Planning and Development Reports

Committee Consideration – 12 April 2016
Council Resolution – 26 April 2016

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Council: 26 April 2016

PD12.16 (Lot 300) No. 6/29 Strickland Street, Mount Claremont – Additional Seats and Tables (Retrospective)

Committee	12 April 2016
Council	26 April 2016
Applicant	G Chapman
Owner	S and T Church
Officer	Andrew Bratley – Coordinator Statutory Planning
Director	Peter Mickleson – Director Planning & Development Services
Director Signature	
File Reference	DA2015/461 – ST8/29-U6
Previous Item	Item E9.04 – 24 February 2004 Item PD56.15 – 15 December 2015
Attachments	1. Site Plan (A4) 2. Floor Plan (A4)

1.0 Executive Summary

Following a complaint, a retrospective development application has been received, which seeks approval to retain 10 additional tables and 20 additional seats outside of the Deli Chicchi restaurant building at Unit 6 of the Mount Claremont Shopping Centre.

The additional seats and tables results in an additional shortfall of 10 car bays, a total shortfall of 95 car bays on site. Therefore the proposal was advertised to nearby landowners for comment. During the advertising period 2 objections and 2 non-objections were received.

The application has been referred to Council for determination, as officers do not have the delegation to determine an application where specific objections have been received.

The restaurant results in a significant additional car parking shortfall, therefore is recommended that Council refuses the application.

2.0 Recommendation to Committee

Council refuses the application for 10 additional tables and 20 additional seats at (Lot 300) No. 6/29 Strickland Street, Mount Claremont, for the following reasons:

1. **An insufficient number of car bays are provided for the use, thus potentially creating safety issues for pedestrians and other road users due to vehicles being illegally parked.**

2. **The proposal does not satisfy the conditions and standards of clause 5.5.1 and clause 6.4.2 of the City of Nedlands Town Planning Scheme No.2, due to insufficient car parking.**

3.0 Strategic Community Plan

KFA: Natural and Built Environment

This report addresses the Key Focus Area of Natural and Built Environment through adherence to the requirements of Town Planning Scheme No. 2 (TPS 2).

4.0 Legislation / Policy

- *Planning and Development Act 2005* (Act).
- Metropolitan Region Scheme (MRS).
- City of Nedlands Town Planning Scheme No. 2 (TPS 2).
- Council Policy – Neighbour Consultation.

5.0 Budget / Financial Implications

The proposal is for works to be constructed on a private lot, and therefore has no immediate budget or financial implications for the City, however should Council refuse the application, there may be financial implications through an appeal of Council's decision.

6.0 Risk Management

Not applicable.

7.0 Background

Property address		(Lot 300) No. 6/29 Strickland Street, Mount Claremont
Lot area		2,023m^2
Zoning/	**MRS**	Urban
Reserve	**TPS 2**	Retail Shopping

The subject site has frontages to Asquith Street, Strickland Street and Olearia Lane, and the existing building on the site consists of residential and commercial premises. The commercial uses include shops, an office and the Deli Chicchi restaurant. Nearby properties contain dwellings, and commercial activities such as offices and the Annie's Child Care Centre as seen in the location plan on the next page.

In February 2004, Council resolved to approve an application for a restaurant at Unit 6 of the Mount Claremont Shopping Centre. The approved plans show 35 seats inside the building and 20 seats within an outdoor alfresco area on the adjacent verge.

Subsequently the City received a petition from landowners requesting the City to increase the number of car parking bays for the Mount Claremont Shopping Centre.

In December 2015, Council resolved to approve an application for a restaurant at 3/29 Asquith Street, Mount Claremont, resulting in a shortfall of 85 car bays on site.

In an attempt to address the car parking issue in the locality, at the same meeting Council resolved that the provision of at least 16 parking bays in the vicinity of Rochdale Rd and Asquith Streets be investigated by Administration as a matter of urgency.

8.0 Discussion

The application seeks retrospective approval to retain 10 additional tables and 20 additional seats outside of the restaurant building. This is in addition to 35 seats inside the building and 20 seats within an outdoor alfresco area on the adjacent verge, approved by Council in February 2004.

Refer to Attachments 1 and 2 for the site plan and floor plan received as part of the application.

8.1 Consultation

The proposal was advertised for 21 days to nearby landowners for comment in January and February 2016 due to a shortfall in the required amount of car bays. During the advertising period 2 objections and 2 non-objections were received. The following is a summary of the concerns raised:

1. There being not enough on site car bays available;
2. The seating area causing an obstruction to pedestrians;
3. The additional seating not being in accordance with the restaurant's liquor licence issued by the Department of Gaming, Racing and Liquor;
4. The shortage in car bays resulting in vehicles parking illegally along nearby streets and subsequently obstructing the sightlines of drivers leaving their residential properties; and
5. There currently not being enough toilets should the restaurant be approved by Council.

The impact of the restaurant on car bay demand and the area's amenity is discussed in the following sections.

8.2 Town Planning Scheme No. 2

The following provisions of TPS 2 apply to such proposals.

8.2.1 Existing Car Parking Demand

Thirteen car parking bays exist on the entire site, all at the rear of the buildings (refer to Attachment 1). The existing tenancies on the property require a total of 98 car bays, a deficit of 85 car bays therefore exists. The restaurant operating at Unit 6 excluding the additional seats and tables proposed, requires up to 28 car bays.

In addition, 8 car bays exist on the opposite side of Olearia Lane on 35 Asquith Street, and immediately adjoining the property are 11 on street car bays along Asquith Street and 13 on street car bays along Strickland Street.

The City frequently receives complaints from residents about vehicles allegedly used by those visiting the Mount Claremont Shopping Centre, obstructing driveways, parking on registered verges and overstaying in time restricted car bays.

8.2.2 Future Car Parking Demand

The following TPS 2 car parking requirements would apply to the restaurant:

Car Parking Provision	Car Parking Requirement	Car Bay Shortfall
Restaurant 1 bay per 2.6sqm of restaurant seating area (the restaurant seating area being 95sqm); or 1 bay per 2 persons. Whichever is greater (being up to 75 persons). In this case the seating number is the greater.	38 car bays required.	An additional shortfall of 10 car bays, a total shortfall of 95 car bays for the shopping centre.

8.2.3 Amenity

TPS 2 Clause	Assessment Comment
In accordance with clause 5.5.1, Council may refuse to approve any development if in its opinion the development would adversely affect the amenity of the surrounding area having regard to the likely effect on the locality in terms of the external appearance of the development, or any other factor inconsistent with the **use** for which the lot is zoned.	The City is aware of car parking difficulties within the vicinity. It is evident that the existence of the additional seats and tables is having a significant impact in terms of car parking.

Regulations Clause	Assessment Comment
Clause 67 under Schedule 2 (Deemed Provisions) of the Regulations stipulates that in considering a development application due regard is to be given to the following matters, amongst others: a) The amenity of the locality, including the locality of the area. b) The vehicle flows to and from the subject land will not be disruptive to existing traffic movements or circulation patterns. c) Any submission received on the application. d) Any other planning consideration considered appropriate.	The impact the current shortfall in car bays within the locality is reflected by the objections and the number of complaints received by the City.

8.3 Other Matters of Concern

During the advertising period concerns were also received with regard to more toilets being required for the shopping centre due to the restaurant operating. Adequate staff and public sanitary conveniences shall be required to be provided in accordance with the Building Code of Australia should Council approve the application.

During the advertising period concerns were also received with regard to the restaurant not operating in accordance with its liquor licence. If the application is approved this issue will be overcome.

9.0 Conclusion

It is considered that there is inadequate provision of car parking to meet the demand from the retrospective increase in seating.

As customers primarily consume food and drink on the premises and within the associated outdoor alfresco area, the frequency and long term occupancy rate for the onsite car parking bays results in car bays being less regularly available for customers visiting the shopping centre.

For these reasons it is recommended that the application be refused by Council. However, recommended conditions are provided below if Council resolves to approve the application

9.1 Recommended Conditions if Application is Approved

Council approves the application for 10 additional tables and 20 additional seats at (Lot 300) No. 6/29 Strickland Street, Mount Claremont, subject to the following conditions:

1. **The development shall at all times comply with the approved plans.**

2. **This approval only pertains to the existing 10 tables and 20 seats beneath the outside canopy of the restaurant building.**

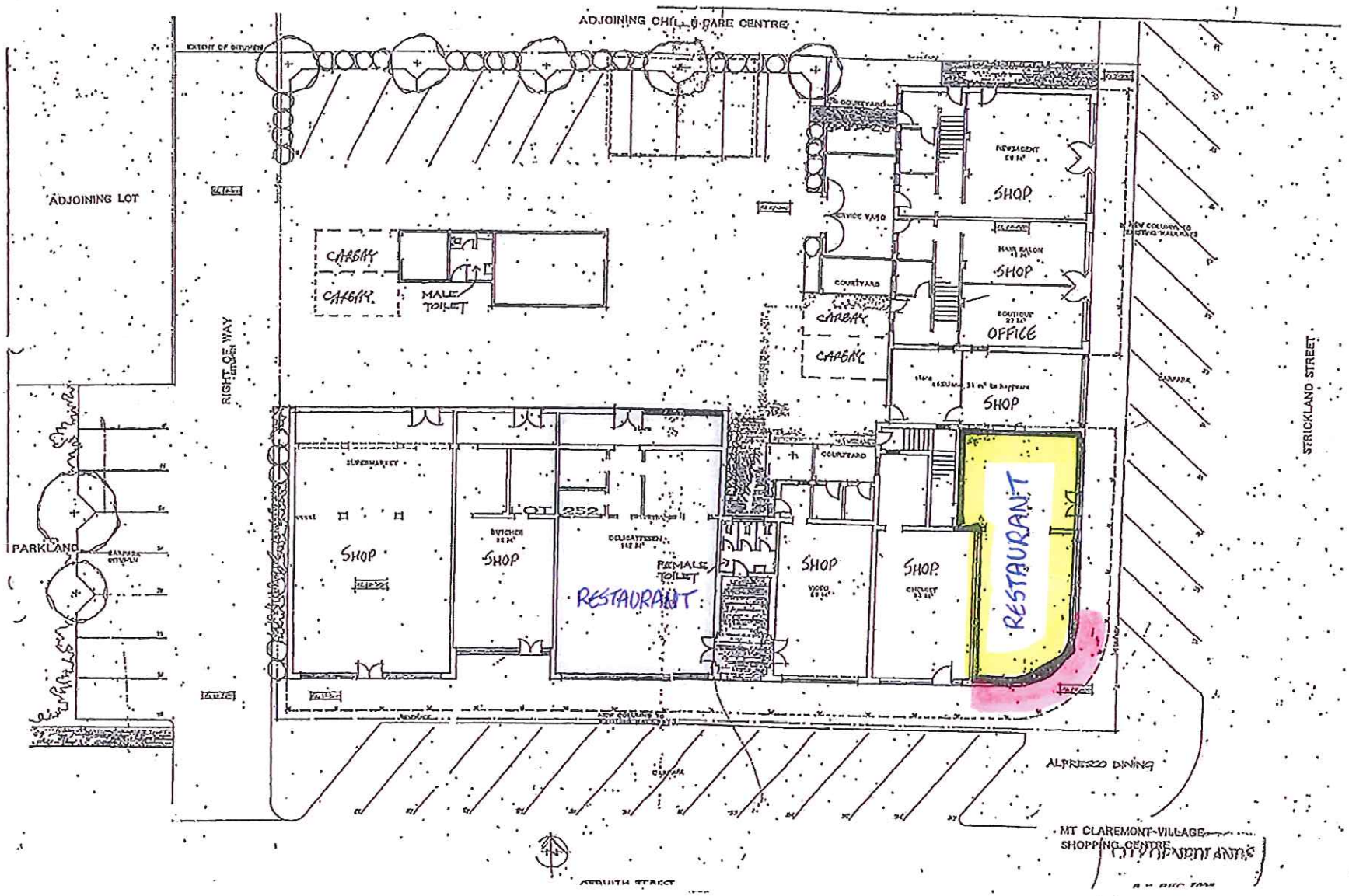
Advice Notes specific to this approval:

1. **The applicant is advised that a separate development application is required to be submitted and approved by the City if they intend to further increase the seating area and/or seating numbers on the premises.**

2. **Adequate staff and public sanitary conveniences shall be provided in accordance with the Building Code of Australia.**

3. **The restaurant complying with Australian Standard AS1668.2 – 2012 and AS 2444-2001.**

PD12.16 - Attachment 1
Site Plan



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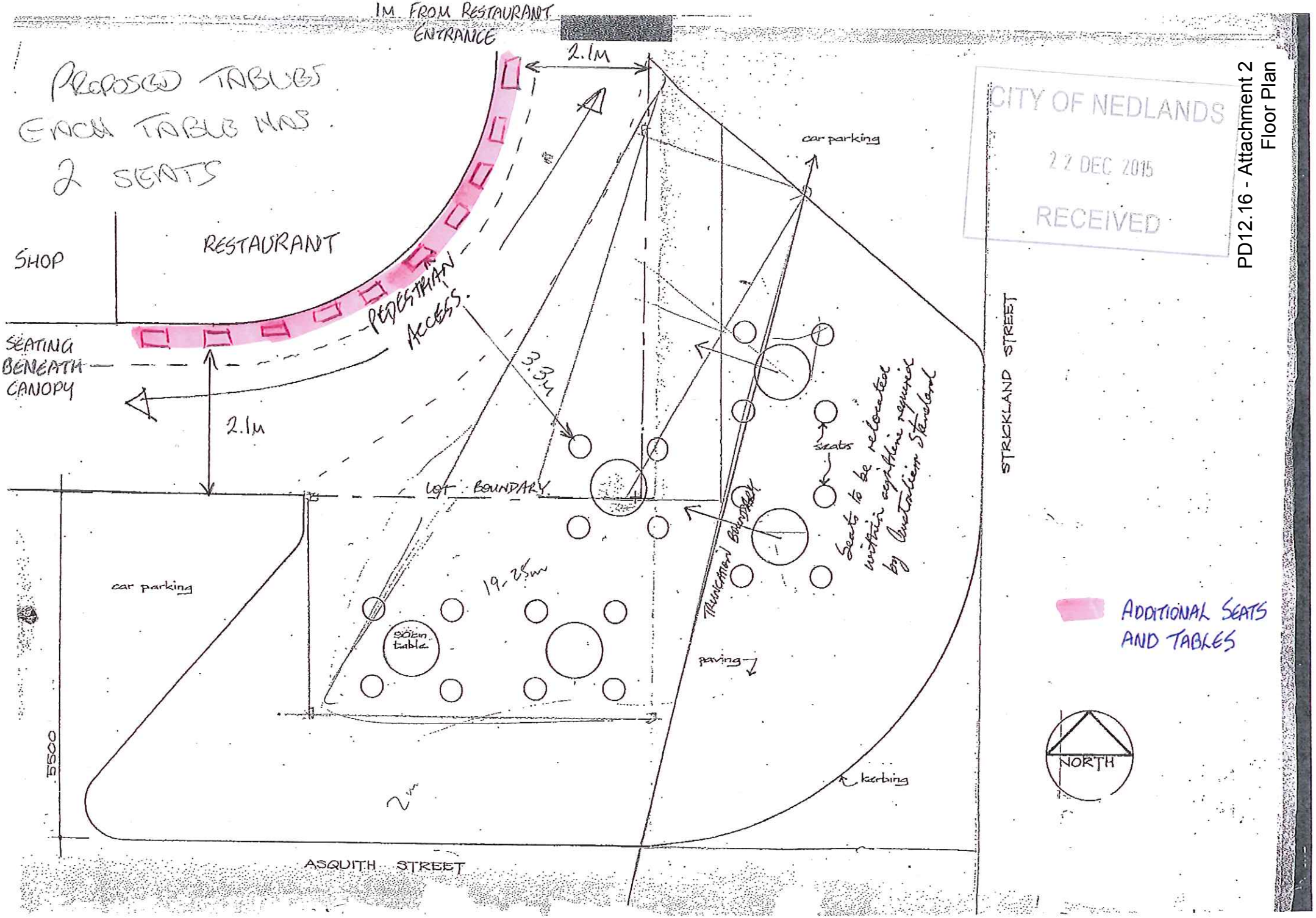
22/12/15

ADDITIONAL SEATS AND TABLES


1M FROM RESTAURANT ENTRANCE
PROPOSED TABLES EACH TABLE HAS 2 SEATS
2.1M
car parking
SHOP
RESTAURANT
PEDESTRIAN ACCESS.
SEATING BENEATH CANOPY
2.1M
3.3M
LOT BOUNDARY
seats
Seats to be relocated within existing approval by Australian Standard
TRUNCATION BOUNDARY
19.25m
car parking
900m table
paving
kerbing
5500
2m
ASQUITH STREET
STRICKLAND STREET
ADDITIONAL SEATS AND TABLES
NORTH
CITY OF NEDLANDS
22 DEC 2015
RECEIVED
PD12.16 - Attachment 2
Floor Plan

PD13.16 (Lot 27) No. 5 Adams Road, Dalkeith – Enclosure of Existing Hardstand Area

Committee	12 April 2016
Council	26 April 2016
Applicant	E Marron
Owner	E Marron
Officer	Andrew Bratley - Coordinator Statutory Planning
Director	Peter Mickleson – Director Planning & Development Services
Director Signature	
File Reference	DA2016/28
Previous Item	Item E29.04 – March 2004 Item D14.08 – April 2008
Attachments	1. Site Plan 2. Floor Plan 3. North and East Elevations

1.0 Executive Summary

The proposal to is construct a roof over an existing pergola structure adjacent to the eastern boundary of the property (refer to Attachments 1 to 3), which is not compliant with the deemed-to-comply provisions of the Residential Design Codes (R-Codes) in relation to open space and the primary street setback requirements. The application was advertised to the affected neighbours and during the advertising period 4 objections were received.

Where an objection has been received, administration does not have the delegation from Council to determine the application and therefore the application is referred to Council for determination.

The same matter was refused by Council in 2008 and subsequently refused by the State Administrative Tribunal (SAT) in 2009 following an appeal. SAT concluded that the proposal would not be consistent with the setback, open space and orderly and proper planning requirements.

The open space and primary street setback variations are considered to not comply with the design principle provisions of the R-Codes, it is therefore recommended that the application be refused by Council.

2.0 Recommendation to Committee

Council refuses the development application to construct a roof over an existing pergola at (Lot 27) No. 5 Adams Road, Dalkeith, for the following reasons:

1. **The proposal not satisfying the Design Principles stipulated under clause 5.1.2 (Street Setback) and clause 5.1.4 (Open Space) of the Residential Design Codes, and would therefore not be consistent with orderly and proper planning.**

2. **The proposed open space and the average primary street setback setting an undesirable precedence for the locality.**

3.0 Strategic Community Plan

KFA: Natural and Built Environment

This report addresses the Key Focus Area of Natural and Built Environment through adherence to the design requirements of TPS 2 and the R Codes.

4.0 Legislation

- *Planning and Development Act 2005* (Act).
- Metropolitan Region Scheme (MRS).
- City of Nedlands Town Planning Scheme No. 2 (TPS2).
- Residential Design Codes of WA 2015 (R-Codes).
- Council Policy – Neighbour Consultation.

5.0 Budget / Financial Implications

The proposal is for works to be constructed on a private lot, and therefore has no immediate budget or financial implications for the City, however should Council refuse the application, there may be financial implications through an appeal of Council's decision.

6.0 Risk management

Nil.

7.0 Background

7.1 Site Description

Lot area	781m^2
Metropolitan Region Scheme Zoning	Urban
Town Planning Scheme No. 2 Zoning	Residential – R12.5
Detailed Area Plan/Outline Development Plan	No
Controlled Development Area	Yes

The subject property contains a two storey single dwelling as shown in the locality plan on the following page. The topography of the land falls steeply towards the western (rear) boundary. Access to the property is obtained from Adams Road.

In March 2004, Council resolved to approve a development application for a 2 storey dwelling at the property. The approved plans show a 2 car garage and an unenclosed hardstand area adjacent to the eastern boundary. The development is shown on the approved plans as having an average primary street setback of 7.5m (from Marlin Court).

In April 2008, Council resolved to refuse a retrospective development application for the enclosure of a cabana and hardstand area as it did not comply with the open space nor average 7.5m front setback requirements of the R-Codes. It was proposed that 52% open space be provided in lieu of 55% and an average front setback of 5.5m in lieu of 7.5m.

Subsequently an application for review of Council's refusal decision was lodged with the State Administrative Tribunal (SAT). In January 2009, the SAT resolved to approve the cabana but affirmed Council's decision to refuse the hardstand enclosure (DR 193 2008). The retrospective roofing over the hardstand area was subsequently removed.

8.0 Discussion

The development application seeks approval to construct a tiled roof over an existing 23sqm pergola structure which will be 3.8m in height above natural ground level, and if approved will be used as a single car garage. Refer to Attachments 1 to 3.

The street setbacks of the existing structure will remain unchanged.

The development does not comply with the deemed-to-comply provisions of the R-Codes in terms of open space and the primary street setback requirements.

8.1 Consultation

The development application was advertised to the affected landowners by the City for 21 days for comment. Four objections were received during the consultation period.

The following is a summary of the concerns received:

a) A similar application being refused by Council and the SAT previously; and
b) Approval of the current application resulting in less open space than that required.

Due to the property adjoining the Swan River Trust's Development Control Area the application was also referred to the Department of Parks and Wildlife (DPAW) for comment. No concerns were raised.

The impact the extension will potentially have on the neighbours' amenity is discussed in the following section.

8.2 State Planning Policy 3.1 – Residential Design Codes

The proposal is not compliant with the following deemed-to-comply provisions of the R-Codes:

8.2.1 Open Space

Deemed-to-comply Requirement	Proposed	Complies?
A minimum of 55% open space for properties with an R12.5 density coding in accordance with clause 5.1.4 (Open Space) and Table 1 (General Site Requirements).	If approved, 49.9% open space (390.2sqm) will exist on the property in lieu of the minimum 55% (429.55sqm) required.	No

Variations to the deemed-to-comply requirements can be considered subject to satisfying the following design principle provisions:

Design principles	Assessment/Comment
Reflect the existing and/or desired streetscape character or as outlined under the local planning framework.	Due to the topography of the land and an existing retaining wall the visual impact the proposed roof will have on the Marlin Court streetscape will be minimal. The primary street façade and setback of the structure will remain unchanged. The proposed roof will be consistent in terms of height and appearance compared with the existing portion of the dwelling and garage, and is therefore have minimal visual impact on the Adams Road streetscape.
Consistent with the expectations of the applicable density code.	As a consequence of the SAT's decision to approve the roof cabana in 2009, currently 52% open space exists on the property. The applicant proposes a further 3% shortfall in open space (49%). The open space proposed is what would be expected for properties with a higher density coding (e.g. R20 or R25), and therefore approval of such variation would set an undesirable precedence for the locality.

8.2.2 Street Setback

Due to the size and orientation of the lot, Marlin Court has been deemed to be the primary street when previous applications for the property have been determined.

Town Planning Scheme No. 2 requires a 9m primary street setback, which can only be varied where more than 50% properties on the same side of the street have development setback less than 9m. As more than 50% of properties along Marlin Court have development setback less than 9m from the primary street the street setback provisions under the R-Codes apply, being the following.

Deemed-to-comply Requirement	Proposed	Complies?
An average primary street setback of 7.5m.	An average primary street setback of 5.5m is proposed.	No
A minimum primary street setback of 3.75m.	A minimum primary street setback of 2m is proposed.	No

Variations to the deemed-to-comply requirements can be considered subject to satisfying the following design principle provisions:

Design principles	Assessment/Comment
Contribute to, and are consistent with, an established streetscape.	Existing development on properties along Marlin Court is setback a minimum or average of 7.5m

	from the primary street boundary. The subject property currently has an average setback of 7.5m from the primary street. In accordance with the R-Codes a pergola is not deemed to be a building and is therefore not subject to any building setback requirements. By enclosing with a tiled roof it becomes a building and is setback 2m from the primary street boundary. The proposed average primary street setback of 5.5m is unacceptable as it is inconsistent with the prevailing development on nearby properties and will set an undesirable precedence.
Provide adequate privacy and open space for dwellings.	As discussed under section 8.2.1 of this report, as a consequence of the SAT's decision to approve the roof cabana in 2009 currently 52% open space exists on the property. The applicant proposes a further 3% shortfall in open space (49%). The open space proposed is what would be expected for properties with a higher density coding (e.g. R20 or R25), and therefore approval of such variation would set an undesirable precedence for the locality.
Positively contributes to the prevailing development context and streetscape.	Existing development on properties along Marlin Court is setback at least 7.5m from the primary street boundary. The subject property currently has an average setback of 7.5m from the primary street. In accordance with the R-Codes a pergola is not deemed to be a building and is therefore not subject to any building setback requirements. By enclosing with a tiled roof it becomes a building and is setback 2m from the primary street boundary. The proposed average primary street setback of 5.5m is unacceptable as it is inconsistent with the prevailing development on nearby properties and will set an undesirable precedence.

9.0 Conclusion

The proposal is to construct a tiled roof over an existing pergola structure with an average primary street setback of 5.5m in lieu of 7.5m, a minimum primary street setback of 2m in lieu of 3.75m, and 49.9% open space in lieu of 55%.

The variations are considered to not satisfy the relevant design principles of the R-Codes. Accordingly, the application is recommended to Council for refusal. However, recommended conditions are provided below if Council resolves to approve the application.

9.1 Recommended Conditions if Application is Approved

Council approves the development application to construct a roof over an existing pergola at (Lot 27) No. 5 Adams Road, Dalkeith, it is recommended that it be subject to the following conditions and advice notes:

1. **The development shall at all times comply with the approved plans.**

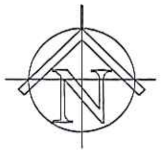
2. **This development approval pertains to the construction of a tiled roof over an existing pergola structure only.**

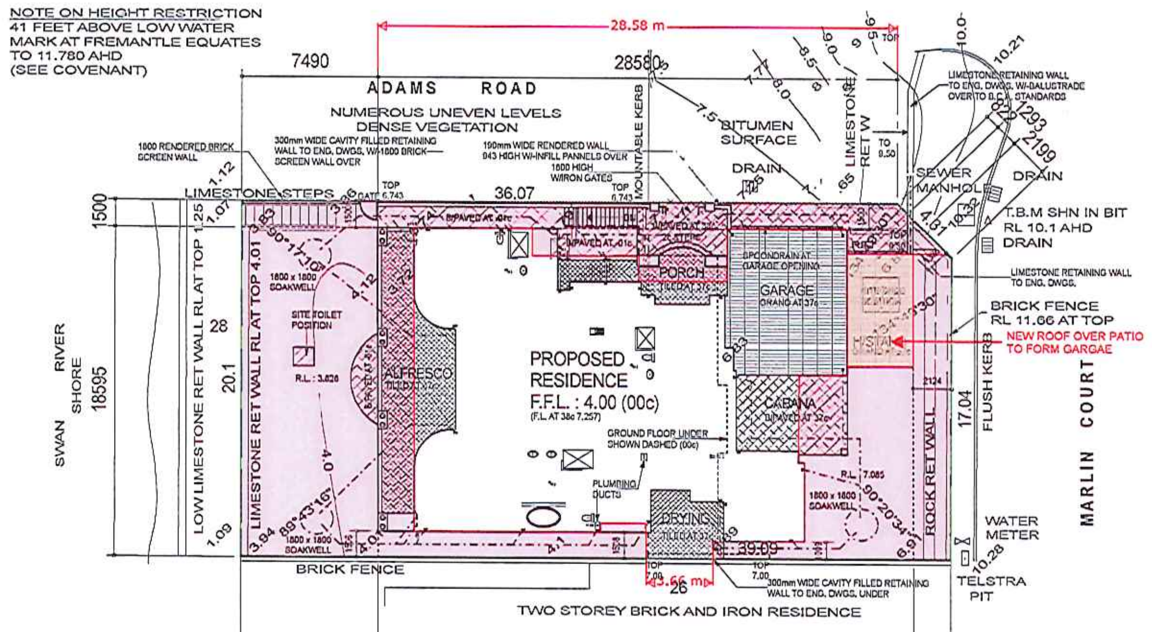
3. **All stormwater from the development, which includes permeable and non-permeable areas, shall be contained onsite.**

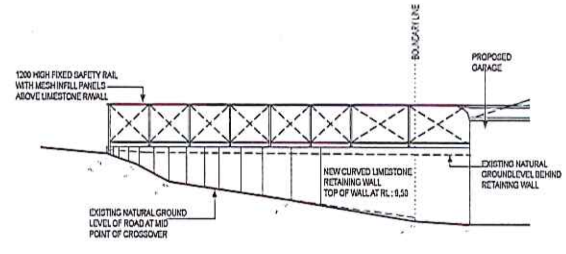
Advice Notes specific to this approval:

1. **All downpipes from guttering shall be connected so as to discharge into drains, which shall empty into a soak-well; and each soak-well shall be located at least 1.8m from any building, and at least 1.8m from the boundary of the block.**

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




NOTE ON HEIGHT RESTRICTION
41 FEET ABOVE LOW WATER MARK AT FREMANTLE EQUATES TO 11.780 AHD (SEE COVENANT)
ADAMS ROAD
NUMEROUS UNEVEN LEVELS DENSE VEGETATION
28.58 m
7490
28580
36.07
BITUMEN SURFACE
DRAIN
SEWER MANHOLE
T.B.M SHN IN BIT RL 10.1 AHD
DRAIN
LIMESTONE RETAINING WALL TO ENG. DWGS.
BRICK FENCE RL 11.66 AT TOP
NEW ROOF OVER PATIO TO FORM GARGAE
MARLIN COURT
FLUSH KERB
17.04
WATER METER
TELSTRA PIT
PROPOSED RESIDENCE
F.F.L. : 4.00 (00c)
PORCH
GARAGE
CABANA
ALFRESCO
DRYING
GROUND FLOOR UNDER SHOWN DASHED (00c)
PLUMBING DUCTS
SITE TOILET POSITION
1800 x 1800 SOAKWELL
LIMESTONE STEPS
LIMESTONE RET WALL RL AT TOP 4.01
LOW LIMESTONE RET WALL RL AT TOP 1.25
ROCK RET WALL
BRICK FENCE
TWO STOREY BRICK AND IRON RESIDENCE
300mm WIDE CAVITY FILLED RETAINING WALL TO ENG. DWGS. UNDER
SWAN RIVER SHORE
18595
1500
20.1
28
39.09
26
7590
29460
2058
MOUNTABLE KERB


1200 HIGH FIXED SAFETY RAIL WITH MESH INFILL PANELS ABOVE LIMESTONE R/WALL
PROPOSED GARAGE
BOUNDARY LINE
EXISTING NATURAL GROUNDLEVEL BEHIND RETAINING WALL
NEW CURVED LIMESTONE RETAINING WALL TOP OF WALL AT RL : 8.50
EXISTING NATURAL GROUND LEVEL OF ROAD AT MID POINT OF CROSSOVER

CROSSOVER ELEVATION
SCALE 1:100

CODE VARIATION:
THE PROPOSED GARAGE ROOF EXTENDS INTO THE FRONT SET BACK AREA.

THE UNIQUE CONDITIONS APPLYING TO THIS SITE, MEAN THAT THE EXSITING PERGOLA FASCIA IS LESS THAN 1.2m ABOVE GROUND LEVEL WHEN VIEWED FROM MARLIN COURT.
THE R-CODES PERMIT A 1.2m HIGH SOLID FENCE TO A STREET BOUNDARY SO VISUALLY THE EXISTING PERGOLA HAS LESS IMPACT ON THE STREETSCAPE THAN A SOLD WALL ON THE BOUNDARY.

THE RIDGE HEIGHT OF THE NEW ROOF OVER THE PERGOLA AREA IS LESS THAN 1.8m ABOVE GROUND LEVEL WHEN VIEWED FROM MARLIN COURT.
VISUALLY IT HAS LESS IMAPCT ON THE STREETSCAPE THAN AN OPEN SCREEN FENCE ON THE BOUNDARY TO 1.8M HIGH.

THE PROPOSED ROOF OVER THE EXISTING PERGOLA HAS NO MORE IMPACT ON STREETSCAPE THAT WHAT HAS ALREDAY BEEN APPROVED.

ADD TILE ROOF TO MATCH EXISTING OVER PERGOLA SPACE TO FORM A NEW GARAGE

LOT AREA: 781.2 m2
SITE COVER: 391.0 m2 [incl new garage]
OPEN SPACE: 390.2 m2
OPEN SPACE: 49.96 %

PLAN AMENDMENTS BY :
3 FEB 2016

peter cottee
building designs
energy assessments

a : 1 raffan view, gwelup, wa, 6018
e : cottee@iinet.net.au
t/f : 08 9246 5556
m : 0417 930 630

RECEIVED 10/12/16

REV	AMMENDMENT	DATE

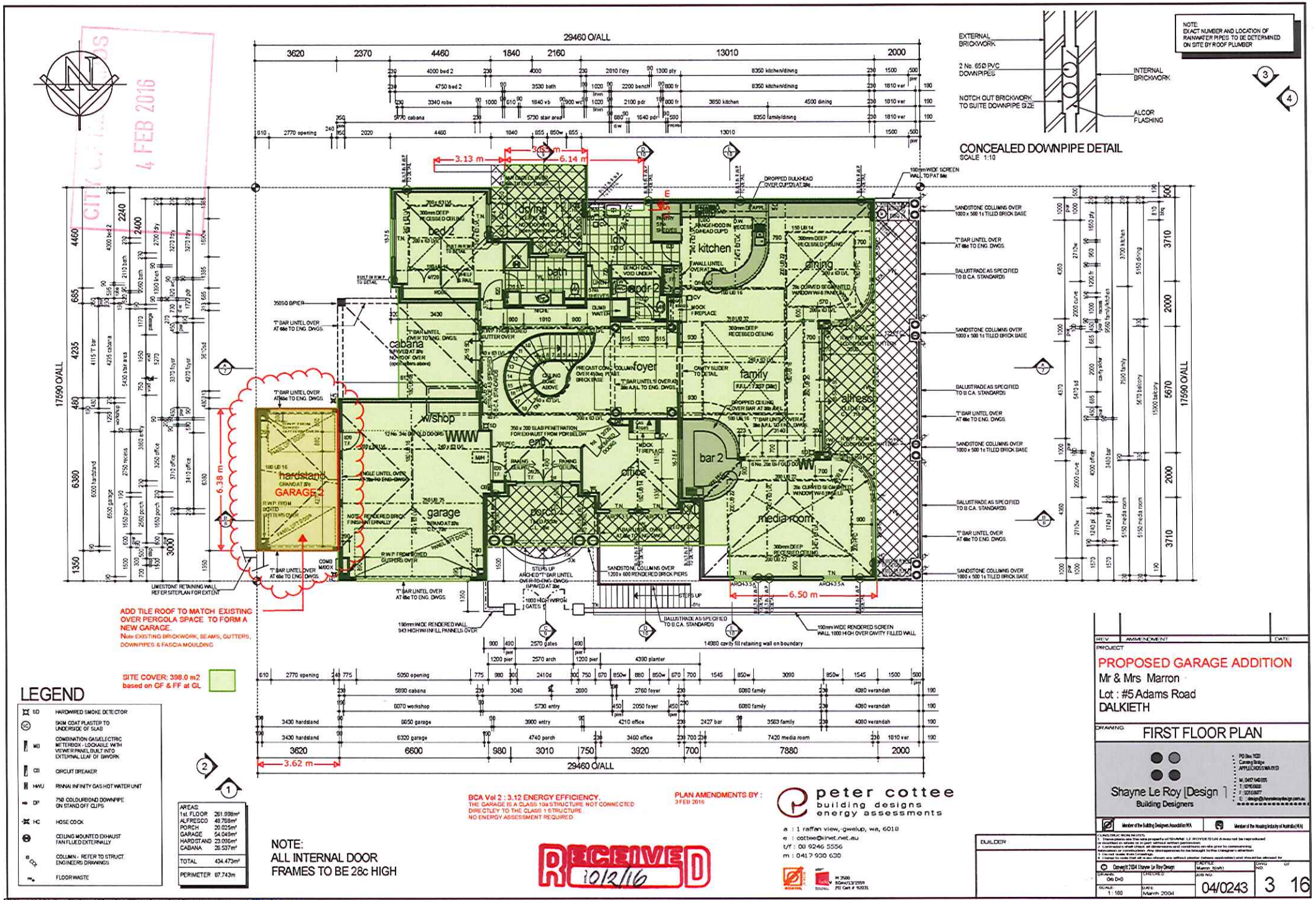
PROJECT
PROPOSED GARAGE ADDTION
Mr & Mrs Marron
Lot : #5 Adams Road
DALKIETH

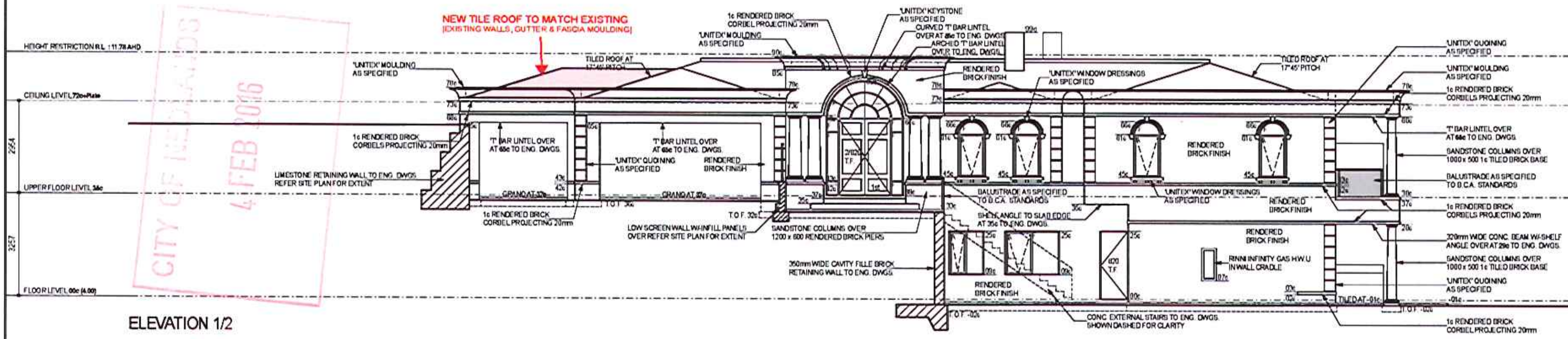
DRAWING: SITE & SETOUT PLAN

Shayne Le Roy [Design]
Building Designers

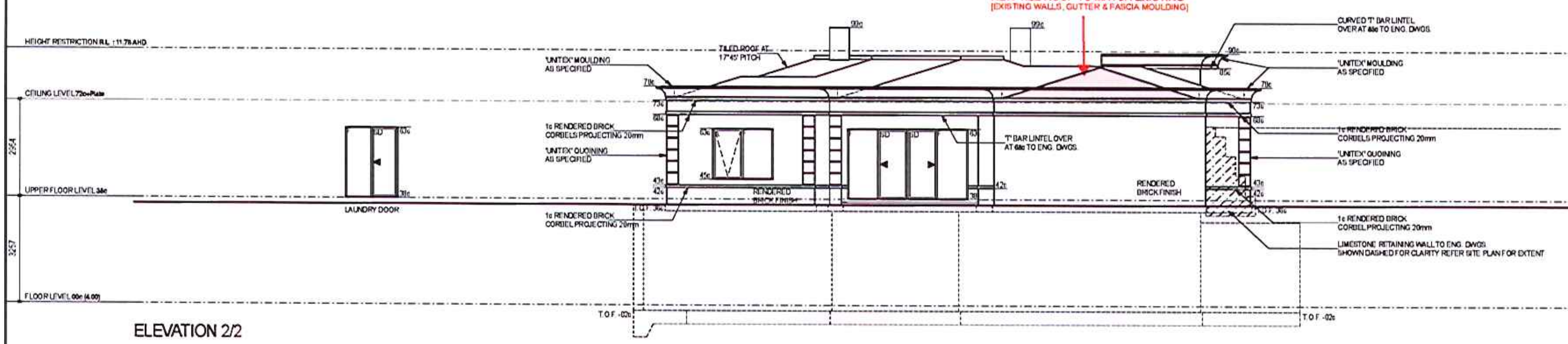
BUILDER :

DRAWN: Ob DrD
SCALE: 1 : 200
DATE: March 2004
JOB NO. 04/0243
DWG NO. 1 OF 16




NEW TILE ROOF TO MATCH EXISTING
[EXISTING WALLS, GUTTER & FASCIA MOULDING]
HEIGHT RESTRICTION R.L. 11.78 AHD
CEILING LEVEL
UPPER FLOOR LEVEL
FLOOR LEVEL
'UNITEX' MOULDING AS SPECIFIED
1c RENDERED BRICK CORBELS PROJECTING 20mm
LIMESTONE RETAINING WALL TO ENG. DWGS REFER SITE PLAN FOR EXTENT
'T' BAR LINTEL OVER AT 65c TO ENG. DWGS
'UNITEX' QUOINING AS SPECIFIED
RENDERED BRICK FINISH
LOW SCREEN WALL W/INFILL PANELS OVER REFER SITE PLAN FOR EXTENT
SANDSTONE COLUMNS OVER 1200 x 600 RENDERED BRICK PIERS
350mm WIDE CAVITY FILLE BRICK RETAINING WALL TO ENG. DWGS
'UNITEX' KEYSTONE AS SPECIFIED
'UNITEX' WINDOW DRESSINGS AS SPECIFIED
TILED ROOF AT 17'45' PITCH
BALUSTRADE AS SPECIFIED TO B.C.A. STANDARDS
CONC. EXTERNAL STAIRS TO ENG. DWGS SHOWN DASHED FOR CLARITY
RINNAI INFINITY GAS H.W.U IN WALL CRADLE
SANDSTONE COLUMNS OVER 1000 x 500 1c TILED BRICK BASE
320mm WIDE CONC. BEAM W/SHELF ANGLE OVER AT 29c TO ENG. DWGS

ELEVATION 1/2


NEW TILE ROOF TO MATCH EXISTING
[EXISTING WALLS, GUTTER & FASCIA MOULDING]
HEIGHT RESTRICTION R.L. 11.78 AHD
CEILING LEVEL
UPPER FLOOR LEVEL
FLOOR LEVEL
TILED ROOF AT 17'45' PITCH
'UNITEX' MOULDING AS SPECIFIED
1c RENDERED BRICK CORBELS PROJECTING 20mm
'UNITEX' QUOINING AS SPECIFIED
LAUNDRY DOOR
'T' BAR LINTEL OVER AT 68c TO ENG. DWGS
CURVED 'T' BAR LINTEL OVER AT 68c TO ENG. DWGS
RENDERED BRICK FINISH
LIMESTONE RETAINING WALL TO ENG. DWGS SHOWN DASHED FOR CLARITY REFER SITE PLAN FOR EXTENT

ELEVATION 2/2

PLAN AMENDMENTS BY :
3 FEB 2016

peter cottee
building designs
energy assessments
a : 1 raffan view, gwelup, wa, 6018
e : cottee@iinet.net.au
t/f : 08 9246 5556
m : 0417 930 630

BUILDER

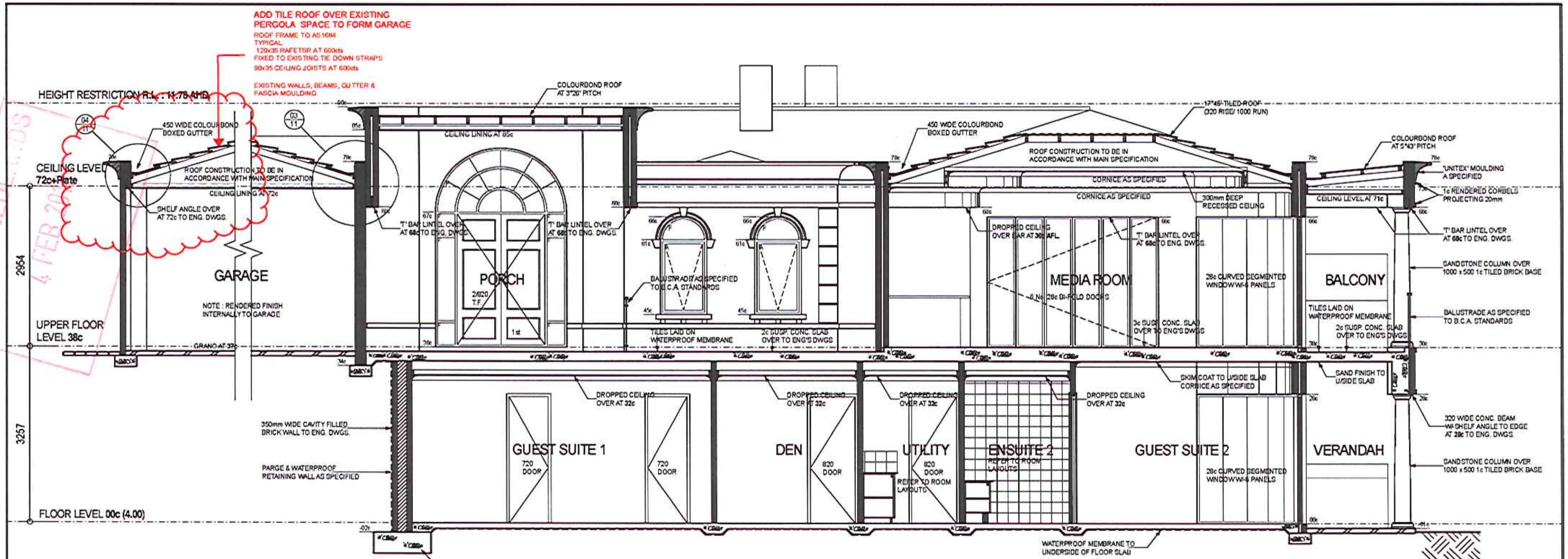
REV	AMMENDMENT	DATE

PROJECT
PROPOSED GARAGE ADDITION
Mr & Mrs Marron
Lot : #5 Adams Road
DALKIETH

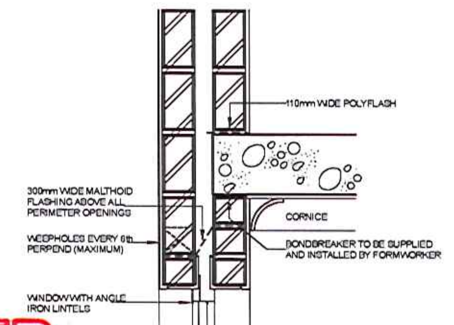
DRAWING
ELEVATIONS 1

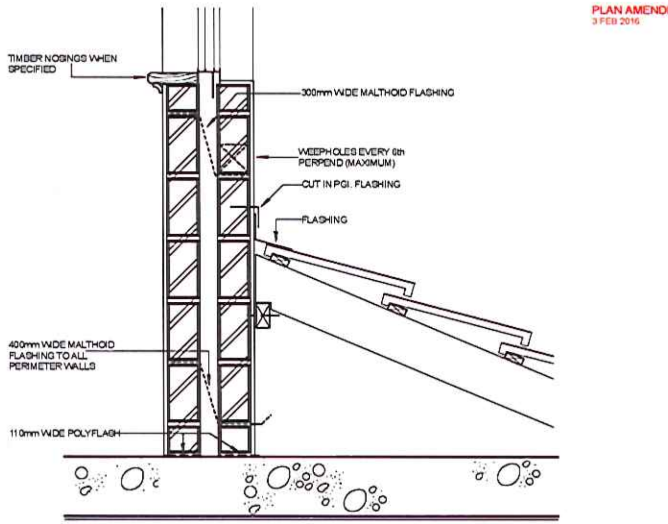
Shayne Le Roy [Design]
Building Designers

DRAWN	CHECKED	JOB NO	DWG NO	OF
Ob DHD		04/0243	5	16
SCALE 1:100	DATE March 2004			


ADD TILE ROOF OVER EXISTING PERGOLA SPACE TO FORM GARAGE
ROOF FRAME TO AS 1684 TYPICAL
120x35 RAFETER AT 600cts
FIXED TO EXISTING TIE DOWN STRAPS
90x35 CEILING JOISTS AT 600cts
EXISTING WALLS, BEAMS, GUTTER & FASCIA MOULDING
HEIGHT RESTRICTION R.L. : 11.75 AHD
COLOURBOND ROOF AT 3°20' PITCH
17°45' TILED ROOF (320 RISE/ 1000 RUN)
450 WIDE COLOURBOND BOXED GUTTER
ROOF CONSTRUCTION TO BE IN ACCORDANCE WITH MAIN SPECIFICATION
CEILING LINING AT 72c
CEILING LINING AT 85c
SHELF ANGLE OVER AT 72c TO ENG. DWGS.
CEILING LEVEL 72c+Plate
GARAGE
NOTE : RENDERED FINISH INTERNALLY TO GARAGE
UPPER FLOOR LEVEL 38c
FLOOR LEVEL 00c (4.00)
2954
3257
'T' BAR LINTEL OVER AT 68c TO ENG. DWGS.
PORCH
2/820 T.F.
BALUSTRADE AS SPECIFIED TO B.C.A STANDARDS
TILES LAID ON WATERPROOF MEMBRANE
2c SUSP. CONC. SLAB OVER TO ENG'S DWGS
CORNICE AS SPECIFIED
DROPPED CEILING OVER AT 30c AFL
MEDIA ROOM
6 No. 28c BI-FOLD DOORS
300mm DEEP RECESSED CEILING
28c CURVED SEGMENTED WINDOW W/4 PANELS
COLOURBOND ROOF AT 5°43' PITCH
'UNITEX' MOULDING AS SPECIFIED
1c RENDERED CORBELS PROJECTING 20mm
CEILING LEVEL AT 71c
BALCONY
SANDSTONE COLUMN OVER 1000 x 500 1c TILED BRICK BASE
BALUSTRADE AS SPECIFIED TO B.C.A. STANDARDS
SAND FINISH TO U/SIDE SLAB
SKIM COAT TO U/SIDE SLAB CORNICE AS SPECIFIED
320 WIDE CONC. BEAM W/SHELF ANGLE TO EDGE AT 28c TO ENG. DWGS.
DROPPED CEILING OVER AT 32c
350mm WIDE CAVITY FILLED BRICK WALL TO ENG. DWGS.
PARGE & WATERPROOF RETAINING WALL AS SPECIFIED
GUEST SUITE 1
720 DOOR
DEN
820 DOOR
UTILITY
REFER TO ROOM LAYOUTS
ENSUITE 2
GUEST SUITE 2
VERANDAH
WATERPROOF MEMBRANE TO UNDERSIDE OF FLOOR SLAB
REINFORCED CONCRETE FLOOR & FOOTINGS TO ENGINEERS DETAILS

SECTION B/2
SCALE 1:50





TYPICAL FLASHING DETAILS
1:10

RECEIVED 10/2/16

4 FEB 2016 ... OF NEDLANDS

PLAN AMENDMENTS BY :
3 FEB 2016

peter cottee
building designs
energy assessments

a : 1 raffan view, gwelup, wa, 6018
e : cottee@iinet.net.au
t/f : 08 9246 5556
m : 0417 930 630

REV	AMMENDMENT	DATE

PROJECT

PROPOSED GARAGE ADDITION

Mr & Mrs Marron

Lot : #5 Adams Road
DALKIETH

DRAWING: SECTION 2

Shayne Le Roy [Design]
Building Designers

PO Box 1120 Canning Bridge APPLECROSS WA 6153

Member of the Building Designers Association WA | Member of the Housing Industry of Australia (HIA)

BUILDER

DRAWN	CHECKED	CAD FILE	DWG NO	OF
Orb D+D		Marron c(orb)	8	16
SCALE: AS LABELLED	DATE: April 2004	JOB NO: 04/0243		

PD14.16 (Lot 138) No. 175 Stirling Highway, Nedlands – Proposed Change of Use (from Office and Showroom to Child Day Care Centre)

Committee	12 April 2016
Council	26 April 2016
Applicant	KJS Kids Care Pty Ltd
Owner	R Yeu
Officer	Andrew Bratley – Coordinator Statutory Planning
Director	Peter Mickleson – Director Planning & Development Services
Director Signature	
File Reference	DA2015/432 – ST6/175
Previous Item	Item PC18 – 21 June 1994
Attachments	1. Site Plan, Floor Plan and Elevations (A3) 2. Car Park Layout Plan (A3) 3. Signage Elevations (A3) 4. Fencing Elevation (A3) 5. Photograph of the property as seen from Napier Street (A4) 6. Photograph of the property as seen from Stirling Highway (A4) 7. Traffic Impact Assessment (A4) 8. Acoustic Report (A4)

1.0 Executive Summary

A development application has been received for the existing building on the property to be used as a child day care centre (refer to Attachments 1 to 4).

The application was advertised to nearby landowners for comment due to variations proposed to the amount of onsite car bays required, and a child day care centre being an 'AA' use in the Office/Showroom zone under Town Planning Scheme No. 2 (TPS 2). During the advertising period 1 objection and 1 non-objection were received.

The application has been referred to Council for determination, as officers do not have the delegation to determine an application under instrument of delegation 6A, where specific objections have been received.

The proposed use will not have a detrimental impact on the amenity of the locality and/or on traffic safety, and the subsequent shortfall in the required amount of car bays is deemed to satisfy the requirements of TPS 2, it is therefore recommended that Council approves the application.

1.1 Recommendation to Committee

Council approves the change of use application for a child day care centre to operate at (Lot 138) No. 175 Stirling Highway, Nedlands, subject to the following conditions and advice:

1. **The development shall at all times comply with the approved plans.**

2. **This development approval does not pertain to the proposed street boundary fencing. Any proposed street fencing shall require further planning approval.**

3. **A total of 6 onsite car parking bays being constructed, drained, marked and kerbed to the City's satisfaction prior to the child day care centre commencing, and be maintained thereafter by the landowner to the City's satisfaction.**

4. **Prior to the child day care commencing, the driveway being a minimum of 0.6m from the northern boundary, to the City's satisfaction.**

5. **Prior to the child day care centre commencing, the designated staff and drop off/pick up car bays being marked "staff only" and/or "pick up/drop off" in accordance with the approved car park layout plan, to the City's satisfaction.**

6. **Prior to the child day care centre commencing, the shared staff and drop off/pick up car bay being sign posted as only being permitted to be used by staff between 9.00am and 4.00pm, to the City's satisfaction.**

7. **The proposed street boundary fencing and signage being maintained by the landowners to the City's satisfaction.**

8. **The child day care centre being permitted to only operate between 7.00am and 6.00pm Monday to Friday, excluding public holidays.**

9. **The child day care centre accommodating a maximum of 20 children and 3 staff.**

10. **The child day care centre complying with the recommendations of the Acoustic Report, to the City's satisfaction.**

11. **The existing southern crossover being removed, and the kerbing and verge being reinstated to the City's satisfaction prior to the use commencing.**

Advice Notes specific to this approval:

1. **Adequate sanitary conveniences, fire exits and entrances shall be provided in accordance with the Building Code of Australia and the Disability Discrimination Act.**

2. **Development approval is required to be sought and obtained from the City for any proposed signage not included in this development approval.**

3. **Prior to commencing a Food Business, a proprietor shall lodge with the City a *Food Business Registration / Notification Form**;**

4. ***Penalties apply under the Food Act 2008 where a food business fails to notify the enforcement agency (the City).***

5. **Prior to commencing a Food Business, the premises shall receive an inspection from an Environmental Health Officer at the City which cites the Food Business may commence operation.**

6. **The applicant shall lodge an *Application for Food Premises Alteration / Fit-out* and construction shall not commence until an Environmental Health Officer at the City is satisfied the proposed fit-out can achieve the required food safety outcomes.**

7. **Prior to commencing a Food Business, a documented Food Safety Program which meets the requirements of the *Australian New Zealand Food Standards Code, Standard 3.2.1 Food Safety Programs*, shall have been deemed satisfactory by an Environmental Health Officer at the City, and will be implemented and maintained.**

8. **Plans and specifications of any exhaust hood and additional ventilating system are to be provided to the City's Environmental health Services for approval prior to fabrication and installation.**

9. **Food handlers are required to complete the City's free online food safety training at www.nedlands.imalert.com.au**

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

2.0 Strategic Community Plan

KFA: Natural and Built Environment

This report addresses the Key Focus Area of Natural and Built Environment through adherence to the requirements of TPS 2.

3.0 Legislation / Policy

- *Planning and Development Act 2005* (Act).
- Metropolitan Region Scheme (MRS).
- City of Nedlands Town Planning Scheme No. 2 (TPS 2).
- Council Policy – Neighbour Consultation.

4.0 Budget / Financial Implications

The proposal is for works to be constructed on a private lot, and therefore has no immediate budget or financial implications for the City, however should Council refuse the application, there may be financial implications through an appeal of Council's decision.

5.0 Risk Management

Not applicable.

6.0 Background

Property address	(Lot 138) No. 175 Stirling Highway, Nedlands
Lot area	726m^2
MRS Reserve	Urban and Primary Regional Road
TPS 2 Zoning	Office/Showroom

The subject site contains a single storey office and showroom building which was approved by Council in June 1994, and was previously occupied by Urban Stone Central with 6 car bays being available on site. The topography of the land falls towards the southern boundary of the property. Vegetation exists within the property's southern portion, and along the western and eastern boundaries (refer to Attachment 5 and 6). A patio structure exists within the southern portion of the property which is to be retained.

Surrounding properties contain single dwellings, with commercial buildings being on the opposite side of Napier Street and Stirling Highway.

Car parking restrictions apply along the section of Napier Street adjacent to the subject property, meaning that on street car parking is permitted for a maximum of 3 hours between Monday and Friday 8.00am to 5.00am.

7.0 Discussion

The application seeks development approval for the existing building on the property to be used as a child day care centre (refer to Attachments 1 to 4).

The details of the application are as follows:

a) The centre will accommodate up to 20 children between the age of 2 and 5 years and 3 staff.

b) The centre will operate between 7.00am and 6.00pm Monday to Friday, excluding public holidays.

c) Two (2) car bays for staff, 3 drop off/pick up car bays, and one shared car bay to be used by staff and as a pickup/drop off bay are proposed. The shared bay will only be permitted to be used by staff between 9.00am and 4.00pm.

d) An existing garage on the property is proposed to be converted into an office. No other alterations or additions are proposed to be made to the building.

e) Two non-illuminated wall signs both 5.6sqm in area, and a 1.6sqm sign attached to an existing pylon structure are proposed.

f) Wrought iron fencing 1.6m in height above NGL is proposed around a proposed outdoor playing area which abuts Napier Street and Stirling Highway.

g) An existing crossover is proposed to be removed and the verge and kerbing reinstated.

h) A Traffic Impact Assessment provided as part of the application concludes that the minimal additional traffic generation from the proposal will not adversely affect the operation of Napier Street (refer to Attachment 7).

i) An acoustic report provided as part of the application (refer to Attachment 8) concludes that noise emissions from the property if the centre is approved, can comply with the *Environmental Protection (Noise) Regulations 1997* provided noise mitigation measures are implemented. The following recommendations were made.

*"**Child Play Noise***

In order for child play noise to comply with the Regulations at all receivers, a solid fence of minimum height 1.8 metres should be erected along the east boundary, from the south-east corner of the existing building to the south boundary.

New AC Units Noise Mitigation

In a case where new AC units are installed, the following should be implemented:

i. Source an AC unit with a sound power level no greater than 72 dB(A) (e.g. residential type unit rather than commercial size); or,
ii. Relocate the south AC unit to either the roof, west or north side of building; or,
iii. Erect a 2.1m high fence along the south boundary in-lieu of the 1.8m recommended.

Generic Recommendations

In addition to the above, consideration could be given to the following common 'good practices' in regard to child play:

i. The behaviour and 'style of play' of children should be monitored to prevent particularly
ii. loud activity e.g. loud banging/crashing of objects, 'group' shouts/yelling;
iii. Crying children should be taken inside to be comforted; and,
iv. No amplified music should be played outside."

j) With regard to the above recommendations, the following should be noted:

i. A 1.8m high Colorbond fence is to be erected along the eastern (rear) boundary from the south east corner of the existing building to the southern boundary.
ii. No roof mounted air conditioning units are proposed as part of the development application. Development approval is only required to be obtained in future if an air conditioning unit(s) is visible from the street(s).
iii. There is no evidence to suggest that amplified music shall be played outside.

7.1 Consultation

The proposal was advertised for 21 days to nearby landowners for comment in January and February 2016 due to variations proposed to the amount of onsite car bays required, and a child day care centre being an 'AA' use in the Office/Showroom zone under TPS 2. A sign with regard to the proposed development was also erected on the property and remained in place for 21 days.

During the advertising period 1 objection and 1 non-objection were received. The following is a summary of the concerns raised:

a) There being not enough car bays available.
b) Traffic congestion being caused by those visiting the child day care centre; and
c) Vehicles parking along the street obstructing the sightlines of those drivers entering and exiting nearby properties.

The potential impact the proposal will have on the area's amenity is discussed in the following sections.

The application was also referred to MRWA as the property is affected by a Regional Road Reservation. MRWA advised that it has no objections to the proposal.

7.2 Town Planning Scheme No. 2

The following provisions of TPS 2 apply to such proposals.

7.2.1 Existing Car Parking Demand

Six (6) car bays exist on the property adjacent to the northern and Napier Street boundaries (refer to Attachment 1). Currently a total of 8 car bays are required for the existing use, a deficit of 2 car bays therefore exists.

Car parking restrictions apply along the section of Napier Street adjacent to the subject property, meaning that on street car parking is permitted for a maximum of 3 hours between Monday and Friday 8.00am to 5.00am.

7.2.2 Future Car Parking Demand

TPS 2 does not contain a prescribed minimum number of car bays for the use Child Day Care Centre, therefore the number of car bays required is at the City's discretion. Surrounding local governments' parking requirements for the use have been reviewed, and the following car parking requirements apply.

Local Government	Car Parking Provision	Car Parking Requirement	Car Bay Surplus
Town of Mosman Park	*Child Day Care Facility* 1 bay per staff member plus 1 bay per 4 children allowed under maximum occupancy.	9 bays required	3 car bay shortfall
City of Subiaco	*Child Care Premises* 1 bay per 2 staff members and 1 per 10 children with a minimum of 3 spaces.	4 bays required	2 car bay surplus

It should however be noted that the WAPC'S Child Care Centre Bulletin recommends that 1 car bay per 5 children be provided. As the centre will accommodate up to 20 children 4 bays will be required, a surplus of 2 bays.

7.2.3 Amenity

TPS 2 Clause	Assessment Comment
*"5.5.1 Council may refuse to approve any development if in its opinion the development would adversely affect the amenity of the surrounding area having regard to the likely effect on the locality in terms of the external appearance of the development, traffic congestion and hazard, noise or any other factor inconsistent with the **use** for which the lot is zoned"*	Having reviewed surrounding local governments' car parking requirements for child day care centres a 3 car bay shortfall will exist, worst case scenario, if the application is approved by Council. Considering that the drop off/pick up bays will only be occupied for a short amount of time and ample on street car parking is available along Napier Street, the availability of car bays is not expected to be an issue. It should also be noted that the office and showroom use previously approved by Council on the property had a 2 car bay shortfall, and the nature of the business would have meant that the on site car bays

	would have been occupied for longer periods of time compared to the proposed use. The City has no record of any car parking complaints being received directly related to this property. A Traffic Impact Assessment provided as part of the application did not raise any issues and/or concerns. The recommendations of an acoustic report provided as part of the application will be complied with. It is recommended that a condition relating to the acoustic report be included if the application is approved by Council.

8.0 Local Planning Policy – Advertisement Signs

Two non-illuminated wall signs both 5.6sqm in area, and a 1.6sqm sign attached to an existing pylon structure are proposed.

The proposed signage is compliant with Local Planning Policy – Advertisement Signs with the exception of the wall signs being 0.6sqm in excess of what is permitted.

As the wall signs will be non-illuminated, will not directly face any residential properties and will be setback 5.5m from Napier Street and 24m from Stirling Highway, the variation will have minimal impact on the amenity of surrounding properties.

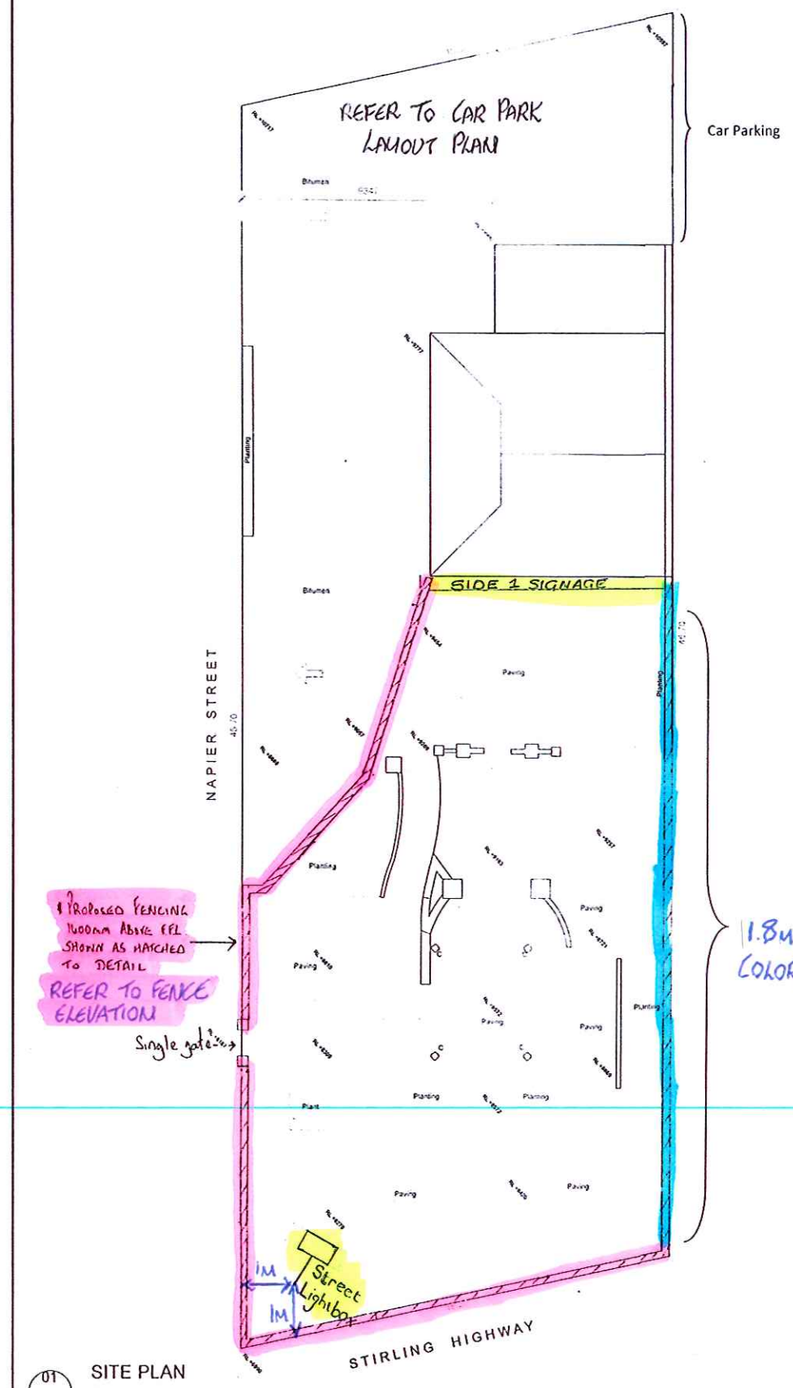
9.0 Council Policy – Fill and Fencing

Wrought iron fencing 1.6m in height above natural ground level is proposed along the Stirling Highway boundary and portion of the Napier Street boundary. A solid fence 1.8m in height above natural ground level is proposed to be erected along the eastern (rear) boundary, from the south east corner of the existing building to the south boundary to address recommendations made by the acoustic report submitted by the applicant.

Both types of proposed fencing comply with Council Policy – Fill and Fencing.

10.0 Conclusion

The proposed use will not have a detrimental impact on the amenity of the locality and/or on traffic safety, and the amount of car bays proposed on site is deemed to satisfy the requirements of TPS 2, it is therefore recommended that Council approves the application. Accordingly, the application is recommended to Council for approval.



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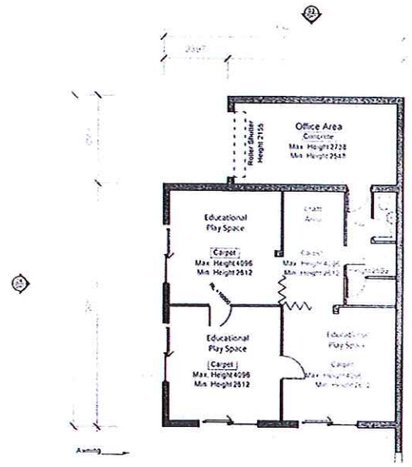

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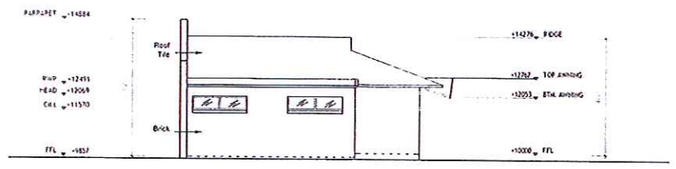

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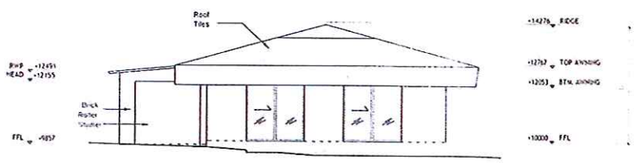

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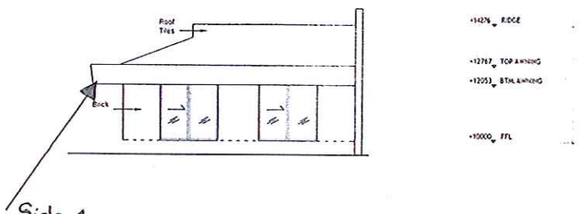

05/01 ELEVATION 03
Scale 1:100

CLIENT:
KNIGHT FRANK

DATE	REV	COMMENTS
10/11/15	-	DRAWING ISSUE

EXISTING CONDITIONS
175 Stirling Highway, NEDLANDS, WA

JOB No.	58096	Date	10/11/2015
Description	EC	Revision	-
Drawn By	DP	Checked by	AS
Scale	1:100 @ A1 1:200 @ A3	Sheet No.	1 of 1

sydney adelaide melbourne brisbane adelaide perth
REALSERVE
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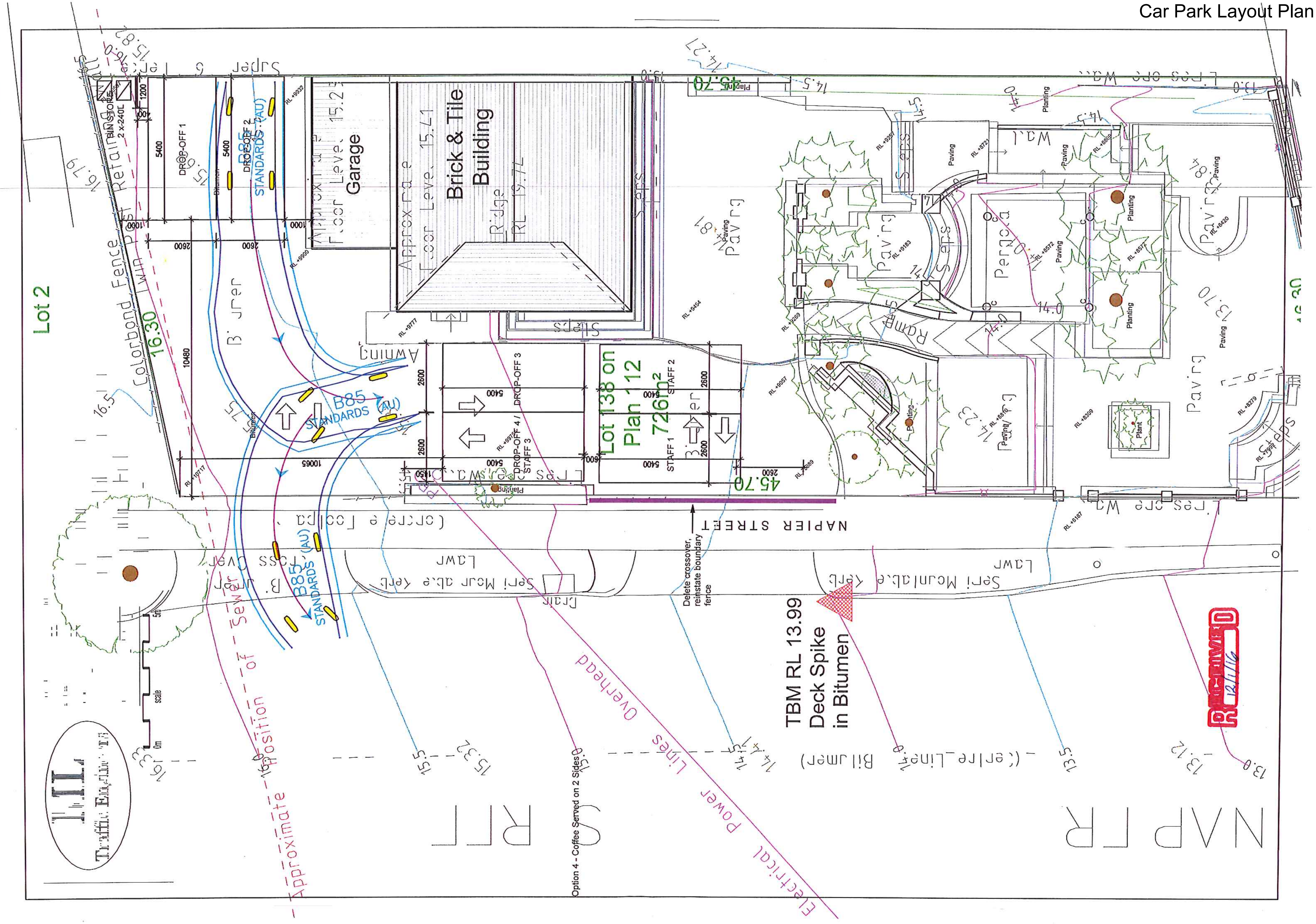
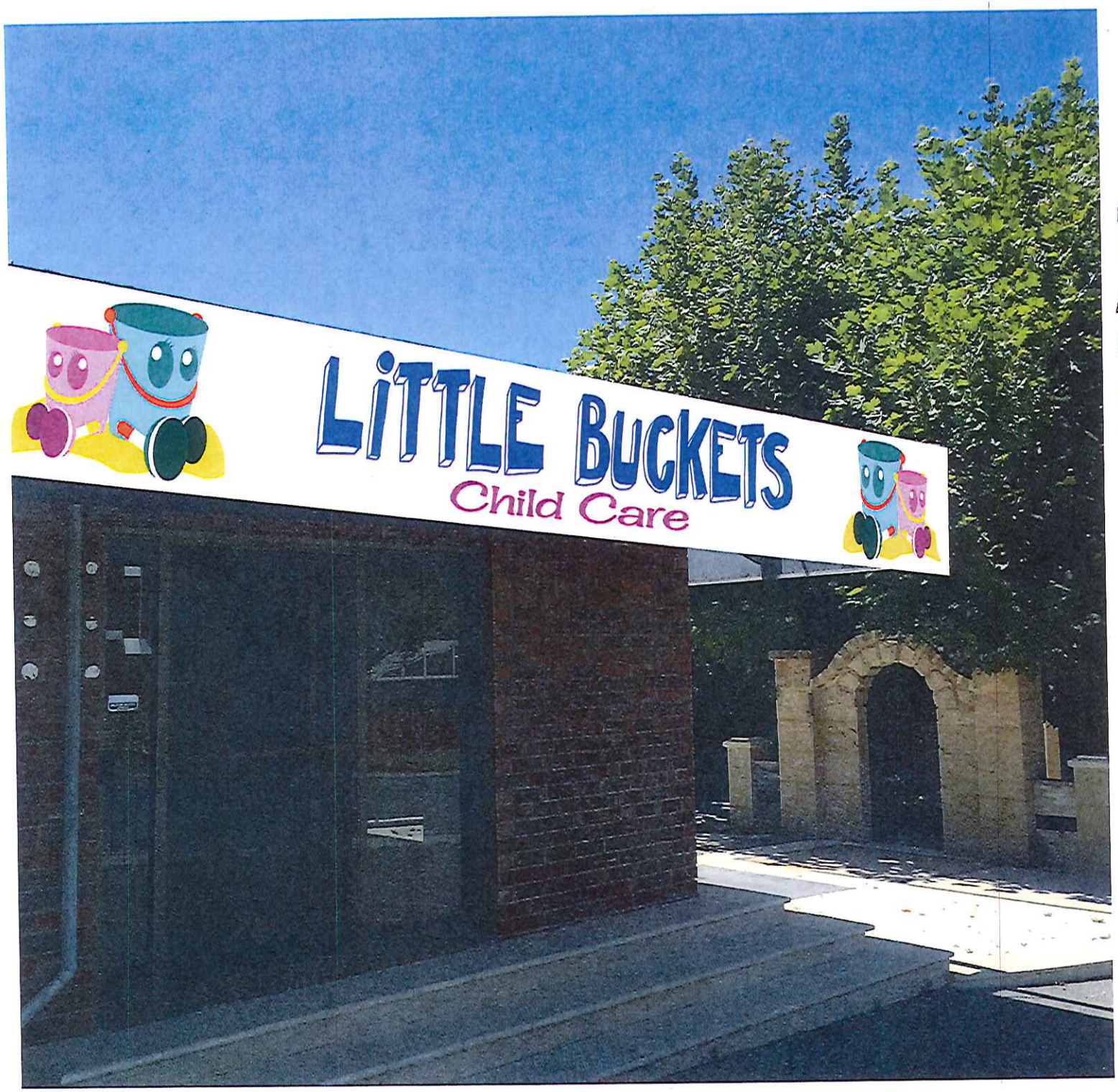
F 08 9463 6063
www.realserve.com.au

Car Park Layout Plan





SIDE 1

NON - ILLUMINATED
WALL SIGN

LENGTH - 8M

HEIGHT - 0.7M

HEIGHT OF UNDERSIDE
ABOVE NGL - 2.6M

RECEIVED
11/1/16

PD14.16 - Attachment 3
Signage Elevations

NON - ILLUMINATED WALL SIGN

SIDE 1

LENGTH - 8M
HEIGHT - 0.7M
HEIGHT OF UNDERSIDE ABOVE NGL - 2.6M

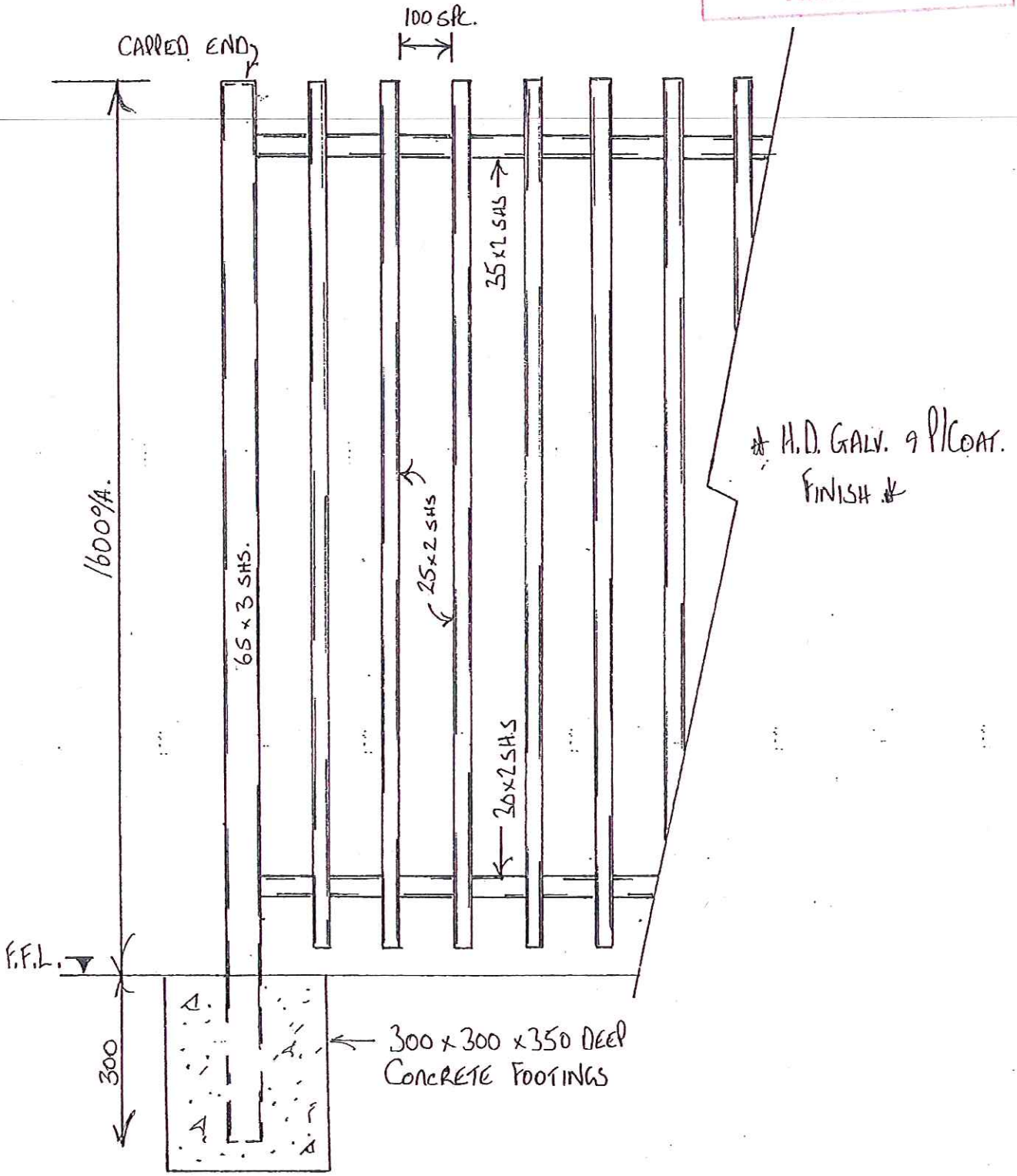
NON-ILLUMINATED PYLON SIGN

LENGTH - 2M

HEIGHT - 0.8M

HEIGHT OF UNDERSIDE ABOVE NGL - 2.7M

PROPOSED FENCING DETAIL



175 STIRLING HWY, NEDLANDS.

PD14.16 - Attachment 4
Fencing Elevation

PD14.16 - Attachment 5
Photograph of the property as seen from Napier Street

PD14.16 - Attachment 6

Photograph of the property as seen from Stirling Highway

RECEIVED 11/1/16

ML Traffic Engineers

A1514389W Transport Statement 1

11th January 2016

City of Nedlands
PO Box 9
Nedlands WA 6909
Tel: 08 9273 3500
Email: council@nedlands.wa.gov.au

Dear Sir/Madam,

Transport Statement – Planning Application for a Child Care Centre at 175 Stirling Highway, Nedlands

1. Overview

I refer to the planning application for a child Care centre at 175 Stirling Highway, Nedlands. The proposed centre will have a capacity of 20 children and 3 staff. A total of 6 parking bays are proposed – 2 for staff, 3 for drop-off/pick-up and 1 that is shared between staff (for staff's use after 9am and before 4pm) and drop-off/pick-up (before 9am and after 4pm).

The site is located on a corner block, with Napier Street abutting the western boundary and Stirling Highway abutting the southern boundary. There are 2 crossovers on Napier Street. The southern crossover (located closest to Stirling Highway) will be deleted to alleviate Council's concern about cars approaching the northern crossover at a higher than acceptable (for a shared pedestrian / vehicle environment) speed as part of a drive-in drive-out manoeuvre. The northern crossover will be retained for access to staff and drop-off / pick-up parking spaces.

A bin-store with room for 2 x 240 litre Council bins (each bin measures 0.74m deep x 0.55m wide) will be located at the north-east corner of the block. Refuse collection will occur on-street, with bins moved to the verge by staff on designated collection day.

Council has requested the provision of a transport statement to address concerns with manoeuvres at the crossover potentially clashing with traffic along Napier Street during peak periods, given the crossover's proximity to Stirling Highway.

IBM Building, Level 3, 1060 Hay Street, West Perth WA 6005

Telephone: 08 6467 7558 ***Facsimile: 1300 739 523***
perth@mltraffic.com.au *www.mltraffic.com.au*

ML Traffic Engineers Pty Ltd
ABN 69 148 048 257

2. Background Traffic Data

Council's information request for a transport statement came through during the school holiday period. Data collection was not undertaken given that traffic volumes would not be reflective of regular conditions. As such, weekday peak hourly directional traffic volumes for Stirling Highway were derived from Main Roads Western Australia's short-term counts at 2 locations:

- West of Vincent Street (SLK 6.41) collected in May 2008 during the school-term.
- East of Loch Street (SLK 7.02) collected in July 2015 during the school holidays.

A small growth factor (around 50 trips per hour in each direction) was applied to the Year 2008 data. Growth is generally minimal in built up areas where there are no significant land use changes.

There is no on-line traffic count data for Napier Street. Turning movements along Napier Street were estimated based on:

- Napier Street catering to around 64 dwellings for its entire length between Stirling Highway and Carrington Street.
- Ord Street and Loftus Street run parallel to Napier Street. Both these streets have the same functional hierarchy as Napier Street, being local streets.
- Not all trips associated with dwellings on Napier Street will pass through Napier Street / Stirling Highway intersection. There will be passing traffic from other streets as well as commercial tenancies in the vicinity of Stirling Highway. We have assumed these two factors to even out.
- Detached dwellings having a traffic generation rate of 1 trip per hour with 80% outbound / 20% inbound directional split in the AM peak period and a 70% inbound / 30% outbound directional split in the PM peak period.
- Directional split of 67% towards / from Perth CBD and 33% towards / from Fremantle.

Time of Day	Stirling Hwy (East Approach)		Stirling Hwy (West Approach)		Napier Street (North Approach)	
	Right	Through	Through	Left	Left	Right
8am to 9am	9	1100	1425	4	34	17
5pm to 6pm	30	1500	1140	15	13	6

Table 1: Estimated Traffic volumes at Napier Street / Stirling Highway Intersection

3. Drop-off and Pick-up Related Traffic

Table 3.6 of the NSW RTA Guide to Traffic Generating Developments Version 2.2 states traffic generation rates of 0.8 vehicle trip per child per hour between 7am and 9am and 0.7 vehicle trip between 4pm and 6pm. A 20-children centre will generate 16 trips per hour (8 in and 7 out) in the morning drop-off period and 14 trips per hour (7 in and 7 out) in the afternoon pick-up period. At other times of the day, traffic movements are expected to be minimal (1 or 2 trips every 2 to 3 hours). Traffic generation over a 24-hour period would be around 50 trips.

The existing use, being a building products showroom, would generate between 2 to 3 trips per hour during morning and afternoon commuter peak periods (staff movements), 2 to 3 trips per hour during daytime trading hours and around 30 trips over a 24 hour period.

Traffic distribution is assumed to be evenly distributed given a predominantly local catchment for the proposed child care centre. A worst case scenario will involve 100% of site traffic to pass through Napier Street / Stirling Highway intersection.

Time of Day	Stirling Hwy (East Approach)		Stirling Hwy (West Approach)		Napier Street (North Approach)	
	Right	Through	Through	Left	Left	Right
8am to 9am	9 + 4	1100	1425	4 + 4	34 + 4	17 + 3
5pm to 6pm	30 + 4	1500	1140	15 + 3	13 + 4	6 + 3

Table 2: Projected (with Child Care Centre) Traffic volumes at Napier Street / Stirling Highway Intersection

4. Intersection Configuration

The intersection of Napier Street and Stirling Highway features:

- A median break on Stirling Highway, with room for a driver exiting Napier Street to stage the crossing, i.e. give way to traffic in direction at a time. However, given the limited width of the median break at 3.5m, cars on the median eastbound lane of Stirling Highway may need to move to the kerbside lane should the rear of the exiting vehicle be partially blocking the median lane.
- 2 traffic lanes in each direction along Stirling Highway. A vehicle that is stopped at the median to turn into Napier Street will not block the passage of westbound traffic entirely. Cars on the westbound median lane of Stirling Highway may need to move to the kerbside lane should the rear of a right-turning vehicle be partially blocking the median lane.
- Room for 2 stand-up lanes on the Napier Street approach over a 12m length (given the statutory No Standing zone) and a carriageway width of 12m at the

intersection holding line. In other words, there is room for a left-turning vehicle to pass up to 2 queued right-turning cars.

5. SIDRA Intersection Analyses

SIDRA intersection operations analyses were undertaken using SIDRA 6.0. The following findings apply:

- Marginal increase in queue length on Napier Street approach in the morning – an increase of 0.6m from 3.8m to 4.4m.
- Marginal increase in queue length on Napier Street approach in the afternoon – an increase of 0.3m from 0.9m to 1.2m.
- Marginal increase in average delay on Napier Street approach in the morning – an increase of 0.5s from 24.7s to 25.2s.
- Marginal increase in average delay on Napier Street approach in the afternoon – an increase of 0.2s from 15.2s to 15.4s.

The retained (northern) crossover is located 40m Stirling Highway. There is room to store 8 cars between the crossover and Give Way holding line – 4 cars at the 12m wide portion (over a length of 12m) of Napier Street and 4 cars in a single file to the retained crossover of the subject site. The modelled queue lengths for existing and proposed conditions are well below the storage capacity.

6. Crash Analysis of Napier Street

A 5-year analysis of intersection and midblock crashes within Napier Street between 1st January 2010 and 31st December 2014, along the section between Stirling Highway (chainage 0.00km) and Bedford Street west (chainage 0.34km) shows:

- A total of 3 crashes – with all 3 crashes occurring the intersection of Stirling Highway and Napier Street (chainage 0.00km).
- 2 crashes involved property damage with minor severity. 1 crash involved property damage with major severity.
- 2 right-angled crashes and 1 rear-end crash.
- No reported mid-block crashes along Napier Street.

The number and type of crashes are on the minimum end of the scale – being fewer than 1 crash per year. The minimal additional traffic generation from the proposed child care centre will not adversely affect the operation of Napier Street.

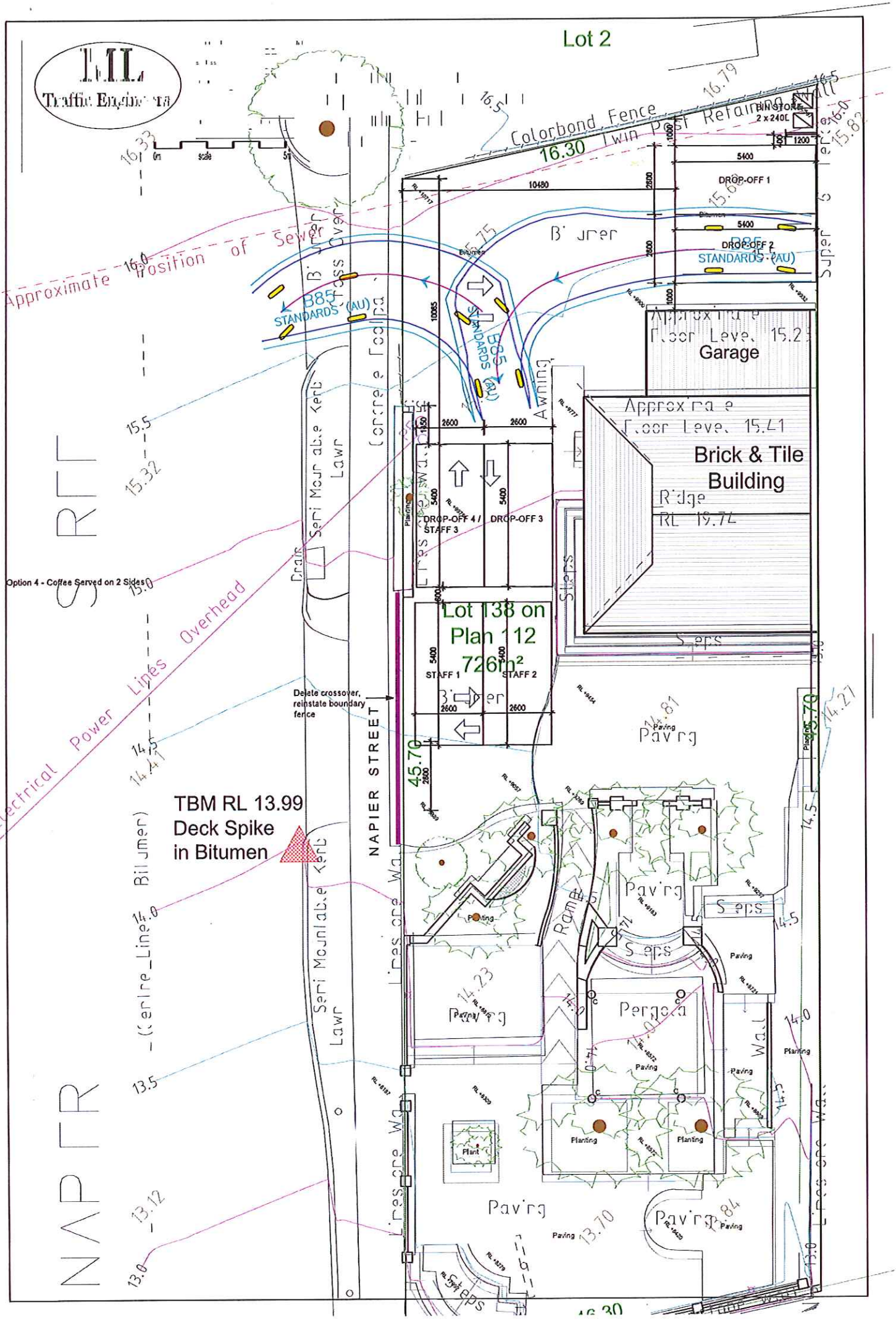
7. Conclusions

We trust the explanations presented in this letter are sufficient for Council to support this Planning application. If you need to clarify or discuss any of the points raised in this letter, please contact the writer on 08 6467 7558 or mlee6@mltraffic.com.au.

Yours sincerely,

Michael Lee (BEng, 1989)
Principal

Appendix A: Proposed Car Park


Lot 2
Colorbond Fence
Twin Post Retaining Wall
BIN STORE
2 x 240L
DROP-OFF 1
DROP-OFF 2
STANDARDS (AU)
Approximate Position of Sewer
Approximate Floor Level 15.25
Garage
Approximate Floor Level 15.41
Brick & Tile Building
Ridge
RL 19.72
DROP-OFF 4 / STAFF 3
DROP-OFF 3
STAFF 1
STAFF 2
Awning
Steps
Lot 138 on Plan 112
726m²
Option 4 - Coffee Served on 2 Sides
Delete crossover, reinstate boundary fence
NAPIER STREET
Electrical Power Lines Overhead
TBM RL 13.99
Deck Spike
in Bitumen
Bitumen
Kerb
Lawn
Pergola
Planting
Paving
Ramp
Wall
Plant
45.70
16.30

Appendix B: 5-Year Crash History

Detailed Crash History

Report Criteria

Road	SLK	CWY
1220112 - Napier St	0.00 to 0.34	All

Parameter	Value	Description
From Date	01/01/2010	
To Date	31/12/2014	
Crash Type	All	
Severity	All	

Road	SLK	CWY	True Dist	Loc End Date	Dist Error	Intersection	Date	Day	Time	Severity	Crash No.	Type	Light Cond	Road Cond	Speed Limit	Traffic Control	Road Feature	Road Alignment	Speed Factor	MR Nature	Location	RUM	Unit	Unit Type	From Dir	To Dir	Veh/Ped Move	First Object Hit	Second Object Hit	Third Object Hit	Target Impact Point
1220112	0.00	S	0.00			STIRLING HWY (013946)	18/05/2010	Tuesday	1640	PDO Minor	20108 09033	Intersection	Daylight	Dry	60	Give Way Sign	3-way Intx (T-junction)	Straight		Right Angle	On Cway	17:Intx: Thru - Left	Target	Station Wagon	S - STIRLING HWY	N - STIRLING HWY	Straight Ahead: Not Out Of Control				Rear
																							Colliding	Car	N - NAPIER ST	N - STIRLING HWY	Turning: To Make Left Turn				
							29/06/2010	Tuesday	1250	PDO Minor	20101 99523	Intersection	Daylight	Dry	60	No Sign Or Control	3-way Intx (T-junction)	Straight		Rear End	On Cway	31:Same Dirn: Same Lane Rear End	Target	Car	N - STIRLING HWY	S - STIRLING HWY	Stopped: To Avoid Veh				Rear
																							Colliding	Car	N - STIRLING HWY	S - STIRLING HWY	Straight Ahead: Not Out Of Control				
							05/02/2012	Sunday	2130	PDO Major	20120 26533	Intersection	Dark - Street Lights On	Dry		Give Way Sign	3-way Intx (T-junction)	Straight	No	Right Angle	On Cway	17:Intx: Thru - Left	Colliding	Car			Straight Ahead: Not Out Of Control				
																							Target	Car			Turning: To Make Left Turn				Side

Appendix C: Traffic Volumes

Weekly Volume by Hour

Traffic Flow:	**Both Directions**	Road Name:	**Stirling Hwy (H014)**
Site No:	**4218**	Location Description:	**West of Vincent St (SLK 6.41)**
Date Range:	**08 May 2008 to 12 May 2008**	Count Type:	**Axle Pairs**

Average Vehicle Volume

Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon - Fri	Mon - Sun
0000	155			194	298	461	559	216	333
0100	78			100	150	276	330	109	187
0200	46			55	131	206	201	77	128
0300	56			46	87	135	168	63	98
0400	96			89	86	117	142	90	106
0500	322			318	333	173	150	324	259
0600	956			1078	1066	446	205	1033	750
0700	2198			2242	2152	715	430	2197	1547
0800	2520			2411	2503	1396	854	2478	1937
0900	2144			2346	2272	1750	1229	2254	1948
1000	1983			2227	2180	2080	1458	2130	1986
1100	2146			2206	2355	2306	1895	2236	2182
1200	2099			2508	2495	2355	2019	2367	2295
1300	2099			2178	2484	2223	1705	2254	2138
1400	2199			2333	2435	2112	1740	2322	2164
1500	2466			2582	2628	1980	1781	2559	2287
1600	2404			2491	2537	1942	1853	2477	2245
1700	2491			2618	2599	2080	1839	2569	2325
1800	1930			2304	2290	1696	1418	2175	1928
1900	1127			1468	1646	1171	862	1414	1255
2000	833			1033	973	851	767	946	891
2100	706			993	948	761	666	882	815
2200	420			728	968	894	423	705	687
2300	228			436	728	811	245	464	490
Total	31702			34984	36344	28937	22939	34341	30981

Peak Statistics

		Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon - Fri	Mon - Sun
AM	1/4 Hour	0800			0745	0800	1130	1145	0800	1145
	1/4 Hr Vol	661			659	651	608	532	652	577
	1/2 Hour	0745			0745	0800	1115	1145	0745	1145
	1/2 Hr Vol	1309			1302	1295	1193	1043	1299	1150
	1 Hour	0730			0730	0745	1145	1145	0730	1145
	1 Hr Vol	2552			2545	2534	2362	2070	2541	2311
	1 Hr Fact	.9652			.9655	.9731	.9617	.9727	.9748	.9907
	2 Hour	0730			0730	1145	1115	1115	0730	1115
	2 Hr Vol	4900			4855	4949	4692	3949	4882	4502
PM	1/4 Hour	1630			1800	1500	1230	1215	1700	1700
	1/4 Hr Vol	679			677	676	614	527	668	594
	1/2 Hour	1445			1445	1500	1215	1200	1445	1700
	1/2 Hr Vol	1275			1335	1328	1197	1038	1312	1177
	1 Hour	1445			1715	1445	1200	1200	1445	1700
	1 Hr Vol	2496			2624	2633	2355	2019	2582	2325
	1 Hr Fact	.96			.969	.9737	.9589	.9578	.9717	.9779
	2 Hour	1445			1615	1445	1200	1200	1445	1445
	2 Hr Vol	4985			5136	5182	4578	3724	5087	4578
Peak	12 Hour	0700			0715	0715	0800	0830	0715	0715
	12 Hr Vol	26679			28456	29045	23091	18665	28043	25075

Weekly Volume by Hour

Traffic Flow:	**Directional**	Road Name:	**Stirling Hwy (H014)**
Site No:	**4218**	Location Description:	**West of Vincent St (SLK 6.41)**
Date Range:	**08 May 2008 to 12 May 2008**	Count Type:	**Axle Pairs**

Average Vehicle Volume

Hour	Mon		Tue		Wed		Thu		Fri		Sat		Sun		Mon - Fri		Mon - Sun	
	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W
0000	81	74					84	110	165	133	253	208	311	248	110	106	179	155
0100	45	33					48	52	80	70	145	131	160	170	58	52	96	91
0200	22	24					32	23	70	61	98	108	92	109	41	36	63	65
0300	31	25					19	27	49	38	70	65	78	90	33	30	49	49
0400	57	39					45	44	39	47	53	64	66	76	47	43	52	54
0500	152	170					147	171	149	184	73	100	65	85	149	175	117	142
0600	443	513					495	583	467	599	205	241	109	96	468	565	344	406
0700	1276	922					1390	852	1272	880	311	404	215	215	1313	885	893	655
0800	1438	1082					1397	1014	1363	1140	609	787	417	437	1399	1079	1045	892
0900	1125	1019					1205	1141	1268	1004	805	945	569	660	1199	1055	994	954
1000	1034	949					1150	1077	1123	1057	1035	1045	709	749	1102	1028	1010	975
1100	1069	1077					1085	1121	1191	1164	1134	1172	968	927	1115	1121	1089	1092
1200	1056	1043					1214	1294	1206	1289	1235	1120	1010	1009	1159	1209	1144	1151
1300	1077	1022					1113	1065	1225	1259	1106	1117	848	857	1138	1115	1074	1064
1400	1081	1118					1138	1195	1170	1265	996	1116	885	855	1130	1193	1054	1110
1500	1158	1308					1250	1332	1281	1347	1052	928	875	906	1230	1329	1123	1164
1600	1092	1312					1094	1397	1242	1295	1021	921	915	938	1143	1335	1073	1173
1700	1069	1422					1120	1498	1127	1472	1110	970	898	941	1105	1464	1065	1261
1800	818	1112					951	1353	971	1319	821	875	676	742	913	1261	847	1080
1900	472	655					642	826	763	883	571	600	435	427	626	788	577	678
2000	390	443					529	504	475	498	422	429	411	356	465	482	445	446
2100	306	400					477	516	479	469	419	342	325	341	421	462	401	414
2200	197	223					348	380	469	499	397	497	238	185	338	367	330	357
2300	102	126					200	236	364	364	419	392	133	112	222	242	244	246
Total	15591	16111					17173	17811	18008	18336	14360	14577	11408	11531	16924	17422	15308	15674

Peak Statistics

		Mon		Tue		Wed		Thu		Fri		Sat		Sun		Mon - Fri		Mon - Sun	
		E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W
AM	1/4 Hour	0730	0800					0745	0945	0730	0815	1130	1115	1145	1145	0730	0800	1145	1145
	1/4 Hr Vol	378	310					406	317	371	313	316	299	264	268	385	304	291	286
	1/2 Hour	0730	0745					0730	0945	0730	1145	1130	1100	1145	1145	0730	1145	1145	1145
	1/2 Hr Vol	748	588					811	592	724	638	607	593	515	528	761	592	575	576
	1 Hour	0730	0745					0730	1145	0730	1145	1145	1100	1145	1130	0730	1145	1145	1145
	1 Hr Vol	1465	1100					1514	1250	1400	1281	1234	1172	1032	1046	1460	1209	1152	1159
	1 Hr Fact	.9689	.8871					.9323	.9328	.9434	.9531	.9405	.9799	.9773	.9757	.9489	.9367	.9769	.9645
	2 Hour	0715	1045					0715	1115	0715	1145	1115	1100	1100	1115	0715	1115	1115	1115
	2 Hr Vol	2807	2137					2837	2436	2749	2522	2411	2292	1978	1989	2798	2345	2240	2261
PM	1/4 Hour	1545	1630					1545	1800	1615	1700	1715	1315	1215	1215	1545	1700	1230	1745
	1/4 Hr Vol	. 306	388					332	413	332	382	336	294	259	268	317	375	295	322
	1/2 Hour	1545	1730					1530	1745	1600	1730	1215	1400	1215	1200	1545	1730	1230	1730
	1/2 Hr Vol	603	713					631	810	660	742	645	578	517	528	624	741	578	639
	1 Hour	1530	1700					1500	1715	1530	1700	1200	1345	1200	1200	1500	1700	1200	1700
	1 Hr Vol	1184	1422					1250	1533	1282	1472	1235	1143	1010	1009	1230	1464	1144	1261
	1 Hr Fact	.9673	.974					.9413	.928	.9654	.9634	.9413	.982	.9749	.9412	.97	.976	.9701	.9803
	2 Hour	1445	1600					1430	1630	1445	1645	1200	1245	1200	1530	1430	1630	1430	1615
	2 Hr Vol	2327	2734					2424	2973	2551	2838	2341	2261	1858	1899	2421	2835	2234	2434
Peak	12 Hour	0700	0715					0700	0730	0715	0730	0800	0745	0845	0815	0700	0730	0715	0730
	12 Hr Vol	13293	13391					14107	14451	14461	14638	11495	11610	9237	9460	13946	14149	12431	12687

Weekly Volume by Hour

Traffic Flow:	**Both Directions**	Road Name:	**Stirling Hwy (H014)**
Site No:	**0724**	Location Description:	**East of Loch St (SLK 7.02)**
Date Range:	**09 Jul 2015 to 12 Jul 2015**	Count Type:	**Axle Pairs**

Average Vehicle Volume

Hour	Mon	Tue	Wed	Thu ⇙	Fri ⇙	Sat ⇙	Sun ⇙	Mon - Fri	Mon - Sun
0000				167	276	346	363	222	288
0100				88	139	242	257	114	182
0200				65	104	162	188	85	130
0300				65	81	110	136	73	98
0400				122	102	104	102	112	108
0500				386	368	222	137	377	278
0600				1124	1110	537	284	1117	764
0700				1938	1865	814	426	1902	1261
0800				2368	2287	1109	811	2328	1644
0900				2085	2078	1546	1166	2082	1719
1000				2101	2206	1892	1507	2154	1927
1100				2225	2235	2303	1767	2230	2133
1200				2394	2413	2371	1888	2404	2267
1300				2153	2307	2239	2061	2230	2190
1400				2288	2238	2198	1967	2263	2173
1500				2532	2475	2014	1806	2504	2207
1600				2408	2326	1959	1818	2367	2128
1700				2485	2463	1894	1693	2474	2134
1800				1958	1770	1478	1298	1864	1626
1900				1258	1275	896	846	1267	1069
2000				1089	901	810	635	995	859
2100				953	856	814	602	905	806
2200				679	732	677	477	706	641
2300				387	473	550	260	430	418
Total				33318	33080	27287	22495	33205	29050

Peak Statistics

		Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon - Fri	Mon - Sun
AM	1/4 Hour				0815	0830	1145	1145	0815	1145
	1/4 Hr Vol				638	610	595	488	601	552
	1/2 Hour				0815	0815	1145	1130	0815	1130
	1/2 Hr Vol				1225	1173	1188	928	1199	1098
	1 Hour				0800	1145	1145	1145	1145	1145
	1 Hr Vol				2368	2329	2401	1915	2349	2253
	1 Hr Fact				.9279	.8769	.984	.9424	.9388	.9539
	2 Hour				1130	1115	1115	1145	1130	1130
	2 Hr Vol				4657	4694	4752	3933	4669	4476
PM	1/4 Hour				1515	1230	1215	1315	1700	1230
	1/4 Hr Vol				673	664	610	554	661	591
	1/2 Hour				1515	1230	1215	1315	1645	1215
	1/2 Hr Vol				1305	1290	1213	1065	1273	1161
	1 Hour				1630	1645	1215	1315	1645	1215
	1 Hr Vol				2555	2483	2386	2071	2507	2281
	1 Hr Fact				.962	.9448	.9779	.9346	.9489	.9657
	2 Hour				1515	1515	1200	1300	1515	1215
	2 Hr Vol				4982	4824	4610	4028	4903	4465
Peak	12 Hour				0645	0645	0730	0815	0645	0715
	12 Hr Vol				26964	26682	21961	18664	26823	23456

Weekly Volume by Hour

Traffic Flow:	**Directional**	Road Name:	**Stirling Hwy (H014)**
Site No:	**0724**	Location Description:	**East of Loch St (SLK 7.02)**
Date Range:	**09 Jul 2015 to 12 Jul 2015**	Count Type:	**Axle Pairs**

Average Vehicle Volume

Hour	Mon		Tue		Wed		Thu		Fri		Sat		Sun		Mon - Fri		Mon - Sun	
	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W
0000							73	94	146	130	184	162	175	188	110	112	145	144
0100							39	49	78	61	126	116	129	128	59	55	93	89
0200							32	33	61	43	86	76	106	82	47	38	71	59
0300							42	23	40	41	65	45	72	64	41	32	55	43
0400							63	59	52	50	52	52	52	50	58	55	55	53
0500							205	181	167	201	112	110	67	70	186	191	138	141
0600							531	593	484	626	216	321	130	154	508	610	340	424
0700							1154	784	1150	715	332	482	217	209	1152	750	713	548
0800							1370	998	1345	942	484	625	329	482	1358	970	882	762
0900							1081	1004	1058	1020	686	860	476	690	1070	1012	825	894
1000							1018	1083	1099	1107	867	1025	676	831	1059	1095	915	1012
1100							1116	1109	1125	1110	1142	1161	864	903	1121	1110	1062	1071
1200							1199	1195	1212	1201	1207	1164	935	953	1206	1198	1138	1128
1300							1116	1037	1196	1111	1109	1130	984	1077	1156	1074	1101	1089
1400							1165	1123	1146	1092	1116	1082	968	999	1156	1108	1099	1074
1500							1290	1242	1210	1265	1078	936	943	863	1250	1254	1130	1077
1600							1090	1318	1067	1259	1069	890	1021	797	1079	1289	1062	1066
1700							1068	1417	1125	1338	1089	805	954	739	1097	1378	1059	1075
1800							849	1109	849	921	797	681	687	611	849	1015	796	831
1900							624	634	585	690	470	426	441	405	605	662	530	539
2000							568	521	451	450	413	397	332	303	510	486	441	418
2100							476	477	403	453	434	380	351	251	440	465	416	390
2200							358	321	388	344	363	314	263	214	373	333	343	298
2300							213	174	227	246	268	282	115	145	220	210	206	212
Total							16740	16578	16664	16416	13765	13522	11287	11208	16710	16502	14615	14437

Peak Statistics

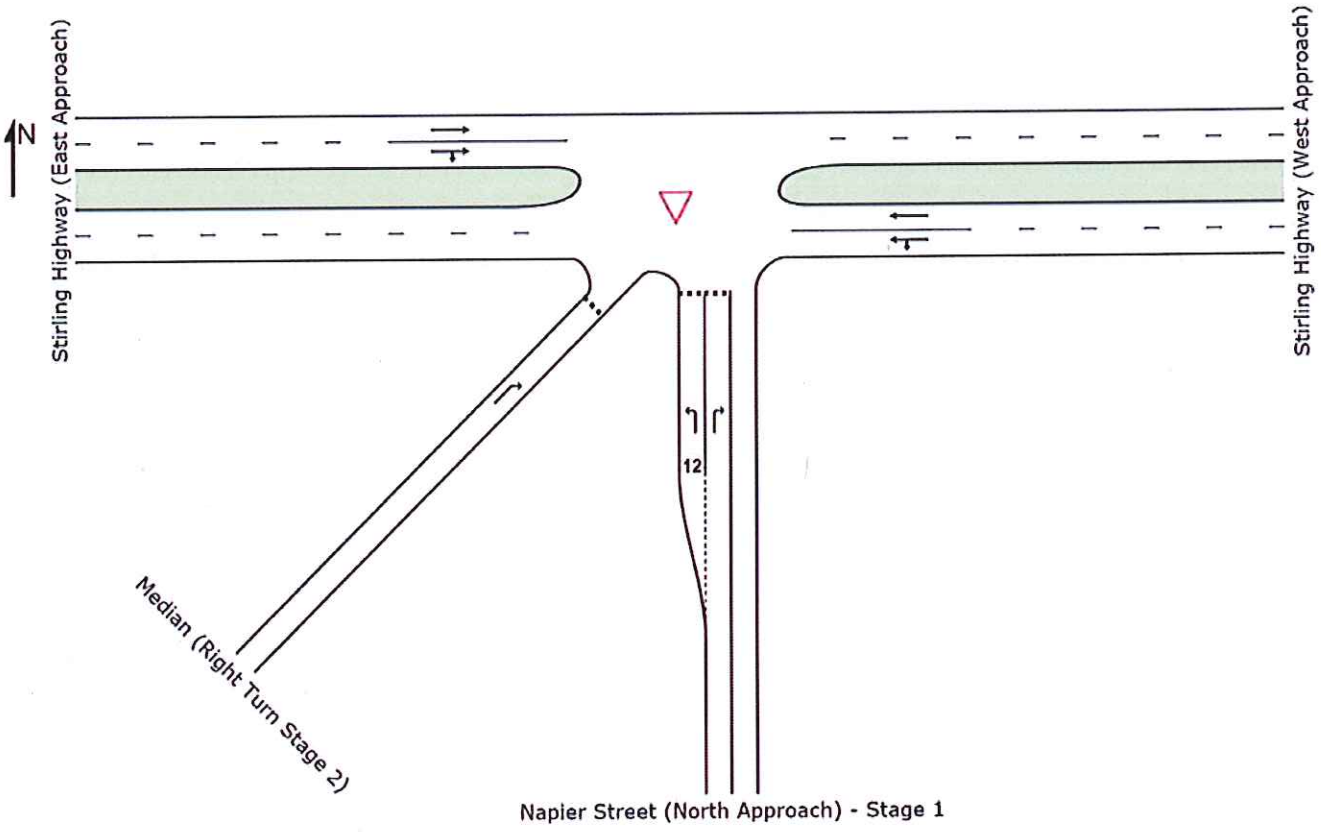
		Mon		Tue		Wed		Thu		Fri		Sat		Sun		Mon - Fri		Mon - Sun	
		E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W
AM	1/4 Hour							0815	1045	0800	1000	1145	1115	1145	1145	0800	1045	1145	1145
	1/4 Hr Vol							375	315	371	296	302	299	240	248	366	286	277	276
	1/2 Hour							0800	1145	0745	1100	1145	1115	1145	1130	0745	1145	1130	1130
	1/2 Hr Vol							735	612	729	579	605	598	468	476	730	570	549	549
	1 Hour							0730	1130	0745	1145	1145	1130	1145	1145	0745	1145	1145	1145
	1 Hr Vol							1426	1226	1421	1159	1225	1182	936	979	1424	1178	1126	1128
	1 Hr Fact							.9507	.9608	.9575	.8834	.9879	.985	.936	.9377	.974	.9469	.9252	.9535
	2 Hour							0730	1115	0715	1100	1115	1115	1145	1145	0715	1115	1130	1130
	2 Hr Vol							2603	2335	2554	2311	2406	2346	1939	1994	2573	2321	2254	2222
PM	1/4 Hour							1515	1630	1230	1730	1300	1215	1315	1345	1230	1730	1230	1215
	1/4 Hr Vol							348	365	336	373	317	300	282	284	329	368	304	296
	1/2 Hour							1500	1715	1230	1645	1215	1215	1315	1345	1230	1715	1230	1215
	1/2 Hr Vol							670	725	660	698	620	593	530	559	646	704	594	582
	1 Hour							1445	1630	1230	1645	1215	1215	1615	1315	1445	1645	1230	1215
	1 Hr Vol							1295	1431	1269	1380	1221	1165	1056	1094	1260	1405	1160	1136
	1 Hr Fact							.9303	.9801	.9442	.9249	.9629	.9708	.9462	.963	.9604	.9545	.9532	.9603
	2 Hour							1400	1630	1230	1545	1200	1200	1515	1215	1345	1615	1215	1215
	2 Hr Vol							2455	2777	2432	2620	2316	2294	2025	2093	2412	2670	2243	2223
Peak	12 Hour							0645	0645	0700	0645	0815	0730	0815	0815	0645	0645	0715	0730
	12 Hr Vol							13532	13432	13582	13116	11158	10874	9297	9367	13549	13274	11802	11663

Appendix D: SIDRA Assessment of Intersection Queuing

SITE LAYOUT

▽ Site: 2016 AM No Development Napier St Stirling Hwy

Staged crossing at three-way intersection with 4-lane major road (Give-way control)
Give-way behaviour assumed for Stage 2
Giveway / Yield (Two-Way)



MOVEMENT SUMMARY

▽ Site: 2016 AM No Development Napier St Stirling Hwy

Staged crossing at three-way intersection with 4-lane major road (Give-way control)
Give-way behaviour assumed for Stage 2
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	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: Napier Street (North Approach) - Stage 1											
1	L2	34	0.0	0.179	23.3	LOS C	0.5	3.8	0.88	0.95	39.7
3	R2	17	0.0	0.120	27.5	LOS D	0.3	2.4	0.89	0.95	23.6
Approach		51	0.0	0.179	24.7	LOS C	0.5	3.8	0.88	0.95	32.3
East: Stirling Highway (West Approach)											
4	L2	4	0.0	0.378	5.6	LOS A	0.0	0.0	0.00	0.00	58.3
5	T1	1425	5.0	0.378	0.1	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		1429	5.0	0.378	0.1	NA	0.0	0.0	0.00	0.00	59.9
West: Stirling Highway (East Approach)											
11	T1	1100	5.0	0.314	13.5	LOS B	9.0	65.6	0.46	0.01	49.1
12	R2	9	0.0	0.314	34.8	LOS D	9.0	65.6	1.00	0.02	39.8
Approach		1109	5.0	0.314	13.7	NA	9.0	65.6	0.47	0.01	49.0
SouthWest: Median (Right Turn Stage 2)											
32a	R1	17	0.0	0.044	7.5	LOS A	0.1	0.8	0.70	0.70	43.3
Approach		17	0.0	0.044	7.5	LOS A	0.1	0.8	0.70	0.70	43.3
All Vehicles		2606	4.8	0.378	6.4	NA	9.0	65.6	0.22	0.03	53.8

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▽ Site: 2016 AM With Development Napier St Stirling Hwy

Staged crossing at three-way intersection with 4-lane major road (Give-way control)
Give-way behaviour assumed for Stage 2
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	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: Napier Street (North Approach) - Stage 1											
1	L2	38	0.0	0.201	23.9	LOS C	0.6	4.4	0.88	0.96	39.4
3	R2	20	0.0	0.142	27.8	LOS D	0.4	2.8	0.89	0.95	23.5
Approach		58	0.0	0.201	25.2	LOS D	0.6	4.4	0.89	0.95	32.0
East: Stirling Highway (West Approach)											
4	L2	8	0.0	0.379	5.6	LOS A	0.0	0.0	0.00	0.01	58.2
5	T1	1425	5.0	0.379	0.1	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		1433	5.0	0.379	0.1	NA	0.0	0.0	0.00	0.00	59.9
West: Stirling Highway (East Approach)											
11	T1	1100	5.0	0.324	13.3	LOS B	8.8	64.5	0.44	0.01	49.2
12	R2	13	0.0	0.324	35.5	LOS E	8.8	64.5	1.00	0.03	39.4
Approach		1113	4.9	0.324	13.6	NA	8.8	64.5	0.45	0.01	49.1
SouthWest: Median (Right Turn Stage 2)											
32a	R1	20	0.0	0.052	7.7	LOS A	0.2	1.0	0.70	0.70	43.2
Approach		20	0.0	0.052	7.7	LOS A	0.2	1.0	0.70	0.70	43.2
All Vehicles		2624	4.8	0.379	6.4	NA	8.8	64.5	0.22	0.03	53.7

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▽ Site: 2016 PM No Development Napier St Stirling Hwy

Staged crossing at three-way intersection with 4-lane major road (Give-way control)
Give-way behaviour assumed for Stage 2
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	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: Napier Street (North Approach) - Stage 1											
1	L2	13	0.0	0.041	14.4	LOS B	0.1	0.9	0.77	0.89	43.9
3	R2	6	0.0	0.025	16.9	LOS C	0.1	0.5	0.79	0.90	25.3
Approach		19	0.0	0.041	15.2	LOS C	0.1	0.9	0.78	0.89	35.7
East: Stirling Highway (West Approach)											
4	L2	15	0.0	0.306	5.6	LOS A	0.0	0.0	0.00	0.02	58.2
5	T1	1140	5.0	0.306	0.0	LOS A	0.0	0.0	0.00	0.01	59.9
Approach		1155	4.9	0.306	0.1	NA	0.0	0.0	0.00	0.01	59.8
West: Stirling Highway (East Approach)											
11	T1	1500	5.0	0.443	9.4	LOS A	9.5	69.5	0.44	0.02	51.9
12	R2	30	0.0	0.443	26.7	LOS D	9.5	69.5	1.00	0.05	43.5
Approach		1530	4.9	0.443	9.7	NA	9.5	69.5	0.45	0.02	51.7
SouthWest: Median (Right Turn Stage 2)											
32a	R1	17	0.0	0.086	16.7	LOS C	0.3	1.5	0.85	0.85	35.7
Approach		17	0.0	0.086	16.7	LOS C	0.3	1.5	0.85	0.85	35.7
All Vehicles		2721	4.9	0.443	5.7	NA	9.5	69.5	0.27	0.03	54.6

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▽ Site: 2016 PM With Development Napier St Stirling Hwy

Staged crossing at three-way intersection with 4-lane major road (Give-way control)
Give-way behaviour assumed for Stage 2
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	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: Napier Street (North Approach) - Stage 1											
1	L2	17	0.0	0.054	14.5	LOS B	0.2	1.2	0.77	0.89	43.9
3	R2	9	0.0	0.038	17.2	LOS C	0.1	0.8	0.80	0.90	25.3
Approach		26	0.0	0.054	15.4	LOS C	0.2	1.2	0.78	0.90	35.0
East: Stirling Highway (West Approach)											
4	L2	18	0.0	0.307	5.6	LOS A	0.0	0.0	0.00	0.02	58.1
5	T1	1140	5.0	0.307	0.0	LOS A	0.0	0.0	0.00	0.01	59.8
Approach		1158	4.9	0.307	0.1	NA	0.0	0.0	0.00	0.01	59.8
West: Stirling Highway (East Approach)											
11	T1	1500	5.0	0.449	9.4	LOS A	9.5	69.3	0.43	0.03	51.9
12	R2	34	0.0	0.449	27.1	LOS D	9.5	69.3	1.00	0.06	43.3
Approach		1534	4.9	0.449	9.8	NA	9.5	69.3	0.45	0.03	51.7
SouthWest: Median (Right Turn Stage 2)											
32a	R1	17	0.0	0.087	16.9	LOS C	0.3	1.5	0.85	0.85	35.6
Approach		17	0.0	0.087	16.9	LOS C	0.3	1.5	0.85	0.85	35.6
All Vehicles		2735	4.8	0.449	5.8	NA	9.5	69.3	0.26	0.03	54.5

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Environmental Noise Assessment

Childcare Centre, 175 Stirling Highway, Nedlands

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Prepared for:
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Report: 15123434-01.docx

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Appendices

1 INTRODUCTION

A childcare centre (CCC) is proposed at 175 Stirling Highway, Nedlands, as shown on *Figure 1-1* below. The site is at the corner of Stirling Highway and Napier street and with existing residential premises immediately to the north and to the east.

The proposal is to refurbish the existing commercial premises and keeping the existing car parking layout, that is, car parking at the rear for staff and children drop off spots to the west of the building. Entry / exit is via Napier Street.

The proposed CCC will cater for two to five year olds and accommodate up to 20 children in one group. The proposed hours of operation are Monday to Friday, 7.30am to 6.00pm. It is therefore expected members of staff will arrive after 7.00am, and that children drop-offs will also start after 7.00am.

This report assesses noise emissions from the proposed site against the *Environmental Protection (Noise) Regulations 1997* (the Regulations).

Figure 1-1 Site Locality (City of Nedlands IntraMaps)

The site plan is included in *Appendix A* and forms the basis of this environmental noise assessment.

Appendix D contains a description of some of the acoustic terminology used throughout this report.

2 CRITERIA

Environmental noise in Western Australia is governed by the *Environmental Protection Act 1986*, through the *Environmental Protection (Noise) Regulations 1997* (the Regulations).

Regulation 7 defines the prescribed standard for noise emissions as follows:

"7. (1) Noise emitted from any premises or public place when received at other premises –

(a) Must not cause or significantly contribute to, a level of noise which exceeds the assigned level in respect of noise received at premises of that kind; and

(b) Must be free of –

i. Tonality;

ii. Impulsiveness; and

iii. Modulation".

A "...noise emission is taken to *significantly contribute to* a level of noise if the noise emission exceeds a value which is 5 dB below the assigned level..."

Tonality, impulsiveness and modulation are defined in Regulation 9. Noise is to be taken to be free of these characteristics if:

(a) The characteristics cannot be reasonably and practicably removed by techniques other than attenuating the overall level of noise emission; and

(b) The noise emission complies with the standard after the adjustments of *Table 2-1* are made to the noise emission as measured at the point of reception.

Table 2-1 Adjustments for Intrusive Characteristics

Tonality	Modulation	Impulsiveness
+ 5dB	+ 5dB	+ 10dB

Note: The above are cumulative to a maximum of 15dB.

The baseline assigned levels (prescribed standards) are specified in Regulation 8 and are shown in *Table 2-2*.

Table 2-2 Baseline Assigned Noise Levels

Premises Receiving Noise	Time Of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise sensitive premises: highly sensitive area[1]	0700 to 1900 hours Monday to Saturday (Day)	45 + influencing factor	55 + influencing factor	65 + influencing factor
	0900 to 1900 hours Sunday and public holidays (Sunday)	40 + influencing factor	50 + influencing factor	65 + influencing factor
	1900 to 2200 hours all days (Evening)	40 + influencing factor	50 + influencing factor	55 + influencing factor
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night)	35 + influencing factor	45 + influencing factor	55 + influencing factor
Noise sensitive premises: any area other than highly sensitive area	All hours	60	75	80
Commercial	All hours	60	75	80
Industrial	All hours	65	80	90

1. ***highly sensitive area*** means that area (if any) of noise sensitive premises comprising —
   (a) a building, or a part of a building, on the premises that is used for a noise sensitive purpose; and
   (b) any other part of the premises within 15 metres of that building or that part of the building;

The influencing factor applicable at the closest noise-sensitive premises has been calculated as 7 dB as shown in *Table 2-3*, and based on the land use maps from the City of Nedlands and Town of Claremont shown in *Appendix B*.

Table 2-3 Influencing Factor Calculation

Description	Within 100 metre Radius	Within 450 metre Radius	Total
Industrial Land	0.0 dB 0 %	0.0 dB 0 %	0 dB
Commercial Land	0.9 dB 19 %	0.4 dB 8 %	1.3 dB
Major Road	*Stirling Highway*	-	6 dB
Minor Road	-	-	0 dB
Total			**7 dB**

Table 2-4 shows the assigned noise levels applicable at the nearby noise sensitive premises. including the influencing factor.

Table 2-4 Assigned Noise Levels

Premises Receiving Noise	Time Of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise sensitive premises: highly sensitive area[1]	0700 to 1900 hours Monday to Saturday (Day)	52	62	72
	0900 to 1900 hours Sunday and public holidays (Sunday)	47	57	72
	1900 to 2200 hours all days (Evening)	47	57	62
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night)	42	52	62

1. ***highly sensitive area*** means that area (if any) of noise sensitive premises comprising —
   (a) a building, or a part of a building, on the premises that is used for a noise sensitive purpose; and
   (b) any other part of the premises within 15 metres of that building or that part of the building;

Based on the proposed hours of operations, the applicable criteria are the daytime assigned noise levels of 52 dB L_{A10} and 72 dB L_{Amax}.

It must be noted the assigned noise levels above apply outside the receiving premises and at a point at least 3 metres away from any substantial reflecting surfaces. Given the close proximity of existing buildings and fences, the noise emissions were assessed at a point 1 metre away from building facades and a -2.5 dB adjustment was made to the predicted noise levels to account for reflected noise.

3 METHODOLOGY

A 3-Dimensional noise model of the proposed child care centre was built in dedicated software *SoundPlan* (version 7.4) and used to predict noise levels from outdoor child play, the car park use and new AC units, with the *CONCAWE* algorithms selected.

Input data required in the model are:

- Meteorological Information;
- Topographical data and buildings;
- Ground Absorption; and
- Source sound power levels.

3.1 Meteorological Information

Meteorological information utilised (*Table 3-1)* is based on that specified in the *draft EPA Guidance for the Assessment of Environmental Factors No.8 Environmental Noise*. These conditions are considered the worst-case for noise propagation. At wind speeds greater than those shown, sound

propagation may be further enhanced, however background noise from the wind itself and from local vegetation is likely to be elevated and dominate the ambient noise levels.

Table 3-1 Modelling Meteorological Conditions

Parameter	Day (0700-1900)
Temperature (°C)	20
Humidity (%)	50
Wind Speed (m/s)	4
Wind Direction[1]	All
Pasquil Stability Factor	E

1. Note that the modelling package used allows for all wind directions to be modelled simultaneously.

The EPA policy is that compliance with the assigned noise levels needs to be demonstrated for 98% of the time, during the day and night periods, for the month of the year in which the worst-case weather conditions prevail. In most cases, the above conditions occur for more than 2% of the time and therefore must be satisfied.

3.2 Topographical Data

Based on the site plan provided and *Google Earth* publicly available elevation data, a 3-dimensional model was developed, which included ground elevations and the existing dwellings nearby.

3.3 Site Layout

All existing buildings were included in the noise model as these can provide noise shielding but also reflection paths. Single storey buildings were modelled as 3.5 metres high and double storey buildings as 7 metres high. Ground floor and upper floor receivers are at 1.5 metres and 4.3 metres above local ground respectively.

Existing fences and walls were also included as follows:

- North boundary steel fence of height varying height between 1.6 metres and 2.0 metres;
- East boundary fence, 1.6 metres in height;
- Solid wall at back of planter box in south corner of existing building, 1.6 metres in height; and,
- Solid wall at back of planter box near covered area, 1.6 metres in height.

An overview of the noise model showing the location of these elements is shown in *Appendix C*.

3.4 Ground Absorption

Ground absorption varies from a value of 0 to 1, with 0 being for an acoustically reflective ground (e.g. asphalt, concrete) and 1 for acoustically absorbent ground (e.g. grass). In this instance, a value of 0.0 has been used throughout.

3.5 Source Sound Levels

The sound power levels used in the modelling are provided in *Table 3-2*.

Table 3-2 Source Sound Power Levels, dB

Description	Octave Band Centre Frequency (Hz)								Overall dB(A)
	63	125	250	500	1k	2k	4k	8k	
Closing Car Door, L_{max}	79	81	86	90	86	81	78	71	**91**
General Child Play by Kindy, L_{10}	51	60	70	77	83	82	75	67	**87**
Typical AC Condenser unit	90	82	75	73	73	67	62	58	**77**

With regards to the above, please note the following:

- Car door closing was modelled as a point source 1.0 metre above ground level. Since noise from a car door closing is a short term event, only the L_{Amax} level is applicable;
- Outside child play is generally restricted in duration to 1-2 hours. Therefore noise is likely to be present for more than 10% of a representative assessment period and hence the L_{A10} is applicable;
- General Child Play represents a group of up to 20 children playing outside. This source was modelled as an area source, 1.0 metre above ground level; and,
- New AC plant was modelled 1m from local ground level and near where existing AC units are located in the north and south walls.

4 RESULTS

4.1 Outdoor Child Play

The predicted noise levels from Child Play within the overall area available are presented in *Table 4-1* below. The location and extent of the play area included in the noise model is shown in *Figure 4-1* next page.

Table 4-1 Predicted Noise Levels of Child Play

Location	Child Play[1], dB L_{A10}
63 Napier Street	44
66 Napier Street, ground level	25
66 Napier Street, Upper Floor	34
173 Stirling Highway, West	54

1. Façade correction of -2.5 dB applied

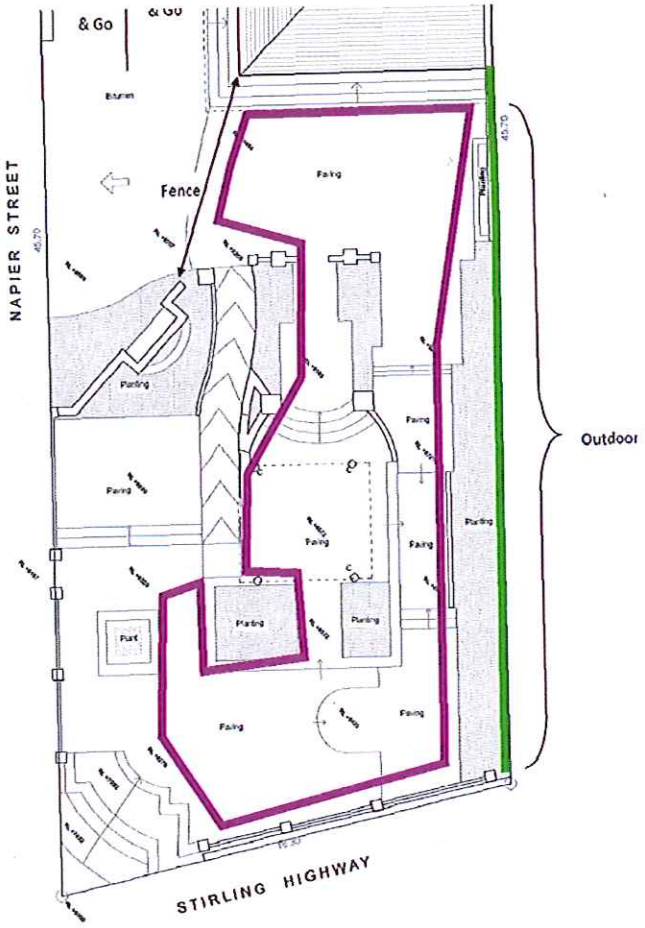


Figure 4-1 Child Play Area

4.2 Indoor Child Play

An assessment of noise levels from indoor child play was carried out and the resulting noise levels at all locations were predicted to be well below that of outdoor child play considered in *Section 4.1*. This assessment was carried out based on the following considerations:

- Sliding doors to outside will be closed during indoor activity / play;
- Internal noise levels within activity rooms would not exceed those from outdoor play; and,
- Any music played within the internal activity areas would be 'light' music with no significant bass content and played at a relatively low level.

4.3 Car Park

The predicted noise levels from car doors closing on the ground level car park are presented in *Table 4-2* below. Given the layout of the proposed site and surrounding premises, it is noted that individual receivers are affected by different source's location.

Table 4-2 Predicted Noise Levels of Car Doors Closing

Location	Staff Carpark	
	Predicted Noise Level[1] dB L_{Amax}	Worst-Case Source Location
63 Napier Street	55	Staff Bay 3
66 Napier Street, ground level	57	Drop Off 1
66 Napier Street, Upper Floor	67	Drop Off 1
173 Stirling Highway, West	59	Staff Bay 2

1. Façade correction of -2.5 dB applied

4.4 New AC Units

The existing building has two wall mounted AC units, one on the north wall and the other on the south wall. Given the size and location of these existing units, compliance is likely already achieved at nearby receivers. However, noise levels were predicted for a case where new AC units are to replace the existing. The new units were located in a similar location than the existing.

The predicted noise levels from the new AC units are shown in *Table 4-3* next page.

Table 4-3 Predicted Noise Levels of New AC Units

Location	Predicted Noise Level[1] dB L_{A10}
63 Napier Street	35 (AC on north wall)
66 Napier Street, ground level	40 (AC on north wall)
66 Napier Street, Upper Floor	43 (AC on north wall)
173 Stirling Highway, West	52 (AC on south wall)

1. Façade correction of -2.5 dB applied

5 ASSESSMENT

5.1 Child Play

Table 5-1 next page presents an assessment of the predicted noise levels from child play at the proposed CCC. Given the operating times of 07.30am to 06.00pm, the applicable criterion is daytime assigned noise level of 52 dB L_{A10}.

Noise from child play is not considered to contain annoying characteristics within the definition of the Regulations and therefore no penalties were included.

It can be seen that compliance can be achieved at all identified receivers except at 173 Stirling Highway. To achieve compliance at this receiver would require the fence along the east boundary to be at least 1.8 metres high. It is noted only the section of fence from the south-east corner of the existing building to the south boundary is to be 1.8 metres high.

Table 5-1 Assessment of Child Care Noise Levels Against L_{A10}

Location	Assigned Noise Level[1] dB L_{A10}	Predicted Noise Levels[2] dB L_{A10}	Calculated Exceedance
63 Napier Street	52	44	*Complies at all times*
66 Napier Street, ground level	52	25	*Complies at all times*
66 Napier Street, Upper Floor	52	34	*Complies at all times*
173 Stirling Highway, West	52	54	2 dB

Notes:
1. The assigned noise level is as defined in *Table 2-4*.
2. Levels from *Table 4-1*.

5.2 Car park

Table 5-2 below presents an assessment of the predicted noise levels from the ground level car park. Given the opening time of 07.30am, it is expected staff members will arrive before that time but after 07.00am, and that children drop-offs will also occur after 07.00am. Therefore the applicable criterion is the daytime assigned noise level of 72 dB L_{Amax}.

Given the nature of the source, car doors closing are not considered to be impulsive within the definition of the Regulations and therefore no penalties were included.

It can be seen the highest predicted level is at the upper floor of receiver 66 Napier Street, with a level of 67 dB L_{Amax} for car door closing in the carpark.

Table 5-2 Assessment of Car Doors Noise Levels Against L_{Amax}

Location	Assigned Noise Level[1] dB L_{Amax}	Predicted Noise Level[2] dB L_{Amax}	Calculated Exceedance dB
63 Napier Street	72	55	*Complies*
66 Napier Street, ground level	72	57	*Complies*
66 Napier Street, Upper Floor	72	67	*Complies*
173 Stirling Highway, West	72	59	*Complies*

Notes:
1. The assigned noise level is as defined in *Table 2-4*.
2. Levels from *Table 4-2*.

5.3 New AC Units

Table 5-3 next page presents an assessment of the predicted noise levels from the new AC units, should the existing ones be replaced. Given the opening time of 07.30am, it is expected these units would not be running for more before 07.00am. Therefore, the applicable criterion is the daytime assigned noise level of 52 dB L_{A10}.

Given the nature of the source, AC unit noise is considered to be tonal and therefore a 5 dB penalty was added to the predicted levels (refer *Table 2-1)*.

Table 5-3 Assessment of (New) AC Units Noise Levels Against L_{A10}

Location	Assigned Noise Level[1] dB L_{A10}	Predicted Noise Level[2] dB L_{A10}	Assessable Level[3] dB L_{A10}	Calculated Exceedance dB
63 Napier Street	52	35 (AC north)	40	*Complies*
66 Napier Street, ground level	52	40 (AC north)	45	*Complies*
66 Napier Street, Upper Floor	52	43 (AC north)	48	*Complies*
173 Stirling Highway, West	52	52 (AC south)	57	5 dB

Notes:
1. The assigned noise level is as defined in *Table 2-4*.
2. Levels from *Table 4-2*.

It can be seen that a new AC unit to the south could result in an exceedance of up to 5 dB at the receiver located at 173 Stirling Highway. In a case where the existing AC unit on this side of the building is replaced, the following should be considered:

- Source an AC unit with a sound power level no greater than 72 dB(A) (e.g. residential type unit rather than commercial size); or,
- Relocate the south AC unit to either the roof, west or north side of building; or,
- Erect a 2.1m high fence.

6 CONCLUSIONS

An assessment of the overall noise emissions from the proposed Child Care Centre located at 175 Stirling Highway, Nedlands was undertaken. The noise emissions can comply with the Regulations at all receivers provided noise mitigation measures are implemented. Recommendations are made below for each noise source.

6.1 Child Play Noise Mitigation

In order for child play noise to comply with the Regulations at all receivers, a solid fence of minimum height 1.8 metres should be erected along the east boundary, from the south-east corner of the existing building to the south boundary.

The location and extent of the fence is shown as a green line on *Figure 6-1* below.

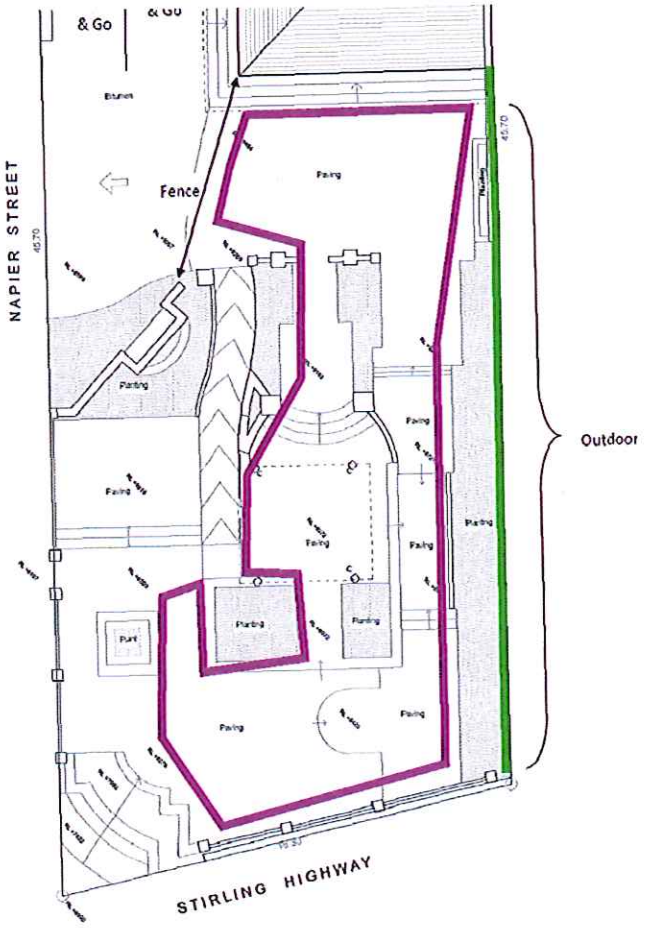


Figure 6-1 Location and Extent of 1.8m East Boundary Fence (Green Line)

6.2 Car Park Noise Mitigation

Noise from closing doors in the carpark complies with the Regulations at all receivers and therefore no further treatments are required.

6.3 New AC Units Noise Mitigation

In a case where new AC units are installed, the following should be implemented:

- Source an AC unit with a sound power level no greater than 72 dB(A) (e.g. residential type unit rather than commercial size); or,
- Relocate the south AC unit to either the roof, west or north side of building; or,
- Erect a 2.1m high fence along the south boundary in-lieu of the 1.8m recommended in *Section 6.1.*

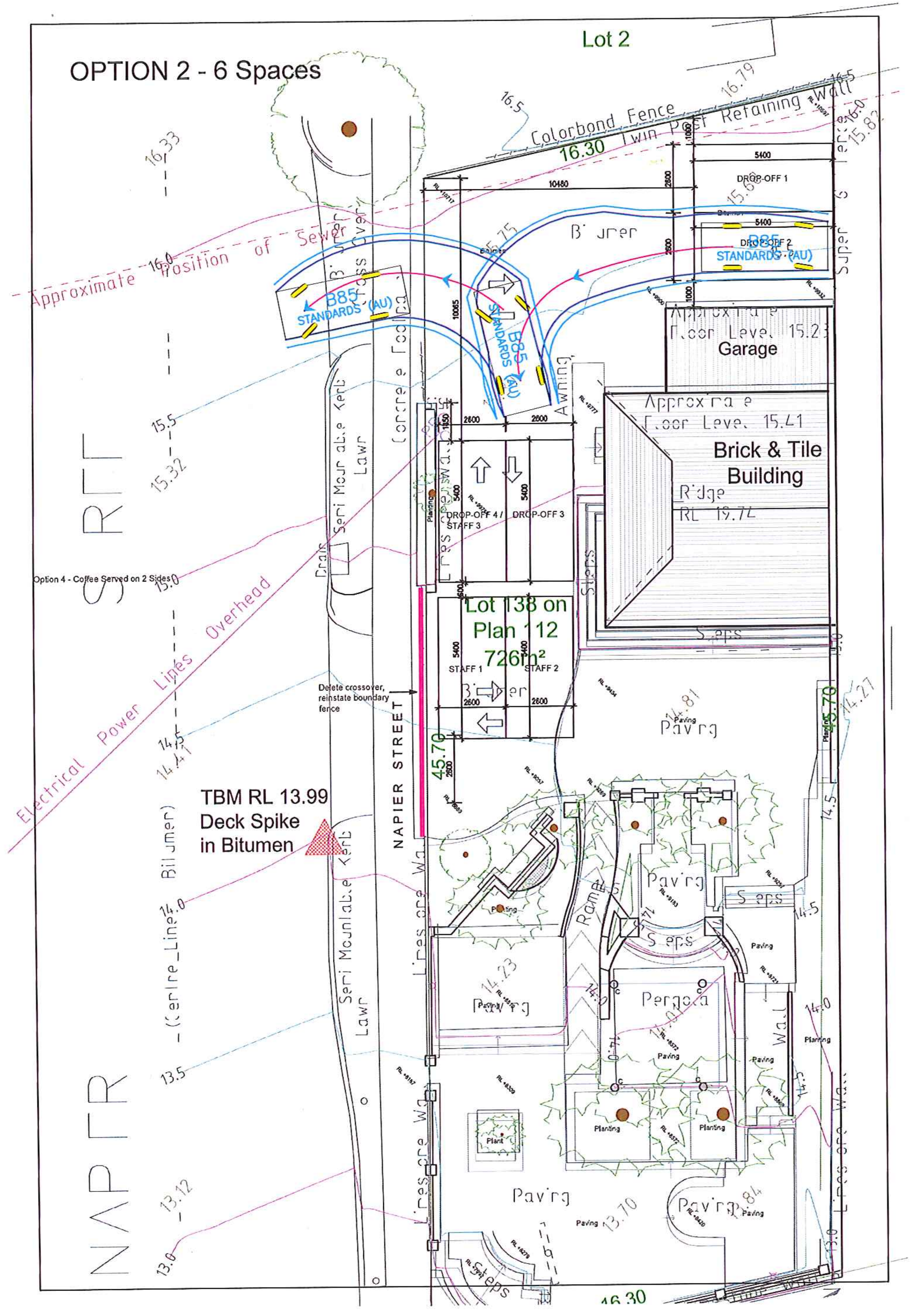
6.4 Generic Recommendations

In addition to the above, consideration could be given to the following common 'good practices' in regard to child play:

- The behaviour and 'style of play' of children should be monitored to prevent particularly loud activity e.g. loud banging/crashing of objects, 'group' shouts/yelling;
- Crying children should be taken inside to be comforted; and,
- No amplified music should be played outside.

Appendix A

Site Plan Drawings



OPTION 2 - 6 Spaces
Lot 2
Colorbond Fence
Twin Post Retaining Wall
16.30
DROP-OFF 1
DROP-OFF 2
B85 STANDARDS (AU)
Approximate Position of Sewer
Approximate Floor Level 15.23
Garage
Approximate Floor Level 15.41
Brick & Tile Building
Ridge RL 19.74
DROP-OFF 4 / STAFF 3
DROP-OFF 3
Option 4 - Coffee Served on 2 Sides
Lot 138 on Plan 112 726m²
STAFF 1
STAFF 2
Delete crossover, reinstate boundary fence
NAPIER STREET
45.70
Electrical Power Lines Overhead
TBM RL 13.99 Deck Spike in Bitumen
Pergola
Paving
Planting
Steps
16.30

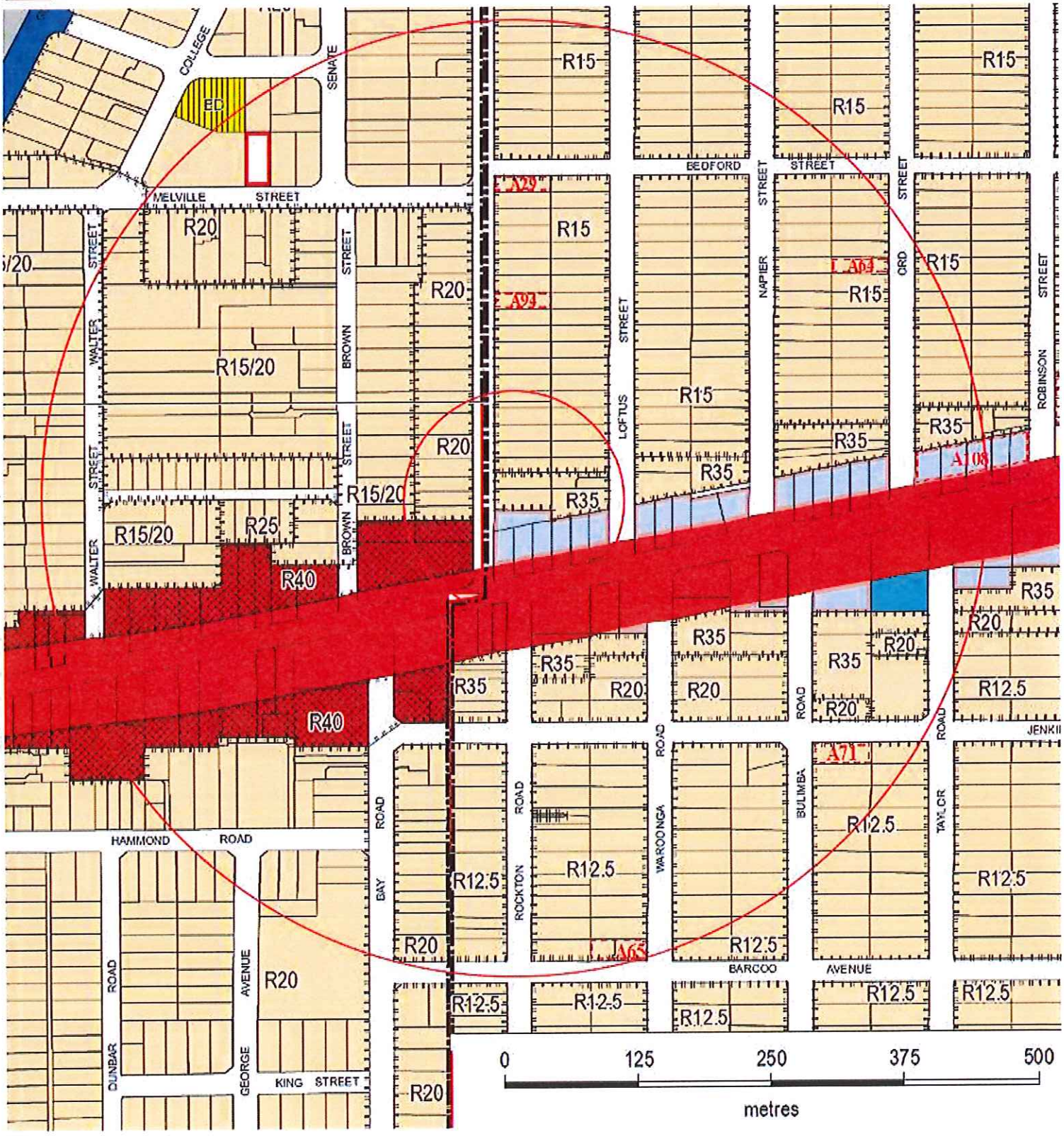
Appendix B

Land Use Map

LOCAL SCHEME ZONES

(see scheme text for additional information)

- Development
- ED Educational
- PS Educational : Primary school
- TS Educational : Technical school
- Highway
- Light industrial
- Local centre
- Residential
- A Special development
- Special zone - restricted use
- Town centre

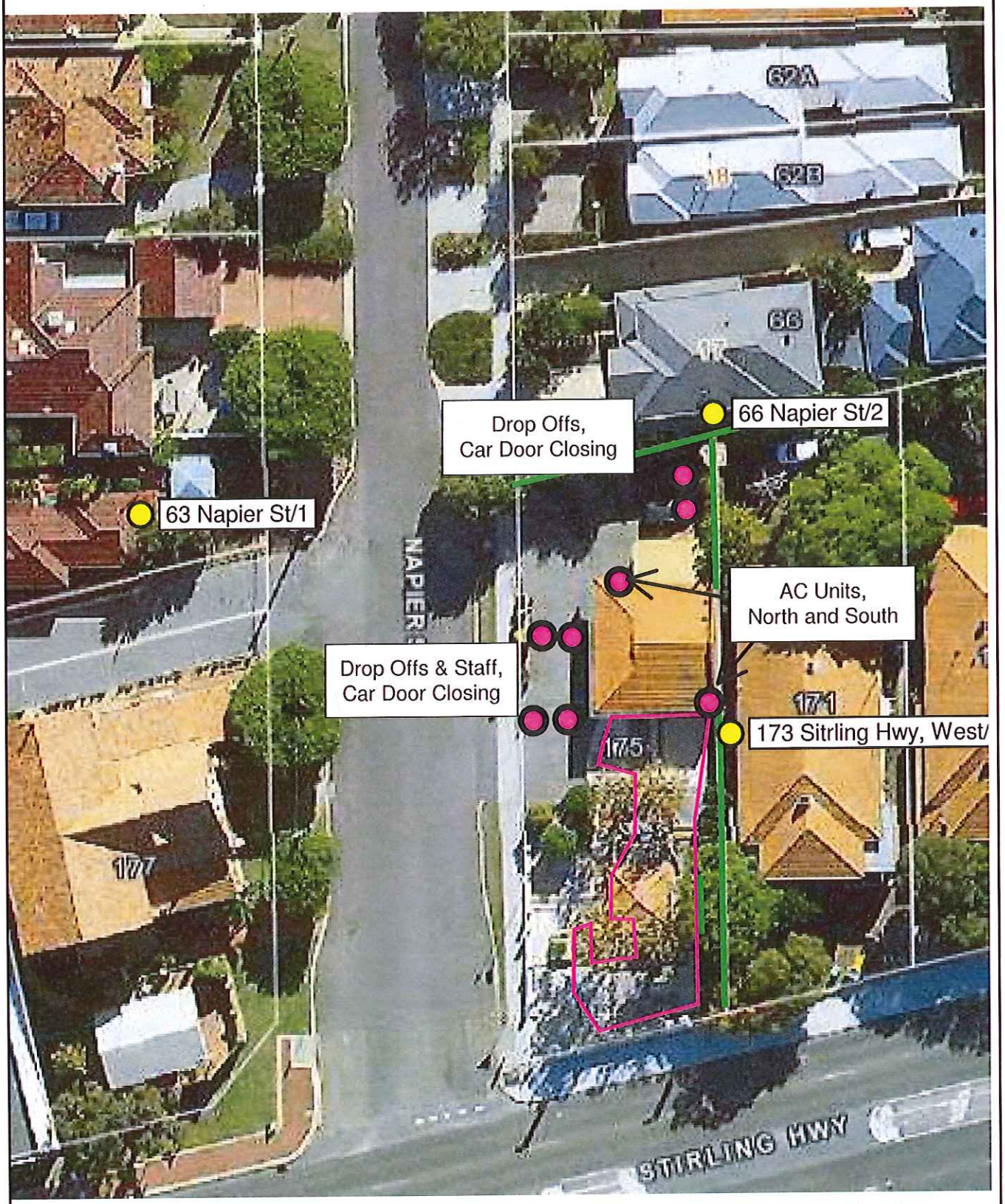


Appendix C

Noise Model Overview

Proposed Child Care Centre - Noise Model Overview

175 Stirling Highway, Nedlands



Signs and symbols

- Receiver
- Existing Fences/Walls
- Child Play Area
- Point source

17 December 2015

Length Scale 1:420

0 2 4 8 12 m

Lloyd George Acoustics
by Olivier Mallié
olivier@lgacoustics.com.au
0439 987 455

Appendix D

Terminology

The following is an explanation of the terminology used throughout this report.

Decibel (dB)
The decibel is the unit that describes the sound pressure and sound power levels of a noise source. It is a logarithmic scale referenced to the threshold of hearing.

A-Weighting
An A-weighted noise level has been filtered in such a way as to represent the way in which the human ear perceives sound. This weighting reflects the fact that the human ear is not as sensitive to lower frequencies as it is to higher frequencies. An A-weighted sound level is described as L_A dB.

Sound Power Level (L_w)
Under normal conditions, a given sound source will radiate the same amount of energy, irrespective of its surroundings, being the sound power level. This is similar to a 1kW electric heater always radiating 1kW of heat. The sound power level of a noise source cannot be directly measured using a sound level meter but is calculated based on measured sound pressure levels at known distances. Noise modelling incorporates source sound power levels as part of the input data.

Sound Pressure Level (L_p)
The sound pressure level of a noise source is dependent upon its surroundings, being influenced by distance, ground absorption, topography, meteorological conditions etc and is what the human ear actually hears. Using the electric heater analogy above, the heat will vary depending upon where the heater is located, just as the sound pressure level will vary depending on the surroundings. Noise modelling predicts the sound pressure level from the sound power levels taking into account ground absorption, barrier effects, distance etc.

L_{ASlow}
This is the noise level in decibels, obtained using the A frequency weighting and the S time weighting as specified in AS1259.1-1990. Unless assessing modulation, all measurements use the slow time weighting characteristic.

L_{AFast}
This is the noise level in decibels, obtained using the A frequency weighting and the F time weighting as specified in AS1259.1-1990. This is used when assessing the presence of modulation only.

L_{APeak}
This is the maximum reading in decibels using the A frequency weighting and P time weighting AS1259.1-1990.

L_{Amax}
An L_{Amax} level is the maximum A-weighted noise level during a particular measurement.

L_{A1}
An L_{A1} level is the A-weighted noise level which is exceeded for one percent of the measurement period and is considered to represent the average of the maximum noise levels measured.

L_{A10}
An L_{A10} level is the A-weighted noise level which is exceeded for 10 percent of the measurement period and is considered to represent the "*intrusive*" noise level.

L_{Aeq}
The equivalent steady state A-weighted sound level ("equal energy") in decibels which, in a specified time period, contains the same acoustic energy as the time-varying level during the same period. It is considered to represent the "average" noise level.

L_{A90}
An L_{A90} level is the A-weighted noise level which is exceeded for 90 percent of the measurement period and is considered to represent the *"background"* noise level.

One-Third-Octave Band
Means a band of frequencies spanning one-third of an octave and having a centre frequency between 25 Hz and 20 000 Hz inclusive.

L_{Amax} assigned level
Means an assigned level which, measured as a $L_{A\,Slow}$ value, is not to be exceeded at any time.

L_{A1} assigned level
Means an assigned level which, measured as a $L_{A\,Slow}$ value, is not to be exceeded for more than 1% of the representative assessment period.

L_{A10} assigned level
Means an assigned level which, measured as a $L_{A\,Slow}$ value, is not to be exceeded for more than 10% of the representative assessment period.

Tonal Noise
A tonal noise source can be described as a source that has a distinctive noise emission in one or more frequencies. An example would be whining or droning. The quantitative definition of tonality is:

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.

This is relatively common in most noise sources.

Modulating Noise
A modulating source is regular, cyclic and audible and is present for at least 10% of the measurement period. The quantitative definition of modulation is:

a variation in the emission of noise that —

(a) is more than 3 dB $L_{A\,Fast}$ or is more than 3 dB $L_{A\,Fast}$ in any one-third octave band;

(b) is present for at least 10% of the representative.

Impulsive Noise

An impulsive noise source has a short-term banging, clunking or explosive sound. The quantitative definition of impulsiveness is:

a variation in the emission of a noise where the difference between $L_{A\,peak}$ and $L_{A\,Max\,slow}$ is more than 15 dB when determined for a single representative event;

Major Road
Is a road with an estimated average daily traffic count of more than 15,000 vehicles.

Secondary / Minor Road
Is a road with an estimated average daily traffic count of between 6,000 and 15,000 vehicles.

Influencing Factor (IF)

$$= \frac{1}{10}(\%\,\text{Type}\,A_{100} + \%\,\text{Type}\,A_{450}) + \frac{1}{20}(\%\,\text{Type}\,B_{100} + \%\,\text{Type}\,B_{450})$$

where :

$\%\,\text{Type}\,A_{100}$ = the percentage of industrial land within a100m radius of the premises receiving the noise

$\%\,\text{Type}\,A_{450}$ = the percentage of industrial land within a 450m radius of the premises receiving the noise

$\%\,\text{Type}\,B_{100}$ = the percentage of commercial land within a100m radius of the premises receiving the noise

$\%\,\text{Type}\,B_{450}$ = the percentage of commercial land within a 450m radius of the premises receiving the noise

+ Traffic Factor (maximum of 6 dB)

= 2 for each secondary road within 100m

= 2 for each major road within 450m

= 6 for each major road within 100m

Representative Assessment Period
Means a period of time not less than 15 minutes, and not exceeding four hours, determined by an inspector or authorised person to be appropriate for the assessment of a noise emission, having regard to the type and nature of the noise emission.

Background Noise
Background noise or residual noise is the noise level from sources other than the source of concern. When measuring environmental noise, residual sound is often a problem. One reason is that regulations often require that the noise from different types of sources be dealt with separately. This separation, e.g. of traffic noise from industrial noise, is often difficult to accomplish in practice. Another reason is that the measurements are normally carried out outdoors. Wind-induced noise, directly on the microphone and indirectly on trees, buildings, etc., may also affect the result. The character of these noise sources can make it difficult or even impossible to carry out any corrections.

Ambient Noise
Means the level of noise from all sources, including background noise from near and far and the source of interest.

Specific Noise
Relates to the component of the ambient noise that is of interest. This can be referred to as the noise of concern or the noise of interest.

Peak Component Particle Velocity (PCPV)

The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and in one of the three orthogonal directions (x, y or z) measured as a peak response. Peak velocity is normally used for the assessment of structural damage from vibration.

Peak Particle Velocity (PPV)

The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and is the vector sum of the PCPV for the x, y and z directions measured as a peak response. Peak velocity is normally used for the assessment of structural damage from vibration.

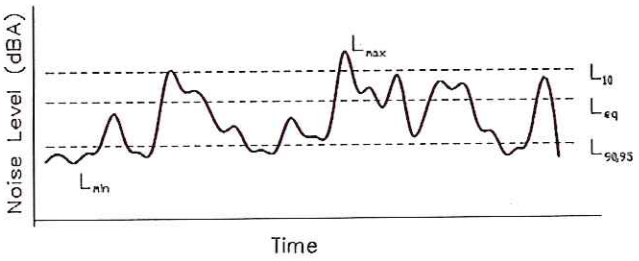
RMS Component Particle Velocity (PCPV)

The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and in one of the three orthogonal directions (x, y or z) measured as a root mean square (rms) response. RMS velocity is normally used for the assessment of human annoyance from vibration.

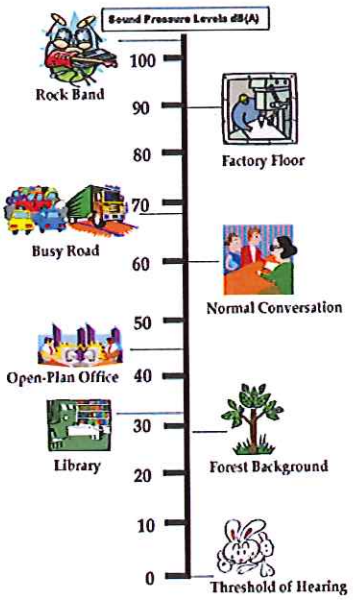
Peak Particle Velocity (PPV)

The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and is the vector sum of the PCPV for the x, y and z directions measured as a root mean square (rms) response. RMS velocity is normally used for the assessment of human annoyance from vibration.

Chart of Noise Level Descriptors



Typical Noise Levels



PD15.16 (Lot 800) No. 38 Kingsway, Nedlands – Proposed Additions to an Existing Public Worship (Church)

Committee	12 April 2016
Council	26 April 2016
Applicant	Allerding and Associates
Landowner	Methodist Church in Australia Inc.
Officer	Andrew Bratley – Coordinator Statutory Planning
Director	Peter Mickleson – Director Planning & Development Services
Director Signature	
File Reference	DA2015/341 – KI3/38
Previous Item	Item PD02.16 – February 2016
Attachments	1. Site Plan (A3) 2. Floor Plan (A3) 3. North and South Elevations (A3) 4. East Elevation (A3) 5. Photograph of the church as seen from Kingsway (A4) 6. Traffic Impact Assessment (A4) 7. Applicant's Justification (A4)

1.0 Executive Summary

A development application has been received to extend the rear of the existing public worship (church) on the property in order to install additional seating and a raised stage (refer to Attachments 1 to 6).

This item was included on the Ordinary Council meeting of 23 February 2016, where the Presiding Member advised that due to a request by the applicant, this item has been withdrawn. The applicant has now provided further details and justification in relation to the hours of operation. (Refer to Attachment 7).

The application was advertised to nearby landowners for comment due to variations proposed to the amount of onsite car bays required, the building setback from the south (side) boundary and the plot ratio area permitted. During the advertising period 7 objections, 1 non-objection, 2 submissions which provided comment on the proposal, and 1 submission which made no comment on the proposal were received.

The application has been referred to Council for determination, as officers do not have the delegation to determine an application under instrument of delegation 6A, where specific objections have been received.

The proposed extension and subsequent shortfall in the required amount of car bays are deemed to satisfy the requirements of Town Planning Scheme No. 2 (TPS 2), it is therefore recommended that Council approves the application.

1.1 Recommendation to Committee

Council approves the application for additions to the existing public worship (church) at (Lot 800) No. 38 Kingsway, Nedlands, subject to the following conditions and advice:

1. **The development shall at all times comply with the approved plans.**

2. **The amount of seating on the property being limited to 296 seats in total.**

3. **Church services being restricted to Friday 7:30pm to 9:30pm and Sunday 9.00am to 1.00pm only with the exception of:**

    a) **Weddings and funerals, which are not to be held between 7.30am and 9.00am or 2.00pm and 4.00pm Monday to Friday, excluding public holidays and during school holidays; and**

    b) **Annual services, being held only on Christmas Day 9:00am to 1:00pm, Good Friday 9:00am to 1:00pm and Maundy Thursday (the Thursday before Easter) 7:00pm to 9:00pm.**

4. **The education building not being used concurrently with the church building except for Sunday school activities whilst church services are being held.**

5. **A total of 13 onsite car parking bays being constructed, drained, marked and kerbed to the City's satisfaction prior to practicable completion of the proposed additions, and be maintained thereafter by the landowner to the City's satisfaction.**

6. **No external amplified sound being utilised at any time.**

7. **The external colours and materials of the proposed additions blending with the existing portions of the church building being retained, to the City's satisfaction. Details of which being submitted to the City as part of the building permit application.**

Advice Notes specific to this approval:

1. **Adequate sanitary conveniences, fire exits and entrances shall be provided in accordance with the Building Code of Australia and the Disability Discrimination Act.**

2. **Noise from activities conducted on the property is to comply with the *Environmental Protection (Noise) Regulations 1997*.**

3. **Development approval being sought and obtained from the City for any proposed signage.**

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

2.0 Strategic Community Plan

KFA: Natural and Built Environment

This report addresses the Key Focus Area of Natural and Built Environment through adherence to the requirements of TPS 2.

3.0 Legislation / Policy

- *Planning and Development Act 2005* (Act).
- Metropolitan Region Scheme (MRS).
- City of Nedlands Town Planning Scheme No. 2 (TPS 2).
- Council Policy – Neighbour Consultation.

4.0 Budget / Financial Implications

The proposal is for works to be constructed on a private lot, and therefore has no immediate budget or financial implications for the City, however should Council refuse the application, there may be financial implications through an appeal of Council's decision.

5.0 Risk Management

Not applicable.

6.0 Background

Property address		(Lot 800) No. 38 Kingsway, Nedlands
Lot area		1,764m^2
Zoning/ Reserve	**MRS**	Urban
	TPS 2	Residential R12.5 (Additional Use (A7) – Public Worship)

The subject site contains a church and an education building both used by the Kingsway Methodist Church (refer to Attachment 5), with 9 car bays being available at the rear of the buildings. The topography of the land falls towards the south east corner of the property.

Surrounding properties contain single and grouped dwellings. Opposite is Nedlands Primary School in front of which are 44 marked car bays within the Kingsway road reserve as shown in the locality plan on the next page.

Car parking restrictions apply along the section of Kingsway within the immediate vicinity of the subject property, meaning that on street car parking is not permitted between Monday and Friday 7.30am to 9.00am and 2.30pm to 4.00pm. Vehicles using the 44 marked car bays in front of the school are exempt from these restrictions.

The property is included in the City's Municipal Inventory [MHI] and has been allocated Management Category C, which means that proposed development is subject to the following:

"Retain and conserve if possible, endeavour to conserve the significance of the place through the provisions of the City of Nedlands Town Planning Scheme; a more detailed Heritage Assessment/Impact Statement may be required prior to approval being given for any major redevelopment or demolition; photographically record the place prior to any major redevelopment or demolition."

In February 2016, Council resolved to defer making a decision with regard to the proposed additions to the church building to allow the applicant the opportunity to provide further details and justification in relation to the hours of operation. This has subsequently been received from the applicant (refer to Attachment 7).

7.0 Discussion

The application seeks development approval to extend the rear of the existing public worship (church) on the property in order to install additional seating and a raised stage.

The details of the application are as follows:

a) The rear of the church is proposed to be extended and a mezzanine level installed towards the front of the church building so that a raised stage and an additional 126 seats (from 170 seats currently to 296 seats) can be accommodated.
b) The proposed rear extension will be 10m in height above the property's mean natural ground level, and setback 12.4m from the rear boundary, 2.4m from the south (side) boundary and 22.6m from the north (side) boundary.
c) A plot ratio of 0.62 is proposed.
d) The northern side of the education building's basement level is proposed to be extended to increase the floor area of the disabled toilets;
e) The existing car parking area is proposed to be reconfigured to increase the number of onsite car bays from 9 to 13 bays.
f) Three disabled ramps are to be constructed on the southern side of the existing church building.
g) The applicant has advised that the education building shall not be used concurrently with the church building other than for Sunday school activities for children that are too old for the creche and not ready to participate in the full service of the church. All other activities associated with the education building are to be conducted at times such that they are not concurrent with the service times.
h) A Traffic Impact Assessment provided as part of the application concludes the following:

    i. The proposed development should not generate significant vehicular trips.
    ii. The proposed development has good access to public transport.
    iii. The impacts of the traffic volumes associated with the proposed development on the road network are considered acceptable with little notable impact expected.

i) Services are to continue to be held on Fridays 7.30pm to 9.30pm and on Sundays 9.00am to 1.00pm only, with the exception of funerals, weddings and annual services. By way of justification with regard to the hours of operation, the applicant has provided justification which is deemed acceptable. Refer to Attachment 7.

It should be noted that during the assessment of the proposal the 286 car bays marked on Appendix C of Attachment 6 as being available at the Broadway Fair Shopping Centre have not been taken into consideration as these are on private property. No legal agreement exists for these car bays to be used by those visiting the church and/or the education building on the subject property.

7.1 Consultation

The proposal was advertised for 21 days to nearby landowners for comment in November 2015 due to variations proposed to the required amount of onsite car bays, the building setback from the south (side) boundary and the plot ratio area permitted. A sign with regard to the proposed development was also erected on the property and remained in place for 21 days.

During the advertising period 7 objections, 1 non-objection, 2 submissions which provided comment on the proposal, and 1 submission which made no comment on the proposal were received. The following is a summary of the concerns raised:

a) There being not enough car bays available.
b) Traffic congestion being caused by those visiting the church;
c) Those visiting the church parking illegally despite the availability of on street car bays in front of Nedlands Primary School; and
d) The height, scale and bulk of the building as a consequence of the proposed extension being unacceptable.

The potential impact the proposal will have on the area's amenity is discussed in the following sections.

It should be noted that no objections were received from those immediately surrounding the subject property.

As the property is included in the City's MHI the proposal was also referred to the City's Heritage Consultant. No concerns were raised. It was recommended that the colours and materials of the proposed additions blend with the existing portions of the church building.

7.2 Town Planning Scheme No. 2

The following provisions of TPS 2 apply to such proposals.

7.2.1 Existing Car Parking Demand

Nine (9) car bays exist on the property, all at the rear of the buildings (refer to Attachment 1). Currently a total of 43 car bays are required, a deficit of 34 car bays therefore exists.

In addition, 44 marked on street car bays exist on the opposite side of Kingsway in front of Nedlands Primary School, with space available to accommodate up to 27 cars on the eastern side of Kingsway and up to 25 vehicles along Kingsway to the north (refer to Appendix C of Attachment 6). When church services are held the car parking time restrictions mentioned in the background section of this report will not apply.

7.2.2 Future Car Parking Demand

The following TPS 2 car parking requirements apply to the proposal:

Car Parking Provision	Car Parking Requirement	Car Bay Shortfall
Religious Purposes 1 bay per 4 persons. Persons meaning the number of persons for whom seating is provided. A total of 296 seats are to be available.	74 car bays required and 13 car bays are proposed to be available onsite.	61 car bay shortfall. An additional 27 car bay shortfall.

7.2.3 Amenity

TPS 2 Clause	Assessment Comment
Table III – Land Permitted for Additional Uses Maximum plot ratio – 0.5 Side setback – 5m where the lot adjoins any residential zone. Clause 5.4.1.3 (Application of Standards) stipulates that Council may agree to vary a standard in Table 3 subject to development approval being sought.	A plot ratio of 0.62 in lieu of 0.5, and a setback of 2.4m in lieu of 5m from the south (side) boundary is proposed. The appearance of the building if the application was approved by Council, will be consistent with what would be expected if the property was to be redeveloped for residential purposes at the R12.5 coding in terms of setbacks, building height and site coverage. The height and rear setback of the proposed extension is compliant with TPS 2. The proposed setback from the southern boundary, and the external colours and materials of the proposed extension will be consistent with the existing portion of the church building being retained. The height of the extension will be lower than the existing portion of the church building due to the topography of the property. Considering the above, the proposed variations will not have a detrimental impact on the amenity of surrounding landowners.

*"5.5.1 Council may refuse to approve any development if in its opinion the development would adversely affect the amenity of the surrounding area having regard to the likely effect on the locality in terms of the external appearance of the development, traffic congestion and hazard, noise or any other factor inconsistent with the **use** for which the lot is zoned"*	During the advertising period it got brought to the City's attention that vehicles are parking illegally even when marked car bays in front of Nedlands Primary School are available. It is believed that when the illegal parking does occur it is due to people wanting to park as closely as possible to the church for convenience, and not as a consequence of there being an inadequate amount of car parking space available. Vehicles parking illegally could also be due to those attending services at the church on the corner of Princess Road and Viewway. Having been made aware of the concerns raised during the advertising period with regard to the alleged illegal parking of vehicles, the church has apparently made the congregation aware of the concerns, and the church has not identified any illegal parking taking place on the surrounding streets. The City has no recent record of receiving any complaints about vehicles parking illegally within the vicinity of the church at times when services are being held. The education building will not be used concurrently with the church building other than for Sunday school activities which will be attended by children whose parents are attending the church services. On the basis of this, the majority of vehicles will be occupied by families and not just individuals. Therefore the impact on car parking spaces/bays available in the vicinity will not be as significant as the increase in seating might suggest. Church services will be held outside school hours therefore the on street car bays opposite to the property will be available. A Traffic Impact Assessment provided as part of the application did not raise any issues and/or concerns. As mentioned previously, the appearance of the buildings if the application was approved by Council, will be consistent with what would be expected if the property was to be redeveloped for residential purposes at the R12.5 coding in terms of setbacks, building height and site coverage. Considering the above, the proposal will not have a detrimental impact on the amenity of surrounding landowners.

8.0 Conclusion

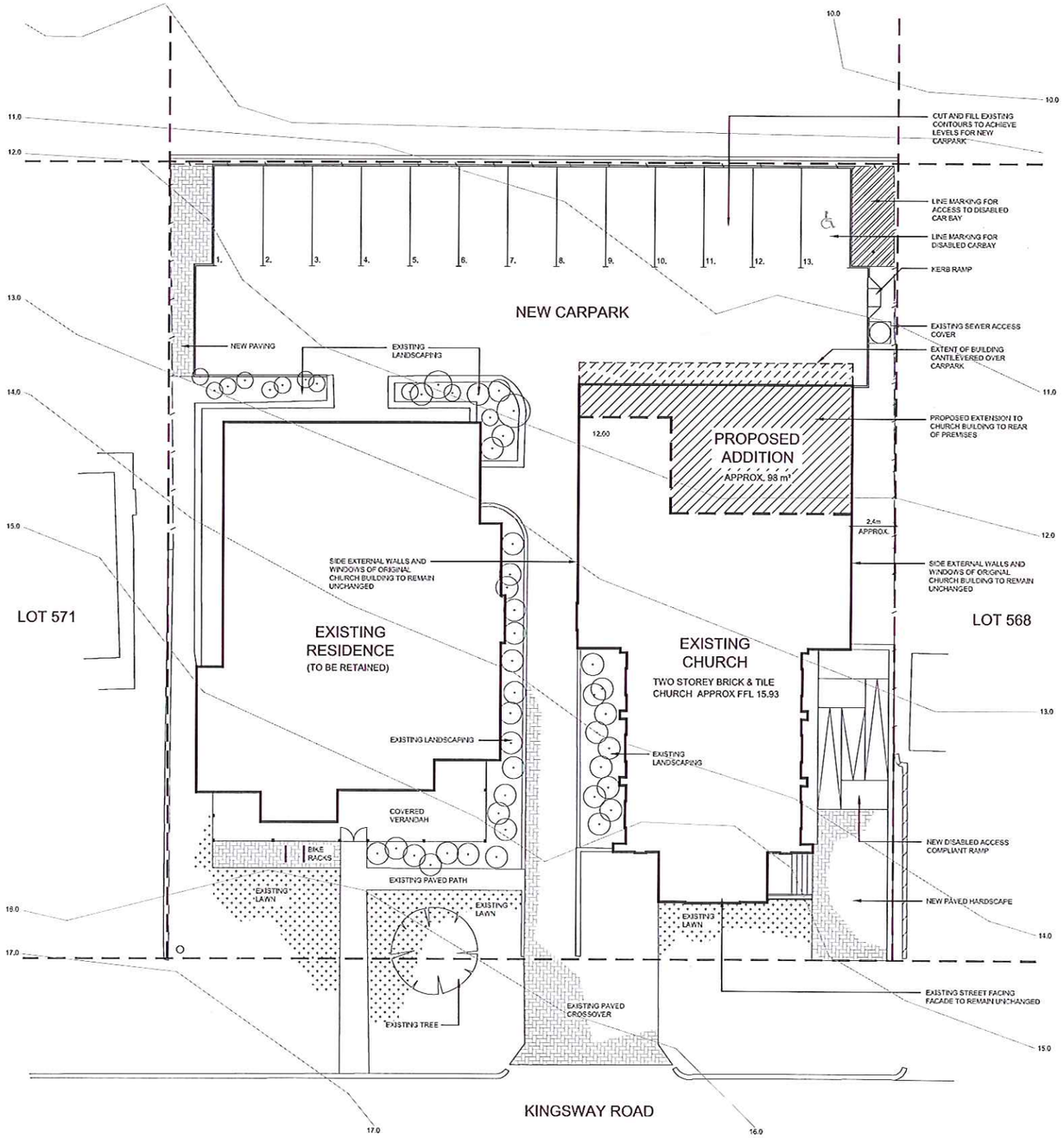
The proposal is to extend the rear of the existing public worship (church) on the property in order to install additional seating and a raised stage (refer to Attachments 1 to 4).

The appearance of the buildings if the application was approved by Council, will be consistent with what would be expected if the property was to be redeveloped for residential purposes at the R12.5 coding in terms of setbacks, building height and site coverage.

There is considered to be an ample amount of car parking space available considering the church service times, that the education building and church building will not be used concurrently apart from Sunday school activities, and that the majority of those visiting the property will be families who will be sharing vehicles. There are also no concerns from a traffic impact and/or heritage perspective.

Accordingly, the application is recommended to Council for approval.

REV	DATE	AMENDMENTS/ REASON FOR ISSUE
C	05/11/15	AMENDED EXISTING CONTOURS
B	26/08/15	ADDED DIS. BAY, LANDSCAPING, BOUNDARY SETBACK
A	17/08/15	ADDED BIKE RACKS
-	06/05/15	INITIAL ISSUE



SITE PLAN
SCALE 1:200

RECEIVED
6/11/15

HART ARCHITECTS
LEVEL 1 34 KING STREET PERTH WA 6000
t (08) 9322 1122 f (08) 9322 1133 e: team@hartarchitects.com.au

KINGSWAY METHODIST CHURCH
38-40 KINGSWAY NEDLANDS
SITE PLAN
SCALE 1:200

A2 @ 1:200

1156DA01[C]

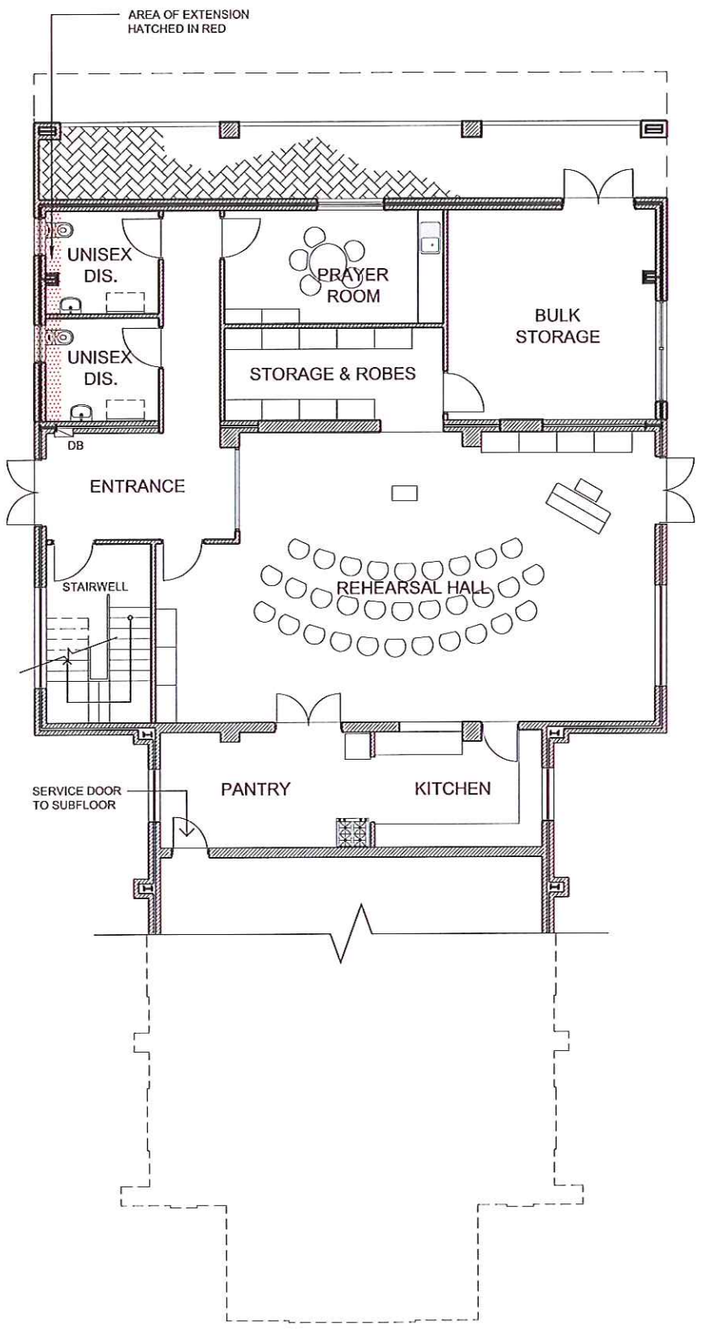
REV	DATE	AMENDMENTS/ REASON FOR ISSUE
A	26/08/15	AMENDED TOILETS
–	06/05/15	INITIAL ISSUE

SEATING CAPACITY

CHURCH GROUND FLOOR	: 266
MEZZANINE	: 30
TOTAL CAPACITY	: 296
EXISTING CAPACITY	: 170

EXTENSION AREAS

CHURCH GROUND FLOOR	: 80 m²
MEZZANINE	: 38 m²
BASEMENT	: 3 m²
TOTAL	: 121 m²



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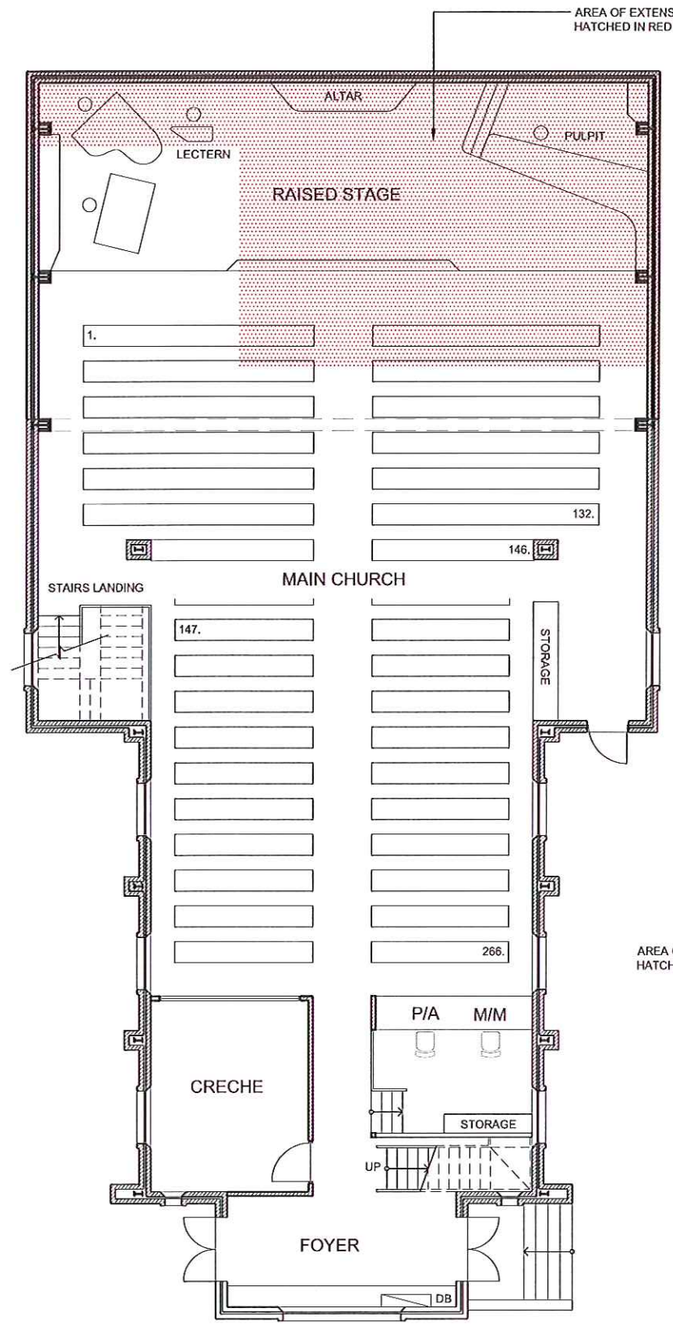
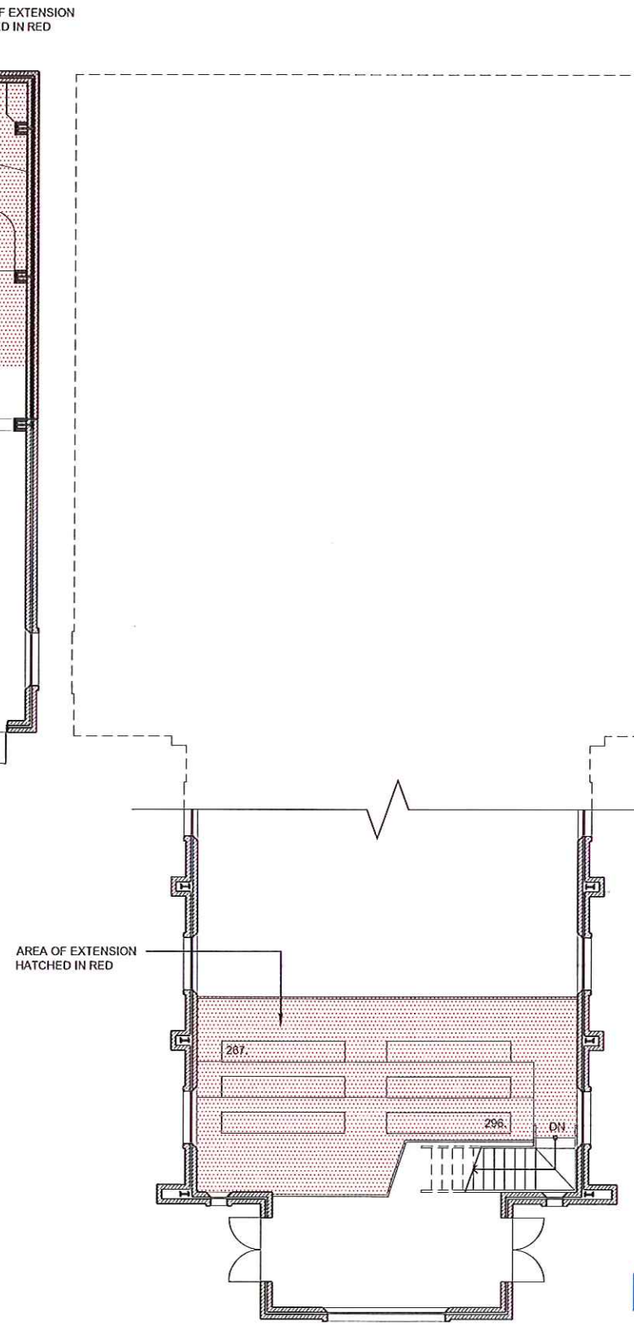
SCALE 1:100



GROUND FLOOR PLAN
SCALE 1:100



MEZZANINE FLOOR PLAN
SCALE 1:100

RECEIVED 18/9/15

HART ARCHITECTS
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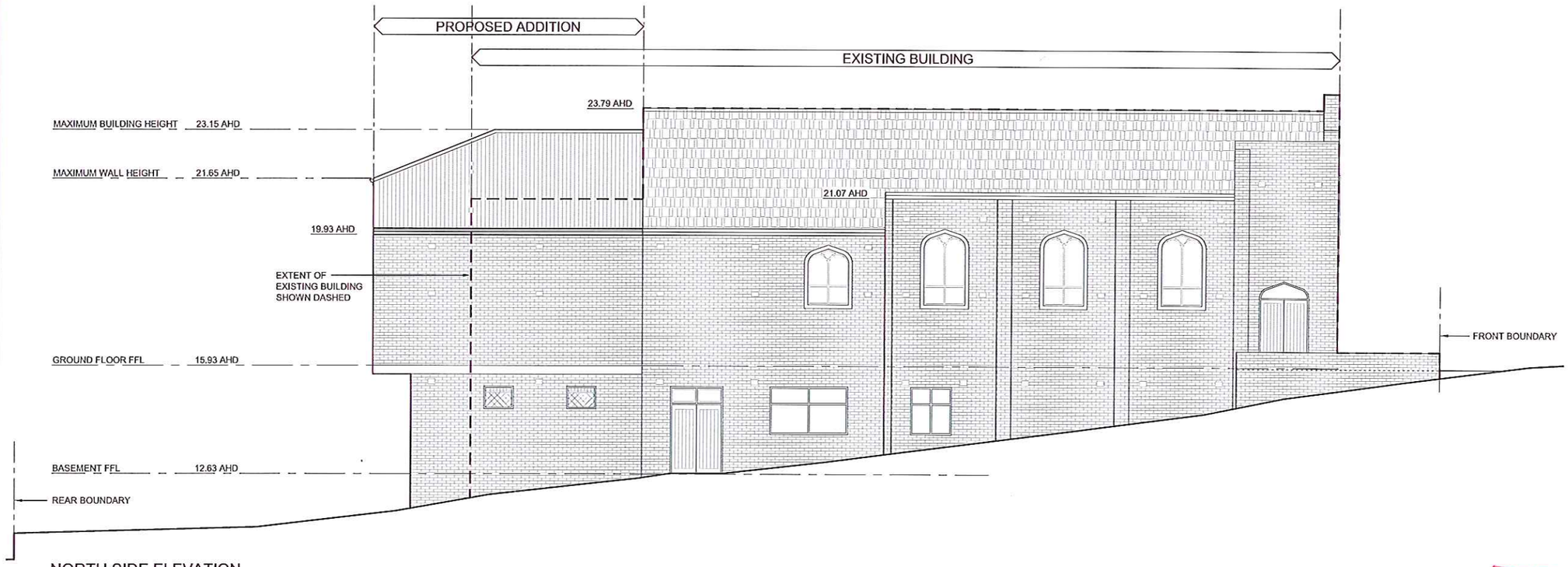
KINGSWAY METHODIST CHURCH
NEDLANDS
GROUND FLOOR & MEZZANINE PLANS
SCALE 1:100

A2 @ 1:100

1156DA02 A

REV	DATE	AMENDMENTS/ REASON FOR ISSUE
–	01/07/15	INITIAL ISSUE



NORTH SIDE ELEVATION
SCALE 1:100

SOUTH SIDE ELEVATION
SCALE 1:100

HART ARCHITECTS
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KINGSWAY METHODIST CHURCH
38-40 KINGSWAY NEDLANDS
SIDE ELEVATIONS
SCALE 1:100

A2 @ 1:100

1156DA04

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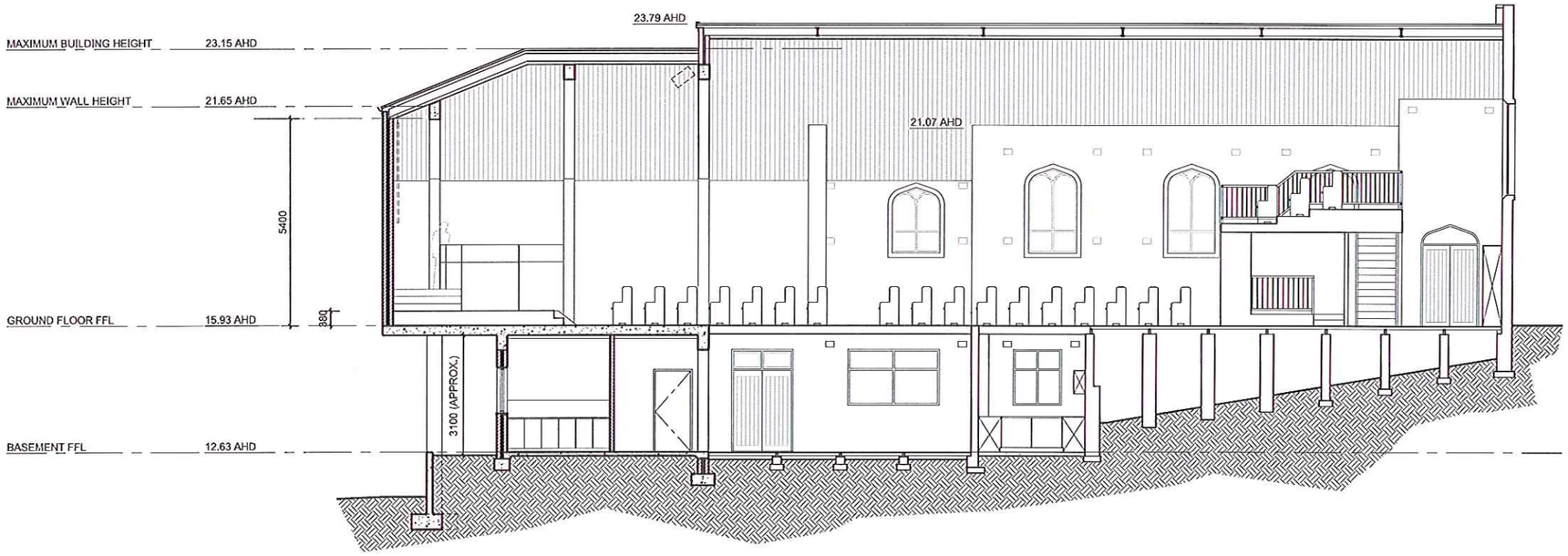
–	06/05/15	INITIAL ISSUE



LONG SECTION AA

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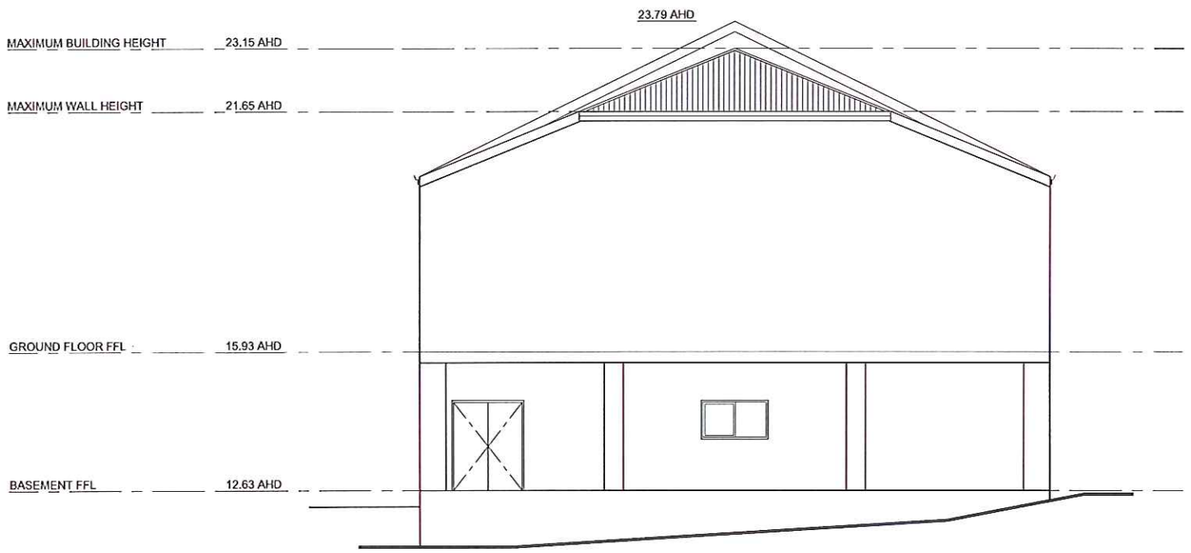

EAST (REAR) ELEVATION

SCALE 1:100

HART ARCHITECTS
LEVEL 1 34 KING STREET PERTH WA 6000
t: (08) 9322 1122 f: (08) 9322 1133 e: team@hartarchitects.com.au

KINGSWAY METHODIST CHURCH
38-40 KINGSWAY NEDLANDS
SECTION AND ELEVATION
SCALE 1:100

PD15.16 - Attachment 5
Photograph of the church as seen from Kingsway

Excellence in Transport Engineering

tarsc

Kingsway Methodist Church Redevelopment

TRAFFIC IMPACT STATEMENT

- Revision 1
- 21/08/15

TARSC Pty Ltd
13 Sopwith Elbow
MAYLANDS WA 6051
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Email: admin@tarsc.com.au

Contents

Document history and status

Revision	Date issued	Approved by	Revision type
0	11/08/15	R Ding	Initial Release Issued for Client Review
0.1	12/08/15	R Ding	Amended parking numbers
1	21/08/15		Amended due to comments on draft report

Distribution of copies

Revision	Copy no	Quantity	Issued to
0	1 (e-mail Word doc w/o Appendices)	1	Allerding & Associates
0.1	1 (e-mail Word doc w/o Appendices)	1	Allerding & Associates
1	1 (e-mail pdf)	1	Allerding & Associates

Printed:	21 August 2015 11:12 AM
Last saved:	18 August 2015 02:17 PM
File name:	M:\Users\Rod\My Documents\work\jobs\J15.17 - Kingsway Methodist Church\Kingsway Methodist Church Transport Statement Rev 1.docx
Author:	Rodney Ding
Name of client:	Kingsway Methodist Church
Client project manager:	Amanda Butterworth @ Allerding & Associates
Name of project:	Kingsway Methodist Church
Name of document:	Transport Statement
Document version:	Revision 1
Project number:	J15.17

1. Introduction

1.1 Purpose of This Report

This report is commissioned by Allerding & Associates on behalf of the Kingsway Methodist Church to document a traffic impact statement for the City of Nedlands for the proposed expanded church at 38-40 Kingsway, Nedlands.

As part of the approval processes this traffic impact statement will take the format of a Transport Statement (due to the size of the development, a "moderate" impact is expected with peak hour vehicular trips less than 100 per hour) in accordance with WAPC guidelines is required to support the application approval by the City of Nedlands.

1.2 Proposed Development

As discussed above, 38-40 Kingsway in Nedlands is proposed to be expanded from a current seating capacity of 170 persons to 296 persons. Access to the proposed development is via a single crossover from Kingsway on the western side of the site. The off-street car park proposes 13 car bays at ground level.

Refer to the locality plan in **Appendix B.**

2. Vehicle Access & Parking

2.1 Access to Car Park

As discussed in **Section 1.2**, access to the proposed development is via a single crossover on Kingsway. This crossover is existing and is not proposed to be modified. The nearest edge of the crossover to the nearest intersection (at Elizabeth Street) is approximately 45m from the southern kerb-line of Elizabeth Street.

This crossover will allow one-way traffic flow at a time.

There are suitable sight distances to the crossover for both approaches for the development. .

Approximately 250m sight distance is provided on both approaches to the crossover. This exceeds the minimum 45m for commercial driveways as required by Australian Standards (AS/NZS 2890.1:2004) and provides sight distances suitable for the desirable 5s gap criteria of 69m.

2.2 Parking

The parking supply required under the City of Nedlands Town Planning Scheme No. 2 is 1 bay for every 4 people. Based on the current 170 persons 43 bays would need to be provided, whilst the proposed 296 people church would require 74 bays.

The development proposes 13 bays on-site for parking, this an increase from the current 9 bays provided on-site. Also, within a 400m radius there are 454 further car spaces available for use by the general public, this is approximately a 5-minute walk. These are detailed by the parking survey detailed in **Appendix C**.

Of these spaces not on-site, there are approximately 123 spaces within a 200m or 2-miniute walking distance (not as the "crow flies" as per the previous measure). The total number of bays on-site and within this 2-minute walking distance are summarised in **Table 2.1** on the next page.

As shown in **Table 2.1** the current parking demand recorded for the current church is a rate of approximately 1 bay per 2.62 seats. As the current demand for the church is in excess of the requirements under the TPS No. 2 the actual demand for parking will be used for the basis of determination of the parking required. The expected parking demand for the 296 person church has been estimated on this same rate with 113 cars so calculated. These should be parked both on-site and in the immediate vicinity of the church due to the church services. In addition to these there should be parking not related to the church at the peak use of the bays by the church on a Sunday morning. So, based on this measure, there is expected to be an additional 48 cars parked within 200m of the church.

The occupancy at which a parking facility achieves optimum efficiency is generally accepted as being in the range of 85 to 95% of capacity. With the increase in the church size there is expected

to be a surplus of approximately 5 bays (or a 96% utilisation of the parking within a 200m walking distance of the church). This surplus in parking supply will ensure adequate spare parking and good circulation and opportunities to find parking bays within a short walking distance of the church. If all the bays within a 2-minute walk are all utilised, there is approximately 30 on-street bays available within a 3-minute walk from the church or 300m. These are located in Area A (part of Viewway S of Elizabeth St), Area D (Broadway N of Elizabeth St), Area G (part of Caporn St) and Area H (part of Broadway S of Elizabeth St).

Table 2.1 – Parking Supply & Demand

Location	Supply	Current Demand	Expected Demand
On-Site (rear)	13 (currently 9)	9c	13c
On-Site (verge)	2 (+10g)	2c	2c
Area B (Kingsway S of Elizabeth St) (angle)	46	46c	46c
Area B (Kingsway S of Elizabeth St) (parallel)	25 (-5g)	8c + 3	22c + 3
Area C (Kingsway N of Elizabeth St)	25	2	23c + 2
Area E (Broadway Fair) (part)	22	12	9c + 12
Area F (Broadway S of Elizabeth St)	3	2	2
Total	136 (+5g)	84 (65c + 19)	131 (113c + 19)

Not included in the above calculations is the ability to park approximately 10 cars on the verge of the church, instead of using the actual street for parallel parking for 5 cars. Thus, there could be 5 additional bays provided within 200m of the church increasing the available parking to 141 bays.

Given the availability of on street parking within 200m and 300m the peak demand for parking associated with the proposed extension can be satisfactorily accommodated on site and within the nearby on street parking available within 300m of the church.

2.3 Service Vehicles

No service vehicles are proposed nor expected to access the site. Furniture delivery vehicles are expected to park on Kingsway for loading or unloading.

General rubbish is to be removed from the site in typical "wheelie" bins. These bins will be emptied by the council rubbish collection from Kingsway.

3. Daily traffic volumes and vehicle types

3.1 Current Traffic

Traffic flows for Elizabeth Street and Kingsway were based on a general assessment of the development in the area and the layout of the road network. The resultant flows derived were:

- Elizabeth Street: 1,200 vehicles per day on a Sunday; and,
- Kingsway: 450 vehicles per day on a Sunday.

Traffic volumes on Elizabeth Street and Kingsway are expected to have minimal traffic growth over recent years with similar flows expected into the future. This is due to the fully developed nature of the surrounding suburb with little developments expected to lead to future significant traffic growth.

With the development in the vicinity being residential, it can be assumed that 10% of the daily Sunday flow occurs in the peak of around 11am to 1pm. The above flows correspond to an hourly flow of between 120 using Elizabeth Street and 45 using Kingsway. .

3.2 Trip Generation of Proposed Development

The traffic generation expected from the proposed development was based on the increase in the parking required and an assumed trip rate of 3 trips per parked car (for the two church services held each Sunday).

The summary of the trips is as below in **Table 3.1.**

Table 3.1 – Developmental Traffic Flows

	Total	
	In	Out
AM	30	0
PM	15	45
Daily	45	45

Vehicles accessing the site are expected to be all private motor vehicle sized cars.

3.3 Trip Distribution

For the purpose of trip distribution, it has been assumed that 50% of the trips to and from the development would be via Elizabeth Street whilst the remainder from Kingsway from the south.

3.4 Traffic Impact of Development

All affected streets are expected to have traffic volumes that should not exceed the capacities for similar roads of their types. These values should be significantly less than 50% of the capacities of the roads and thus there expected to be adequate capacity. Given that traffic flows can vary 5% either side of an average flow from day to day, the slight increases expected on Elizabeth Street a would not be noticeable. The comparisons to the capacities of these roads are shown in **Tables 3.2 and 3.3**.

The capacity for these roads are "theoretical" under ideal conditions. This would not strictly be the case for all streets. What is the determining factor for the operation of these streets is the operation of the intersection of Elizabeth Street and Kingsway. This intersection's performance leads to queues and thus affects its operation of the various roads. Thus, the intersection performance should be viewed as the key measure and not necessarily the arbitrary mid-block assessment which is a more high level comparison.

Table 3.2 – Current Daily Flows

Road	Capacity (two-way)	Actual Daily Flow (two-way)
Elizabeth Street	3,000[1]	1,200
Kingsway	3,000	450

Table 3.3 – Expected Daily Flows

Road	Capacity (two-way)	Expected Daily Flow (two-way)	Difference
Elizabeth Street	3,000	1,250	+4.1%
Kingsway	3,000	500	+11.1%

It can be seen that traffic is expected to increase in all roads near the proposed development with flows not exceeding the capacities for the roads.

With regards to intersections Table 2.4 from Austroads publication, *Guide to Traffic Management Part 6 – Intersections, Interchanges and Crossings* provides advice as to intersection and crossover

[1] Volume based on Access Street B type road, Liveable Neighbourhoods

performance in peak flow conditions with regards to possible further analysis. This is summarized in **Table 3.4**.

Table 3.4 – Austroads Guidelines

Major Road Type	Major Road Flow (vph, two-way)	Minor Road Flow (vph, two-way)
Two-lane	400	250
	500	200
	650	100
Four-lane	1000	100
	1500	50
	2000	25

Applying the rates from **Sections 3.2 and 3.3, Table 3.5** is derived.

Table 3.5 – Comparison to Austroads Guidelines

Intersection	Major Road Flow (vph, two-way)	Minor Road Flow (vph, two-way)
Crossover/Kingsway	125	20
Elizabeth Street/Kingsway	120	125

From the above it can be seen that the crossover on Kingsway and the intersection of Elizabeth Street and Kingsway should be well below the above values given in **Table 3.4** and no further analysis is required. At this level of traffic volumes, the Level of Services would be expected to be A in peak periods and throughout the day.

3.5 Level of Service Concepts

The level of service concept describes the quality of traffic service in terms of six levels, designated A to F, with level of service A (LOS A) representing the best operating condition (i.e. at or close to free flow), and level of service F (LOS F) the worst (i.e. forced flow). More specifically:

- *LOS A*: Primarily free flow operations at average travel speeds, usually about 90% of the FFS (free flow speed) for the given street class. Vehicles are completely unimpeded in their ability to manoeuvre within the traffic stream. Control delay at signalised intersections is less than 10 seconds. At non-signalised movements at intersections the average control delay is less than 10 seconds;
- *LOS B*: Reasonably unimpeded operations at average travel speeds, usually about 70% of the FFS for the street class. The ability to manoeuvre within the traffic stream is only slightly restricted, and control delays at signalised intersections are between 10 and 20 seconds. At non-signalised movements at intersections the average control delay is between 10 and 15 seconds;
- *LOS C*: Stable operations; however, ability to manoeuvre and change lanes in mid-block locations may be more restricted than at LOS B, and longer queues, adverse signal coordination, or both may contribute to lower average travel speeds of about 50% of the FFS for the street class. Signalised intersection delays are between 20 and 35 seconds. At non-signalised movements at intersections the average control delay is between 15 and 25 seconds;
- *LOS D*: A range in which small increases in flow may cause substantial increases in delay and decreases in travel speed. LOS D may be due to adverse signal progression, inappropriate signal timing, high volumes, or a combination of these factors. Average travel speeds are about 40% of FFS. Signalised intersection delays are between 35 and 55 seconds. At non-signalised movements at intersections the average control delay is between 25 and 35 seconds;
- *LOS E:* Characterised by significant delays and average travel speeds of 33% of the FFS or less. Such operations are caused by a combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections (between 55 and 80 seconds), and inappropriate signal timing. At non-signalised movements at intersections the average control delay is between 35 and 50 seconds; and,
- *LOS F*: Characterised by urban street flow at extremely low speeds, typically 25% to 33% of the FFS. Intersection congestion is likely at critical signalised locations, with high delays (in excess of 80 seconds), high volumes, and extensive queuing. At non-signalised movements at intersections the average control delay is greater than 50 seconds.

In addition to the above:

- Average Delay: is the average of all travel time delays for vehicles through the intersection; and,
- Queue: is the queue length below which 95% of all observed queue lengths fall.

4. Traffic management on the frontage streets

4.1 Elizabeth Street

This road is a single carriageway two-lane, two-way road and is classified as an Access Road under the Functional Road Hierarchy. The traffic lane width is approximately 3.25m either side of an unbroken separation line. There is a 2.0m wide footpaths on both side of the road. Traffic volumes are approximately 1,500 vehicles per day (1,200 on a Sunday).

Parking is not permitted on Elizabeth Street with No Parking signs erected on both sides of the road.

4.2 Kingsway

This road is classified as an Access Road and carries in the order of 500 vehicles per day (450 on a Sunday). It is a single carriageway undivided two-lane, two-way road with a pavement width of approximately 8.5m in a reserve width of approximately 20m. Kingsway is subject to the 50km/h built up area speed limit. There is a 2.0m wide footpath on the western side of Kingsway that connects to other footpaths on Elizabeth Street and other footpaths in a wider footpath network. Parking is permitted on the western side of Kingsway in angled parking bays for approximately 46 cars.

4.3 Intersection of Elizabeth Street and Kingsway

This intersection is a four-way junction with Elizabeth Street the priority road and Kingsway the minor road. There is no channelization at this intersection and the intersection is Stop-Sign controlled with a single sign and a solid stop line on both the Kingsway approaches.

There is approximately 140m sight distance west along Elizabeth Street from the intersection on both the Kingsway approaches, whilst the sight distance is approximately 105m to Broadway. These sight distances exceed the minimum of 90m safe intersection sight distance for a 50km/h road.

5. Public transport access

The proposed development lies approximately 200m from bus stops on Broadway with frequencies of every 30 minutes for the Route 24 bus service. The site is also approximately 300m from bus stops in Bruce Street for the Route 23 service. Bothe these services run from Claremont through to the Perth City. The service on Broadway has a bus service which stops at 8:56am and 11:09am on a Sunday morning prior to both the service start times at the church.

These routes can be accessed by footpath networks on Elizabeth Street, Kingsway and Broadway.

There is also the Route 97 bus service which runs between the Subiaco Train Station and UWA. This has a stop located on Fairway which is approximately 500m from the church via footpaths on Fairway, Myers Street, Broadway, Elizabeth Street and Kingsway.

The proximity of these facilities may lead to a low car usage/reliance.

6. Pedestrian and Cycle Access

On both sides of Elizabeth Street there are 2.0m wide footpaths which connect to footpaths on other streets in the area. Kingsway has a 2.0m wide footpath on the western side of the road. Access to bus stops on Bruce Street, Broadway and Fairway is via footpaths on streets. There is a traffic island on Broadway north and south of the intersection of Elizabeth Street and Broadway to allow crossing of Broadway in two stages.

Both Elizabeth Street and Kingsway are a low volume roads and this will allow a good riding environment to allow cyclists to access the church.

Two bike racks are proposed to be installed in front of the education building.

7. Safety Issues

7.1 Intersection of Elizabeth Street/Kingsway

The intersection of Elizabeth Street and Kingsway was found to have had no recorded crashes in the five years up to 31/12/2014. The average crash rate for intersections of this nature is approximately 0.50 crashes per MV (equivalent to approximately 2 crashes in 5 years) with a critical crash rate of 2.70 crashes per MV (equivalent to approximately 9 crashes in 5 years).

With the current crash rate is significantly less than both the average and critical crash rates and overall this suggest that this intersection is safe and thus the small increase in traffic due to the proposed development should be acceptable and not lead to an increase in crashes.

No modifications to this intersection are required due to the proposed development.

7.2 Kingsway

Kingsway between Elizabeth Street and Princess Road was found to have had 3 recorded crashes in the five years up to 31/12/2014. All of these were property damage only with 2 involving parking and 1 involving overtaking. Based on the traffic flows and length of road, this equates to 12.2 crashes per million vehicle kilometres (MVkm) on the road section. The average crash rate for road sections of this nature is approximately 1.98 crashes per MVkm (approximately 0.5 crashes in 5 years) with a critical crash rate of 22.6 crashes per MVkm (approximately 6 crashes in 5 years). The current crash rate is greater than the average crash rate but less than the critical crash rate. So, although the crash rate is higher than the average it is less than the critical crash rate and no modification to this section of road is required due to the proposed development.

7.3 Critical Crash Rate

This is the crash rate above which crashes occur in excess of a significance level above the network average. The critical crash rates described above are at the upper 5% value, one tailed. Crashes which occur at a rate greater than the network average and less than the critical crash rate (based on either the MV or MVkm exposure level) are typically acceptable. As the crash rate approaches and then exceeds the critical crash rate this suggests a possible safety issue, e.g. Critical Rate Factor (CRF) of 0.9 and above.

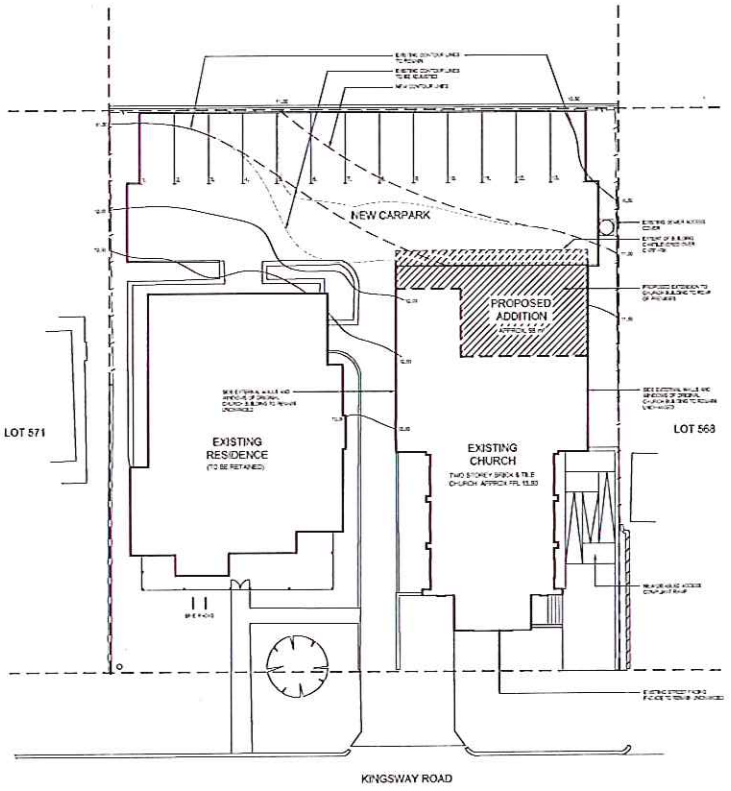
8. Conclusions

As a result of the traffic analysis undertaken for proposed development centre at Kingsway Methodist Church in Nedlands, the following findings were made:

- The proposed development should not generate significant vehicular trips;
- The proposed development has good access to public transport and high standard paths in close proximity to the Perth CBD;
- The impacts of the traffic volumes associated with the development on the road network are considered acceptable with little notable impact expected; and,
- There is expected to be surplus in proposed on-site parking and existing on-street parking (within 200 to 300m) based on expected usage patterns.

Appendix A Proposed Development Plans

REV	DATE	AMENDMENTS REASON FOR ISSUE
A	17/06/15	ADDED BIKE RACKS
-	26/03/15	INITIAL ISSUE

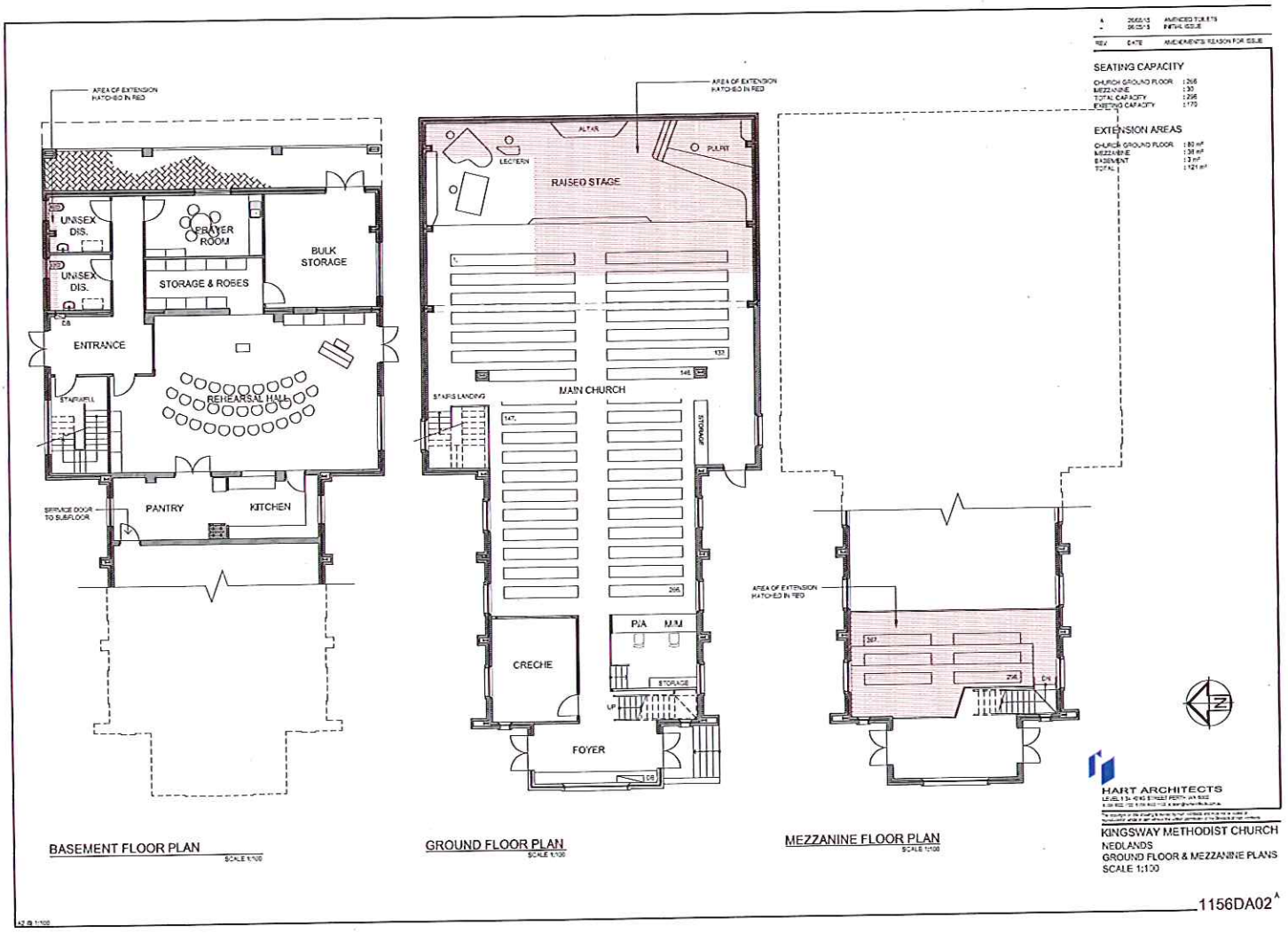


SITE PLAN

HART ARCHITECTS

KINGSWAY METHODIST CHURCH
38-40 KINGSWAY NEDLANDS
SITE PLAN
SCALE 1:200

1156DA01[A]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UNISEX DIS.
PRAYER ROOM
BULK STORAGE
STORAGE & ROSES
ENTRANCE
REHEARSAL HALL
PANTRY
KITCHEN
SERVICE DOOR TO BUILDING
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PULPIT
RAISED STAGE
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STAIRS LANDING
CRECHE
P/A
M.M.
STORAGE
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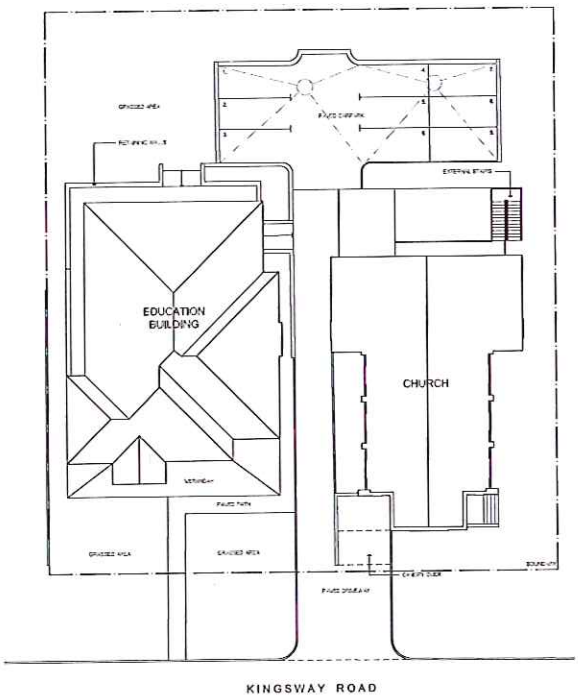
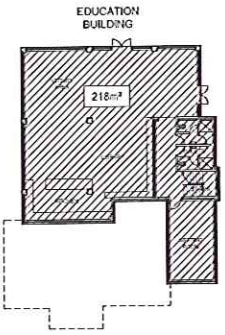
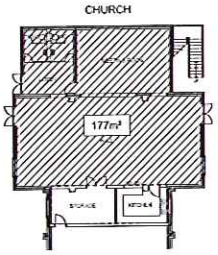
AREA OF EXTENSION HATCHED IN RED
SEATING CAPACITY
EXTENSION AREAS
HART ARCHITECTS
BASEMENT FLOOR PLAN
SCALE 1:100
GROUND FLOOR PLAN
SCALE 1:100
MEZZANINE FLOOR PLAN
SCALE 1:100
KINGSWAY METHODIST CHURCH
NEDLANDS
GROUND FLOOR & MEZZANINE PLANS
SCALE 1:100
1156DA02



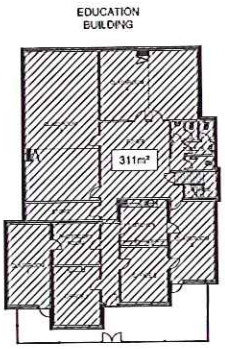
EXISTING SITE PLAN

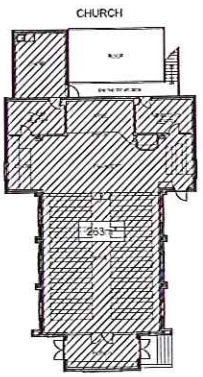


LOWER GROUND FLOOR PLAN



PLOT RATIO CALCULATIONS





GROUND FLOOR PLAN

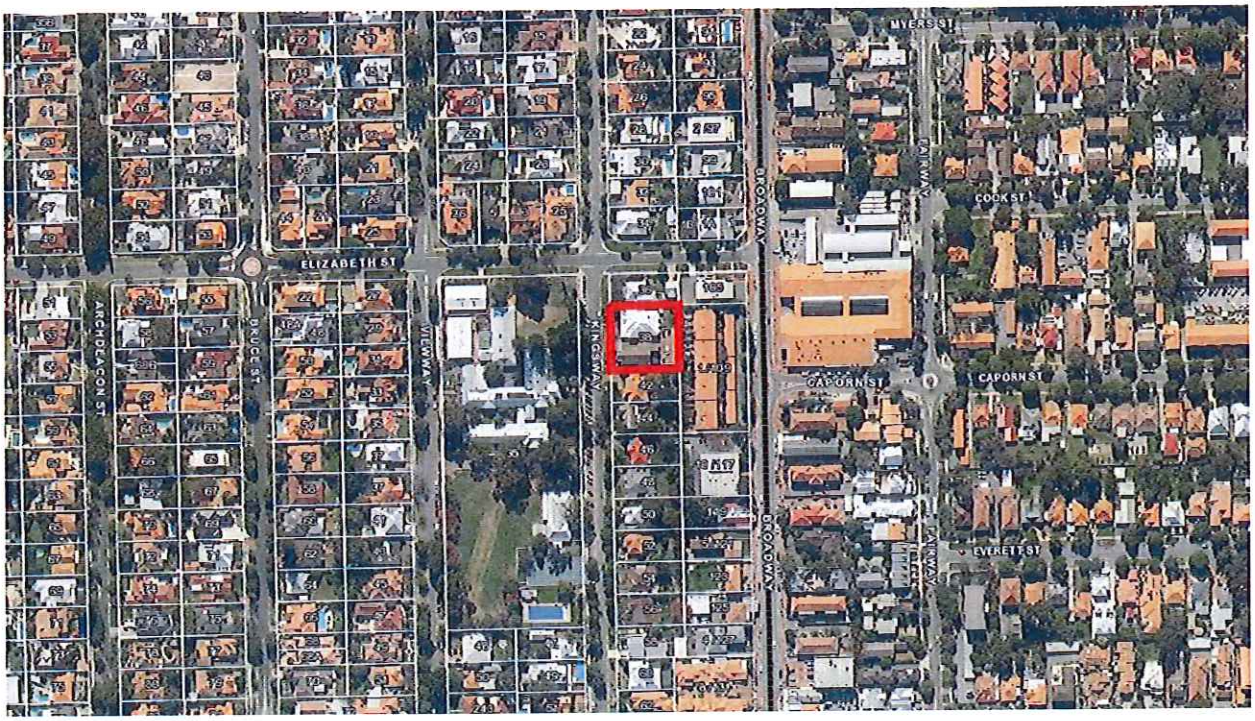
REV	DATE	AMENDMENTS / REASON FOR ISSUE
C	09.01.12	BOUNDARY AND PLOT RATIOS
B	11.11.11	AREAS UPDATED
A	18.10.11	PLOT RATIO CALCULATIONS ADDED
–	26.07.11	INITIAL ISSUE

HART ARCHITECTS

KINGSWAY METHODIST CHURCH
38-40 KINGSWAY NEDLANDS
PLOT RATIO AREAS

1156X00[C]

Appendix B Locality Plan


MYERS ST
COOK ST
ELIZABETH ST
BROADWAY
LANEWAY
KINGSWAY
VIEWWAY
BRUCE ST
ARGYLE AGON ST
CAPORN ST
EVERETT ST

Appendix C Parking Survey

463 spaces

Total existing publically accessible car spaces within 400m radius of 38-40 Kingsway, excluding service/loading bays and crossovers to private properties

25 spaces
Area C
Street Parking on Kingsway (North)

14 spaces
Area D
Street Parking on Broadway (North)

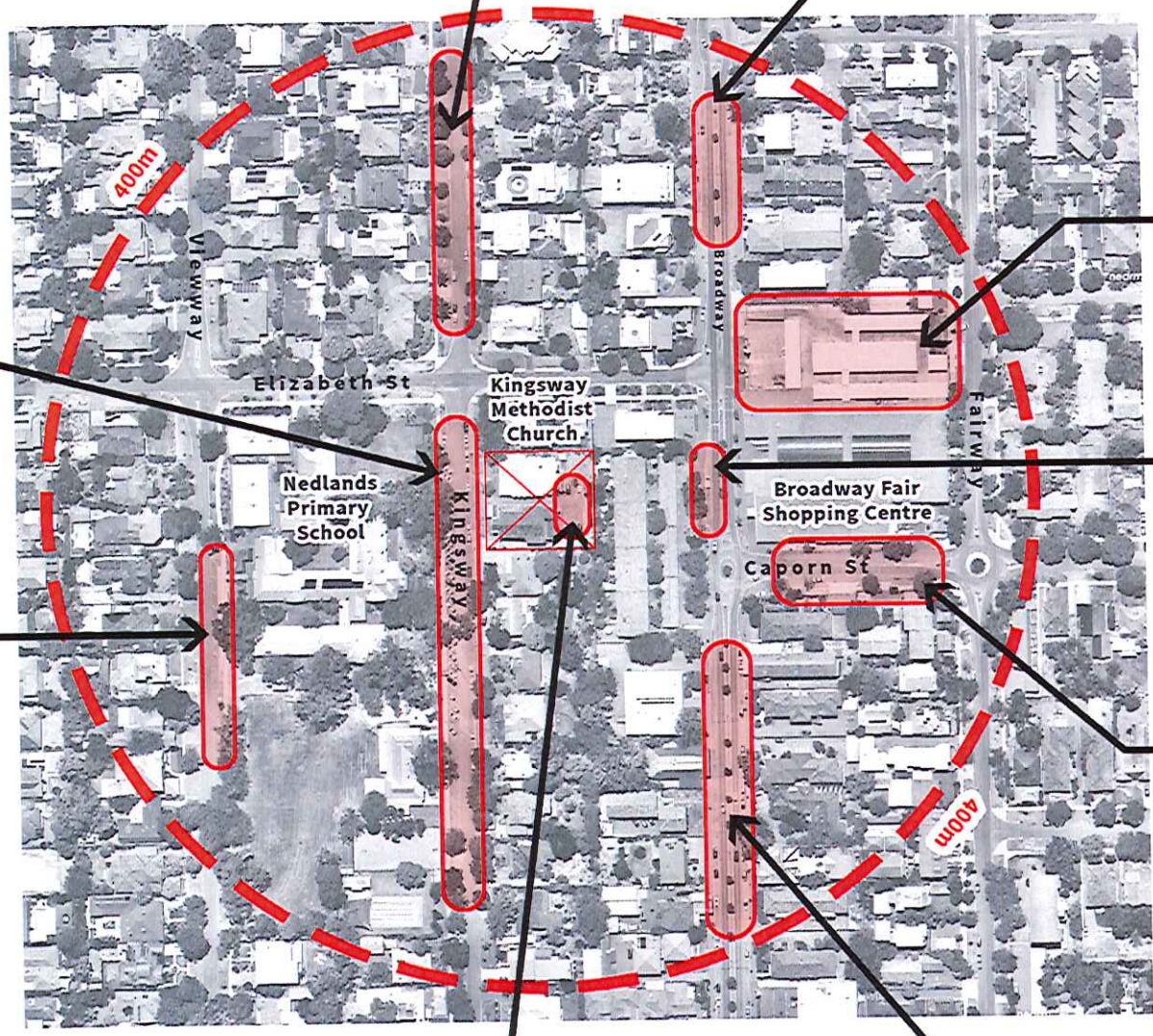
286 spaces
Area E
Broadway Fair Shopping Centre
Marked car bays in 3 level carpark

71 spaces
Area B
Street Parking on Kingsway (South)

3 spaces
Area F
Street Parking on Broadway (Central)

14 spaces
Area A
Street Parking on Viewway Street

13 spaces
Area G
Street Parking on Caporn Street



9 spaces
Area I
Existing marked car bays within church lot

28 spaces
Area H
Street Parking on Broadway (South)

CAR PARKING SURVEY

47% free capacity

218 unused car spaces on a typical Sunday morning within 400m of church buildings on 38-40 Kingsway, Nedlands

Area A

Street Parking on Viewway

Total: 14
Occupied: 5
Unused : 9

Area B

Street Parking on Kingsway (South)

Total: 71
Occupied: 59
Unused : 12

Area C

Street Parking on Kingsway (North)

Total: 25
Occupied: 2
Unused : 23

Area D

Street Parking on Broadway (North)

Total: 14
Occupied: 3
Unused : 11

Area E

Broadway Fair Shopping Centre
Marked car bays in 3 level carpark

Total: 286
Occupied: 148
Unused : 138

Area F

Street Parking on Broadway (Central)

Total: 3
Occupied: 2
Unused : 1

Area G

Street Parking on Caporn Street

Total: 13
Occupied: 7
Unused : 6

Area H

Street Parking on Broadway (South)

Total: 25
Occupied: 13
Unused : 15

Area I

Existing car bays on church property

Total: 9
Occupied: 6
Unused : 3

SUNDAY PARKING USAGE SURVEY

PD16.16 (Lot 6) No. 12 Davies Road, Dalkeith – Front Fencing to Southern Side Boundary

Committee	12 April 2016
Council	26 April 2016
Applicant	G J & J H O'Neill
Owner	G J & J H O'Neill
Officer	Kate Bainbridge – Senior Statutory Planning Officer
Director	Peter Mickleson – Director Planning & Development Services
Director Signature	
File Reference	DA15/422
Previous Item	Nil.
Attachments	1. Partial Site Plan 2. Detail of Posts 3. South Elevation

1.0 Executive Summary

The proposal is for fencing within the front setback along the southern side boundary. The fence is proposed to be solid up to 1.8m in height and therefore does not comply with the deemed-to-comply requirements of the Residential Design Codes or the City's Fill and Fencing Council Policy which permits solid fencing up to 1.2m in height.

One (1) submission was received during the consultation period objecting to the height and design of the fencing. Where an objection has been received, administration does not have the delegation to determine the application and therefore the application is referred to Council for determination.

The fencing material proposed is timber-lap in contrast to the fencing along the front boundary which is rendered brick with wrought iron in-fill. The provision of a solid 1.2m high fence with visually permeable in-fill above to a height of 1.8m will afford the same levels or even greater levels of privacy and match the existing front boundary fencing. The application is therefore recommended for approval subject to modifications to ensure compliance with the R-Codes, TPS2 and Council Policy.

2.0 Recommendation to Committee

Council approves the development application to construct fencing within the front setback along the southern side boundary at (Lot 6) No. 12 Davies Road, Dalkeith, in accordance with the plans dated 8 December 2015 subject to the following conditions and advice notes:

Conditions:

1. **Amended plans are submitted with the building permit demonstrating the fencing is reduced to 1.2m in height or 1.8m in height with visually permeable in-fill above a solid section no more than 1.2m in height.**

2. **The development shall at all times comply with the approved plans as annotated in red.**

3. **All footings and structures to retaining walls shall be constructed wholly inside the site boundaries of the Certificate of Title.**

Advice Notes:

1. **The applicant is required to obtain a building approval for the fencing within the front setback from the City of Nedlands.**

2. **Fencing up to 1.8m in height above natural ground level or approved levels is permitted behind the front setback area (9m back from the front boundary) without further planning approval.**

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

3.0 Strategic Community Plan

KFA: Natural and Built Environment

This report addresses the Key Focus Area of Natural and Built Environment through adherence to the design requirements of TPS 2, contributing to well-planned and managed development in the City of Nedlands.

4.0 Legislation

- *Planning and Development Act 2005* (Act).
- *Planning and Development (Local Planning Schemes) Regulations 2015*.
- Metropolitan Region Scheme (MRS).
- City of Nedlands Town Planning Scheme No. 2 (TPS2).
- Residential Design Codes WA 2015 (R-Codes).
- Council Policy – Neighbour Consultation.
- Council Policy – Fill and Fencing.

5.0 Budget / Financial Implications

The proposal is for works to be constructed on a private lot, and therefore has no immediate budget or financial implications for the City, however should Council refuse the application, there may be financial implications through an appeal of Council's decision.

6.0 Risk management

Nil.

7.0 Background

7.1 Site Description

Lot area	956m^2
Metropolitan Region Scheme Zoning	Urban
Town Planning Scheme No. 2 Zoning	Residential – R12.5
Detailed Area Plan/Outline Development Plan	No
Controlled Development Area	No

The applicant has advised that a number of years ago the existing fencing within the front setback along the southern side boundary was removed due to its poor condition. This fencing was never replaced as a mature tree provided a certain amount of privacy between the property's front yards. The mature tree has since been removed – in agreement of both owners, and hence the front yards now are more open and the applicant wishes to provide more privacy to their front yard area through the provision of a solid fence which ranges from 1.65m in height at the front boundary up to 1.8m.

An aerial image showing the location of the property follows.

8.0 Discussion

The application seeks approval for a solid fencing within the front setback along the southern side boundary ranging from 1.65m up to 1.8m in height.

The applicant has provided a justification in support of the development application provided and a full copy of the applicant's submission received by the City has been given to the Councillors prior to the Council meeting.

8.1 Consultation

The development application was advertised to affected landowners for comment due to the solid portion of the fence fencing exceeding 1.2m in height within the front setback area. The following is a summary of the concerns raised:

- The submitter believes that the proposed height for the first 9 metres of setback is too high as the residential design codes allow 1.2m.
- The submitter believes the additional height proposed will be visually unappealing and it will box in the subject and neighbouring property, instead of creating a friendly, community feel, through a visual sense of openness.
- The submitter believes that the house entrance will be further obstructed by the fence.
- The submitter requests that the fence is no higher than 1.2m as they believe it will create the right balance between privacy and separation as well as providing a harmonious design to the street.
- The submitter believes the additional height of the fence will block out northern light during winter to their property.

The potential impact the fencing shall have on amenity is discussed in the following sections of the report.

8.2 Town Planning Scheme No. 2

The proposal is not compliant with the following provision(s) of TPS 2:

8.2.1 Amenity

TPS 2 Provision	Assessment/Comment
Under clause 5.5.1 Council may refuse to approve any development if in its opinion the development would adversely affect the amenity of the surrounding area having regard to the likely effect on the locality in terms of the external appearance of the development, traffic congestion and hazard, noise or any other factor inconsistent with the **use** for which the lot is zoned.	The fencing within the front setback area along the southern side boundary will be visible from the approach to the dwelling. The lowering of the solid section of the fencing to 1.2m will ensure that the fencing will reduce the bulk and scale of the fence as viewed from the street and neighbouring properties.

8.3 State Planning Policy 3.1 – Residential Design Codes

8.3.1 Street walls and fences

The proposal is not compliant with the following provision(s) of the deemed to comply requirements of the R-Codes:

Deemed-to-Comply Requirement	Proposed
Fences are to be visually permeable above 1.2m	South Boundary – Solid fence from 1.65m up to 1.8m in height

Variations to the Deemed-to-Comply requirements can be considered subject to satisfying the following Design Principle provisions:

Design Principles	Assessment/Comment
Front fences are low or restricted in height to permit surveillance and enhance streetscape with appropriate consideration to the need: • For attenuation of traffic where the street is designated as a primary or district distributor or integrator arterial; and • For necessary privacy or noise screening for outdoor living areas where the street is designated as a primary or district distributor or integrator arterial.	Although the fencing being along the south side boundary within the front setback does not have any implications in terms of passive surveillance from the dwelling, the additional height do not enhance the streetscape. Davies Road is not a primary or district distributor or integrator arterial and the front setback area is not the main outdoor living area of the property. The applicant has advised of two properties within the immediate streetscape where the fencing is solid within the front setback along the side boundaries. This design of fencing is not compliant with the Residential Design Codes Design Principles nor the City's Fill and Fencing Council Policy and should not be able to proliferate due to the negative impact on the streetscape with regard to bulk and scale of front fencing. An approval should not be granted on the basis of an approval of similar development within the locality, but rather based on the merits of the proposal taking into consideration the impact on the streetscape. The majority of dwellings within the street block on Davies Road have permeable fencing within the front setback or no fencing and therefore modifications are recommended to ensure the fencing will not have a detrimental impact on the streetscape.

8.4 Council Policy – Fill and Fencing

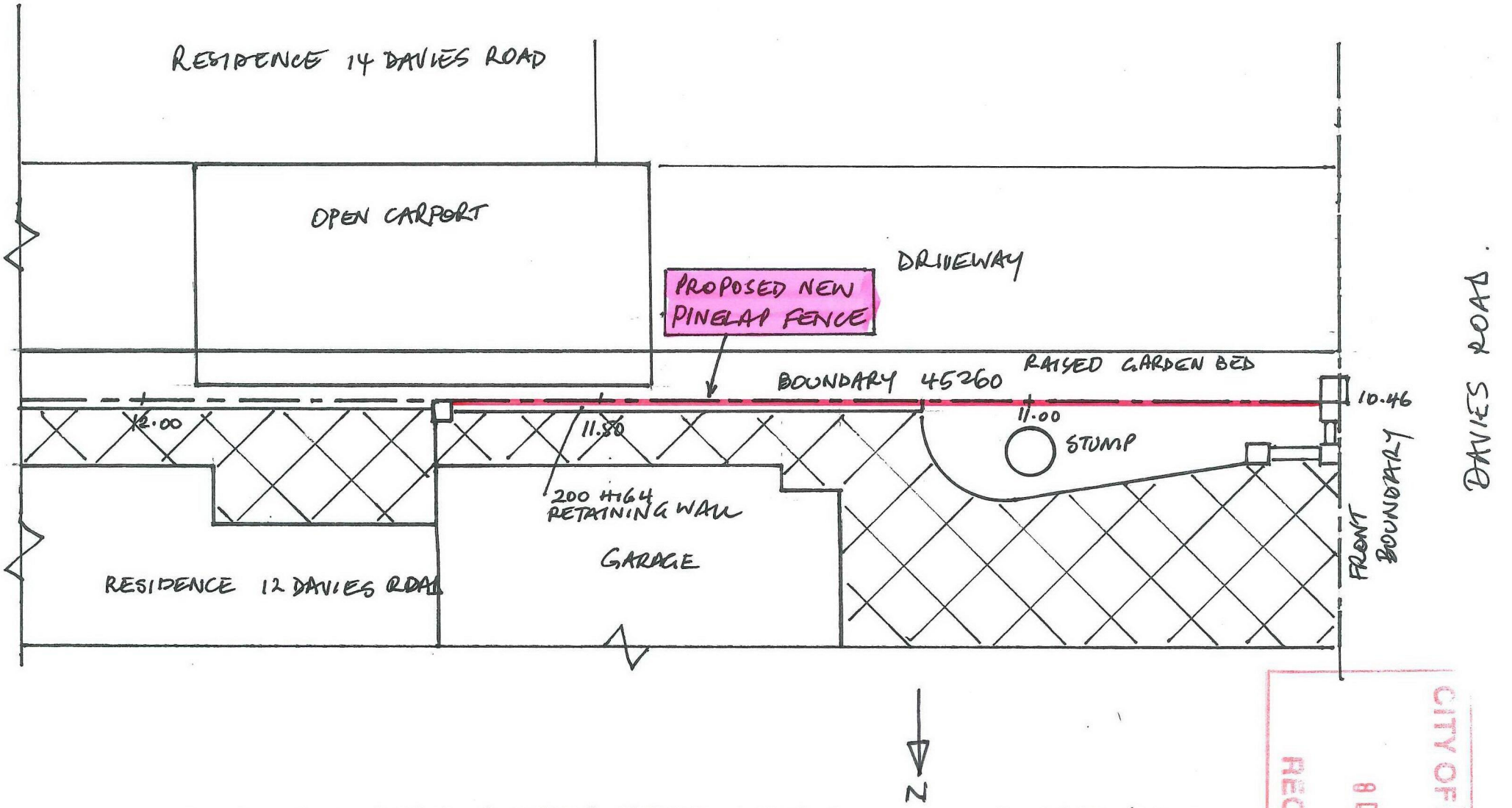
The proposal is not compliant with the following provision(s) of the Fill and Fencing Council Policy:

Policy Provision	Proposed	Assessment/Comment
The height of solid fencing shall be a maximum of 1.2 metres from natural ground level. Any fencing which does not meet these requirements are required to: a) meet the design principles of Clause 5.2.4 (Street walls and fences) and 5.2.5 (Sight lines) of the R-Codes; b) be assessed in terms of the developments likely impact upon streetscape; and c) be advertised in accordance with the Council's Neighbour Consultation Policy.	The fencing is solid to a height of 1.65m to 1.8m above natural ground level within the front setback along the southern side boundary.	As outlined above, the proposed fencing does not comply with the design principles of Clause 5.2.4 and is likely to have a detrimental impact on the streetscape due to the additional height. The impacted neighbouring landowner was consulted by the City who provided objections to the development which are summarised above.

9.0 Conclusion

The proposal is to construct fencing within the front setback area along the southern side boundary at 1.65m to 1.8m in height above natural ground level. The proposal involves a variation to the deemed-to-comply provision of the R-Codes and the City's Fill and Fencing Council Policy. The variation is considered not to be compliant with the relevant design principles of the R-Codes, amenity provisions of the City's TPS2 and requirements of the City's Fill and Fencing Council Policy. Accordingly, the application is recommended to Council for approval with modifications to ensure compliance with the City's abovementioned requirements.

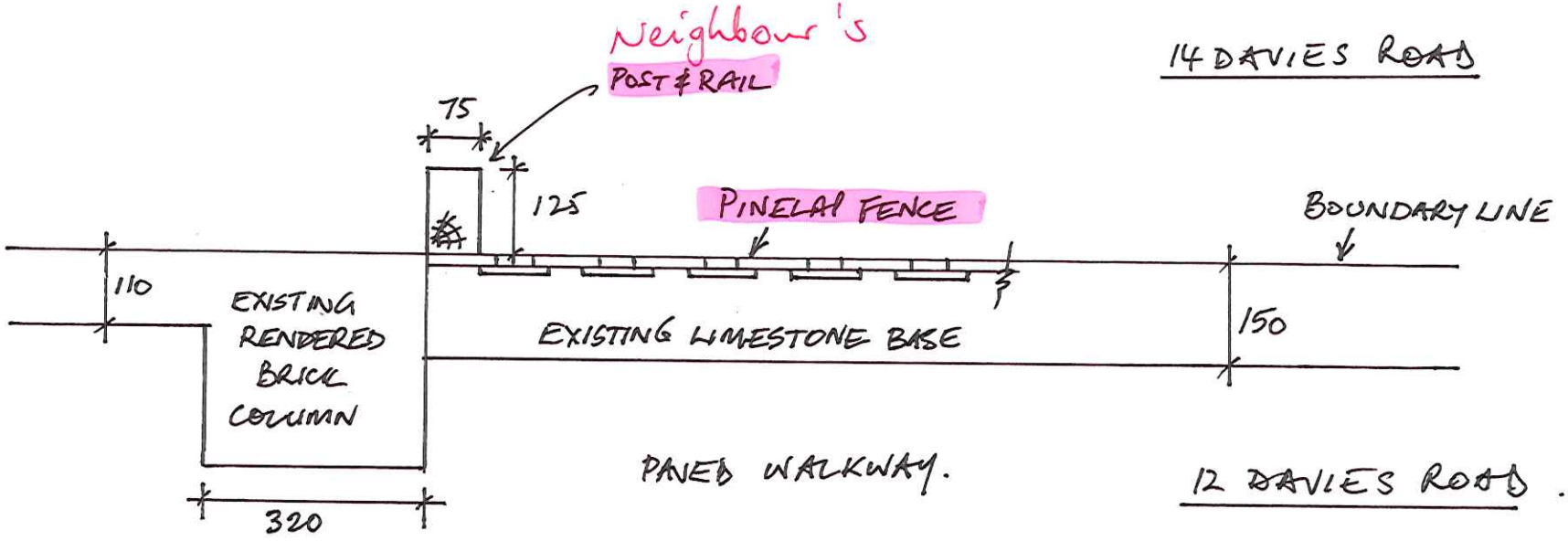
PD16.16 - Attachment 1
Partial Site Plan



SOUTH BOUNDARY SCREEN FENCE DETAIL

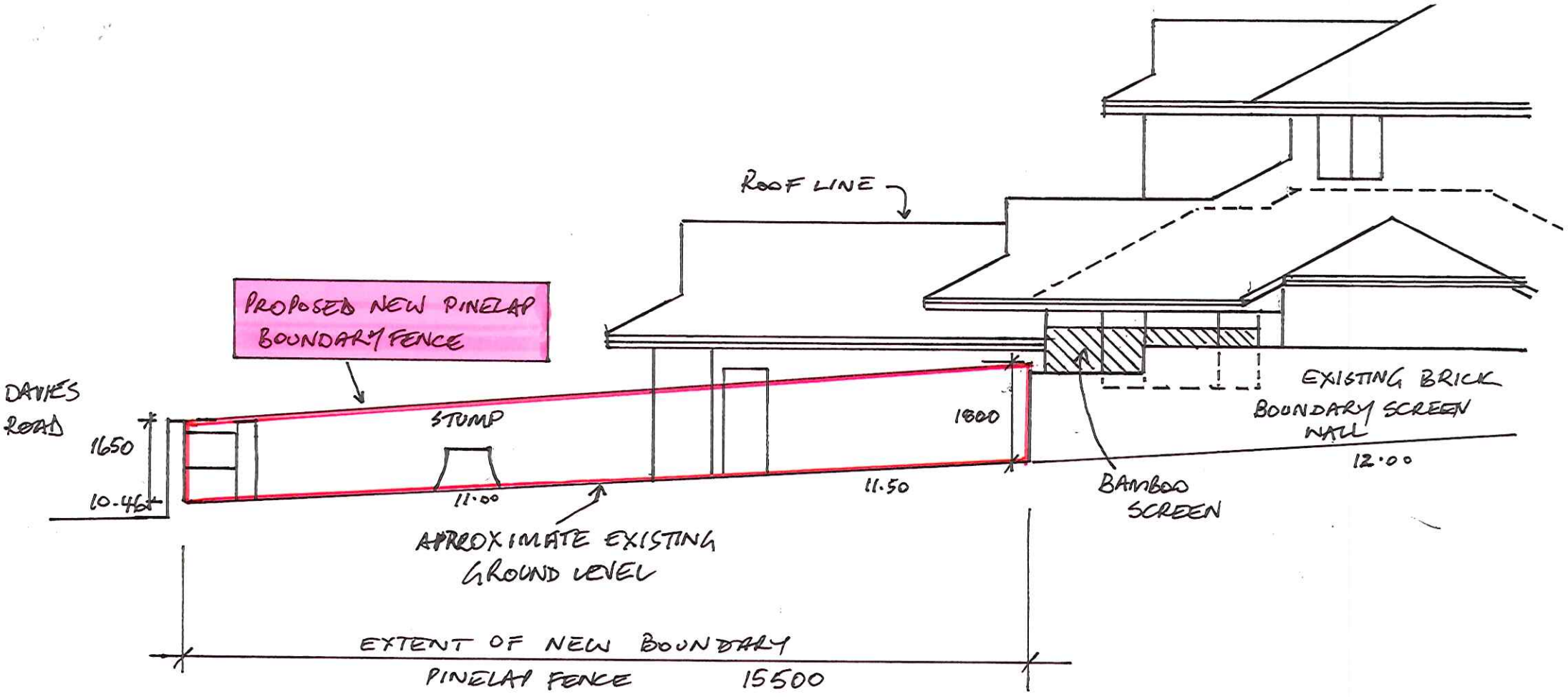
12 DAVIES ROAD, DARLEITH

SCALE 1:100



POST DETAIL SCALE 1:10

12 DAVIES ROAD, DALKEITH.



SOUTH BOUNDARY SCREEN FENCE DETAIL SCALE 1:100

12 DAVIES ROAD, DALKEITH.