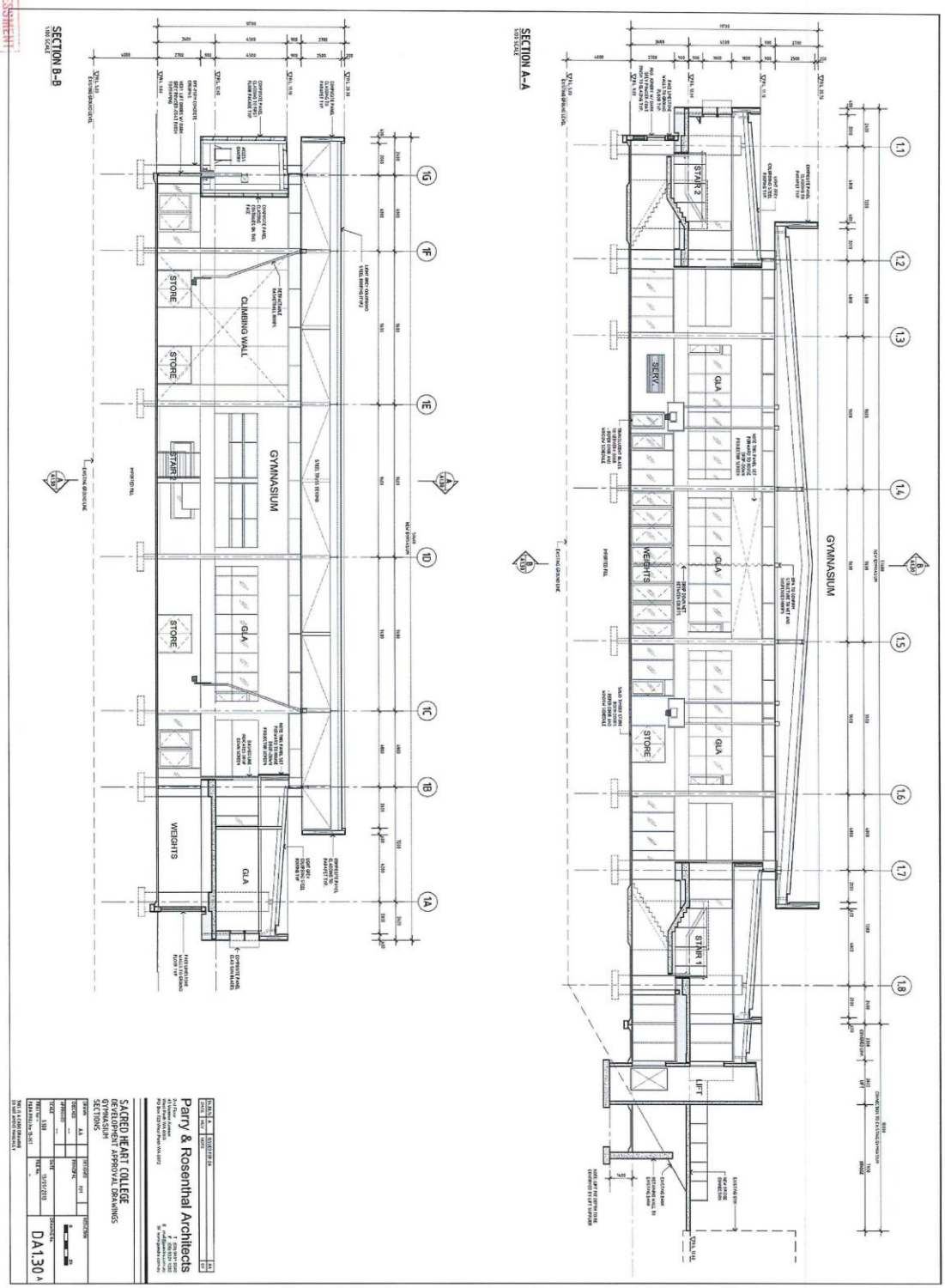

CONSULTING CIVIL & TRAFFIC ENGINEERS, RISK MANAGERS

Project: **Traffic Management Plan – V5**

Sacred Heart College

Proposed Gymnasium

Client: **Parry Rosenthal Architects**

Author: Heidi Lansdell

Signature:

Date: 3rd December 2014

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3	H. Lansdell	P. Nguyen	18/11/14	REV FINAL		18/11/14
4	H. Lansdell	P. Nguyen	18/11/14	REV FINAL		24/11/14
5	H. Lansdell	P. Nguyen	03/12/14	REV FINAL		03/12/14

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CONTENTS

1. SUMMARY

Shawmac Consulting Ltd has been commissioned by Parry and Rosenthal Architects to prepare a Travel Management Plan, prepared in accordance with industry-standard traffic engineering principles Western Australian Planning Commission (WAPC) guidelines for the proposed gymnasium project to be located at Sacred Heart College, Sorrento, in the City of Joondalup.

This plan has been prepared in response to the comments provided by the City of Joondalup as part of the review of the proposal. The plan addresses car parking demands associated with the development, management of travel demand (both vehicular and non-motorised) and service/delivery and general access issues associated with the development.

2. BACKGROUND

Sacred Heart College is an independent Catholic high school catering to a student population from Year 7 to Year 12. The existing student and staff population is 1266 students and 146.3 FTE staff (2014) and is expected to increase to 1375 students in 2015 with no increase in staff numbers and approximately 1400 students in 2016.

The existing access arrangements to the boundary road network include a primary access point to the west side of Hocking Parade, east of West Coast Drive, a partial movements access (left-in/left-out only) from West Coast Drive and an access to the rear of the school from Bahama Close at the northern boundary to the site.

The existing Kiss n Ride arrangements consist of two facilities on the site within the on-site car parking areas B and C between the West Coast Drive and Hocking Parade access points. Typical school operating hours are 840 a.m. to 330 p.m.

Bus embayments are located on Hocking Parade adjacent to the eastern boundary of the school north of Keans Avenue.

Figure 1shows the metropolitan context of the school location with Figure 2 showing an aerial view of the existing school in the context of the boundary road network. Figure 3 shows the existing pick-up/drop-off Kiss n Ride zones on the site.

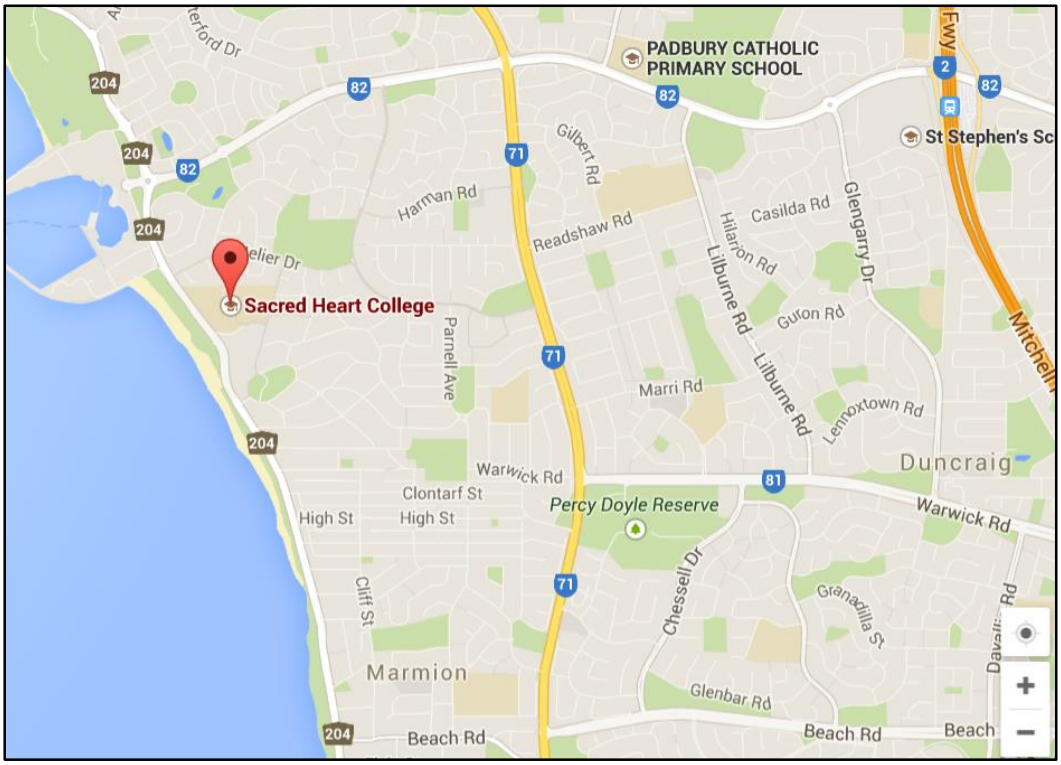


Figure 1: Existing Metropolitan Context

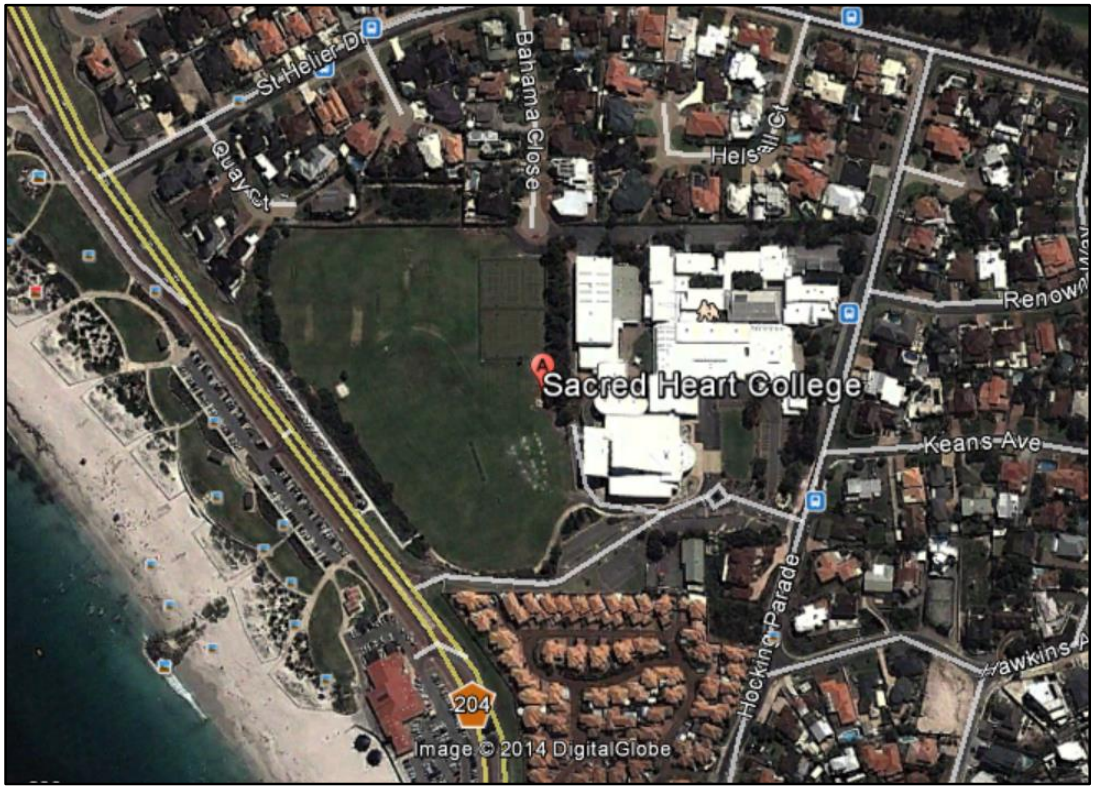


Figure 2: Aerial Overview of Existing School and Boundary Road Network

Figure 3: Existing Pick-Up/Drop-Off Areas during School Peak Periods

3. DEVELOPMENT PROPOSAL

The development proposal consists of a new gymnasium to be located within the northern part of the site partially on the site of the existing courts adjacent to the existing gymnasium. The site plan for the proposal, prepared by Parry and Rosenthal Architects, is shown in Appendix A.

1.1. Access Arrangements

The existing access arrangements for the school are not proposed to change in the context of the development proposal. The proposal itself is ancillary to the existing activities on the site and is not expected to generate additional external traffic movements and at present is not proposed to be utilised for non-college events. The existing Performing Arts Centre located at the southern end of the site between the existing playing fields and Car Park A is currently licensed for external hire on weekends and evenings.

1.2. Parking

The existing car parking supply is not proposed to be modified in the context of the proposal as the new gymnasium is not expected to generate additional parking demand due to its exclusive use by the College as an ancillary generator to College activities.

The existing parking arrangements for the school consist of 139 on-site bays in Car Parks A through F, respectively with additional car parking available on Hocking Parade outside of school peak periods within the bus embayments on the west side north of Keans Avenue.

Additional on-street angle parking is in place on the east side of West Coast Drive adjacent to the school's playing fields.

The existing car parking arrangements are shown in Appendix A in the site plan.

4. EXISTING ROAD NETWORK

The existing road network abutting the school consists of a permeable grid layout provide direct access for the school to West Coast Drive and Hocking Parade with a secondary access point at the rear of the school to Bahama Close.

Access to West Coast Drive is afforded via a partial movements access (left-in/left-out only) providing direct access into Car Parks C and D and a Kiss n Ride (pick-up/drop-off) area within the western part of the school (Car Parks A and B).

Access to Hocking Parade is afforded via a full movements access to the west side of Hocking Parade approximately 50m south of Keans Road which provides direct access to Car Parks A and B a connection through to Car Parks C and D via an internal road connection. A Kiss n Ride facility is also provided in Car Park B.

Access to Car Parks E and F is afforded via the rear or northern boundary of the site via the southern terminus of Bahama Close.

The existing road classification for the boundary road network is shown in Figure 4.

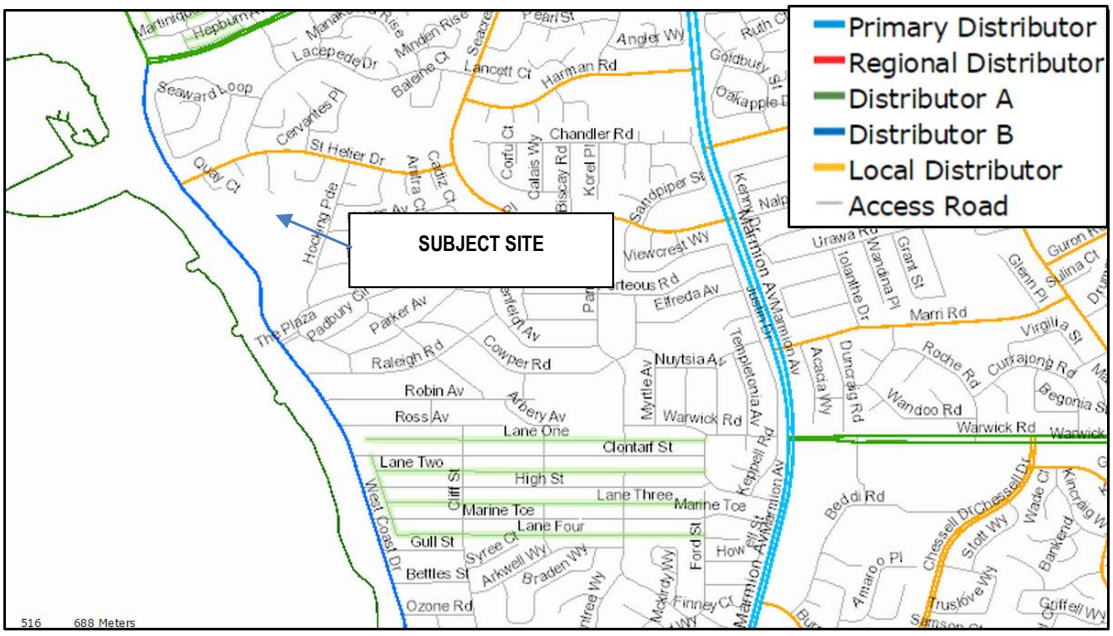


Figure 4: Boundary Road Network

The classification of the surrounding roads is based on the Main Roads Western Australia *Functional Road Hierarchy*. Table 1 shows the existing road hierarchy, existing traffic volumes and associated practical road capacities for each road link.

Road	MRWA Functional Road Classification	Existing Daily Traffic Volume (vpd)	Existing Practical Road Capacity (vpd)
West Coast Drive	District Distributor B	17,503 vpd (M-F) 18,365 (M-S)	15,000 to 20,000 vpd
St. Helier Drive	Local Distributor	4,000 vpd (estimated)	5,000 to 7,000 vpd
Hocking Parade	Access Road	1,864 vpd	3,000 vpd
Bahama Close	Access Road	800 vpd	1,500 vpd

Table 1: Existing Traffic Volumes

The existing speed zoning in the area is generally 50kph with a section of Hocking Parade zoned to 40kph during school peak periods.

A review of the existing crash history in the reporting period of 2009-2013 indicates a very low rate of crashes along Hocking Parade and St. Helier Drive with no crashes on Hocking Parade at the school entry. No crashes were recorded on Bahama Close. There were 6 crashes on West Coast Drive involving a driveway between Beach Road West and Whitfords Avenue/Hepburn Avenue which in comparison to the traffic volumes and direct frontage is very low.

4.1. Existing Pedestrian and Cyclist Networks

The existing pedestrian and cycling infrastructure in the vicinity of the school is considered to be of a high standard with a foot path in place on the west side of Hocking Parade and the east side of West Coast Drive. A dual use path is in place on the west side of West Coast Drive opposite the western boundary of the school and a Principal Shared Path is in place on St. Helier Drive to the north of the school.

4.2. Public Transport

Existing public transport services consist of line haul bus services providing direct connections to the Warwick Railway Station and Stirling Railway Station with bus stops on Hocking Parade and West Coast Drive.

Based upon a review of the existing student population and staff complement as well as the existing traffic data on the adjacent boundary road network, it is assumed that using a public transport and other non-motorised mode split of 70% and an average auto occupancy rate of 1.25 students per vehicle that the current number of daily trips generated by the school is in the order of 1,500 vpd. These trips are distributed primarily during the a.m. (7:30 to 8:30 a.m.) and school p.m. (2:30 to 3:30 p.m.) peak periods. This mode split is based upon a review of a number of public and private high schools throughout the Perth Metropolitan area with excellent access to public transport services (ranging from a bus/train mode split between 50% and 85%) and the resultant daily traffic volumes on the boundary road network (as provided by the City of Joondalup).

The proposal is not expected to generate additional trips during the weekday a.m. and p.m. peak periods but may generate additional visitor traffic between 9 a.m. and 2:30 p.m. and on weekends for sporting events. A review of the existing traffic volumes on the boundary roads indicate that an increase of 150 vpd can be comfortably accommodated during a typical weekday within the existing practical road capacity. Estimated traffic generation on weekends may be in the order of 300 to 400 vpd for special events which can be accommodated within the existing road capacity even with the existing ambient weekend demands on West Coast Drive associated with the major weekend generators at Hillarys Boat Harbour and Sorrento Quay.

It can therefore be concluded that the traffic generated by the proposal can be comfortably accommodated within the existing road capacity and is not expected to impact the risk profile of the road network based upon residual practical road capacity and crash history.

6. PURPOSE OF CAR PARKING AND TRAVEL MANAGEMENT PLAN

A critical component of ensuring the success of a school-based Car Parking and Travel Management Plan for the existing school operations during a typical weekday and for special events at the Performing Arts Centre and Gymnasium is outlined as follows:

- Maximise safety for students and parents/caregivers;
- Minimise impacts to existing traffic operations on the adjacent local road system;
- Encourage parents and caregivers to use appropriate pick-up/drop-off areas in accordance with the plan;
- Maintain a balance between these objectives and accessibility for the local community as whole;
- Encourage parents to allow older children to travel by public transport, if appropriate;
- Encourage carpooling to increase the number of students per car and to reduce the total number of cars;

- Inform parents of the proposed traffic management system for the set-down and collection of students and regularly communicate it in newsletters and on the website;
- Manage the pick-up operation of students during the peak pick-up/drop-off period;
- Encourage parents to collect younger siblings with older siblings in order to minimise impacts to traffic and car parking demands on and off the site school site;
- New parents will be advised of the tenets outlined in the plan at student orientation and publish the plan in the school newsletter and on its school website; and
- Outline car parking and access protocols for special events on the site at the Performing Arts Centre and Gymnasium.

7. CAR PARKING AND ACCESS ARRANGEMENTS

The total parking supply for the school consists of 139 on-site bays with additional on-street car parking on West Coast Drive adjacent to the playing fields and on Hocking Parade north of Keans Avenue within the bus embayment area (only permissible outside of school periods).

The parking arrangement for the school as indicated on the current plans comprises two main interconnected parking areas (Car Parks A through D) with a third area (Car Parks E and F) which have been designed to facilitate effective and efficient distribution of pick-up/drop-off activities and car parking demands.

8. CAR PARKING AND TRAVEL MANAGEMENT PLAN

8.1. Objectives

Parents, staff and students of Sacred Heart College will be requested to consider the following goals to achieve safe, equitable and sustainable access to the school:

- To have safe entry and exit for all students;
- To identify key parking areas; and
- To be a respectful community member.

8.2. Arriving and Departing School on School Days

- Parents and caregivers may park on-site in in the designated Kiss 'n Ride areas within Car Parks B and C. Car Parks A, D, E and F will be designated as dedicated staff car parking and visitor parking only between 7:30 a.m. and 3:30 p.m. and will not be used for Kiss 'n Ride activities. Appropriate signage and line marking will be implemented at these locations.
- The Kiss 'n Ride area has been designated for use between 7:30 and 8:30 a.m. and 2:30 and 3:30 p.m.

on the site and will be located as a one-way circular system oriented to and from the access points to West Coast Drive and Hocking Parade. This area will be signed and line marked appropriately and marshalled by staff during the relevant peak periods.

- When picking-up or dropping-off off in Kiss 'n Ride area(s), the driver must stay with the vehicle. Staff will be available during p.m. peak pick-up period. Parents are also kindly requested to have their children organised to enable the drop-off procedure during the a.m. peak period to be as efficient as possible.
- Once drop-off is completed, parents must to turn left-out of the proposed on-site car parking areas, wherever possible.
- U-turns or three-point turns within on-site car parking areas and on the local road network are discouraged, particularly within the on-site pick-up areas of the school, in order to maximise safety for not only parents/caregivers and students but also for the local community using the local road network adjacent to the school.
- Parents are advised to adhere to local car parking regulations on the boundary roads in the vicinity of the school by not parking in no-parking/no-stopping zones or on adjacent road verges.
- The posted speed limit in the vicinity of the school will be 40kph between 7:30 a.m. and 9:00 a.m. and 2:30 p.m. and 4:00 p.m. It would be expected in the interests of safety and local amenity that this speed limit is adhered to.
- If escorting children directly into the school, parents and caregivers are requested to maintain safe crossing procedures between car parking areas and on-street car parking in order to minimise congestion and maximise safety.

8.3. Alternative Travel Management Strategies

- In order to minimise the effects of parents setting down and picking up students during the morning and afternoon and also to minimise the number of cars present at any given time in the vicinity of the school, the following strategies will be implemented:-
    - While each school is unique, all school communities have similar concerns relating to congestion, access and road safety. The TravelSmart Schools program provides real solutions that have been planned and successfully implemented in other WA schools, by WA school communities. The School's P & F will work in consultation with the Council to develop a TravelSmart for Schools Plan. TravelSmart for Schools program development officers can be contacted by phone on 6551 6000 or email tsts@transport.wa.gov.au to register the school's interest in making the school TravelSmart.
    - Inform parents of the Car Parking and Travel Management Plan for the set-down and collection of students, stating that compliance with the procedures is expected.
    - All these strategies will be communicated to parents through school newsletters and on the

School's website, in student orientation packages, and reinforced at parent/teacher meetings, assemblies and letters sent home.

- Walking and cycling to school as part of a Safe Routes to Schools initiative will be encouraged via the distribution of relevant information via the school's website.
- The nearest bus routes to the school site are the Routes 423 and 441 which run a line haul service along Hocking Parade and West Coast Drive and are operated by Transperth. These services run between the Stirling Railway and Warwick Railway Stations.

8.4. Special Events Management

- Parents and visitors to the school for special events are encouraged to access the school using alternative transport modes such as public transport, walking and cycling, wherever possible and practicable.
- If accessing the College by motor vehicle, Car Parks E and F at the rear of the site, this car parking will not be available for use other than for staff and will be cordoned off completely in order to minimise traffic utilising Bahama Close during these times.
- Vehicular traffic will be marshalled into the school via West Coast Drive and Hocking Parade via a one-way system west to east (eastbound) in order to 'backfill' Car Parks A through D from Hocking Parade during peak periods. Traffic marshals will be appointed during these peak demand periods to assist in optimising way finding and efficient utilisation of these car parking areas.
- Overflow car parking will be accommodated on the playing fields (where appropriate) using a similar marshalling system via the stub road connection at the eastern end of Car Park C.
- Disabled parking will be provided as required as close as possible to the event venue and in close proximity to access to the on-site pedestrian network.
- Exit from special events will be via West Coast Drive and Hocking Parade only via a left-turn outbound movement from the playing fields and Car Parks A, B C and D to maximise efficient distribution of vehicle demands post-event and to minimise confusion for vehicles wishing to access West Coast Drive northbound by allowing them direct access to St. Helier Drive which is currently operating within its practical road capacity and can accommodate the additional traffic associated with special events wishing to travel northbound on West Coast Drive.
- On-street car parking along West Coast Drive may be utilised through the discretion of patrons who will be required to conform to the City of Joondalup's signage and time-restrictions along this section of road.
- Extraordinary events such as end-of-year graduation or special sporting events will be required to conform to this Travel Management Plan.

- Special signage may be required for specific events to assist in information dissemination and way finding for these events.
- A plan illustrating the access, egress and way finding arrangements in the form of a signage and directional plan will be published on the College's website. An indicative way finding and parking plans is shown in Appendix B.

8.5. Service and Delivery Vehicle Access

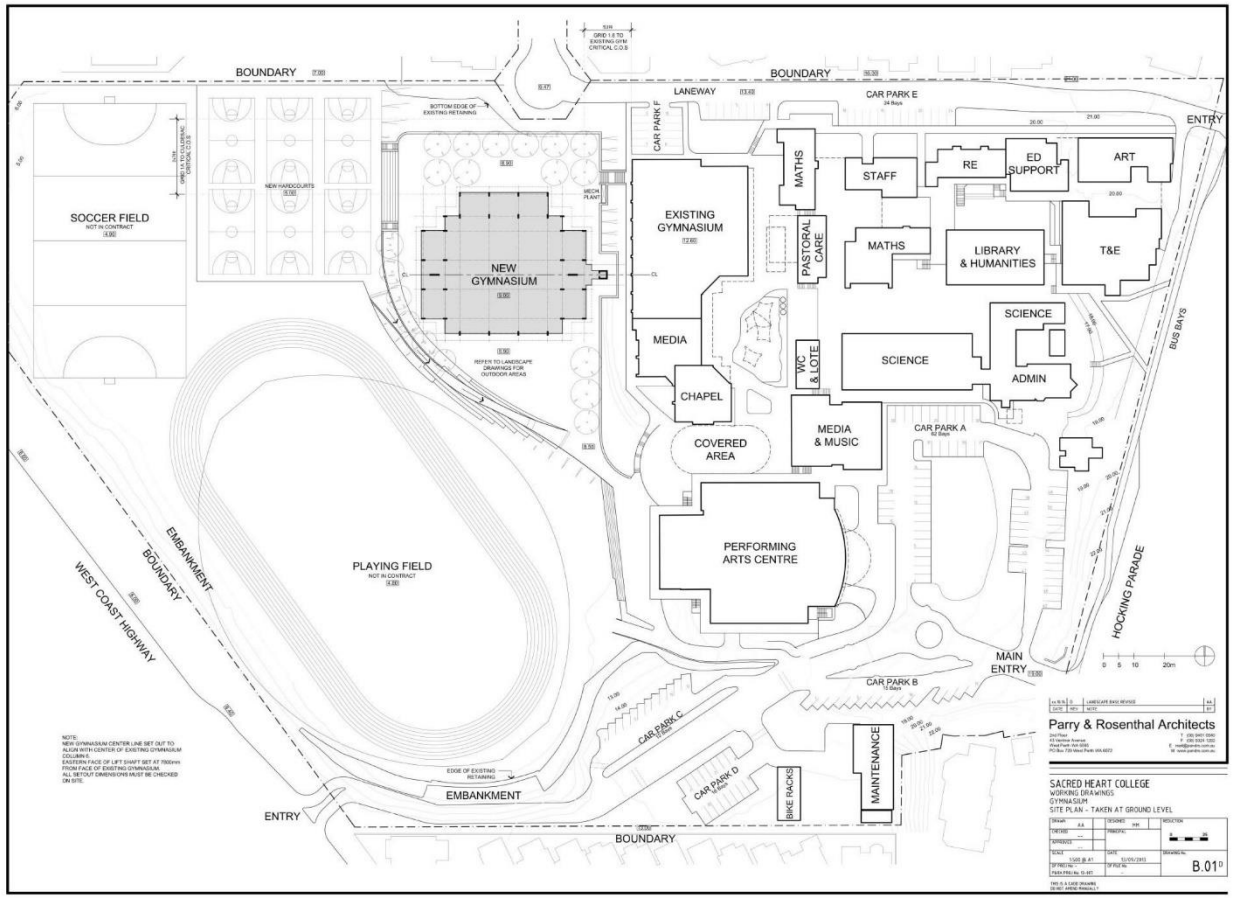
Servicing of the Performing Arts Centre and the Gymnasium will be undertaken via the existing service driveway (road stub) to the north of Car Park C (as is done currently) and via the southern terminus of Bahama Close.

Issues relating to rubbish collection or waste management will be negotiated directly with the City of Joondalup.

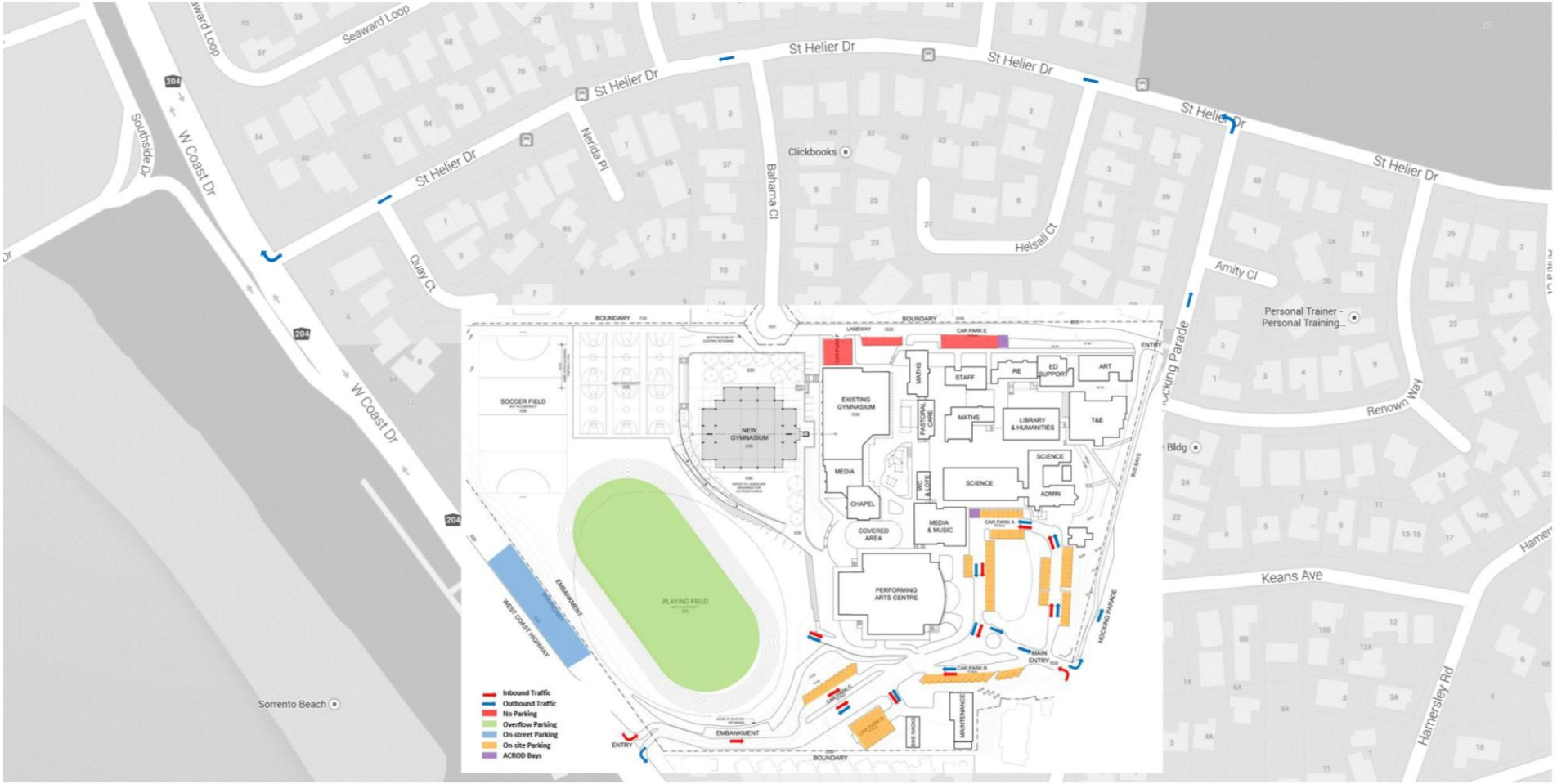
8.6. Construction Traffic Management

Prior to commencement of the construction of the Gymnasium and as part of the tender process to appoint a Contractor to undertake the works, a detailed Construction Roadworks Traffic Management Plan will be prepared in consultation with the City of Joondalup and Main Roads WA in order to minimise the disruption to existing traffic operations on the local boundary road network.

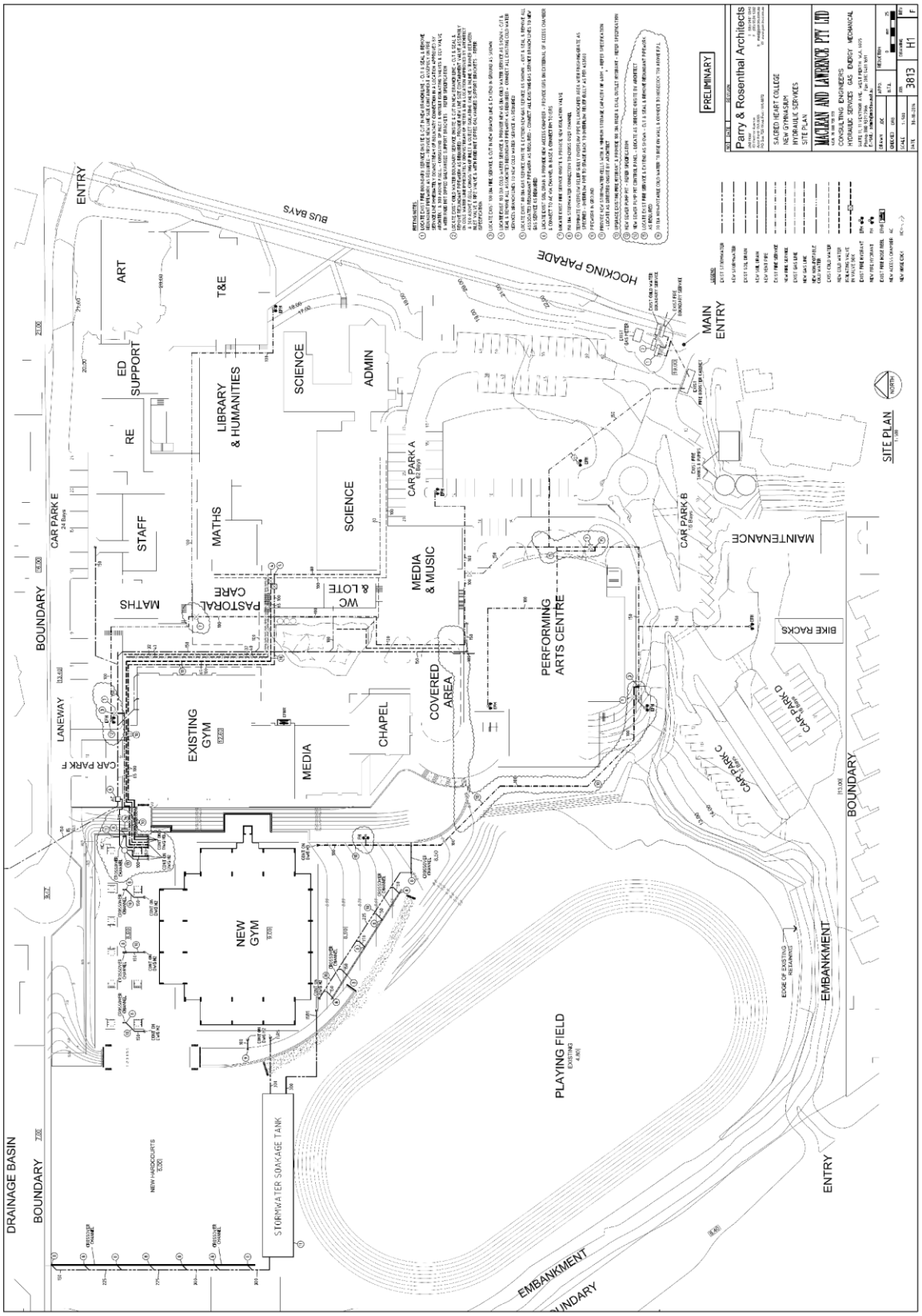
9. APPENDIX A – SITE PLAN

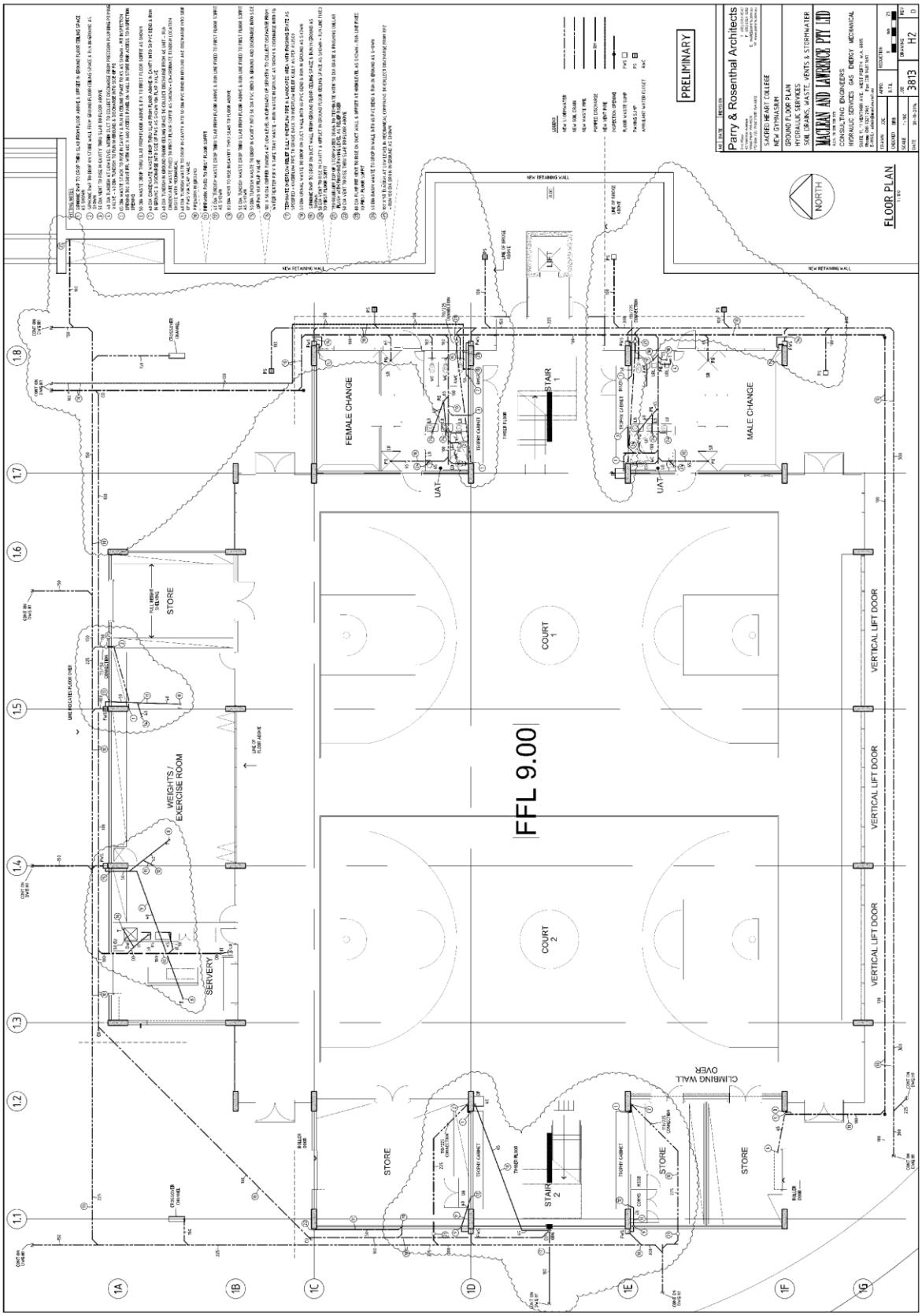

BOUNDARY
BOUNDARY
LANEWAY
CAR PARK E
24 Bays
ENTRY
SOCCER FIELD
NOT IN CONTRACT
NEW HARDCOURTS
NEW GYMNASIUM
EXISTING GYMNASIUM
CAR PARK F
MATHS
STAFF
RE
ED SUPPORT
ART
PASTORAL CARE
MATHS
LIBRARY & HUMANITIES
T&E
SCIENCE
MEDIA
WC & LOTE
SCIENCE
ADMIN
CHAPEL
COVERED AREA
MEDIA & MUSIC
CAR PARK A
52 Bays
BUS BAYS
PERFORMING ARTS CENTRE
PLAYING FIELD
NOT IN CONTRACT
HOCKING PARADE
MAIN ENTRY
CAR PARK B
12 Bays
CAR PARK C
CAR PARK D
BIKE RACKS
MAINTENANCE
EMBANKMENT
BOUNDARY
WEST COAST HIGHWAY
EMBANKMENT
ENTRY
BOUNDARY
Parry & Rosenthal Architects
SACRED HEART COLLEGE
WORKING DRAWINGS
GYMNASIUM
SITE PLAN - TAKEN AT GROUND LEVEL
B.01

10. APPENDIX B – WAYFINDING AND PARKING PLAN FOR SPECIAL EVENTS


Seaward Loop
St Helier Dr
Southside Dr
W Coast Dr
Nerida Pl
Bahama Cl
Clickbooks
Quay Ct
Helsall Ct
Amity Cl
Personal Trainer - Personal Training...
Renown Way
Keans Ave
Hamersley Rd
Sorrento Beach
BOUNDARY
SOCCER FIELD
NEW GYMNASIUM
EXISTING GYMNASIUM
PASTORAL CARE
MATHS
STAFF
RE
ED SUPPORT
ART
LIBRARY & HUMANITIES
T&E
SCIENCE
ADMIN
MEDIA
CHAPEL
COVERED AREA
MEDIA & MUSIC
PERFORMING ARTS CENTRE
PLAYING FIELD
EMBANKMENT
WEST COAST HIGHWAY
HOCKING PARADE
MAIN ENTRY
ENTRY
MAINTENANCE
Inbound Traffic
Outbound Traffic
No Parking
Overflow Parking
On-street Parking
On-site Parking
ACROD Bays

.


DRAINAGE BASIN
BOUNDARY
ENTRY
BUS BAYS
HOCKING PARADE
MAIN ENTRY
ART
T&E
ED SUPPORT
RE
LIBRARY & HUMANITIES
SCIENCE
ADMIN
STAFF
MATHS
SCIENCE
CAR PARK A
CAR PARK E
CAR PARK F
CAR PARK B
CAR PARK D
CAR PARK C
MAINTENANCE
PASTORAL CARE
WC & LOTTE
MEDIA & MUSIC
PERFORMING ARTS CENTRE
BIKE RACKS
EXISTING GYM
MEDIA
CHAPEL
COVERED AREA
NEW GYM
NEW HARDCOURTS
STORMWATER SOAKAGE TANK
PLAYING FIELD
EMBANKMENT
EDGE OF EXISTING EMBANKMENT
LANEWAY
SITE PLAN
NORTH
PRELIMINARY
Parry & Rosenthal Architects
SACRED HEART COLLEGE
NEW GYMNASIUM
HYDRAULIC SERVICES
SITE PLAN
WACKLAN AND LAWRENCE PTY LTD
CONSULTING ENGINEERS
HYDRAULIC SERVICES GAS ENERGY MECHANICAL
3813
H1


PRELIMINARY
Parry & Rosenthal Architects
SACRED HEART COLLEGE
NEW GYMNASIUM
GROUND FLOOR PLAN
HYDRAULIC SERVICES
CIVIL DRAWING, WASTE, VENTS & STORMWATER
MACKMAN AND LAWRENCE PTY LTD
CONSULTING ENGINEERS
HYDRAULIC SERVICES GAS ENERGY MECHANICAL
FLOOR PLAN
1:100
NORTH
FFL 9.00
COURT 1
COURT 2
FEMALE CHANGE
MALE CHANGE
STAIR 1
STAIR 2
STORE
WEIGHTS / EXERCISE ROOM
SERVERY
VERTICAL LIFT DOOR
CLIMBING WALL
NEW RETAINING WALL
3813
H2

MACLEAN AND LAWRENCE PTY. LTD.

SUITE 11, 11 VENTNOR AVE, WEST PERTH, WESTERN AUSTRALIA 6005
TELEPHONE: (08) 9321 2966 FACSIMILE: (08) 9481 1691

PRINCIPAL: B.T. LAWRENCE, DIP. PLMBG. DES. MIPA
ASSOCIATES: C.D. LAWRENCE, MBA, B.COMM
D. BARNES, DIP. PLMBG. DES.

EMAIL: admin@maclaw.net.au
A.C.N. 008 735 573
A.B.N. 76 008 735 573

DATE : 5th November 2014 Ref: 3813

MEMO TO : Parry and Rosenthal

ATTENTION : Michael Michelides

FROM : Josh Clayton

NO. OF PAGES : 1

REFERENCE : **Stormwater Containment**
New Gymnasium - Sacred Heart College

The following stormwater calculations show that the documented stormwater storage capacity of 360m³ (see Drawing No. 3813 H1 G) **complies** with the requirement to retain on site the stormwater runoff from 24 hour storm with 100 year recurrence interval and all in accordance with **Joondalup Development Design Specification JD5 – Stormwater Drainage Design.**

Catchment Area:

New Building	2,300m²
Paving Surround	4,000m²
Hardcourts	4,000m²
	=====
Total Catchment	10,300m²

Soil permeability in accordance with Terra Geotech report October 2013: 7.56×10^{-5}m/s = 272mm per hour.

100 year storm for a 24 hour duration containment requires soakage cells of:
40m (L) x 10m (W) x 0.9m (H) = 360m³.

1 hour runoff = 10,300m² x 0.0451m/hr intensity x 1hr (duration) = 465m³ - 110m³ soakage = 355m³ storage
2 hour runoff = 10,300m² x 0.0272m/hr intensity x 2hr (duration) = 576m³ - 220m³ soakage = 356m³ storage
3 hour runoff = 10,300m² x 0.0211m/hr intensity x 3hr (duration) = 652m³ - 330m³ soakage = 322m³ storage

The required storage peaks at 2 hours at 356m³.

As above 360m³ is being provided and with surcharge from any storm in excess of 100 year storm relieving onto and being contained on the oval.

We trust that this is satisfactory, and please contact us should you require any additional information at this stage.

Regards,

MACLEAN AND LAWRENCE PTY LTD

SACRED HEART COLLEGE – NEW GYMNASIUM PROJECT

DEVELOPMENT APPROVAL REPORT

NOVEMBER 2014

LANDSCAPE PHILOSOPHY

The proposed landscape treatment for the New Gymnasium at Sacred Heart College in Sorrento, aims to build on the existing "Coastal Theme" of the site and provide a strong landscape setting for this major new building on campus. The key landscape concept for the project revolves around the creation of a landscape theme that responds to its existing site character and aims to integrate the building layout and form with the external spaces, utilizing the external areas around the new facility as a series of potential external 'Classrooms' or 'Student Interaction Spaces'.

Key design features of the Gymnasium landscape include :

- Integration of the existing and surrounding "Coastal Character" of the site in the landscape design;
- Retention of the existing vegetation wherever possible, in particular to the existing embankment located between the building and new Gymnasium;
- Creation of a series of broad steps, seating steps and ramps as a way to integrate the new building pad level with the existing playing fields. The broad steps are intended to act as seating opportunities for viewing over the playing fields;
- Provision of a clearly defined and fully accessible access and circulation system for students, staff and visitors including Universal Access via ramps and lifts from the existing main school level to the Gymnasium ground level and to the playing fields;
- Introduction of coastal native planting as features around the Gymnasium building ;
- Creation of a range of seating opportunities to foster interaction between students and opportunities for outdoor classrooms;
- Introduction of seating walls throughout for students to sit during recesses or watch other students playing ball sports on the external courts, and;
- Introduction of feature trees such as the Norfolk Island Pines and Plane Trees to provide a strong contrast to the mass of the Gymnasium building.

PLANTING THEME

The overall planting theme utilises predominantly West Australian endemic coastal species throughout with a strong preference for species that are known to grow well within this harsh coastal area; that is species that can tolerate the climatic, environmental and soil conditions. Exotic plantings of the Norfolk Island Pines, Plane Trees and NZ Xmas Trees, creating a strong contrast to the existing predominantly evergreen indigenous perimeter planting. Native revegetation planting and stabilisation matting is to be installed along the eastern embankment to assist with stabilisation of this steep slope.

A Sustainable Approach

A primary objective of the landscape treatment is to minimise recurrent expenditure through the establishment of a low maintenance landscape, and particularly to minimise watering requirements throughout. This will be achieved through the reinforcement of the coastal character of the site, and include capture surface runoff from pavements and other landscaped areas and dispersal of stormwater over the broadest possible area, as a supplementary watering source.

In addition, Plant species that tolerate the local conditions and are known low water users will be utilised throughout.

Irrigation

The source for irrigation water will be provided from an existing groundwater bore and will service all new and reinstated landscape areas.

The proposed irrigation regime will be designed to provide the minimum water application practicable (which would be phased out over an appropriate period following establishment, where possible), together with the use of low volume irrigation fittings and night-time watering throughout to minimise evaporation and wastage. Generally water-wise planting throughout will further minimise water usage on site.

Maintenance

As part of an overall philosophy to minimise ongoing maintenance costs for this project, plant types with appropriate physical form, growth habit, longevity and reliability within the coastal environment have been selected. In addition, specific attention to micro-climatic factors will be considered in the selection of plant species, in order to reduce watering, pruning and fertilising requirements.

Water conservation techniques such as organic mulching to increase water retention in the soil and to reduce weed growth have been adopted.

Maintenance techniques relating to the protection of newly planted areas by temporary fencing and tree guards will be incorporated, including edging between garden bed and lawn areas to prevent encroachment of grass into planting areas, and to reduce scattering of mulch layer across lawns.

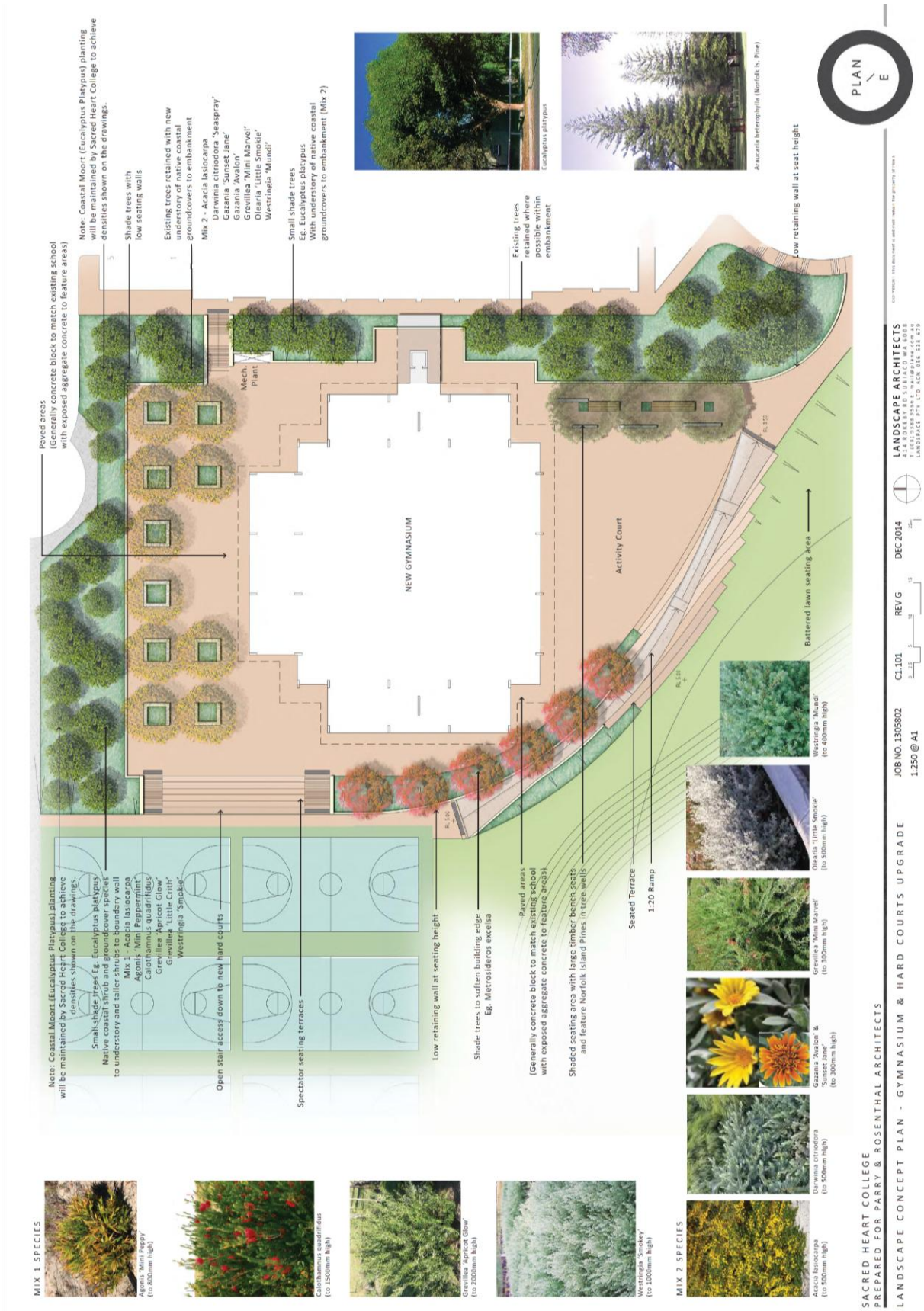
Adherence to DA Conditions

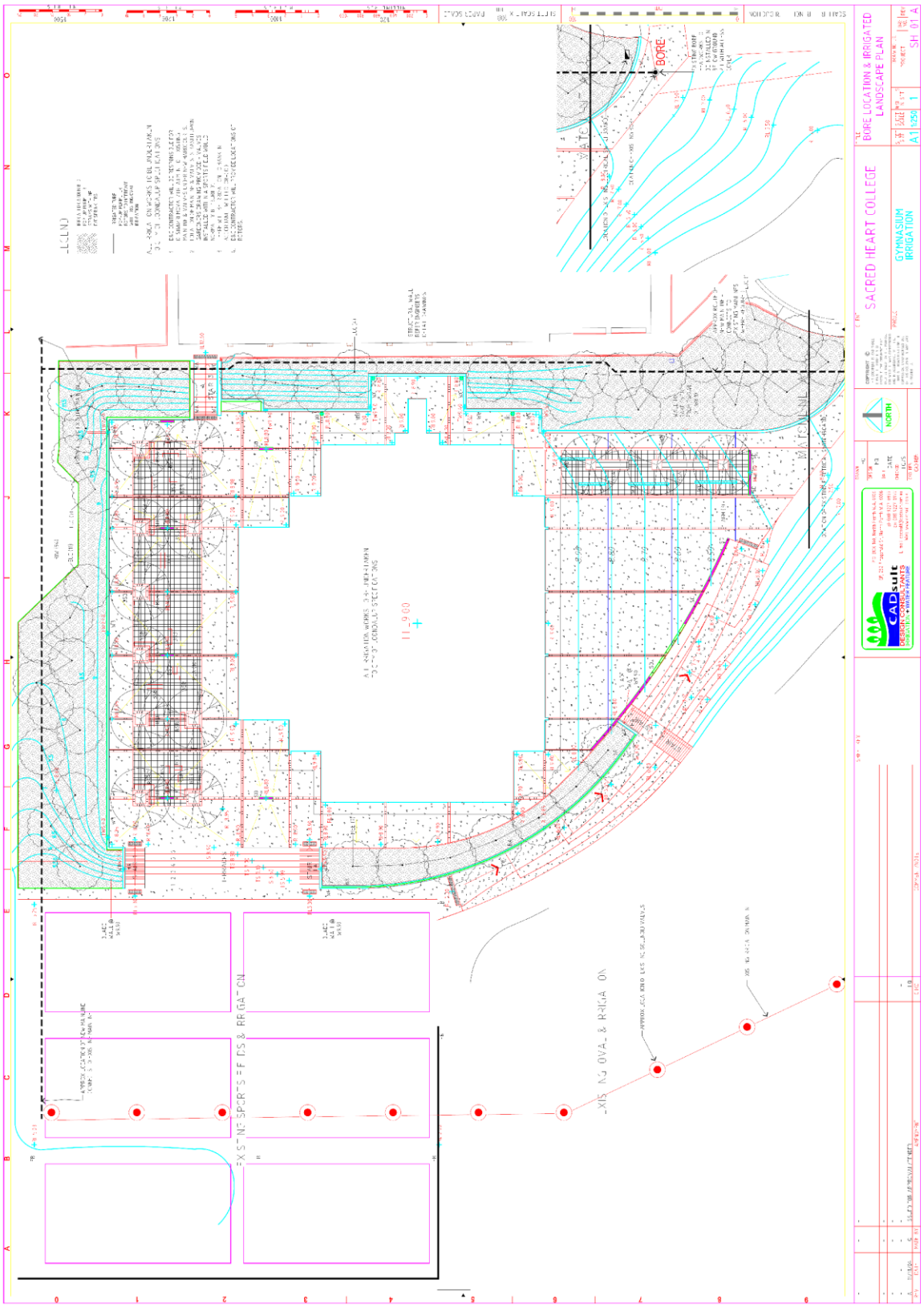
As part of the Development Approvals process, a series of conditions have been placed on the landscape and irrigation component. Following discussions with Lee Prideaux from the City of Joondalup, specific items that have been addressed include :

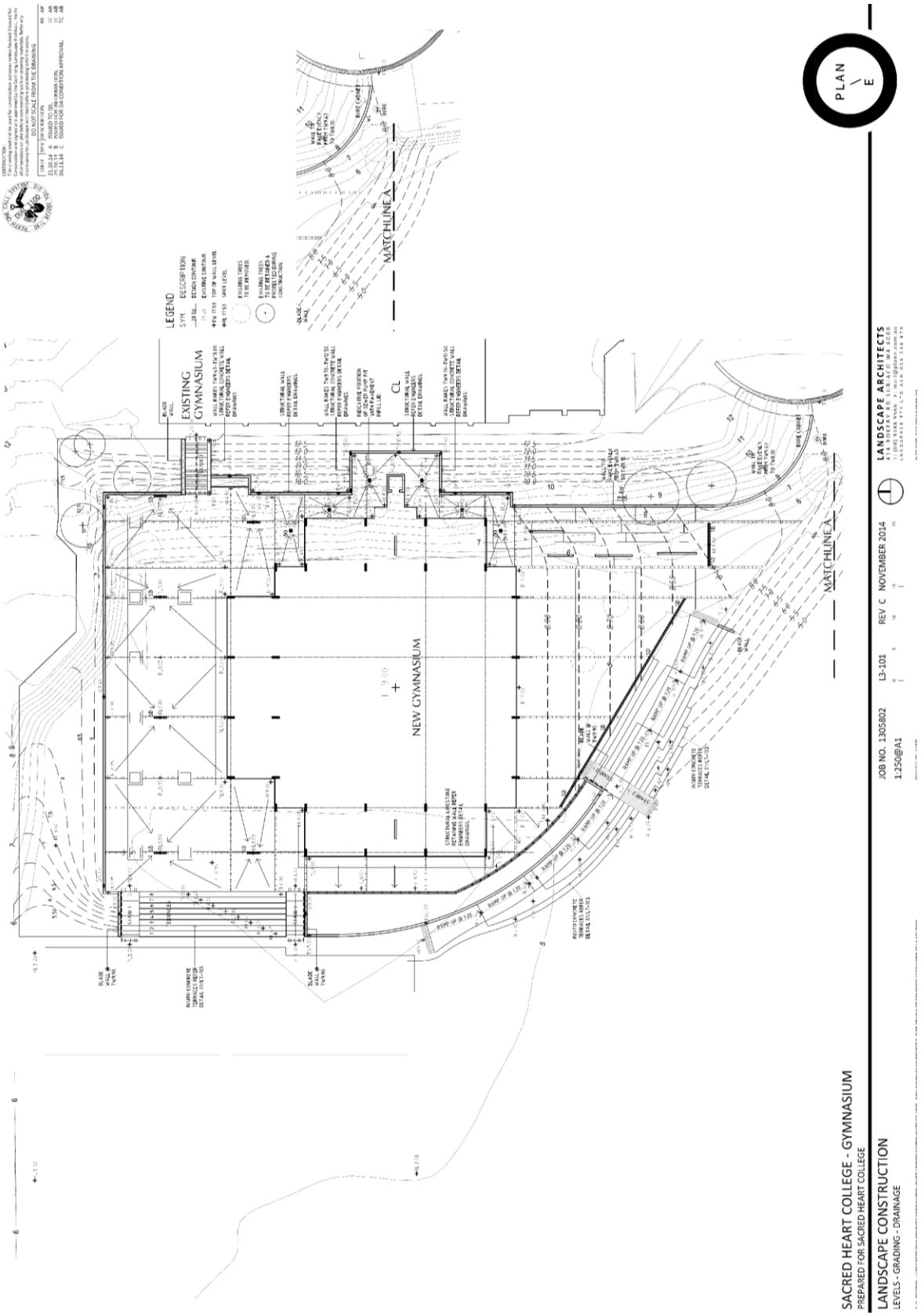
City of Joondalup DA Condition (Info Sheet)	PLAN E Response / Action
1. Detailed Landscape Plan	Refer drawing L5-101
2. Planting Schedule to be provided	Refer drawing L5-101
3. Plant species to be water-wise	Refer plant list on drawing L5-101 which is taken from the City of Joondalup Approved Plant List.

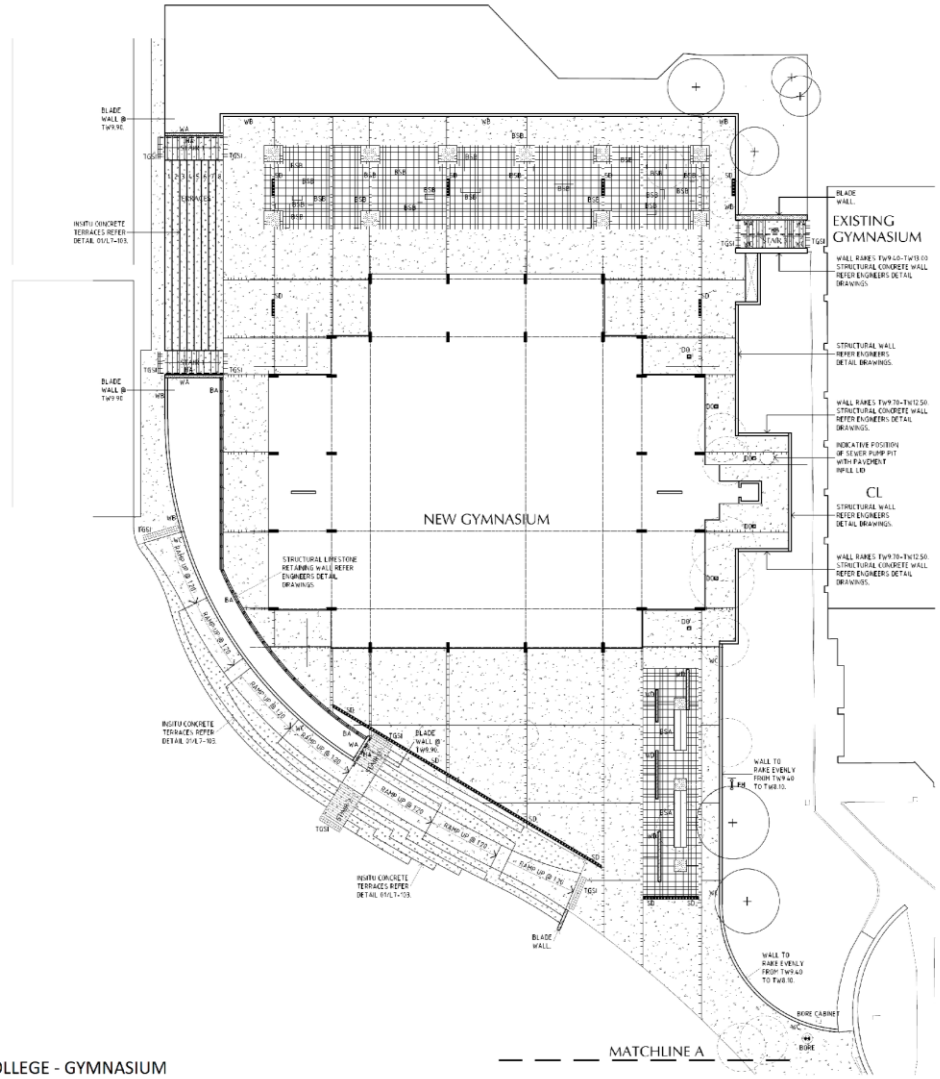
ADHERENCE TO DA CONDITIONS (CONT'D)

4. Levels on Plan	Refer drawing L3-101
5. Existing Natural Vegetation	Refer drawing L5-101 for extent of trees being retained.
6. Road Verges	N/A
7. Irrigation to Landscape	Confirm that all new and reinstated landscaped areas are fully irrigated, serviced from existing groundwater bore, to City of Joondalup Guidelines.
8. Carpark Landscape Strips	N/A
9. Carpark Shade Trees	N/A
10.Tree Carparks	N/A
11a. 8 % of area to be Landscaped	Extent of soft landscape (3,770 m2) is approx. 37% of total site area.
11b. 3 Metre wide perimeter buffer strip	N/A


Paved areas
(Generally concrete block to match existing school with exposed aggregate concrete to feature areas)
Note: Coastal Moort (Eucalyptus Platypus) planting will be maintained by Sacred Heart College to achieve densities shown on the drawings.
Shade trees with low seating walls
Existing trees retained with new understory of native coastal groundcovers to embankment
Mix 2 - Acacia lasiocarpa
Darwinia citriodora 'Seaspray'
Gazania 'Sunset Jane'
Gazania 'Avalon'
Grevillea 'Mini Marvel'
Olearia 'Little Smokie'
Westringia 'Mundi'
Small shade trees
Eg. Eucalyptus platypus
With understory of native coastal groundcovers to embankment (Mix 2)
Existing trees retained where possible within embankment
Low retaining wall at seat height
Mech. Plant
NEW GYMNASIUM
Activity Court
Battered lawn seating area
Eucalyptus platypus
Araucaria heterophylla (Norfolk Is. Pine)
PLAN
Note: Coastal Moort (Eucalyptus Platypus) planting will be maintained by Sacred Heart College to achieve densities shown on the drawings.
Small shade trees Eg. Eucalyptus platypus
Native coastal shrub and groundcover species to understory and taller shrubs to boundary wall
Mix 1 - Acacia lasiocarpa
Agonis 'Mini Peppermint'
Calothamnus quadrifidus
Grevillea 'Apricot Glow'
Grevillea 'Little Critt'
Westringia 'Smokie'
Open stair access down to new hard courts
Spectator seating terraces
Low retaining wall at seating height
Shade trees to soften building edge
Eg. Metrosideros excelsa
Paved areas
(Generally concrete block to match existing school with exposed aggregate concrete to feature areas)
Shaded seating area with large timber bench seats and feature Norfolk Island Pines in tree wells
Seated Terrace
1:20 Ramp
MIX 1 SPECIES
Agonis 'Mini Peppy' (to 800mm high)
Calothamnus quadrifidus (to 1500mm high)
Grevillea 'Apricot Glow' (to 2000mm high)
Westringia 'Smokey' (to 1000mm high)
MIX 2 SPECIES
Acacia lasiocarpa (to 500mm high)
Darwinia citriodora (to 500mm high)
Gazania 'Avalon' & 'Sunset Jane' (to 300mm high)
Grevillea 'Mini Marvel' (to 300mm high)
Olearia 'Little Smokie' (to 500mm high)
Westringia 'Mundi' (to 400mm high)
SACRED HEART COLLEGE
PREPARED FOR PARRY & ROSENTHAL ARCHITECTS
LANDSCAPE CONCEPT PLAN - GYMNASIUM & HARD COURTS UPGRADE
JOB NO. 1305802
1:250 @ A1
C1.101
REVG
DEC 2014
LANDSCAPE ARCHITECTS


BORE
SACRED HEART COLLEGE
GYMNASIUM
IRRIGATION
BORE LOCATION & IRRIGATED
LANDSCAPE PLAN
SH 01 A
NORTH
CADsuit


LEGEND
SYM DESCRIPTION
EXISTING GYMNASIUM
NEW GYMNASIUM
MATCHLINE A
MATCHLINE A
PLAN
SACRED HEART COLLEGE - GYMNASIUM
PREPARED FOR SACRED HEART COLLEGE
LANDSCAPE CONSTRUCTION
LEVELS - GRADING - DRAINAGE
JOB NO. 1305802
1:250@A1
L3-101
REV C NOVEMBER 2014
LANDSCAPE ARCHITECTS



LEGEND

	PAVEMENT TYPE A: INSITU CONC STAIRS & TERRACES CEMENT: PORTLAND TYPE GP5 CHEM: NIL THICKNESS: 100/150 FINISH: OFF-FORM BASE COURSE: COMPACTED SUBGRADE. REFER DETAIL XX/L7-10X.	523 SqM.
	PAVEMENT TYPE B: INSITU CONCRETE PAVING EXPOSED AGGREGATE TYPE: WILKIN KARRI THICKNESS: 100 FINISH: EXPOSED AGG. BASE COURSE: COMPACTED SUBGRADE. REFER DETAIL XX/L7-10X	2909 SqM.
	PAVEMENT TYPE C: BLOCKPAVE PAVING SIZE: 330X330X60mm THICK COLOUR: SILVER BASE COURSE: COMPACTED SUBGRADE. REFER DETAIL XX/L7-10X.	663 SqM.
	PAVEMENT TYPE D: BLOCKPAVE BANDING SIZE: 330X330X60mm THICK COLOUR: CHARCOAL BASE COURSE: COMPACTED SUBGRADE. REFER DETAIL XX/L7-10X.	219 SqM.
	PAVEMENT TYPE E: STONE SET TYPE: CODE/AGGREGATE THICKNESS: BASE COURSE: XXX 50 OR 100mm REFER DETAIL XX/L7-10X.	34 SqM.
TGSI	PAVEMENT TYPE F: TACTILES MANUFACTURER: FOR BLOCKPAVE SIZE: 300x300x60mm. COLOUR: CHARCOAL FINISH: SANDBLAST BASE COURSE: COMPACTED SUBGRADE. REFER DETAIL XX/L7-10X.	19 SqM.
WA	WALL TYPE A: TYPE: FEATURE OFF-FORM CONCRETE BLADE WALL MATERIALS: CONCRETE COLOURS: SIMPSON REFER DETAIL 02/L7-103.	92 L.M.
WB	WALL TYPE B: TYPE: RETAINING WALL MATERIALS: DIAMOND CUT TAMALA 1300x900x350mm LIMESTONE BLOCK COLOURS: NATURAL REFER DETAIL XX/L7-10X.	99 L.M.
WC	WALL TYPE C: TYPE: RAKED RETAINING WALL MATERIALS: TAMALA 1030x1030x350mm LIMESTONE BLOCK COLOURS: NATURAL REFER DETAIL XX/L7-10X.	93 L.M.
WD	WALL TYPE D: TYPE: SEAT WALLS - POLISHED FINISH MATERIALS: 450x450mm OFF FORM CONCRETE COLOURS: REFER DETAIL XX/L7-10X.	23 L.M.
HA	HANDRAIL TYPE A - WALL MOUNTED: 900mm HIGH 316 P X 4.0 SHS STAINLESS STEEL HANDRAIL AND POST REFER DETAIL 05/L7-103	20 L.M
HB	HANDRAIL TYPE B - FREE STANDING: 900mm HIGH 316 P X 4.0 SHS STAINLESS STEEL HANDRAIL AND POST REFER DETAIL XX/L7-10X.	8.5 L.M.
BA	BALUSTRADE TYPE A: 500 X 4.0 S/S POST WITH 50 OD STAINLESS STEEL HANDRAIL, CLOSED ENDS & 400 GRIT LINISHED FINISH REFER DETAIL XX/L7-10X.	52 L.M.
BSA	BENCH SEAT TYPE A: CUSTOM MADE TIMBER BENCH SEAT 450mmHX1500mmW REFER SPEC	12 L.M.
BSB	BENCH SEAT TYPE B: CUSTOM MADE TIMBER BENCH SEAT 450mmHX1500mmW REFER SPEC	79 No
SD	STRIP DRAIN REFER HYDRAULIC ENGINEERS DRAWINGS.	58 L.M.
DOB	POINT DRAIN REFER HYDRAULIC ENGINEERS DRAWINGS.	6 No
STAIR 1	ACCESS STAIR TYPE 1: MATERIAL: CONCRETE SIZE: 300 TREAD - 150 RISER COLOUR: REFER DETAIL XX/L7-10X.	2 No
STAIR 2	ACCESS STAIR TYPE 2 MATERIAL: CONCRETE SIZE: 300 TREAD - 150 RISER COLOUR: REFER DETAIL XX/L7-10X	1 No
STAIR 3	ACCESS STAIR TYPE 3: MATERIAL: CONCRETE SIZE: 300 TREAD - 150 RISER COLOUR: REFER DETAIL XX/L7-10X.	1 No
TERRACES	AMPHITHEATRE TERRACES: MATERIAL: CONCRETE SIZE: 900 BENCH - 450 RISER COLOUR: REFER DETAIL 01/L7-103	1 No

CERTIFICATION:
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DO NOT SCALE FROM THIS DRAWING

ISSUE	REV	DESCRIPTION	BY	AP
21.10.14	A	ISSUED TO QS.	TC	AB
24.10.14	B	ISSUED FOR INFORMATION.	TC	AB
06.11.14	C	ISSUED FOR DA CONDITION APPROVAL.	TC	AB

SACRED HEART COLLEGE - GYMNASIUM

PREPARED FOR SACRED HEART COLLEGE

LANDSCAPE CONSTRUCTION

HARDWORKS

JOB NO. 1305802 L4-101 REV C NOVEMBER 2014

1:250@A1

0 5 10 15 25

LANDSCAPE ARCHITECTS
414 ROKEBY RD SUBIACO WA 6008
T: (08) 9388 9566 E: mail@plane.com.au
LANDSPACE PTY LTD ACN 056 530 079

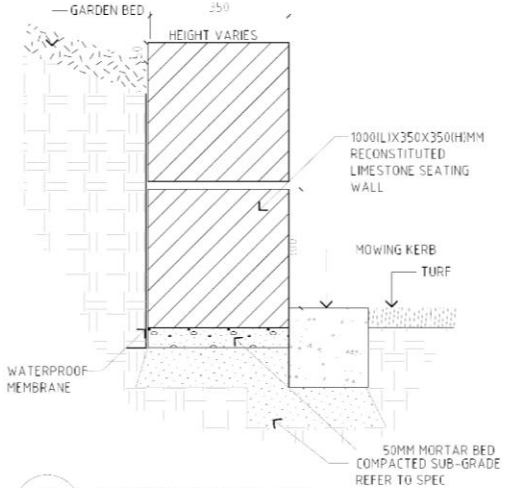
FILE LOCATION: L:\PROJECTS\2013 PROJECTS\13058 SACRED HEART\1305802 SACRED HEART COLLEGE - NEW GYMNASIUM\PROJECT FILES\PS DATA\WORKING\DOCS\CAD\13058-02_L4-101.DWG

PLOTTED BY: TCOOK

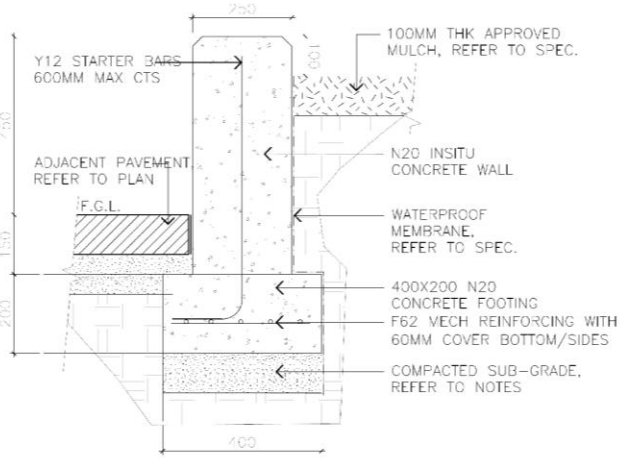
PLOT DATE: 7/11/2014 10:00:00 AM

PLAN E

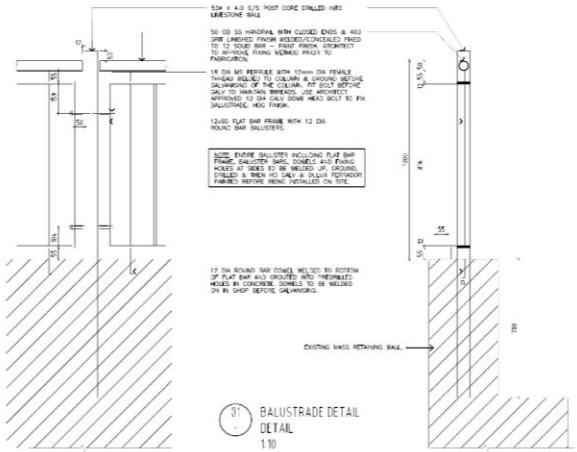
LEGEND
TREES
MIX 1 (TALL SHRUBS)
MIX 2
EXISTING GYMNASIUM
NEW GYMNASIUM
MATCHLINE A
PLAN
SACRED HEART COLLEGE - GYMNASIUM
PREPARED FOR SACRED HEART COLLEGE
LANDSCAPE CONSTRUCTION
SOFTWORKS
JOB NO. 1305802
L5-101
REV C
NOVEMBER 2014
1:250@A1
LANDSCAPE ARCHITECTS



06 RETAINING/SEATING WALL SECTION 1:10



09 WALL TYPE A – INSITU CONCRETE SEATING WALL SECTION 1:10



BALUSTRADE DETAIL DETAIL 1:10

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REFER TO L7-XXX FOR ALL STRUCTURAL NOTES

DATE	REV	DESCRIPTION	BY
06.11.14	A	ISSUED FOR DA CONDITION APPROVAL.	TC AB

SACRED HEART COLLEGE - GYMNASIUM
PREPARED FOR SACRED HEART COLLEGE

LANDSCAPE CONSTRUCTION
DETAILS

JOB NO. 13058-02 L7-101 REV A NOVEMBER 2014
AS SHOWN @ A1

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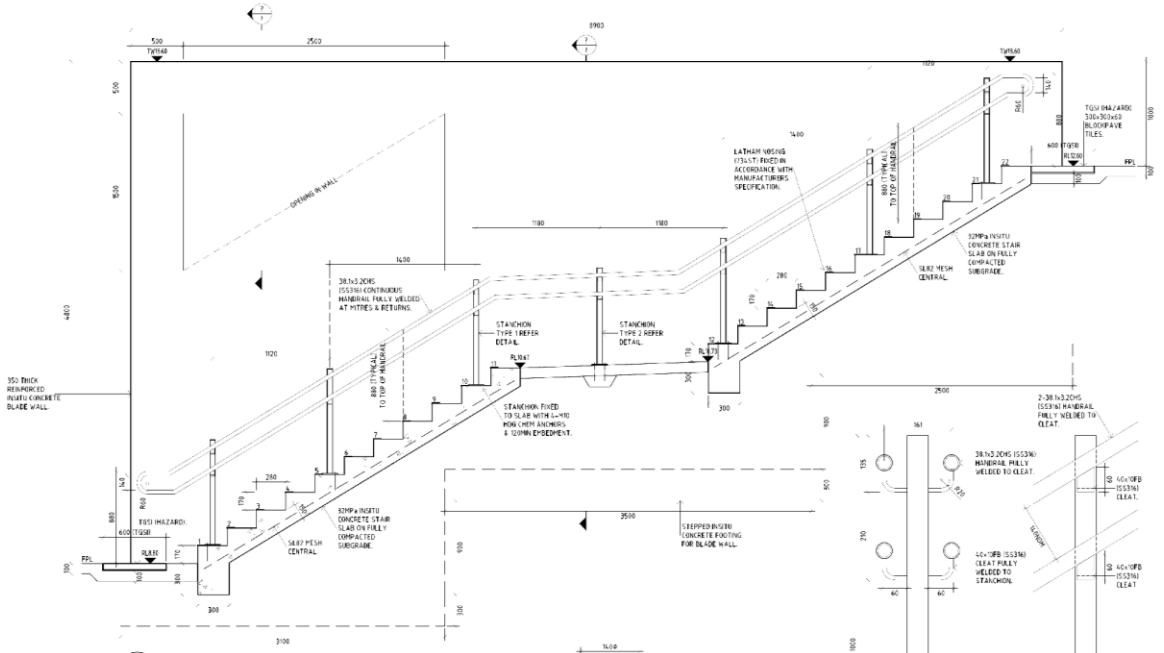
PLAN E

Amended landscape and irrigation plans



SACRED HEART COLLEGE - GYMNASIUM

PREPARED FOR SACRED HEART COLLEGE

LANDSCAPE CONSTRUCTION

DETAILS

JOB NO. 13058-02 L7-102 REV A NOVEMBER 2014

AS SHOWN @ A1

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414 ROKEBY RD SUBIACO WA 6008
T: (08) 9388 9566 E: mail@plane.com.au
LANDSPACE PTY LTD ACN 056 338 673

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PLOT DATE: 7/11/2014 10:00:10 AM

PLAN E

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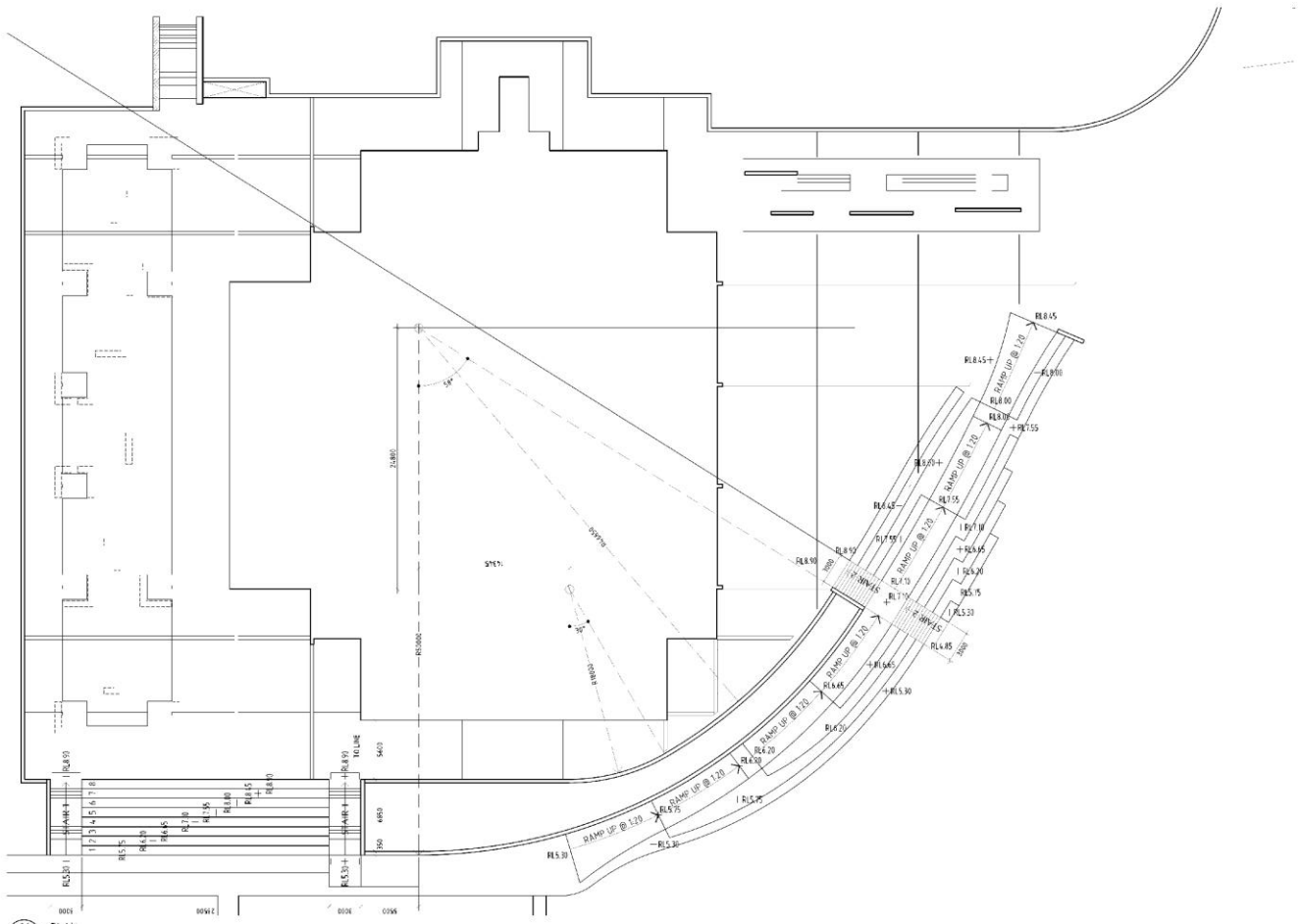
DATE	REV	DESCRIPTION	BY	AP
06.11.2014	A	ISSUED FOR DA CONDITION APPROVAL.	TC	AB



01 - PLAN
STAIRS - TERRACES - RAMPS
1:200

SACRED HEART COLLEGE - GYMNASIUM
PREPARED FOR SACRED HEART COLLEGE

LANDSCAPE CONSTRUCTION
DETAIL - AMPHITHEATRE & STAIRS

JOB No: 1305802
SCALE 1:200@A1
DWG No: L7-103
REV: A
DATE: NOVEMBER 2014
0 4 8 12 20

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PLOTTED BY: TCOOK

PLOT DATE: 7/11/2014 10:00:23 AM

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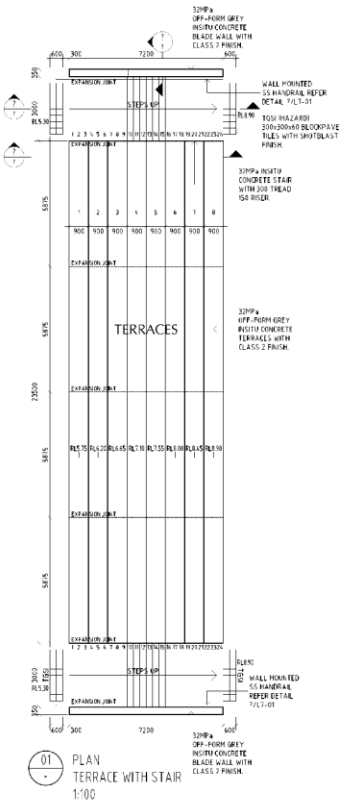
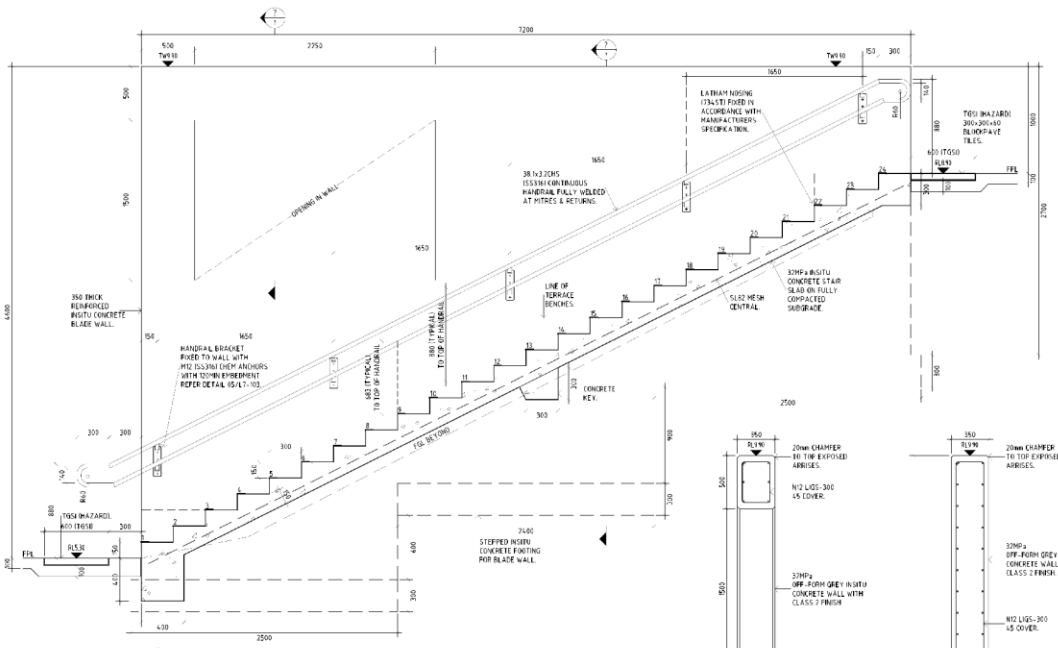
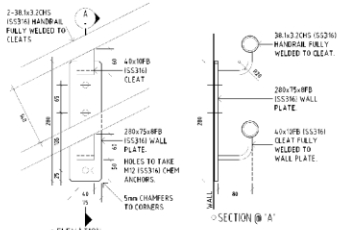
PLAN E



01 PLAN
TERRACE WITH STAIR
1:100

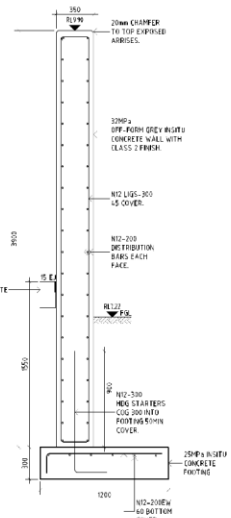


02 TYPICAL SECTION - CONCRETE STAIR
1:20



05 DETAIL
HANDRAIL BRACKET
1:5

04 CROSS SECTION @ 'B'
1:20



03 CROSS SECTION @ 'A'
1:20

CERTIFICATION:
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DO NOT SCALE FROM DRAWING

DATE	REV	DESCRIPTION	BY	AP
05.11.2014	A	ISSUED FOR DA CONDITION APPROVAL	TC	AB

SACRED HEART COLLEGE - GYMNASIUM
PREPARED FOR SACRED HEART COLLEGE

LANDSCAPE CONSTRUCTION
DETAIL - AMPHITHEATRE & STAIRS

JOB No: 1305802 DWG No: L7-104 REV: A DATE: NOVEMBER 2014
SCALE AS SHOWN @ A1

LANDSCAPE ARCHITECTS
414 ROKEBY RD SUBIACO WA 6008
T: (08) 9388 9566 E: mail@plane.com.au
LANDSPACE PTY LTD ACN 056 538 679

FILE LOCATION: L:\PROJECTS\2013 PROJECTS\13056 SACRED HEART\L1305802 SACRED HEART COLLEGE - NEW GYMNASIUM\PROJECT FILE\PS DRAWINGS\CONSDOCS\ACAD\L1305802-02 L7-102.DWG

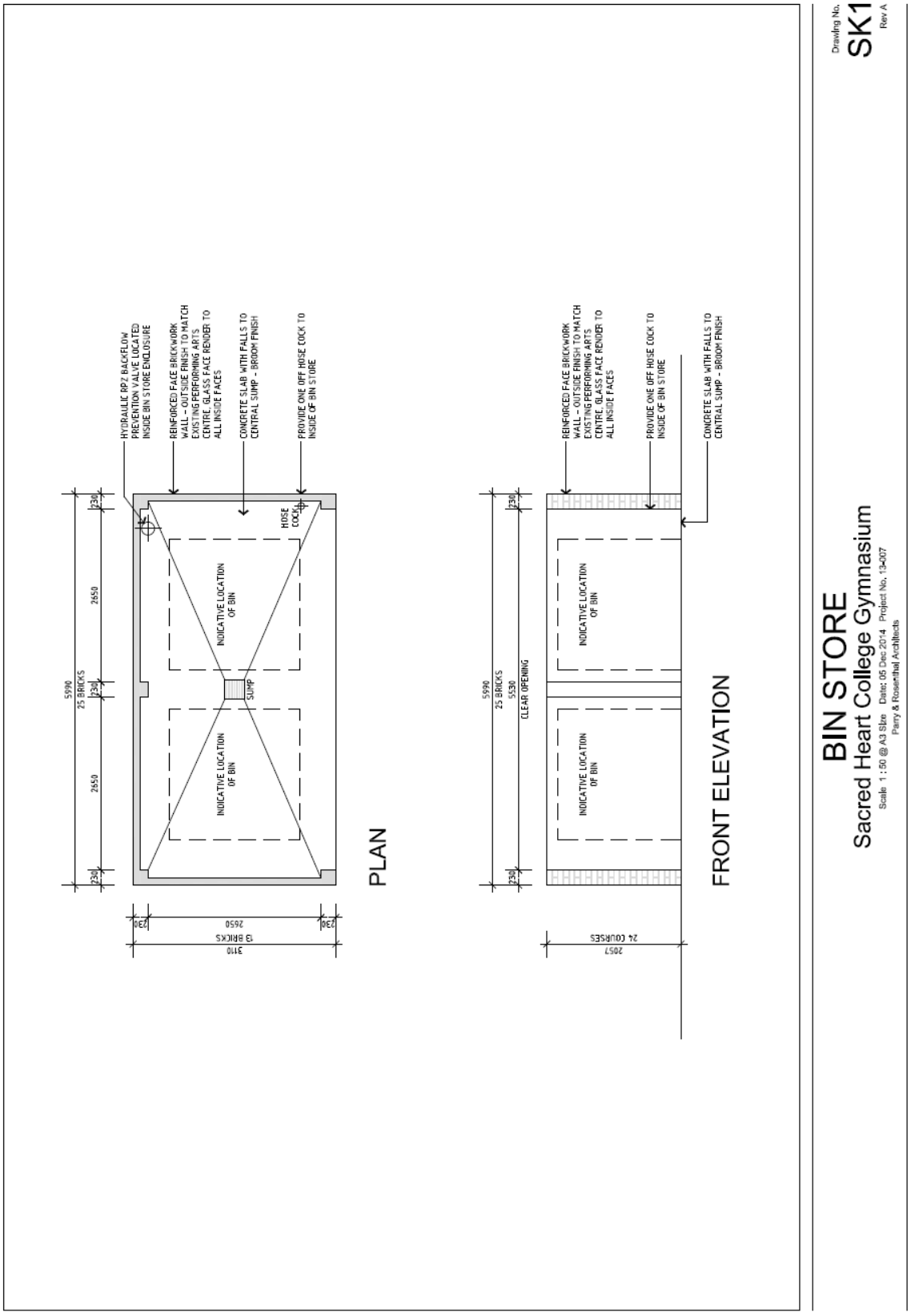
PLOTTED BY: KOOK

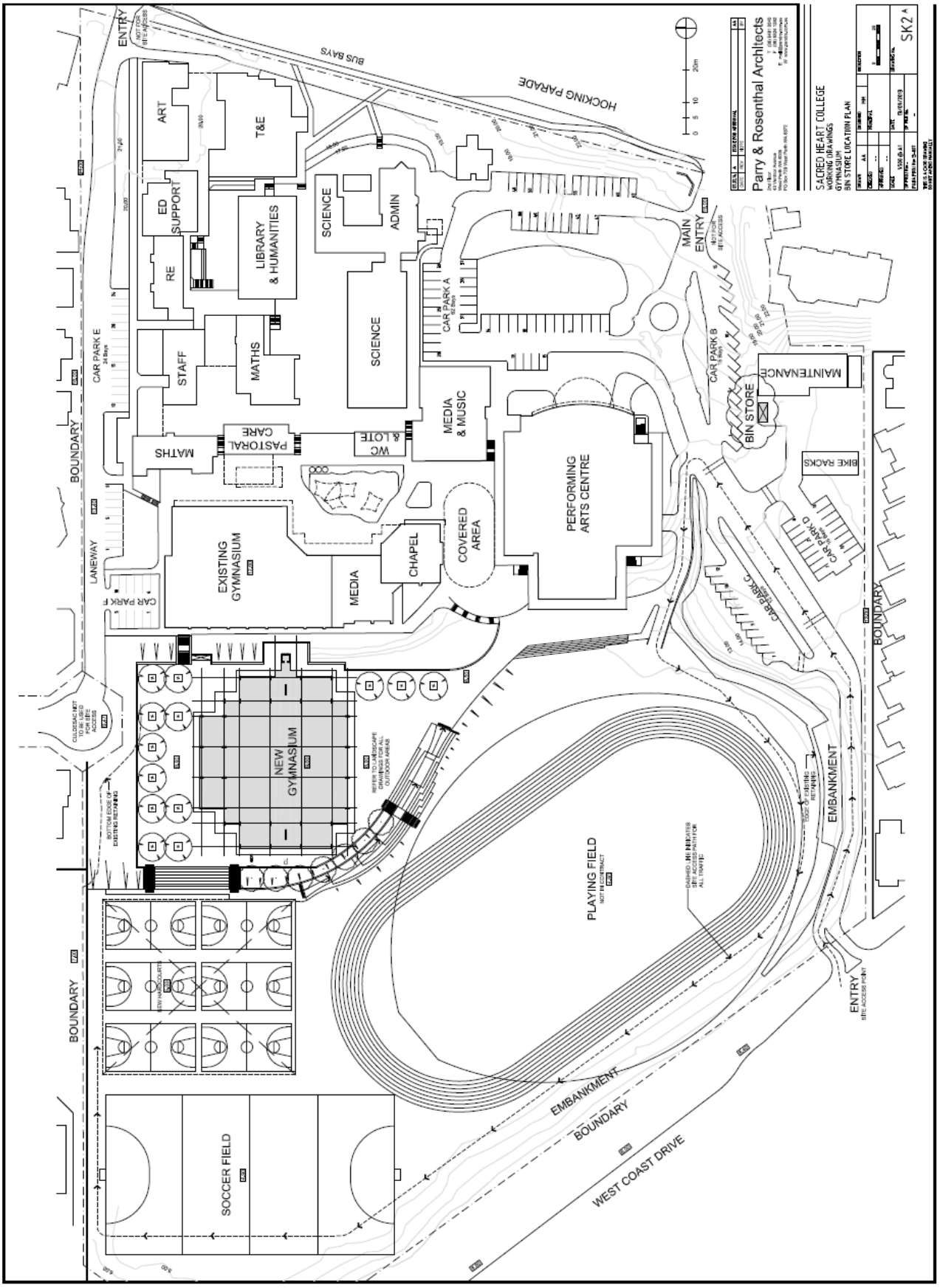
PLOT DATE: 7/11/2017 10:00:27 AM

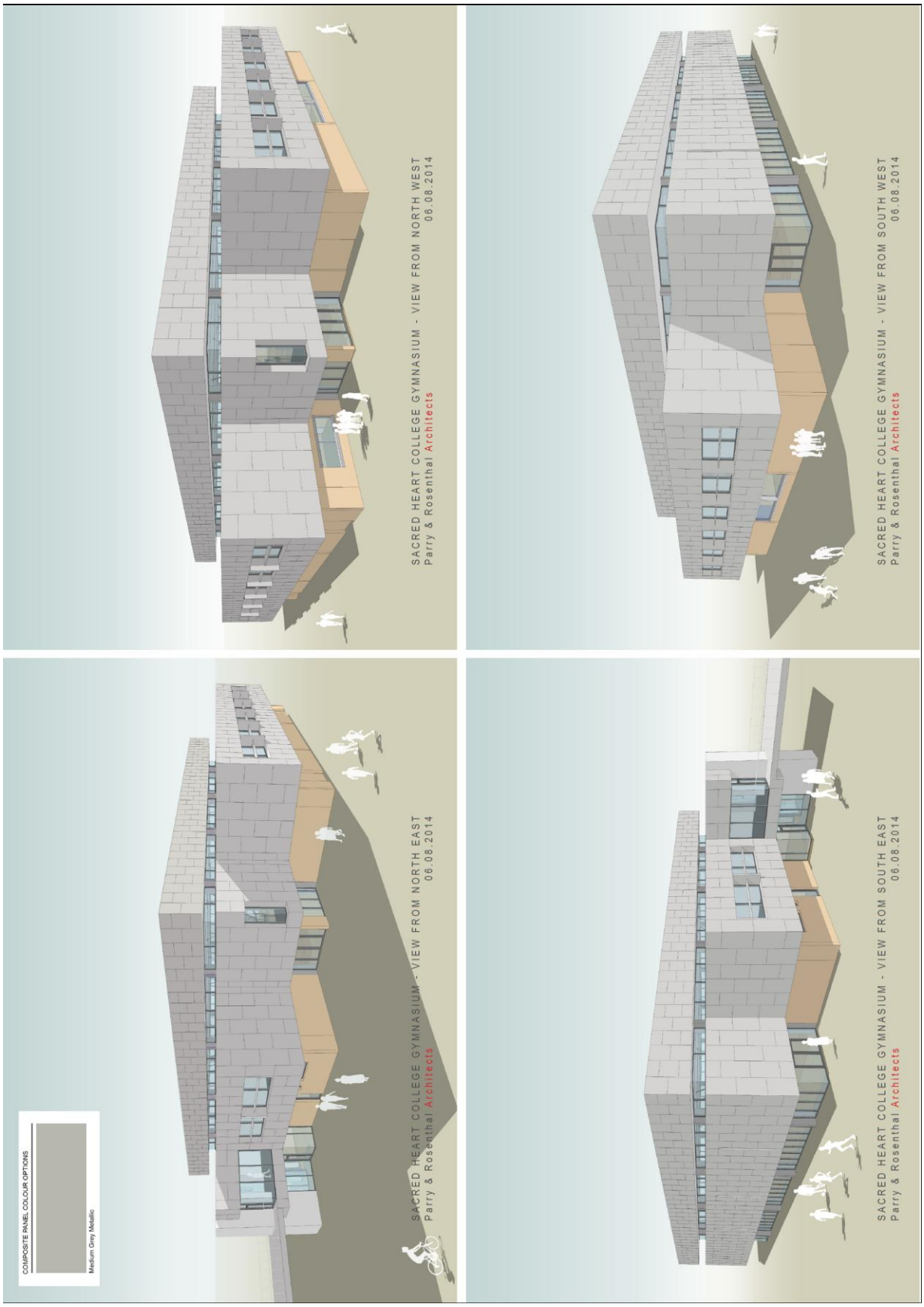
PLANE

CERTIFICATION:
DATE
REV
DESCRIPTION
BY
AP
01.12.2013
A
ISSUED FOR DEVELOPMENT APPROVAL
PLAN E
SACRED HEART COLLEGE - GYMNASIUM
PREPARED FOR SACRED HEART COLLEGE
LANDSCAPE CONSTRUCTION
DETAIL - AMPHITHEATRE & STAIRS
JOB No: 1305802
SCALE: AS SHOWN @ A1
DWG No: L7-105
REV: A
DATE: NOVEMBER 2014
LANDSCAPE ARCHITECTS
01 TYPICAL DETAIL
AMPHITHEATRE TERRACES
1:10

SACRED HEART COLLEGE - GYMNASIUM
PREPARED FOR SACRED HEART COLLEGE
LANDSCAPE CONSTRUCTION
DETAIL - AMPHITHEATRE & STAIRS
LANDSCAPE ARCHITECTS
JOB No: 1305802
DWG No: L7-106
REV: A
DATE: NOVEMBER 2014
SCALE AS SHOWN @ A1
PLAN
E
01 PLAN
SEATING MODULE SETOUT
1:100
04 SEATING MODULES - BASE FRAME SETOUT
1:20
05 DETAIL
SEATING MODULES
1:50
04 TYPICAL LAYOUT
SEATING MODULES WITH CONCRETE BLOCK
1:20
01 TYPICAL SECTION - SEATING MODULE TYPE 5
WITH CONCRETE BLOCK
1:10
09 TYPICAL CROSS SECTION
SEATING MODULE
1:5
07 TYPICAL DETAIL - SEATING MODULE TYPE 5
1:10
PLAN - MODULE TYPE 5
PLAN - MODULE TYPES BASE FRAME
MODULE 1
MODULE 2
MODULE 3
MODULE 4
MODULE 5


HYDRAULIC RPZ BACKFLOW PREVENTION VALVE LOCATED INSIDE BIN STORE ENCLOSURE
REINFORCED FACE BRICKWORK WALL - OUTSIDE FINISH TO MATCH EXISTING PERFORMING ARTS CENTRE, GLASS FACE RENDER TO ALL INSIDE FACES
CONCRETE SLAB WITH FALLS TO CENTRAL SUMP - BROOM FINISH
PROVIDE ONE OFF HOSE COCK TO INSIDE OF BIN STORE
HOSE COCK
INDICATIVE LOCATION OF BIN
SUMP
INDICATIVE LOCATION OF BIN
5990
25 BRICKS
230
2650
230
2650
230
230
2650
13 BRICKS
3710
PLAN
REINFORCED FACE BRICKWORK WALL - OUTSIDE FINISH TO MATCH EXISTING PERFORMING ARTS CENTRE, GLASS FACE RENDER TO ALL INSIDE FACES
PROVIDE ONE OFF HOSE COCK TO INSIDE OF BIN STORE
CONCRETE SLAB WITH FALLS TO CENTRAL SUMP - BROOM FINISH
INDICATIVE LOCATION OF BIN
INDICATIVE LOCATION OF BIN
5990
25 BRICKS
230
5530
CLEAR OPENING
230
2057
24 COURSES
FRONT ELEVATION
BIN STORE
Sacred Heart College Gymnasium
Scale 1:50 @ A3 Size Date: 05 Dec 2014 Project No. 13-007
Parry & Rosenthal Architects
Drawing No.
SK1
Rev A


ENTRY
BUS BAYS
HOCKING PARADE
ART
T&E
ED SUPPORT
RE
LIBRARY & HUMANITIES
SCIENCE
ADMIN
MAIN ENTRY
CAR PARK A
CAR PARK E
STAFF
MATHS
SCIENCE
CAR PARK B
MAINTENANCE
BIN STORE
BOUNDARY
PASTORAL CARE
MATHS
WC
MEDIA & MUSIC
PERFORMING ARTS CENTRE
BIKE RACKS
LANEWAY
CAR PARK F
EXISTING GYMNASIUM
MEDIA
CHAPEL
COVERED AREA
CAR PARK D
CAR PARK C
NEW GYMNASIUM
PLAYING FIELD
EMBANKMENT
ENTRY
SOCCER FIELD
EMBANKMENT
BOUNDARY
WEST COAST DRIVE
Parry & Rosenthal Architects
SACRED HEART COLLEGE
WORKING DRAWINGS
GYMNASIUM
BIN STORE LOCATION PLAN
SK2


SACRED HEART COLLEGE GYMNASIUM - VIEW FROM NORTH WEST
Parry & Rosenthal Architects
06.08.2014
SACRED HEART COLLEGE GYMNASIUM - VIEW FROM SOUTH WEST
Parry & Rosenthal Architects
06.08.2014
SACRED HEART COLLEGE GYMNASIUM - VIEW FROM NORTH EAST
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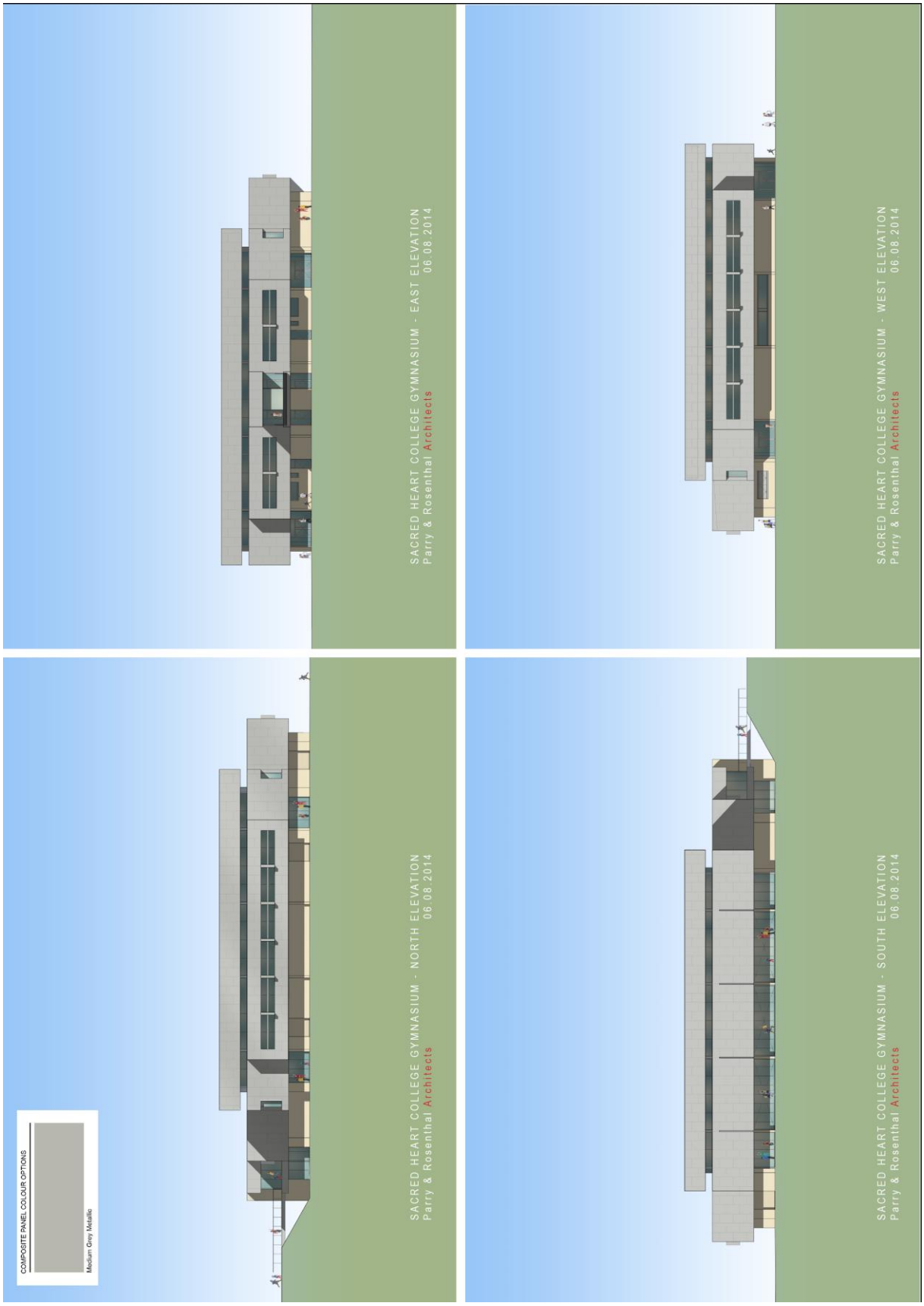
SACRED HEART COLLEGE GYMNASIUM - VIEW FROM SOUTH EAST
Parry & Rosenthal Architects
06.08.2014
COMPOSITE PANEL COLOUR OPTIONS
Medium Grey Metallic


SACRED HEART COLLEGE GYMNASIUM - EAST ELEVATION
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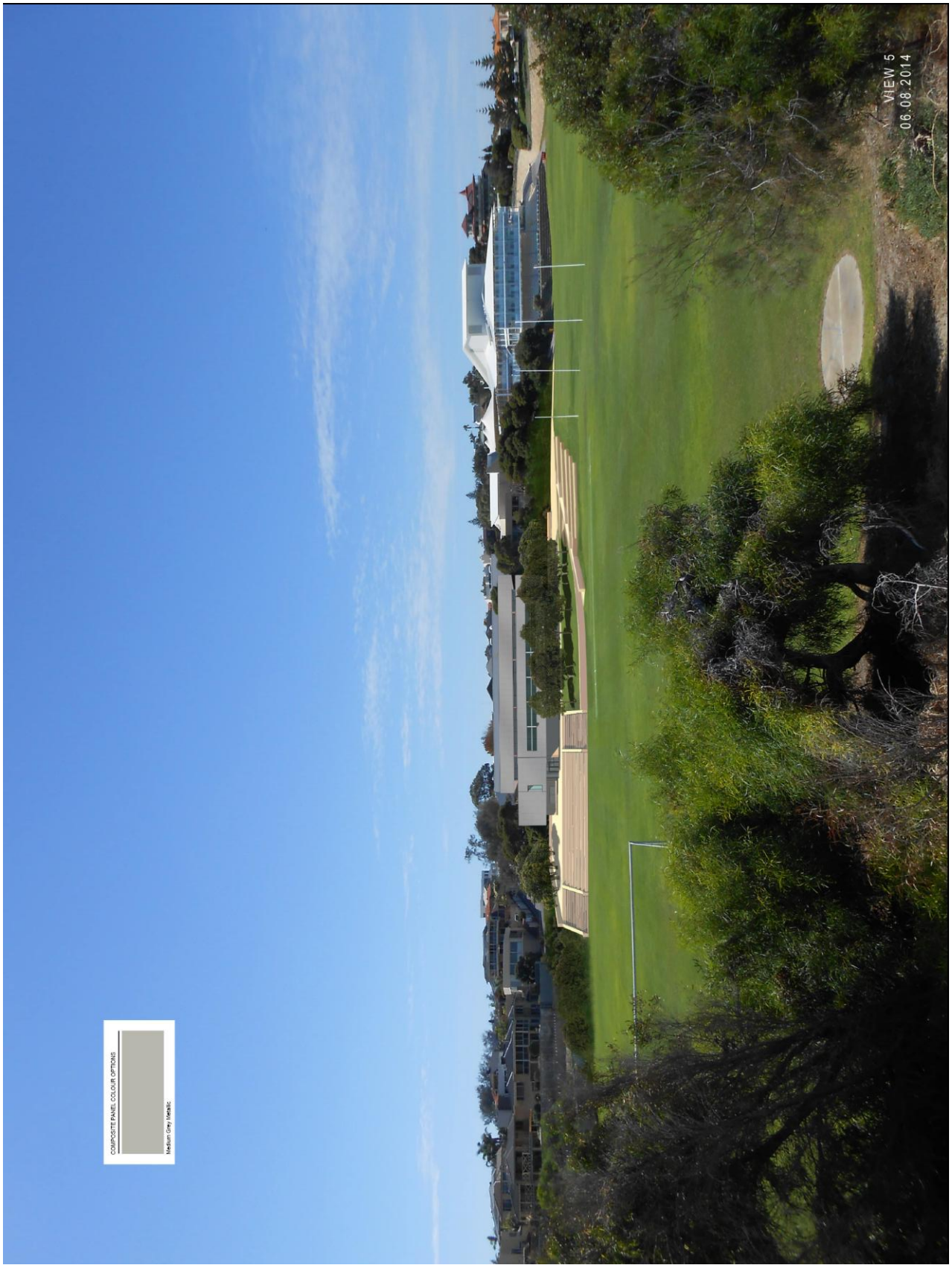
SACRED HEART COLLEGE GYMNASIUM - WEST ELEVATION
Parry & Rosenthal Architects
06.08.2014
SACRED HEART COLLEGE GYMNASIUM - NORTH ELEVATION
Parry & Rosenthal Architects
06.08.2014
COMPOSITE PANEL COLOUR OPTIONS
Medium Grey Metallic
SACRED HEART COLLEGE GYMNASIUM - SOUTH ELEVATION
Parry & Rosenthal Architects
06.08.2014


VIEW 5
06.08.2014
COMPOSITE PANEL COLOUR OPTIONS
Medium Grey Metallic

2nd Floor
43 Ventnor Avenue
West Perth WA 6005

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ABN 94 851 233 643

REPORT – EXTERNAL MATERIALS + FINISHES

Job No:	Project/Subject:	Date:
13-007	**SACRED HEART COLLEGE NEW GYMANSIUM**	**06/11/14**

Item	Details	Notes
1	ROOF Lysaght Klip-Lok 700 Hi-Strength Colorbond Ultra 0.48mm BMT roof sheeting in single uninterrupted full lengths over Bradford Medium Duty Anticon '75' insulation on galvanised steel safety mesh over steel structure. Provide colour matched 0.55BMT colorbond flashings and ridge cappings. Colour: Colorbond Ultra Shale Grey.	
2	ALUMINIUM WALL CLADDING – UPPER LEVEL 4mm Alpolic/FR composite aluminium sheeting in Alpolic EM FR Zinc FR8AZZ3.5 Natural Zinc colour with 10mm closed joints integral to the panel system on galvanised steel framed rigid suspension system fixed to steel structure.	
3	STONE MASONRY – LOWER LEVEL 300mm overall cavity walls comprising Tamala Limestone natural limestone blocks with a diamond cut finish. Block sizes to be 500 x 330 x 100, 500 x 159 x 100 and 250 x 159 x 100 to create a random pattern. Walls to be fair-faced both sides. Mortar to be cream colour with rolled joints. Provide blockwork control joints with approved sealant colour to match limestone. All external blockwork finished with anti-graffiti coating.	
4	PRE-CAST CONCRETE Class 1 pre-cast White concrete with a brushed finish. Refer to structural engineer's details and specifications. Samples of pre-cast concrete to be provided before execution of final work. Exposed lifting points to comprise stainless steel fittings. Finish concrete with a clear sealer.	
5	WINDOW FRAMING Framing generally: Alspec Hunter 150mm x 50mm front glazed framing suite generally with structurally glazed mullions. Finish: Dulux Duratec X15 powder-coat colour Zeus Charcoal Satin 90087732. Doors: Alspec Swan 45 Commercial hinged door suite with wide stiles generally. Finish: Dulux Duratec X15 or equal approved powder-coat colour Zeus Charcoal Satin 90087732.	
6	EXTERNAL GLAZING External glazing generally minimum 10.38mm Viridian ComfortPlus Green 71 laminated safety glass to all external windows.	