



Metro Central Joint Development Assessment Panel Agenda

Meeting Date and Time: Monday 9 February 2015; 3pm
Meeting Number: MCJDAP/87
Meeting Venue: City of Belmont
215 Wright Street
Cloverdale

Attendance

DAP Members

Mr Charles Johnson (Presiding Member)
Mr Ian Birch (Deputy Presiding Member)
Mr Luigi D'Alessandro (Specialist Member)
Cr Phil Marks (Local Government Member, City of Belmont)
Cr Robert Rossi (Local Government Member, City of Belmont)
Cr Jennie Carter (Local Government Member, Town of Bassendean)

Officers in attendance

Mr Christian Buttle (Town of Bassendean)
Mr Ryan Hall (DoP)
Mr Wilmot Loh (City of Belmont)

Local Government Minute Secretary

Ms Rebecca Brockman

Applicants and Submitters

Ms Mandy Leung (Hillam)
Mr David Hillam (Hillam Architects)
Mr Kim Doepel (Doepel Marsh)

Members of the Public

Nil

1. Declaration of Opening

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

2. Apologies

Nil



3. Members on Leave of Absence

Nil

4. Noting of Minutes

Note the Minutes of the Metro Central JDAP meeting No.84 held on the 21 January 2015.

The Minutes of the Metro Central JDAP Meeting No.85 held on 28 January 2015 and Meeting No.86 held on the 5 February 2015 were not available at time of Agenda preparation.

5. Declarations of Due Consideration

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

6. Disclosure of Interests

Nil

7. Deputations and Presentations

- 7.1 Mr David Hillam (Hillam Architects) presenting for the application at Item 8.2. The presentation will present the architectural design concept to the Panel

8. Form 1 - Responsible Authority Reports – DAP Application

- 8.1 Property Location: Lots 90 – 92 (Nos. 7 – 11) Parker Street and Lots 8 & 9 (Nos. 2 & 4A) Wilson Street, Bassendean
Application Details: Mixed Development Comprising Additions and Alterations to Place of Worship, Shop and 35 Multiple Dwellings
Applicant: Doepel Marsh Architects Pty Ltd
Owner: Saint Marks Anglican Church
Responsible authority: Town of Bassendean
DoP File No: DAP/14/00603
- 8.2 Property Location: Lot 1017 (3) Hawksburn Road, Rivervale
Application Details: 147 Multiple Dwellings and 6 Office tenancies
Applicant: Hillam Architects Pty Ltd
Owner: Dragon Century Spring Pty Ltd
Responsible authority: City of Belmont
DoP File No: DAP/14/00637



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

Nil

10. Appeals to the State Administrative Tribunal

Nil

11. General business / Meeting Closure



Minutes of the Metro Central Joint Development Assessment Panel

Meeting Date and Time: Wednesday 21 January 2015; 3pm
Meeting Number: MCJDAP/84
Meeting Venue: City of South Perth
Civic Centre
Cnr Sandgate Street and South Terrace
South Perth

Attendance

DAP Members

Mr Clayton Higham (Presiding Member)
Mr Luigi D'Alessandro (Specialist Member)
Cr Colin Cala (Local Government Member, City of South Perth)
Cr Glenn Cridland (Local Government Member, City of South Perth)

Officers in attendance

Mr Cameron Howell (City of South Perth)
Ms Vicki Lummer (City of South Perth)

Local Government Minute Secretary

Ms Narelle Cecchi (City of South Perth)

Applicants and Submitters

Mr Daniel Lees (TPG)
Mr Jason MacDonald (MacJones)
Mr Brett Lovett (Devwest)
Mr William Lieu (Devwest)

Members of the Public

Nil

1. Declaration of Opening

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

2. Apologies

Mr Charles Johnson (Presiding Member)
Mr Ian Birch (Deputy Presiding Member)

3. Members on Leave of Absence

Mr Ian Birch (Deputy Presiding Member)



4. Noting of Minutes

Note the Minutes of the Metro Central JDAP meeting No.82 held on the 18 December 2014 and meeting No.83 held on the 6 January 2015.

5. Declarations of Due Consideration

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

6. Disclosure of Interests

Member/Officer	Report Item	Nature of Interest
Mr Charles Johnson	9.1	Indirect Pecuniary Interest . consultant for developers on a separate and unrelated rezoning application

7. Deputations and Presentations

7.1 Mr Dan Lees (TPG) presenting for the application at Item 9.1. The presentation supported the amended condition as recommended for approval.

8. Form 1 - Responsible Authority Reports – DAP Application

Nil

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

9.1	Property Location:	Lots 390 and 391 (Nos. 3 & 5) Barker Avenue, Como
	Application Details:	Proposed Amendment to Approved Mixed Development within a Three-Storey Building
	Applicant:	TPG Town Planning, Urban Design and Heritage
	Owner:	Barker 3 Pty Ltd AFT Barker Trust
	Responsible authority:	City of South Perth
	DoP File No:	DAP/14/00581

REPORT RECOMMENDATION / PRIMARY MOTION

Moved by: Cr Colin Cala

Seconded by: Mr Luigi D'Alessandro

That the Metro Central JDAP resolves to:

- 1.** **Approve** that the DAP Application reference DAP/14/00581 as detailed on the DAP Form 2 dated 30 October 2014 is appropriate for consideration in accordance with regulation 17 of the *Planning and Development (Development Assessment Panels) Regulations 2011*;



2. **Approve** the DAP Application reference DAP/14/00581 as detailed on the DAP Form 2 date 30 October 2014 and accompanying plans 1270 A1.01 Rev. F (Site Plan), 1270 A2.01 Rev. L (Ground Floor Plan), 1270 A2.02 Rev K (First Floor Plan), 1270 A2.03 Rev. K (Second Floor Plan) and 1270 A4.01 Rev. G (Elevations) in accordance with the provisions of the Clause 7.9 of the City of South Perth Town Planning Scheme No. 6, for the proposed minor amendment to the approved Mixed Development within a Three-Storey Building at Lots 390 and 391 (Nos. 3 & 5) Barker Avenue, Como, subject to:

Amended Conditions

14. The car stackers shall be of no lesser weight bearing capacity and no lesser internal dimensions than the Wöhr Comfort type 411-190.

All other conditions and requirements detailed on the previous approval dated 8 October 2014 shall remain unless altered by this application.

AMENDING MOTION

Moved by: Cr Colin Carla

Seconded by: Mr Luigi D'Alessandro

Insert Condition (38) to read; % Section 70A notification be placed on the strata title of each unit to state that the car stacker in this development is the Wöhr Type 411-190 which can accommodate vehicles up to 2000kg and a maximum height of 1.9 metres+.

Reason: Ensure potential purchasers are aware of the car stacker dimensions and limitations of the system.

The Amending Motion was put and CARRIED UNANIMOUSLY.

PRIMARY MOTION (AS AMENDED)

Moved by: Cr Colin Carla

Seconded by: Mr Luigi D'Alessandro

That the Metro Central JDAP resolves to:

1. **Approve** that the DAP Application reference DAP/14/00581 as detailed on the DAP Form 2 dated 30 October 2014 is appropriate for consideration in accordance with regulation 17 of the *Planning and Development (Development Assessment Panels) Regulations 2011*;
2. **Approve** the DAP Application reference DAP/14/00581 as detailed on the DAP Form 2 date 30 October 2014 and accompanying plans 1270 A1.01 Rev. F (Site Plan), 1270 A2.01 Rev. L (Ground Floor Plan), 1270 A2.02 Rev K (First Floor Plan), 1270 A2.03 Rev. K (Second Floor Plan) and 1270 A4.01 Rev. G (Elevations) in accordance with the provisions of the Clause 7.9 of the City of South Perth Town Planning Scheme No. 6, for the proposed minor amendment to the approved Mixed Development within a Three-Storey Building at Lots 390 and 391 (Nos. 3 & 5) Barker Avenue, Como, subject to:

Amended Conditions

14. The car stackers shall be of no lesser weight bearing capacity and no lesser internal dimensions than the Wöhr Comfort type 411-190.



38. A Section 70A notification be placed on the strata title of each unit to state that the car stacker in this development is the Wöhr Type 411-190 which can accommodate vehicles up to 2000kg and a maximum height of 1.9 metres.

All other conditions and requirements detailed on the previous approval dated 8 October 2014 shall remain unless altered by this application.

The Primary Motion (as amended) was put and CARRIED UNANIMOUSLY.

10. Appeals to the State Administrative Tribunal

Nil

11. Meeting Closure

There being no further business, the presiding member declared the meeting closed at 3:25pm.

A handwritten signature in black ink, appearing to read 'C. Kelly'.



Form 1 - Responsible Authority Report (Regulation 12)

Property Location:	Lots 90 – 92 (Nos. 7 – 11) Parker Street and Lots 8 & 9 (Nos. 2 & 4A) Wilson Street, Bassendean
Application Details:	Mixed Development Comprising Additions and Alterations to Place of Worship, Shop and 35 Multiple Dwellings
DAP Name:	Metro Central JDAP
Applicant:	Doepel Marsh Architects Pty Ltd
Owner:	Saint Marks Anglican Church
LG Reference:	DABC/BDVAPPS/2014-167
Responsible Authority:	Town of Bassendean
Authorising Officer:	Christian Buttle, Senior Planning Officer
Department of Planning File No:	DAP/14/00603
Report Date:	28 January 2015
Application Receipt Date:	14 August 2014
Application Process Days:	90 days
Attachment(s):	<ol style="list-style-type: none">Plans of the proposed development dated 23 January 2015 comprising:<ul style="list-style-type: none">DA 0.1 – (survey plan and demolition plan)DA 1.0 – E(site plan)DA 1.1 – E (basement floor plan)DA 1.2 – E (car park & lower ground floor plan)DA 1.3 – E (upper ground floor plan)DA 1.4 – E (first floor plan)DA 1.5 – E (second floor plan)DA 1.6 – E (third floor plan)DA 1.7 – E (fourth floor plan)DA 1.8 – E (roof plan)DA 1.9 – E (elevations – south & east)DA 1.10 – E (elevations - west & north)DA 1.13 – E (shadow diagram)Heritage Impact Statement – Ronald Bodycoat Architect dated 15 April 2014.Extract from Town of Bassendean Municipal Heritage Inventory.Town of Bassendean Local Planning Policy No. 1 – Town Centre Strategy and Guidelines.Aerial Photo showing development site and adjoining properties. (Note: site photographs to be tabled at the meeting)

Officer Recommendation:

That the Metro Central JDAP resolves to:

Approve DAP Application reference DAP/14/00603 and accompanying plans dated 23 January 2015:

- DA 01 – (survey plan and demolition plan)
- DA 1.0 – E (site plan)
- DA 1.1 – E (basement floor plan)
- DA 1.2 – E (car park & lower ground floor plan)
- DA 1.3 – E (upper ground floor plan)
- DA 1.4 – E (first floor plan)
- DA 1.5 – E (second floor plan)
- DA 1.6 – E (third floor plan)
- DA 1.7 – E (fourth floor plan)
- DA 1.8 – E (roof plan)
- DA 1.9 – E (elevations –south & east)
- DA 1.10 – E (elevations - west & north)
- DA 1.13 – E (shadow diagram)

in accordance with Clause 10.3 of the Town of Bassendean Local Planning Scheme No.10, subject to the following conditions:

1. Prior to the issue of a building permit for this development, Lots 8, 9, 90, 91 & 92 shall be amalgamated into a single lot on a Certificate of Title or the owner shall enter into a legal agreement with the Town prepared by the Town's Solicitors at the owner's cost requiring amalgamation to be completed within twelve months of the issue of a building permit, or the completion of the development, whichever occurs earlier.
2. Screening shown on the southern facing balconies outside units 15, 16, 23, 24, 30 and 31 shall meet the provisions of clause 6.4.1 C1.2 of the R-Codes being 1.6m minimum height, 75% minimum obscure, permanently fixed, made of durable material and restrict the angle of view toward the house at Nos. 4 – 6 Wilson Street, Bassendean.
3. A detailed landscape plan being submitted prior to or with the application for a Building Permit for the Town's approval which provides full detail of the scope of works to be undertaken in both the private realm and the public realm adjoining the development site, including, but not limited to:
 - (a) the location, type and size of proposed trees, shrubs and ground cover to be planted;
 - (b) methods of protection of existing street trees during the construction process; and
 - (c) reticulation methods, including arrangements incorporated into the design to minimize water use.
4. Existing street trees within the street verge adjacent to the development site being protected with barricades during construction in accordance with the Town's Policy for street tree protection.

5. The site shall be landscaped in accordance with the approved landscaping plan and shall be maintained thereafter.
6. The sealing and kerbing of all car parking areas and access ways to the Town's specifications.
7. The on site car parking spaces and access ways being constructed and maintained thereafter to the Town's satisfaction.
8. Car parking on any subsequent strata plan shall be allocated in accordance with the approved drawings and the following requirements:
 - (a) Units 1 - 34 shall each be allocated at least one car parking bay;
 - (b) Unit 35 shall be allocated two car parking spaces; and
 - (c) Visitor parking bays V1 – V20 shall be made available for the shared use of both the residential and non-residential components of the development.
9. Visitor parking spaces being clearly marked for "Visitors Only" and used as such.
10. A minimum of 12 bicycle parking spaces shall be provided for residents, and a minimum of 4 bicycle parking spaces shall be provided for visitors. The resident bicycle parking spaces shall be located in a weather protected area and shall be constructed in accordance with the provisions of AS 2890.3 (as amended).
11. Bicycle parking facilities shall be provided for the church / church hall / op shop component of the development to a number and at a location to be agreed with the Town.
12. Prior to the submission of an application for a building permit, details of the security intercom system are to be provided to demonstrate that visitors can make contact with the residential units in order to gain access to the resident visitor parking bays. The security intercom system is required to be installed and operational in accordance with the approved details prior to the occupation of the Multiple Dwellings on the subject lot and maintained thereafter.
13. Separate approval being obtained from the Town's Asset Services for the proposed crossovers on the Parker Street and Wilson Street frontages of the development site and these crossovers being constructed in accordance with that approval. The southernmost crossover on the Parker Street frontage of the development site shall be modified by way of relocating the existing power pole clear of the crossover location. In all cases the width of the crossover shall align with the width of vehicular driveway on private property.
14. 1.5 metre x 1.5 metre sight line truncations shall be provided adjacent to the intersection of each driveway and the street alignment on both the Parker Street and Wilson Street frontages of the development site.
15. All storm water being contained and disposed of on site. Details of the method of storm water containment and disposal shall be included with the drawings submitted for a Building Permit.

16. Prior to the submission of an application for a building permit, a detailed lighting plan is to be provided showing all security and safety lighting throughout all public and interior circulation areas, along with external lighting to the Parker Street and Wilson Street frontages of the development site is to be submitted for the approval of the Town, prior to the issue of a building permit.
17. The street number being prominently displayed at the front of the development.
18. The provision of an externally accessed storage unit of not less than 4 sq.metres internal area for each dwelling, constructed of the same materials as the main building.
19. The provision of side and rear fences, behind the street setback line, of 1.8 metres in height, unless higher fencing is shown on the approved drawings. Where the ground levels vary on either side of the fence, the required height shall be measured above the higher ground level. Fencing to be constructed of brick or other such material as may be approved by the Town where so shown on the drawings.
20. Any fencing on the Parker Street frontage of the development site demonstrating compliance with the following requirements:
 - (a) The solid component of fencing generally not exceeding that shown on the approved drawings;
 - (b) The overall height of fencing not exceeding 1.8 metres above ground level; and
 - (c) Infill panels for fencing on this frontage of the site above base level solid components being visually permeable.
21. External fixtures, including but not restricted to air-conditioning units, satellite dishes and non-standard television aerials, but excluding solar collectors, are to be located such that they are not visible from the street. Prior to the issue of a building permit, details being submitted of all proposed ventilation systems, including the location of plant equipment, vents and air conditioning units for the Town's approval. All equipment must be adequately screened to the satisfaction of the Town.
22. External clothes drying is prohibited on any of the balconies unless screened from view of the street or other public place.
23. Each dwelling shall be provided with an electric clothes dryer.
24. A Waste Management Plan (WMP) is to be submitted for the Town's approval prior to or in conjunction with the application for a Building Permit. The WMP shall address matters including, but not necessarily limited to, the following:
 - (a) Measures to be implemented for the purpose of minimising the delivery of waste to landfill during occupation, including: the onsite separation of materials for recycling and the expectations of owners and /or tenants;

- (b) Site Plan showing the location and size of the on-site rubbish disposal area, including the number of general rubbish and recycling bins to be provided for the development, including sharing arrangements where the number of bins is less than the number of dwellings;
 - (c) An estimation of the volume of waste to be generated by the proposed development and the capacity of this volume of waste to be accommodated by on site bin storage capacity;
 - (d) Details of intended method of collection (by private contractor);
 - (e) Details of where the bins would be located when waiting collection;
 - (f) Details of advice to be provided to owners and occupiers regarding the WMP; and
 - (g) Details of how the WMP will continue to be applied in perpetuity across the life of the development, including the WMP being incorporated into the strata by-laws for the proposed development.
25. The bin storage area is:
- (a) To be surrounded by a 1.8 metre high minimum wall with a self-closing gate;
 - (b) To be provided with 75mm min thickness concrete floors grading to a 100mm industrial floor waste, with a hose cock to enable both the bins and bin storage area to be washed out; and
 - (c) To be provided with internal walls that are cement rendered (solid and impervious) to enable easy cleaning.
26. Bins shall be stored only in an approved, designated location, and shall not be stored within any of the approved car parking bays or associated access aisles.
27. Signage for the non-residential component of the development being the subject of separate application and approval.
28. Visually impermeable roller shutters (external and internal), doors, grilles and security bars shall not be installed on any part of the frontage of the non-residential development facing Wilson Street.
29. The proposed boundary walls being finished to the satisfaction of the Town.
30. An acid sulfate soils self-assessment form and, if required as a result of the self-assessment, an acid sulfate soils report and an acid sulfate soils management plan shall be submitted to and approved by the Department of Environment Regulation before the development is commenced. Where an acid sulfate soils management plan is required to be submitted, all development shall be carried out in accordance with the approved management plan.
31. Prior to the issue of a building permit the applicant shall lodge a Construction Management Plan to the satisfaction of the Town of Bassendean that provides details of the following:
- (a) Estimated timeline and phasing of construction;
 - (b) Dust control measures;
 - (c) Noise control measures;

- (d) Access points for heavy vehicles during demolition and construction; and
 - (e) 24 hours contact details of staff available to deal with either an emergency situation or to respond to complaints.
32. The incorporation of public art into the proposed development or a cash-in-lieu payment of one percent of the construction cost of the proposed development in accordance with the Town's adopted Local Planning Policy No. 15 "Percent for Art Policy". Detailed arrangements and agreement with respect to art to be provided on site or alternatively payment of the required fee shall be made prior to or in conjunction with the application for a Building Permit.
33. Prior to the issue of a building permit, the applicant shall jointly with the Town develop and agree upon a plan for the 2% contribution of the building construction costs as prescribed under LPP No. 1 - Town Centre Area Strategy and Guidelines for Bassendean, being a 1% contribution toward infrastructure and 1% contribution toward public art.
34. Prior to the issue of a building permit, a development bond for the sum of \$17,500 being lodged with Council to ensure the satisfactory completion of all works associated with landscaping, car parking, access ways, screen walls, and other associated works.
35. Prior to the issue of a building permit, an acoustic report shall be submitted to the Town for approval which shall:
- (a) be prepared by an acoustical consultant with relevant qualifications and experience equivalent to those required for admission as a Member of the Australian Acoustical Society (to the satisfaction of the Town's Health Services);
 - (b) to satisfaction of the Town, address all matters that are required to demonstrate that the acceptable noise criteria will be achieved including:
 - the identification of all noise sources to be addressed, including the potential for live bands within the various rooms, vehicle and patron noise, cool rooms and the like from the adjoining hotel and plant equipment associated with the proposed development itself;
 - determination of noise source levels and character;
 - acoustic data to be in octave bands where noise sources are internal;
 - the establishment of Assigned Levels for noise sensitive premises in the vicinity in accordance with the *Environmental Protection (Noise) Regulations 1997*;
 - the provision of the following:
 - (1) date, time and results of measurements and or modelling used to represent the noise associated with live bands;
 - (2) assigned Levels determined for adjacent areas/noise sensitive premises in the vicinity; and
 - (3) recommendations for construction and noise control.

36. Prior to the issue of a Building Permit a detailed schedule of all colours and materials to be used in the construction of the development shall be submitted for the Town's approval, paying particular relevance to the provisions of clause 8.8 of the Bassendean Town Centre Strategy and Guidelines – Materials and Colour.
37. The issue of a Building Permit prior to the commencement of any works on site.
38. The building hereby approved shall not be occupied until all of the conditions of planning consent have been complied with to the satisfaction of the Manager Development Services, unless the applicant has entered into an agreement with Council to comply with those conditions within a specified period.
39. This decision constitutes planning approval only and is valid for a period of 2 years from the date of approval. If the subject development is not substantially commenced within the 2 year period, the approval shall lapse and be of no further effect.

Advice Notes:

1. The Town will permit the Owner to defer compliance with the condition relating to amalgamation, provided that the Owner enters into a deed of agreement with the Town prepared by the Town's solicitors at the Owner's cost agreeing to complete the amalgamation within 12 months of the issue of the building permit. The agreement shall require the registration of an absolute caveat on the title to the subject land, until such time as the amalgamation has been completed to the Town's satisfaction.
2. The applicant is advised that in relation to the requirement for a 1% Public Art contribution to be made that the Town can consider on site art works subject to Council approval and demonstration of equivalent value and public access.
3. The Town of Bassendean encourages the retention of stormwater on-site through various best management practices, as laid out in its Planning Policy. Details of the stormwater containment and disposal method are to be provided with the building licence application.
4. **Dial Before You Dig:**
Underground assets may exist in the area that is subject to your application. In the interests of health and safety and in order to protect damage to third party assets please telephone 1100 before excavating or erecting structures. If alterations are required to the configuration, size, form or design of the development upon contacting the Dial Before You Dig service, an amendment to the development consent (or a new development application) may be necessary. Individuals owe asset owners a duty of care that must be observed when working in the vicinity of plant or assets. It is the individual's responsibility to anticipate and request the nominal location of plant or assets on the relevant property via Dial Before You Dig "1100" number in advance of any construction activities.

5. Telecommunications Act 1997 (Commonwealth):
Telstra (and its authorised contractors) are the only companies that are permitted to conduct works on Telstra's network and assets. Any person interfering with a facility or installation owned by Telstra is committing an offence under the Criminal Code Act 1995 (Cth) and is liable for prosecution. Furthermore, damage to Telstra's infrastructure may result in interruption to the provision of essential services and significant costs. If you are aware of any works or proposed works which may affect or impact on Telstra's assets in any way, please contact Telstra's Network Integrity Team on 1800810443.
6. If the planning approval lapses, no development shall be carried out without further approval having first been sought and obtained.
7. If an applicant is aggrieved by this determination there is a right of review under Part 14 of the *Planning and Development Act 2005*. An application for review must be lodged within 28 days of the determination.

Background:

Insert Property Address:	Lots 90 – 92 (Nos. 7 – 11) Parker Street and Lots 8 & 9 (Nos. 2 & 4A) Wilson Street Bassendean
Insert Zoning	MRS: Urban TPS: Town Centre
Insert Use Class:	Place of Worship, Shop & Multiple Dwelling
Insert Strategy Policy:	Town Centre Strategy and Guidelines
Insert Development Scheme:	Town of Bassendean Local Planning Scheme No. 10 (District Zoning Scheme)
Insert Lot Size:	493 sq.m each for a combined total site area of 2465 sq.metres
Insert Existing Land Use:	Place of Worship and Shop
Value of Development:	\$7.5 million

The five lots which comprise the development site are currently developed with the St Marks Anglican Church. The church itself, which fronts Wilson Street will be retained as part of the proposed development, while the existing church hall which fronts Parker Street and the existing op shop, which is located centrally within the development site will each be demolished to facilitate development of the proposed 35 Multiple Dwellings. A replacement church hall and op shop are each proposed to be developed on the Wilson Street frontage of the development site, to the left hand (southern) side of the existing church, while a secondary church hall is intended to be constructed to the rear (west) of the existing church.

The Town's records for the development history of this property show the following applications:

- 1937 – Completion of the church;
- 1938 – Vestry Addition to church; and
- 1959 – Parish hall.

All components of the existing development on site, being the church, church hall and op shop, are in current use by the Anglican Church.

There have been no other formalised applications for redevelopment of the site prior to consideration of the application which is the subject of current consideration.

Details: outline of development application

The application proposes:

- Demolition of the existing non-heritage listed 1959 built parish hall on the Parker Street frontage of the development site;
- Demolition of the existing non-heritage listed 1915 framed op shop located centrally within the site;
- Addition of a new op shop and church hall to the southern side of the existing heritage listed church which faces Wilson Street;
- Addition of a secondary church hall behind the existing listed church which faces Wilson Street; and
- The construction of 35 multiple dwellings in a building of up to five stories in height plus basement car park in a building on the Parker Street fronting portion of the development site.

Legislation & policy:

Local Government Legislation and Policy

(a) Town of Bassendean Local Planning Scheme No. 10, including:

- Clause 4.2.3 – Objectives of Town Centre Zone;
- Clause 5.5 – Variations to Site and Development Standards and Requirements;
- Clause 5.7.2 - Carparking;
- Clause 5.10 – General Development Requirements – Town Centre Zone; and
- Part 7 – Heritage Protection.

(b) Local Planning Policy

- Local Planning Policy No. 1 – Town Centre Strategy and Guidelines.
- Local Planning Policy No. 15 – Percent for Art Policy.

(c) Town of Bassendean Strategic Plan.

The following components of the Town's adopted Strategic Plan are of relevance when considering the application for planning approval:

Town Planning and Built Environment

Objective:

- Ensure Town provides choice in housing types.

Strategies:

- Plan for the highest densities to be centred on railway stations, the Town Centre, and major transport routes.
- Strive to ensure that higher density housing will have excellent design to ensure that development is people friendly and attractive.

- Strive to ensure that new housing, and particularly high density housing has high environmental standards.
- Plan for the availability of a broad range of housing types and affordability.

Objective:

- Preserve our heritage for future generations.

Strategies:

- Strive to ensure heritage buildings will be preserved and showcased.

Objective:

- The Town Centre is a vibrant hub for community.

Strategies:

- Strive for the Town Centre to be a vibrant hub of mixed uses including: dining, entertainment, retail, commercial, civic facilities, family services, and residential apartments.

Arts, Heritage and Culture

Objective:

- Protect local history and heritage.

Strategies

- Support the protection and maintenance of buildings on the State Register of Heritage Places and key buildings on the Municipal Heritage Inventory but at the same time, encourage that they are well utilised and functional buildings.

State Government Policy

The following state government policies are of relevance when considering the application for planning approval:

- (a) Directions 2031 (Bassendean is an identified District Centre).
- (b) State Planning Policy 3.1 – Residential Design Codes of Western Australia.
- (c) State Planning Policy 4.2 – Activity Centres for Perth and Peel

Local Policies

The main policy against which the application for planning approval must be assessed is the Town's adopted Local Planning Policy No. 1 – Town Centre Strategy and Guidelines. The proposed development generally satisfies the provisions of this policy, with more detailed comment being provided within the summary of assessment which is incorporated as a table within this report and under the separate heading of 'Town Centre Strategy'.

Consultation:

Public Consultation

The proposed development was the subject of consultation with adjoining property owners on each side of the development site by way of letters from the Town inviting comment over a period of 14 days. The owners of the following properties were consulted:

- The Bassendean Hotel at Nos. 17 - 21 Old Perth Road and adjoining vacant land at Nos. 23 – 27 Old Perth Road on the northern side of the development site; and
- Single houses at Nos. 13A Parker Street and 4 – 6 Wilson Street on the southern side of the development site.

No response was received from the owners of the Hotel and vacant land on the northern side of the development site.

A formal response was not received from the owner of the adjoining single house at No. 13A Parker Street to the southern side of the development site, although during telephone discussions with this adjoining owner they requested that stores be introduced along the southern boundary of the development site to assist with providing separation between the proposed development and their property. The drawings which are now the subject of DAP consideration incorporate a bank of stores and stairwell along the southern property boundary as verbally requested by the adjoining property owner.

A formal response was received from the owners of the adjoining single house at Nos. 4 – 6 Wilson Street to the southern side of the development site which expressed concern in relation to the height of the boundary wall associated with the development of the proposed op shop and church hall along with the extent of shadow which would be cast by this wall and the potential for their solar hot water system to be cast in shadow. The adjoining property owners have confirmed that these concerns have now been adequately addressed by way of the revised drawings which are the subject of formal consideration which have:

- reduced the length of the boundary wall;
- increased the front setback to the boundary wall; and
- lowered the height of the boundary wall.

The most recent drawings that have been submitted by the applicant now incorporate a boundary wall to a stairwell along the rear (western) boundary of Nos. 4 – 6 Wilson Street and while initially expressing some reservation with this component of the development, the adjoining owners have subsequently indicated their 'acceptance' of this design component noting that the applicant has agreed to construct a masonry wall which runs between the stairwell and the church hall which has been designed in such a way that the stair is indistinguishable from the brick boundary fence itself (fencing between the stair and hall boundary wall has been set at a taller than standard height at this neighbour's request).

Consultation with other Agencies or Consultants

The Town obtained external architectural review on the first and second design concepts for the development.

The current drawings (revision E) can be described as the 'third' design concept for the site (revisions 'D' and 'E' comprise refinement of design concept 'C') and although external design review was not undertaken for the current design, it addresses concerns that were raised in relation to the earlier concepts as identified below:

- Solar access to dwellings within the development itself has improved significantly (the original design incorporated a three storey building which covered the majority of the site and which was two dwellings 'deep', compromising solar access to the southern layer of dwellings). Modifying the design to incorporate a five storey building adjacent to the hotel has allowed the design to become only one dwelling 'deep' which allows for improved solar access for the development as a whole;
- Relationship of the proposed development to adjoining sites has improved (the design now has increased separation from the hotel, and reduced impact on adjoining residential dwellings to the south);
- Architectural design resolution within the development itself has improved (both in terms of the external appearance of the buildings along with the layout of apartments, circulation spaces and siting of ancillary elements such as the bin store);
- The impact of new development on the existing heritage listed church has been reduced by setting back new development behind the alignment of the church whereas the original building design incorporated new building structure which projected to the Wilson Street property boundary, well forward of the existing church and adjoining house at Nos. 4 – 6 Wilson Street; and
- Car parking allocation and distribution has improved from that which had originally been proposed.

With the exception of the external architectural review, no further consultation occurred with other external agencies or consultants.

Planning assessment:

The development site is zoned "Town Centre" by the Town of Bassendean Local Planning Scheme No 10. The objectives of the Town Centre Zone are:

- (a) to promote, facilitate and strengthen the town centre zone as the principal focus of the district in terms of shopping, professional, administrative, cultural, entertainment and other business activities;
- (b) To recognise the unique and specific function of each precinct within the town centre in terms of:
 - i) Traditional main street pedestrian based commercial retail, west of Wilson Street;

- ii) Civic, drive-by commercial and town centre living uses between Wilson and Whitfield Street; and
 - iii) Car based retail in the Bassendean Village Shopping Centre.
- (c) to accommodate a diversity of commercial, cultural and residential facilities;
 - (d) to encourage the integration of existing and proposed facilities within the zone so as to promote ease of pedestrian movement and the sharing of infrastructure, as well as to retain the opportunity for any future expansion of the area;
 - (e) to achieve safety and efficiency in traffic circulation;
 - (f) to ensure that buildings, ancillary structures and advertising are of high quality and achieve an architectural theme contributing to the uniqueness of the townscape;
 - (g) to provide sheltered places for pedestrians and shade to car parking areas;
 - (h) to preclude the storage of bulky and unsightly goods from public view;
 - (i) to provide landscaping appropriate to the scale of development; and
 - (j) to ensure that development conforms to the Local Planning Strategy and the principles of any Local Planning Policy adopted by the Council.

The application proposes mixed use development comprising additions and alterations to an existing heritage listed place of worship, shop and 35 multiple dwellings and the development which has been proposed generally addresses the objectives identified above.

By virtue of clause 5.10.3 of the Local Planning Scheme No. 10, the local government may, at its discretion, permit residential development within the Town Centre Zone to a maximum density of R Inner City. Residential development shall only be permitted where the local government is satisfied that this development is complementary to the scale and character of buildings within the Town Centre Zone.

The notes to table 4 of the Residential Design Codes state that Residential Development in land zoned "R-IC" is to be assessed under the provisions of R- AC3.

It should also be noted that the Town has adopted the Bassendean Town Centre Strategy and Guidelines as a planning policy under Local Planning Scheme No 10 and the proposal has been assessed against the Strategy and Guidelines and Part 6 - Design elements for multiple dwellings in areas coded R30 or greater, within mixed use development and activity centres – of State Planning Policy 3.1 - Residential Design Codes.

A summary of the assessment is provided below:

Design Element	Residential Design Codes	Town Centre Strategy	Compliance / Officer Comments
6.1.1 Building Size	Maximum permissible plot ratio of 2.0.	<p>Clause 7.5 – Building Envelope:</p> <p>An agreed envelope of footprint and height will define new development on each lot. There is no plot ratio limit in the Town Centre.</p> <p>A minimum height of 3 storeys or 10 metres is set for buildings in the Town Centre.</p>	<p>Acceptable – refer to comments below:</p> <p><u>Parker Street frontage:</u> Building footprint and height is acceptable being five storeys adjacent to hotel and primarily 3 storeys adjacent to the adjacent residential development within Parker Street. This provides a suitable transition in height between the development site and other houses within the Parker St street block which are generally single storey in height.</p> <p><u>Wilson Street frontage:</u> Proposed development is acceptable, being subservient to existing heritage listed church building.</p>
6.1.2 Building height	<p>Top of external wall = 18m.</p> <p>Top of pitched roof =21m.</p>	<p>Clause 7.5 – Building Envelope:</p> <p>A minimum height of 3 storeys and a maximum height of 5 storeys.</p>	<p>Acceptable – refer to comments below:</p> <p>Five storeys adjacent to Hotel transitioning primarily to 3 storeys adjacent to closest residential zoned properties on Parker Street as described above.</p>
6.1.3 Street setback	<p>Min primary street setback 2 m.</p> <p>Minimum secondary street setback 2 m.</p>	<p>Clause 7.5 – Building Envelope:</p> <p>Residential development at ground level can be setback 2.0 to 4.0 metres to provide a transition between public and private</p>	<p>Acceptable – refer to comments below:</p> <p>Main face of building set back 4.0 metres from Parker Street frontage of development site with balconies and ground floor outdoor living areas located within street</p>

		space. Residential entry foyers at ground level can have a nil setback.	setback area (set back 1.5 metres from street alignment). New op shop and church hall on Wilson Street frontage of development site set back behind front alignment of existing church. Bin store for church bins located forward of new additions but set beneath existing ground level of existing memorial gardens forward of church, so screened from view of street.
6.1.4 Lot boundary setbacks	Table 5 = prescribed side setback of 4m.	Clause 7.5 – Building Envelope: Rear setbacks should be provided suitable to accommodate parking and avoid overshadowing of neighbouring buildings. Rear setbacks from residential adjoining should provide privacy and comply with R Code requirements.	Acceptable – refer to detailed comments below:

North boundary adjacent to Hotel

Basement car park built to lot boundary with units above generally set back between 6.3 to 6.4 metres. Unit 35 on fourth floor of building provided with 6.0m setback from northern property boundary.

South boundary adjoining house at Nos. 4 - 6 Wilson Street

Lower ground floor built to lot boundary with zero setback. Lower ground floor causes no adverse amenity impact on adjoining property to south as height of associated building structure which projects above ground level ranges from only 100mm above ground level to 2.3 metres above natural ground level of adjoining property.

Upper ground floor of Church Hall built to boundary with zero setback. Wall length 18.5m; maximum height approximately 4.5 metres and average height

approximately 4.0 metres above neighbouring ground level. Wall height has been reduced from that which had originally been proposed and while adjoining owner had originally objected to this component of the development, this objection has been withdrawn based upon the reduced height. Reduced wall height ensures that shadow cast by wall does not exceed that already cast by church. Building to boundary makes effective use of space for development of new church hall while having only limited building bulk impact on adjoining residential property.

Portion of residential building which 'overlaps' the boundary with the adjoining house at Nos. 4-6 Wilson Street is set back in accordance with Table 5 of the R-Codes.

East boundary adjacent to house at Nos. 4-6 Wilson Street

A portion of the development site also adjoins the rear boundary of the single house at Nos. 4 – 6 Wilson Street.

Stairwell of lower ground floor is built to boundary but top of wall associated with this construction does not exceed existing ground levels on development site, so this construction is acceptable.

Stairwell on upper ground floor plan is built to boundary, projecting to a height of approximately 2.5 metres in height above the existing ground levels of the development site (a maximum height of 3.7 metres above the existing ground level of the adjoining residential property). Stairwell is 2.8 metres in length and has been the subject of discussions with adjoining owner and architect. The result of those discussions has resulted in the wall height which is now proposed (which is lower than that which had originally been proposed) and which will be tied in with, and indistinguishable from, fence construction along the rear boundary (as the height of the stair will match the height of fence construction along this boundary). Design outcome was facilitated by Town through negotiation with adjoining neighbour and applicant.

Carport associated with parking bay 6 set back 1.7 metres from rear boundary. This exceeds the setback which would ordinarily be required for single storey development and is supported.

Remaining portion of residential development is set back 17.3 metres from rear boundary of house at Nos. 4 – 6 Wilson Street.

South boundary adjoining house at No. 13A Parker Street

Stores and stairwell incorporating wall length of 21.2 metres and wall height of 2.5 metres above ground level of development site (up to 3.7 metres maximum above ground level of adjoining property) located on boundary. The placement of this building structure along the boundary was made at the specific request of the adjoining owner in order to afford greater separation between their property and the proposed development. Proposed wall has no adverse impact on adjoining property and is supported.

Remainder of residential development set back a minimum of 6.3 metres from common boundary with house at No. 13A Parker Street.

6.1.5 Open space	No requirements specified	No requirements specified	Complies.
6.2.1 Street surveillance	Street elevation addresses street and clearly defined entry. Building has habitable room windows or balconies facing street. Basement parking structures no more than 1m above ground level.	Clause 8.3 Facades: The design of building facades should contribute to the harmony, liveliness and safety of streetscapes.	Complies. Building addresses street with facades parallel to street and defined entry. Building includes a combination of habitable room windows and balconies facing street. Basement car park does not project more than 1m above natural ground level as viewed from the street.
6.2.2 Street walls and fences	Front walls and fences within the front setback are visually permeable above 1.2m	Clause 9.5 – Safety and Security: Solid fencing / screening above 0.8m high is discouraged on street frontages.	Complies. <u>Wilson Street frontage:</u> Existing fencing arrangement primarily applies with fencing modified to allow access to new shop. <u>Parker Street frontage:</u> Fencing forward of ground level outdoor living areas. Solid component does not exceed 0.8m above footpath level with infills above visually permeable and overall height does not exceed 1.8 metres. To be reinforced by conditions of approval as appropriate.
6.2.3 Sight lines	Walls, fences and other structures truncated	No specific provisions.	Driveway serving basement car park accessed from Parker Street – fencing truncated

	within a 1.5m x 1.5m truncation area adjacent to intersection of driveway and street alignment.		<p>as required.</p> <p>Driveway serving upper ground floor car park – fencing truncated northern side of driveway. Driveway to be set off southern property boundary by 1.5m to achieve truncation on southern side of driveway.</p> <p>New driveway accessing entry foyer on Wilson Street frontage of development. Truncations not provided.</p> <p>The design will be rendered acceptable on the basis that conditions are incorporated into any approval requiring the provision of truncations to address the deficiencies referred to above.</p>
6.2.4 Building appearance	Buildings that comply with the provisions of a special control area.	<p>Part 8, including:</p> <ul style="list-style-type: none"> • 8.2 – Building character; • 8.3 – Facades; • 8.4 – Roofs; • 8.6 – Building Entry; • 8.7 – Awnings, canopies & balconies; • 8.8 – Materials and colour; • 8.9 – Signage and public art; and • 8.10 – Plant and equipment. 	<p>Although concerns were held in relation to some of these matters with the earlier designs which had been presented to Town, the design which is the subject of current consideration is seen to have sufficiently addressed earlier concerns to warrant approval in terms of building appearance.</p> <p>Detailed comments previously provided under the ‘consultation with other agencies or consultants’ heading of the report.</p>
6.3.1 Outdoor living areas	Each unit to be provided with a balcony of appropriate size	No specific provisions (clause 8.5 does state that “functional size” balconies should be provided).	Each unit is provided with a balcony (upper level units) or equivalent (ground floor units) directly accessed from a habitable room and with overall areas of 10 sq.metres minimum with length

			and/or width dimensions of 2.4m minimum.
6.3.2 Landscaping	<p>Landscaping of open spaces in accordance with the following:</p> <ul style="list-style-type: none"> • No car parking in street setback and 50% max hard surfaces; • Separate pedestrian paths; • Landscape between each 6 external bays; • Lighting to pathways; and • Clear sight lines at crossings. 	<p>Clause 7.10 – Landscape and Hardscape:</p> <p>All spaces around buildings are to be designed to offer attractive amenity for users and passers-by.</p> <p>No specific percentage provision specified. Assessed on quality rather than quantity.</p> <p>Town Centre public realm contribution of 2% of development cost is payable.</p>	<p>Basement car park positioned to accommodate space for 'in ground' planting forward of building on Parker Street frontage of development site.</p> <p>'Memorial Rose Garden' maintained on Wilson Street frontage of site forward of Church.</p> <p>Outdoor communal open space provided to northern side of building adjacent to units 5 to 8 and on third floor of building adjacent to unit 25.</p> <p>At this stage the plans lack information to ascertain compliance with all landscape requirements and the applicant has requested that appropriate conditions be imposed on any approval that is issued for the development with respect to this matter.</p> <p>The design will be rendered acceptable on the basis that conditions are incorporated into any approval specifying detailed landscape requirements.</p>
6.3.3 Parking	<p><u>Car Parking Residential:</u></p> <p>0.75 bays per dwelling for units 1-34 = 25.5 bays</p> <p>1.25 bays for unit 35.</p>	<p>For residential dwellings of 1 to 2 bedrooms the parking ratio shall be reduced to 1 bay per dwelling.</p> <p>Car parking is to be provided consistent with LPS10.</p> <p>Parking for motor</p>	<p><u>Car Parking:</u></p> <p>Units 1 – 34 provided with 1 bay per unit.</p> <p>Unit 35 provided with 2 bays.</p> <p>20 bays total provided for shared use of residential visitors / church / church hall and op shop.</p>

	<p>9 residential visitor bays.</p> <p><u>Car Parking Commercial:</u></p> <p>Church - 116 seats at 1 bay per 5 seats = 23.2 bays.</p> <p>Proposed Hall – Assume 122 person capacity at 1 bay per 5 seats = 24.4 bays.</p> <p>Op Shop – 60 sq.metres gross floor area (GFA) at 1 bay per 12.5 sq.m GFA = 4.8 bays.</p> <p>Total Required Car Bays = 89</p> <p><u>Bicycle Parking Residential</u></p> <p>1 space for each 3 dwellings for residents (12 spaces) and 1 space per 10 dwellings for visitors (4 spaces).</p>	<p>cycles and scooters should be provided to encourage use.</p> <p>Provide bicycle racks outside all commercial, retail and civic buildings.</p>	<p>Refer detailed further discussion with respect to car parking provision.</p> <p><u>Scooter Parking:</u> 3 x scooter parking bays provided.</p> <p><u>Bicycle Parking:</u> 8 spaces provided within basement which are suitably located for occupiers.</p> <p>8 spaces provided at ground level which are suitably located for visitors only.</p> <p>While the overall number of bicycle spaces meets R-Code requirements, the distribution does not (non-weather protected spaces at ground level are not suitable for occupier parking). A condition of approval should require the number of bicycle parking spaces within the basement garage to be increased from 8 to 12.</p>
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The existing church, church hall and op shop are served by an informal parking area which is seen to accommodate capacity for approximately 13 cars to park on site. Based upon current Local Planning Scheme 10 parking provisions, this generates an existing on site parking shortfall of 50 bays using the following calculations:

Church – 116 people accommodated @ 1 bay per 5 seats = 23.2 bays required;
Church Hall – 167 people accommodated @ 1 bay per 5 seats = 33.4 bays reqd;
and
Op Shop – 75 sq.m gross floor area @ 1 bay per 12.5 sq.m GFA = 6 bays required.

Total parking requirement (62.6 bays) minus parking provision (13 bays) = 49.6 bay deficiency (which rounds to 50 bays).

Noting that the proposed redevelopment of the site retains the existing heritage listed church along with updated associated hall and shop facilities, Officers of the Town have advised that support for a continuing parking deficiency for the church, church hall and op shop components of the development would be supported, provided that:

- Car parking for the residential dwellings was provided at a minimum ratio of 1 bay per dwelling (2 bays in the case of unit 35); and
- Car parking for resident visitors were provided at the specified Deemed-to-comply ratio (9 bays) and this parking was tied in with the church parking.

On this basis, the car parking requirement for the residential component of the development equals 45 bays, being 34 bays for units 1 – 34; 2 bays for unit 35 and 9 bays for resident visitors.

56 bays have been provided for the development in total comprising:

- 36 designated resident parking bays; and
- 20 bays for the shared use of resident visitors and church use (i.e. notionally comprised of 9 resident visitor bays and 11 bays provided for church use which is a reduction from the 13 bays which are currently available on site).

The required parking for the church component of the development based on the requirements specified in LPS10 equals:

Church – 116 people accommodated @ 1 bay per 5 seats = 23.2 bays required;
Church Hall – 122 people accommodated @ 1 bay per 5 seats = 24.4 bays reqd;
and
Op Shop – 60 sq.m gross floor area @ 1 bay per 12.5 sq.m GFA = 4.8 bays reqd.

Total parking requirement (52.4 bays) minus parking provision (11 bays) = 41.4 bay deficiency (which rounds to 42 bays).

Accordingly, the parking shortfall for the church component of the development reduces from that which currently exists noting the reduction in size of halls and shop from those which currently exist. Resident visitor parking spaces will also be available for the shared use of church patrons.

Having regard to the explanation provided above, along with:

- the retention of the existing heritage listed church;
 - the continued use of the site for church purposes; and
 - the provision of allocated bays for each of the residential dwellings,
- the 56 bays in total for the development (comprising 36 bays for the exclusive use of dwellings and 20 bays for the shared use of resident visitors and church users), is supported.

Noting the car parking variation that has been supported, it would be appropriate for some bicycle parking to be provided for the church / church hall / op shop component of the development, and although Local Planning Scheme No. 6 does provide the opportunity for the Town to call for change rooms / showers for cyclists, such provision would not seem appropriate in this instance noting the local nature of the facility and the small commercial space which is associated with the development.

A recommended condition calls for bicycle parking facilities to be provided for the church / church hall / op shop component of the development to a number and at a location to be agreed with the Town. Provision somewhere in the vicinity of 4 – 8 spaces would seem appropriate. This equates to bicycle parking provision for around 5% of the people that the church is licensed to accommodate.

<p>6.3.4 Design of car parking spaces</p>	<p>Car parking bays and manoeuvring areas designed and provided in accordance with AS2890.1 (as amended).</p> <p>Visitor spaces marked and retained for such use, and outside security barrier.</p> <p>Car parking spaces (except visitors bays) concealed from view of the street.</p>	<p>Clause 7.4 – Development Type and Intensity in Bassendean:</p> <p>“Common parking areas below ground are encouraged.”</p> <p>Basement car park provided for all but 6 car parking spaces.</p>	<p>Compliance with AS2890.1 now achieved.</p> <p>Visitor parking spaces are located within the basement, however this is difficult to avoid for a building that is designed in an ‘urban’ context (i.e. without large street setbacks where such bays would ordinarily be located). Location of visitor bays within basement is supported provided that suitable arrangements can be made for access, and that there are conditions specifying the need for these bays to be made available for visitor use.</p>
<p>6.3.5 Vehicular Access</p>	<p>Vehicular access is limited to one opening per 20m street frontage that is visible from the street.</p>	<p>Clause 7.9 – Vehicle movement and parking:</p> <p>“Crossovers should be limited to one crossover (3 – 6m wide) per development site. Crossovers should match footpath colour.”</p>	<p>Two crossovers proposed on Parker Street frontage of development site over total lot frontage of 36.81 metres.</p> <p>Two crossovers supported noting that the existing heritage listed church building is being retained. Retention of this building limits the size of the basement car park which can be</p>

			<p>constructed and necessitates the provision of some ground level car parking bays accessed from second crossover.</p> <p>Second crossover (subject to modification discussed in more detail within 6.4.6 – ‘Utilities and Facilities’) also allows for rubbish truck access.</p>
6.3.6 Site works	<p>Excavation between the street and the building, or within 3m of the street alignment not to exceed 0.5m.</p> <p>Excavation within site and behind street setback line unlimited.</p>	No specific provisions.	<p>Excavation of basement car park to 2.9 metres in depth and within 1m of front property boundary proposed supported as space retained for natural planting forward of ground floor courtyards and with the exception of the ramp into the car park, the existence of basement car park does not affect natural ground levels at front boundary as viewed from the street.</p> <p>Excavation behind street setback line for remainder of basement car park and shop on Wilson Street frontage of development site meets the Deemed-to-comply provisions of the R-Codes.</p>
6.3.7 Retaining walls	Where a retaining wall less than 0.5m high is required on a lot boundary, it may be located up to the lot boundary subject to the provisions of	No specific provisions.	Filling and retaining of up to 600mm in height is proposed where the ‘yard’ which sits between Church Hall 1 and Church Hall 2 is located. This compares to the 500mm in height which is accommodated by the Deemed-to-comply provisions of the R-Codes.

	clauses 6.1.4 and 6.4.1, or within 1m of the lot boundary to allow for an area assigned to landscaping subject to clauses 6.3.6 and 6.4.1.		<p>The height of filling and retaining is considered to be acceptable for the following reasons:</p> <ul style="list-style-type: none"> • There is an established height difference between the church and the adjoining residential properties located to the south, and the extent of filling and retaining which is proposed is commensurate with existing ground differentials which already exist along other portions of dividing boundary; • Filling allows an increased ground level to be provided which relates to floor levels within the main church hall; and • The increased fence height which results does not adversely affect habitable room windows or outdoor living areas of the adjoining house at Nos. 4-6 Wilson Street by way of shadow or the like.
6.3.8 Stormwater management	All storm water being directed to garden areas, sumps or rainwater tanks within the development site if possible.	<p>Clause 9.2 – Services and Infrastructure:</p> <p>“All stormwater shall be contained on site or connected to drainage points where supplied.”</p>	<p>Drawings state that storm water is to be disposed of on site via soak wells.</p> <p>Complies and reinforced by way of recommended condition of approval.</p>
6.4.1 Visual Privacy	Major openings set back from lot boundaries in	<p>Clause 7.5 – Building Envelope:</p> <p>“Rear setbacks from</p>	Development meets the Deemed-to-comply provisions of the R-Codes.

	accordance with the cone of vision or screened.	residential adjoining should provide for privacy and comply with R code requirements.”	Screening shown on external balconies outside of units 15, 16, 23, 24, 30 and 31 (southern facing) to meet provisions of clause 6.4.1 C1.2 of R-Codes (1.6m height, 75% min obscure, permanently fixed, made of durable material and restrict view in the direction of the house at Nos. 4 – 6 Wilson Street) to be reinforced by recommended condition of approval.
6.4.2 Solar access for adjoining sites	Not to overshadow adjoining properties by specified amounts (25% for adjoining R20 coded lot at Nos. 4 – 6 Wilson St with specific percentage not set for Town Centre zoned lot at No. 13A Parker St).	Clause 7.5 – Building Envelope: “Rear setbacks should be provided suitable to accommodate parking and avoid overshadowing of neighbouring buildings.”	<u>Wilson Street Frontage:</u> Drawings show that 45% of adjoining lot at No. 4 Wilson St (which is zoned Residential with an R20 density code) is cast in shadow by proposed development. Extent of shadow is supported for the following reasons: <ul style="list-style-type: none"> • Design of additions to southern side of church have been modified so that they don't cast additional shadow above and beyond that already cast by church itself; • Outdoor living areas of adjoining house are not overshadowed by the proposed development; • Major openings to habitable room windows are not overshadowed by the proposed development; and • Roof mounted solar collectors are not affected by the proposed development.

			<p><u>Parker Street Frontage:</u></p> <p>Drawings show that approximately 51% of adjoining lot at No. 13A Parker St (which is zoned Town Centre) is cast in shadow by proposed development. Extent of shadow is supported for the following reasons:</p> <ul style="list-style-type: none"> • Adjoining lot is Town Centre Zoned with no specified overshadowing percentage to be met; • Owing to nature of development on adjoining property, proposed development does not overshadow outdoor living areas, north facing openings to habitable rooms nor roof mounted solar collectors; and • A proportion of shadow is cast by stores on boundary. Stores were positioned here by project Architect at the express request of the adjoining owner.
6.4.3 Dwelling size	<p>1 Bed units – 20% min (7 reqd; 18 proposed)</p> <p>50% max (17.5 allowed; 18 proposed)</p> <p>2 Bed units – 40% min (14 reqd; 16 proposed)</p> <p>3 Bed units –</p>	<p>Clause 7.4 – Development Type and Intensity:</p> <p>Provision of affordable single or 2 bed apartments is encouraged.</p> <p>Smaller dwellings with, 1 bed/1bath or 2 bed/2 bath, flexible living space and limited internal fit out and finishes are</p>	<p>Complies.</p> <p>The dwelling mix matches that advocated by the R-Codes and 34 of the 35 dwellings which are proposed (97%) fall into the 1 bed / 1bath or 2 bed / 2 bath classification advocated by the Town Centre Strategy.</p>

	No requirements-1 proposed.	encouraged to provide affordable housing for younger and older people.	
6.4.4 Outbuildings	Size of outbuildings as specified.	No specific provisions.	<p>Outbuilding of approximately 50 sq.metres in area comprising 8 stores and stairwell located adjacent to the northern boundary of the adjoining house at No. 13A Parker Street and the western boundary of the adjoining house at Nos. 4 – 6 Wilson Street. Outbuilding incorporates wall height of up to 3.7 metres maximum with flat roof compared to the 2.4 metre Deemed-to-comply allowance. Outbuilding incorporates zero setback in lieu of 4m lot boundary setback specified for development of this kind.</p> <p>Outbuilding is supported as it does not detract from streetscape being well set back from the street alignment. Structure does not adversely affect the visual amenity of adjoining residents noting that:</p> <ul style="list-style-type: none"> • The adjoining owner at No. 13A Parker Street specifically requested that a structure of this kind be constructed to the lot boundary; and • As viewed from the adjoining property at Nos. 2-4A Wilson Street, the structure will tie in with, and be indistinguishable from, the remainder of the dividing fence

			separating these properties.
6.4.5 External fixtures	<p>Solar collectors acceptable.</p> <p>Standard TV aerials, essential plumbing and water down pipes.</p> <p>Other fixtures not visible or screened.</p>	<p>Clause 8.10 – Plant and Equipment:</p> <p>All plant and equipment must be concealed from public view using screening or other means that is an integral part of the building design. Surface mounted services, piping and conduits will not be permitted.</p> <p>Roof mounted equipment, aerials, antennas, masts etc must be screened from all views including from above where applicable.</p> <p>Ground level or balcony mounted equipment/air conditioning plant must be well screened using materials to suit the building.</p> <p>All plant and equipment must have noise attenuation to council satisfaction.</p> <p>Telecommunications dishes are not permitted on roofs.</p> <p>Lift over runs shall be contained within the roof space or appropriately designed as an element of the building active frontages.</p>	<p>Complies, but recommended that requirements be reinforced by condition of approval.</p> <p>The following points are noted:</p> <ul style="list-style-type: none"> • No solar collectors are proposed; • Air-conditioning plant and equipment incorporated into roof (600mm louvered screen required to provide effective screening; • Noise report required to ensure that location of air-conditioning plant will not adversely affect residents of proposed development; • Decorative detail provided to lift and stair wall on southern elevation of proposed development.

<p>6.4.6 Utilities and facilities</p>	<p>Storerooms - One per unit and 4m2 with minimum dimensions of 1.5m.</p> <p>Rubbish bins – communal pick up area addressing specified requirements.</p> <p>Clothes drying screened from view.</p>	<p>Clause 7.9 – Vehicle movement and parking:</p> <p>“Consideration should be given to location, access to and storage of recycling and other rubbish bins including communal bin facilities.”</p> <p>Clause 9.3 – Servicing and maintenance:</p> <p>“Service yards must not be located along active frontages and shall be designed as integral parts of the building.</p> <p>All waste storage and delivered goods should be contained within buildings. Rubbish storage and collection facilities shall comply with the current general requirements of the Town of Bassendean and will be efficient, convenient and allow for collection of recyclable material.</p>	<p><u>Storerooms:</u> Each dwelling provided with an externally accessible store of the specified floor area and internal dimensions.</p> <p><u>Rubbish Storage and Collection:</u> Applicant has indicated that private arrangements will be put in place for rubbish collection. This allows a bin storage area of the size shown for the residential component (drawings indicate 18 bin capacity) noting that there is an opportunity for more frequent servicing than that which could be provided by a standard Council collection service (weekly pick up for general rubbish and fortnightly pick up for recycling). Difficulties would arise if a Council collection service were proposed noting that the bin store would be of an insufficient size to accommodate the number of bins that would be required to service the development and the verge would be of an insufficient width to accommodate the number of bins which would need to be presented for collection.</p> <p>Crossover design (two x 2.5m wide crossovers on either side of existing power pole to be retained) is not acceptable as:</p> <ul style="list-style-type: none"> • Each crossover is under width; • The arrangement is not safe in use; and
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			<ul style="list-style-type: none"> • The arrangement is not practical to cater for rubbish truck which needs to reverse into site from Parker Street to service bin store. <p>Condition of approval recommended requiring power pole affected by crossover on Parker Street frontage of development site to be relocated.</p> <p>Arrangements for church on Wilson Street frontage of development site acceptable.</p> <p><u>Clothes Drying:</u> Conditions of approval recommended requiring clothes dryers to be provided for each dwelling and for clothes drying to be screened from view of street or any other public place.</p>
--	--	--	---

Local Planning Scheme No. 10, by virtue of Clause 5.5, gives the local government the ability to vary the site and development standards for all development other than residential development.

Similarly, the Town Centre Area Strategy, which is adopted as a Planning Policy under the Scheme, gives the discretion to vary any part of the Guidelines, subject to the quality of the building and place design being considered when granting any variation.

The Residential Design Codes provides Deemed-to-comply development standards to ensure a certain path to approval and also the opportunity to provide performance based solutions under the associated Design Principles.

Town Centre Strategy

Comment has been made within this report about many of the aspects of the development which are covered by the Town Centre Strategy and Guidelines.

There has been much discussion and negotiation between the applicant and the Town during the assessment of the application and the development which is now proposed, albeit taller (5 storeys maximum) than that which had been proposed when the application was originally lodged (originally 3 storeys across the portion of the site

to be developed for residential purposes), the built form is superior to that which had originally been presented to the Town for assessment.

Importantly, the proposed development, if approved and built, will provide an economic boost to the western end of the Town Centre, which will provide somewhat of a balance to recent development within the Town Centre which has been very much focussed on the eastern end of Old Perth Road around the Bassendean Shopping Centre.

The Town Centre Strategy is primarily focussed on Town Centre Zoned lots which have frontage to Old Perth Road, so while the entirety of the development site has a Town Centre zoning, some of the provisions which are specified within the Town Centre Strategy (such as building adaptability, for example) do not have relevance to the assessment and determination of this application as being on a 'side' street, it is not a site which is likely to see demand for commercial use (rather than residential use on the Parker Street frontage, for example) in the future.

The proposed development is seen to generally satisfy the requirements set down in the Town Centre Strategy and Guidelines.

It would be appropriate for a condition to be imposed on the approval requiring a detailed schedule of materials and finishes to be approved by the Town, and demonstrating compliance with the provisions of clause 8.8 of the Strategy (Materials and colour) prior to the issue of a building permit. Of particular relevance are components of the development which are built with zero setbacks to adjoining properties and all other components of the building (including the eastern elevation of the proposed residential units which are not shown on any of the elevations which form the drawings submitted for planning approval) which are visible from the public realm.

Noise

The development site is situated immediately alongside the Bassendean Hotel which is an entertainment venue with a long history of live bands performing. Bands have in the past performed on the top floor of the premises, within the main bar area and also at the rear bar which opens into the beer garden.

In addition to live music, venues such as this can be the source of other noise nuisances including that associated with excited people within the venue, people arriving and departing the venue and its car park. In addition to these sources there may be noise from existing equipment such as air conditioners, cool rooms and the like that should be considered.

Noting the above, it is appropriate that an acoustic report be prepared and submitted for the Town's approval which confirms that potential noise impacts from the adjoining hotel and also from plant equipment on the upper level of the development itself be fully considered.

The acoustic report shall:

- (a) be prepared by an acoustical consultant with relevant qualifications and experience equivalent to those required for admission as a Member of the Australian Acoustical Society (to the satisfaction of the Town's Health Services);

- (b) to satisfaction of the Town, address all matters that are required to demonstrate that the acceptable noise criteria will be achieved including:
- the identification of all noise sources to be addressed, including the potential for live bands within the various rooms, vehicle and patron noise, cool rooms and the like from the adjoining hotel and plant equipment associated with the proposed development itself;
 - determination of noise source levels and character;
 - acoustic data to be in octave bands where noise sources are internal;
 - the establishment of Assigned Levels for noise sensitive premises in the vicinity in accordance with the *Environmental Protection (Noise) Regulations 1997*;
 - the provision of the following:
 - date, time and results of measurements and or modelling used to represent the noise associated with live bands;
 - assigned Levels determined for adjacent areas/noise sensitive premises in the vicinity; and
 - recommendations for construction and noise control.

Heritage

St Mark The Evangelist Church is assigned a Category 1 listing within the Town of Bassendean Municipal Heritage Inventory, and a copy of the listing (printed via the state government 'inherit' web site) has been provided as an attachment to this report.

Also attached to this report is a Heritage Impact Statement dated 15 April 2014 prepared by Ronald Bodycoat Architect, and although this report was prepared in the context of the drawings which were the basis of the original submission (now superseded), it can still be relied upon as the impact of proposed development has reduced from that which existed when this report was prepared, noting that:

- the front setback of the additions adjacent to the church has increased;
- the height of the additions adjacent to the church have decreased

The proposed development is acceptable from a heritage perspective noting that:

- The heritage listed inter-war gothic styled church is retained and its use is reinforced by the associated redevelopment of this portion of the site; and
- The additions to the southern side of the church are subservient to the existing main building and clearly identifiable as a later addition to the main building by virtue of their differing architecture and materials of construction.

More detailed commentary relating to the relationship between the existing heritage listed church and the proposed additions can be found in the attached Bodycoat report.

Options/Alternatives

If the Development Assessment Panel believes that it is not appropriate to exercise discretion as advocated within this report and the associated officer recommendation, it could choose to incorporate additional conditions or refuse the application subject to specifying appropriate reasons.

Council Recommendation:

Separate advice to be tabled at meeting.

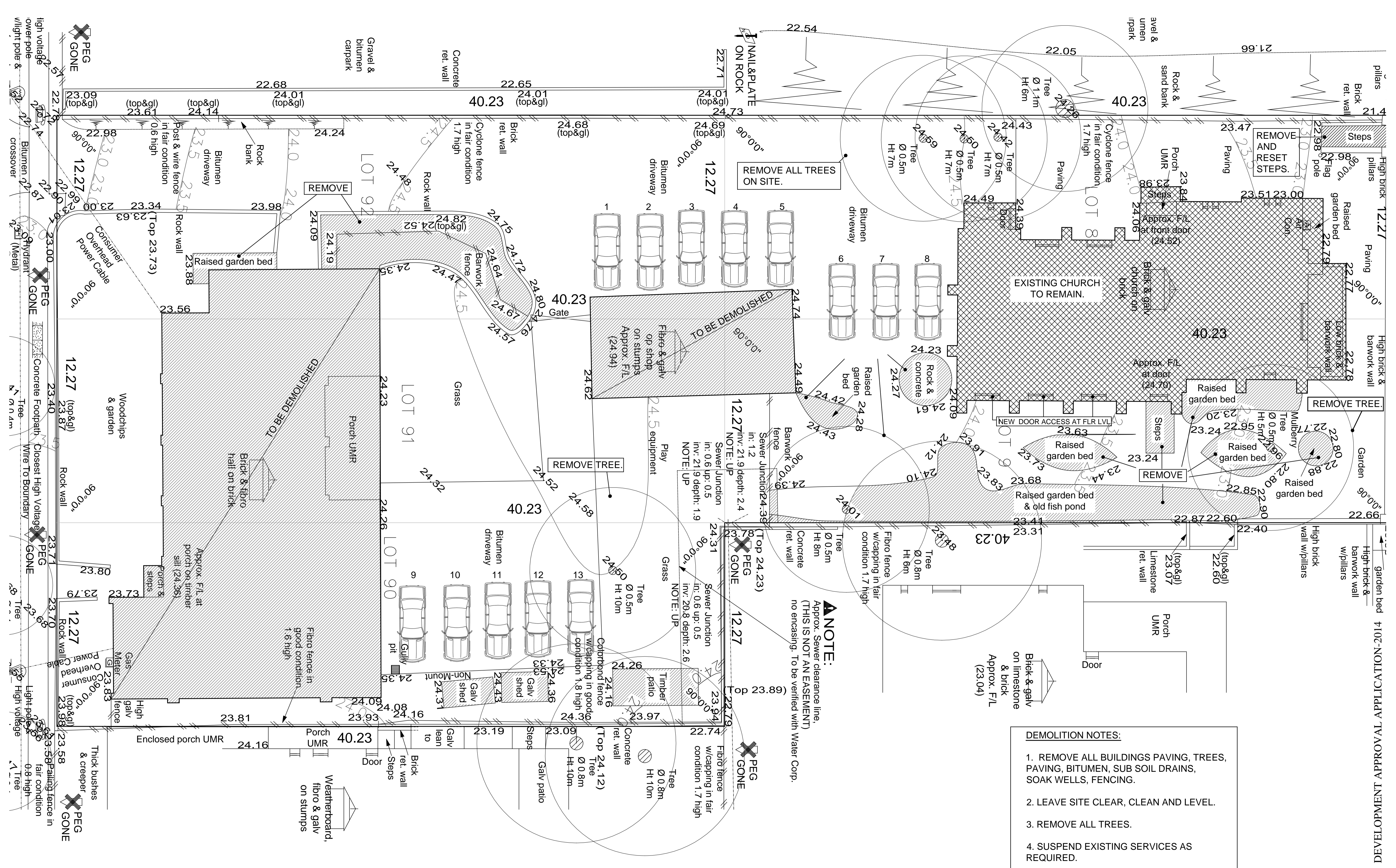
Conclusion:

This application represents the fourth Mixed Use development within the Town of Bassendean to take advantage of increased development potential offered under the provisions of Local Planning Scheme No 10 and the Town Centre Area Strategy and Guidelines and follows earlier approvals issued for developments at No. 85 Old Perth Road (2012); Nos. 78-80 Old Perth Road (2013 & 2014) and 93 Old Perth Road (2013 & 2014).

The proposal has been assessed and has found to be compliant with the Scheme, incorporating the Residential Design and Strategy for the greater part.

The assessment of the proposal indicates that the proposed building should deliver the type of building envisaged by the site's zoning and the Town Centre Area Strategy.

The applicant is seeking the exercise discretion on certain aspects of the development, and the reporting Officer supports such exercise of discretion as outlined in this report.



REMOVE ALL TREES ON SITE.

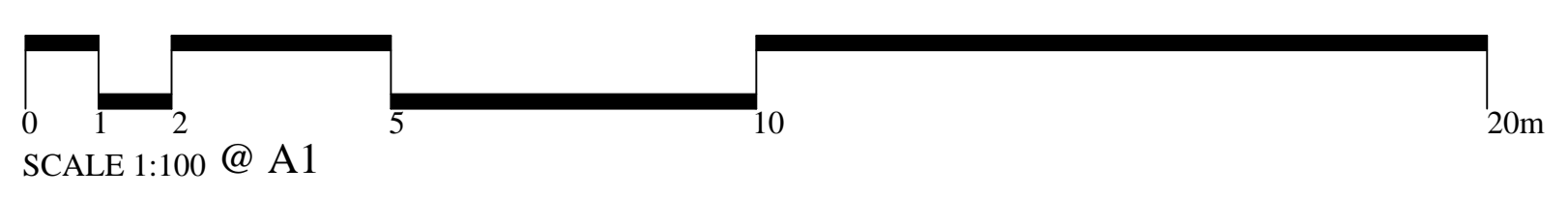
EXISTING CHURCH TO REMAIN.

TO BE DEMOLISHED

TO BE DEMOLISHED

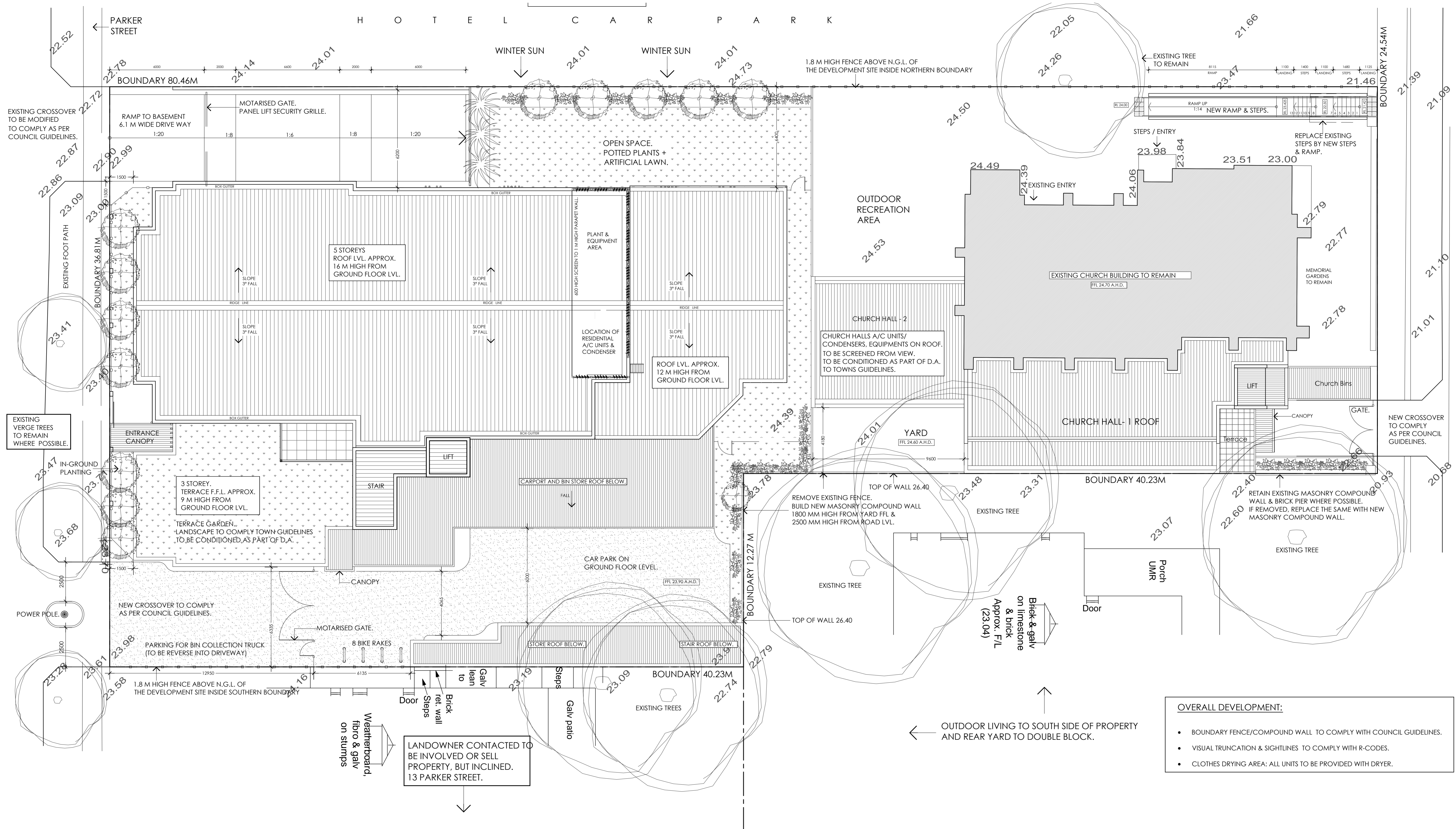
NOTE:
 Approx. Sewer clearance line.
 (THIS IS NOT AN EASEMENT)
 no encasing. To be verified with Water Corp.

- DEMOLITION NOTES:**
1. REMOVE ALL BUILDINGS PAVING, TREES, PAVING, BITUMEN, SUB SOIL DRAINS, SOAK WELLS, FENCING.
 2. LEAVE SITE CLEAR, CLEAN AND LEVEL.
 3. REMOVE ALL TREES.
 4. SUSPEND EXISTING SERVICES AS REQUIRED.



PARKER STREET

WILSON STREET



- OVERALL DEVELOPMENT:**
- BOUNDARY FENCE/COMPOUND WALL TO COMPLY WITH COUNCIL GUIDELINES.
 - VISUAL TRUNCATION & SIGHTLINES TO COMPLY WITH R-CODES.
 - CLOTHES DRYING AREA: ALL UNITS TO BE PROVIDED WITH DRYER.

← OUTDOOR LIVING TO SOUTH SIDE OF PROPERTY AND REAR YARD TO DOUBLE BLOCK.

LANDOWNER CONTACTED TO BE INVOLVED OR SELL PROPERTY, BUT INCLINED. 13 PARKER STREET.

DOEPEL MARSH

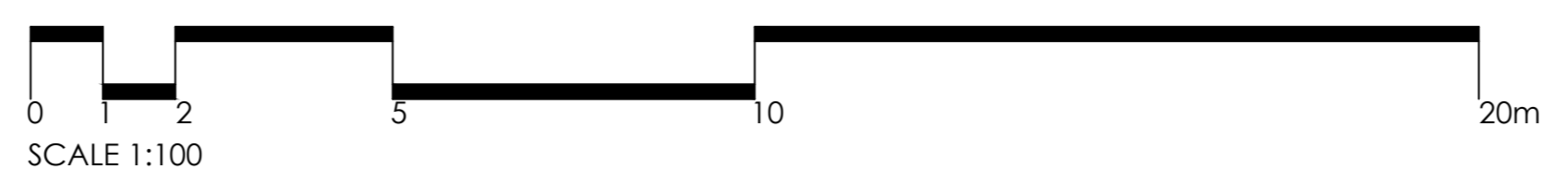
architects



Anglican Church Diocese of Perth



SITE PLAN



ST MARKS ANGLICAN CHURCH REDEVELOPMENT o BASSENDEAN WILSON TO PARKER STREETS.

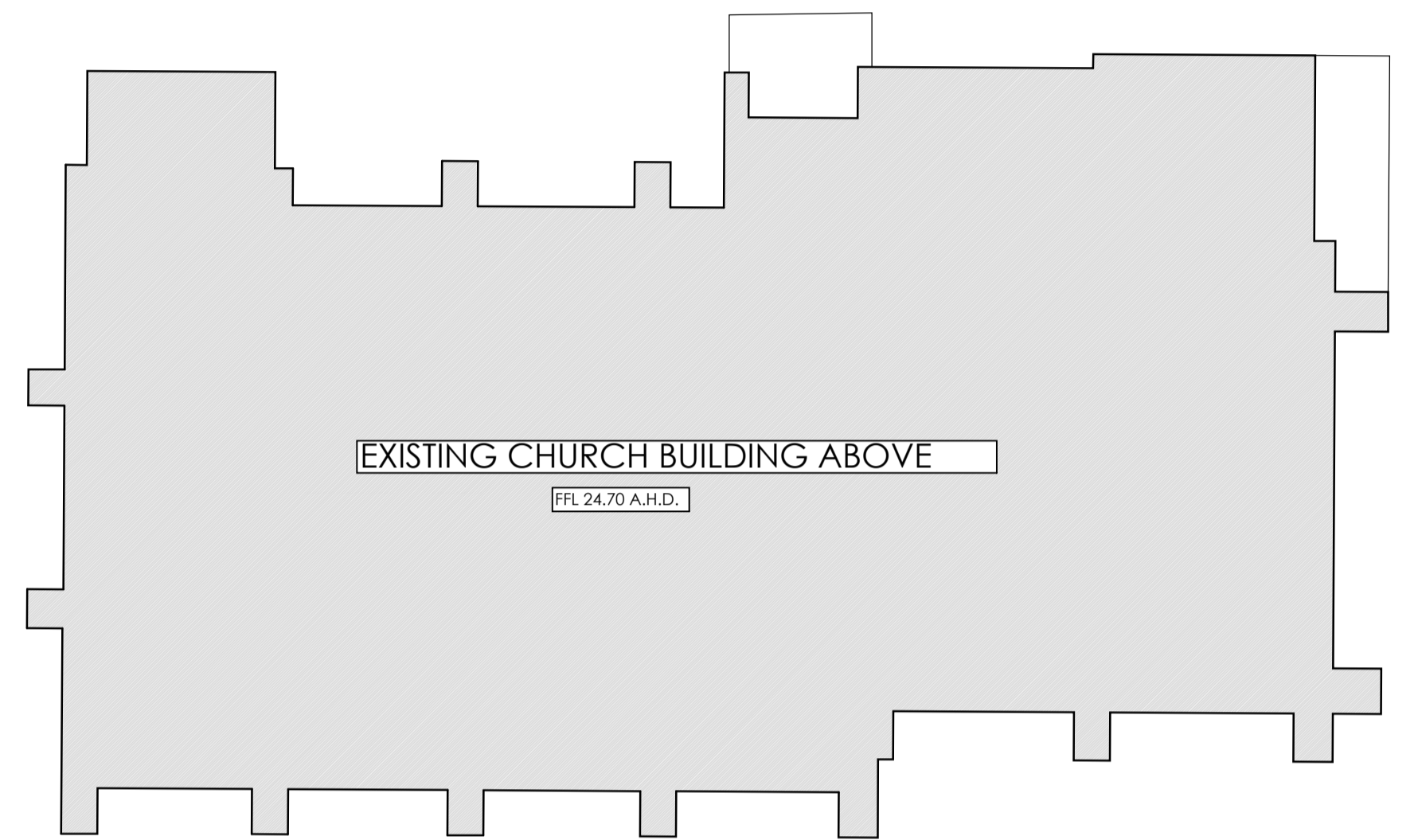
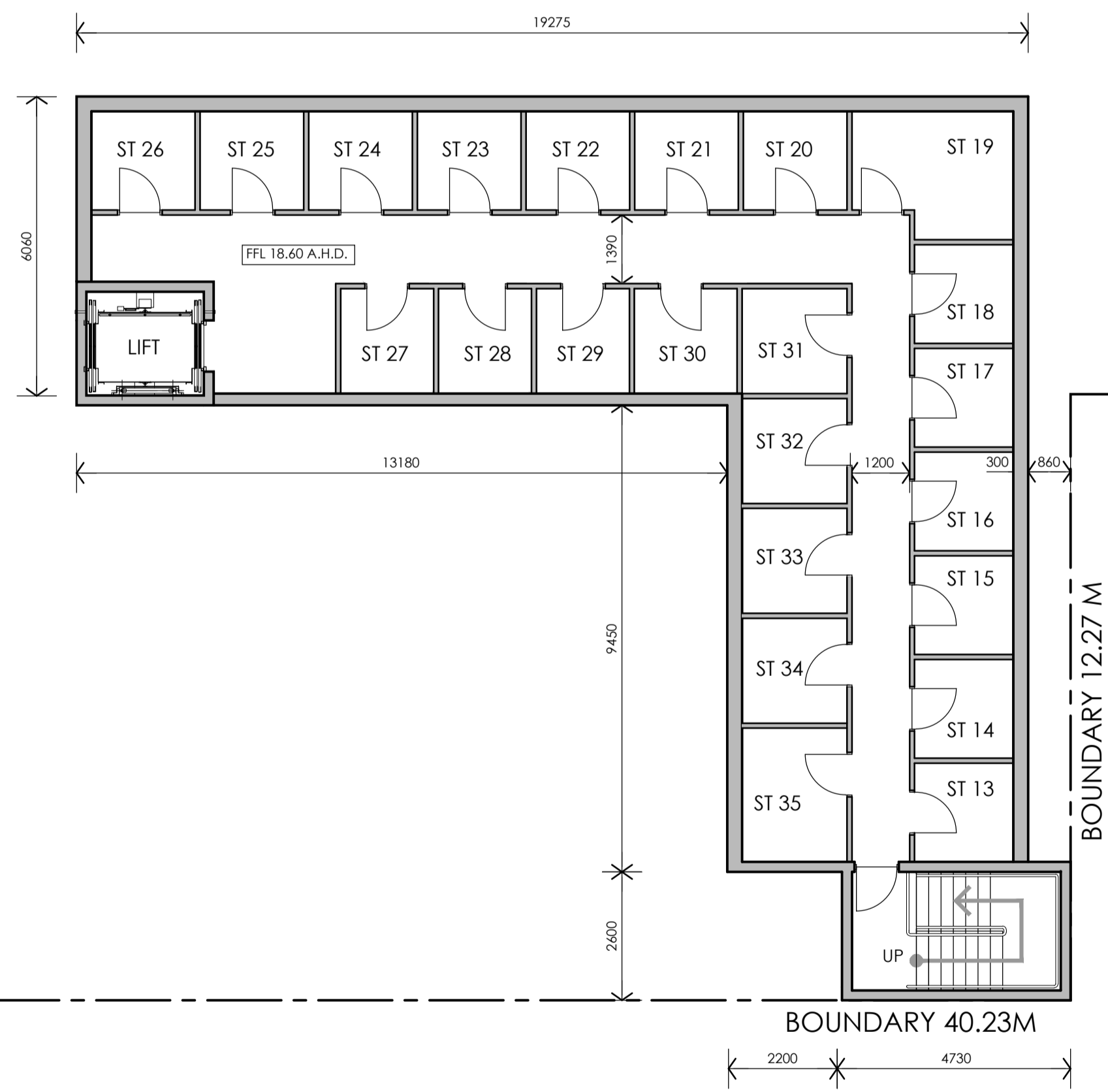
JOB NO. 13.69
DATE: 23 JAN 2015
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DEVELOPMENT APPROVAL APPLICATION- 2014

BOUNDARY 80.46M

BOUNDARY 24.54M

BOUNDARY 36.81M

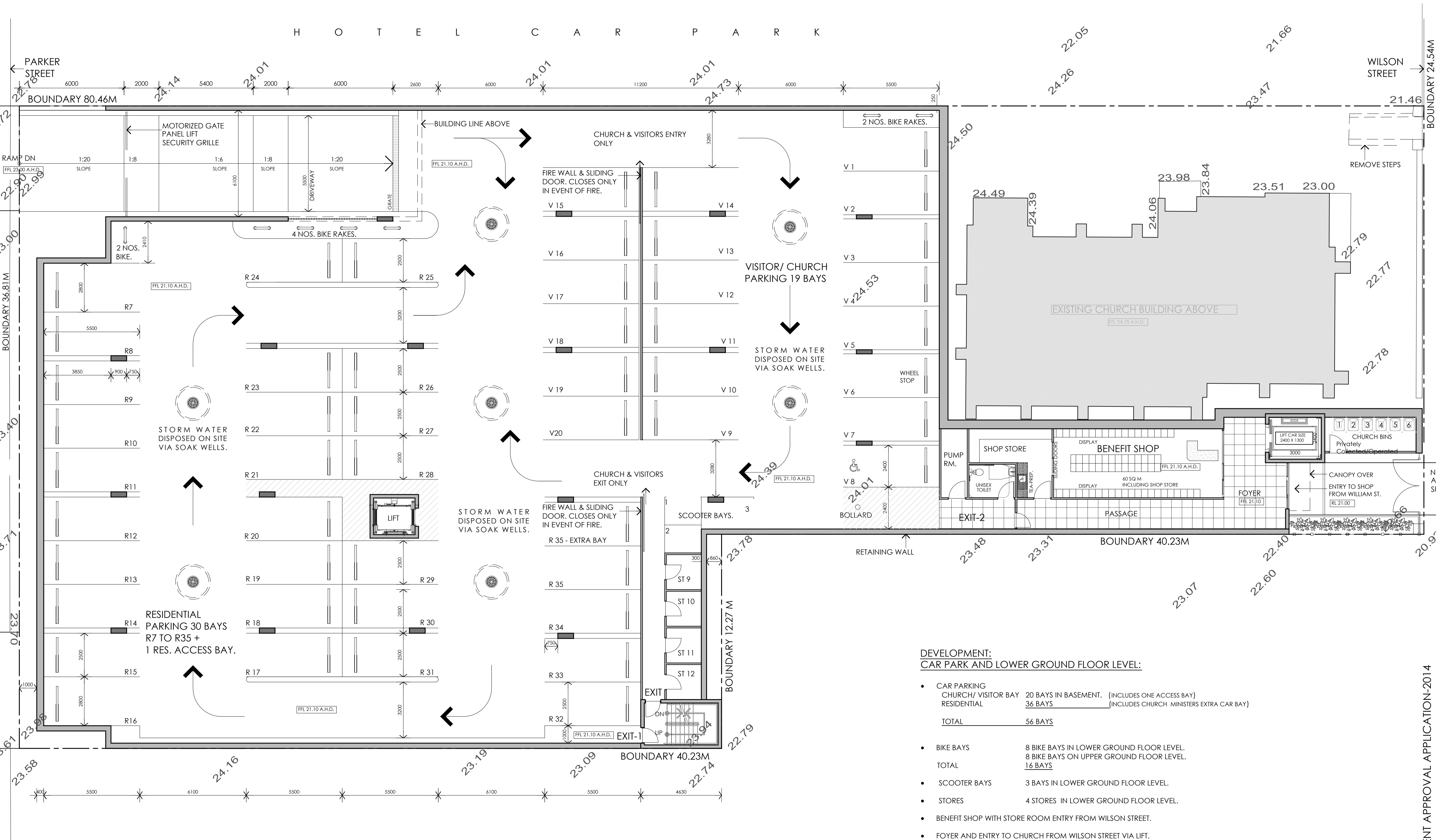


BOUNDARY 40.23M

BOUNDARY 12.27 M

BOUNDARY 40.23M

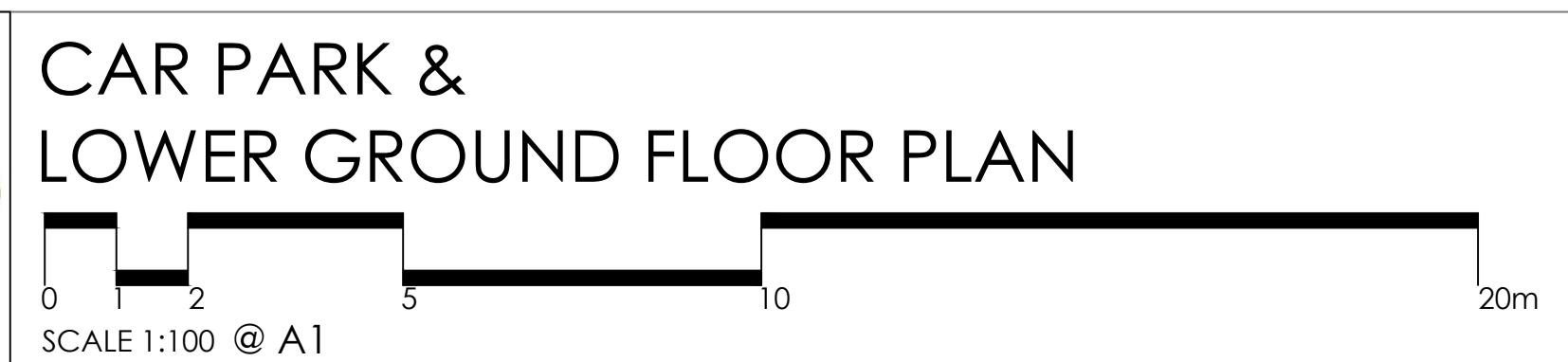
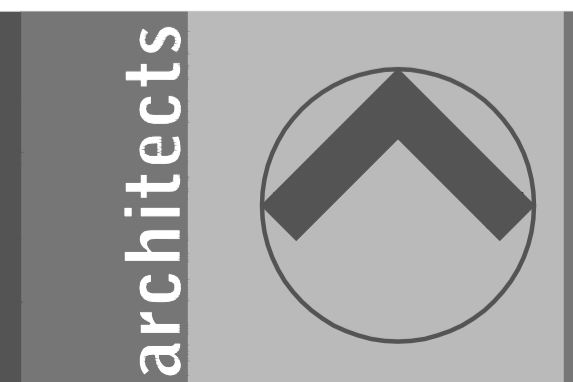
DEVELOPMENT APPROVAL APPLICATION-2014



DEVELOPMENT:
CAR PARK AND LOWER GROUND FLOOR LEVEL:

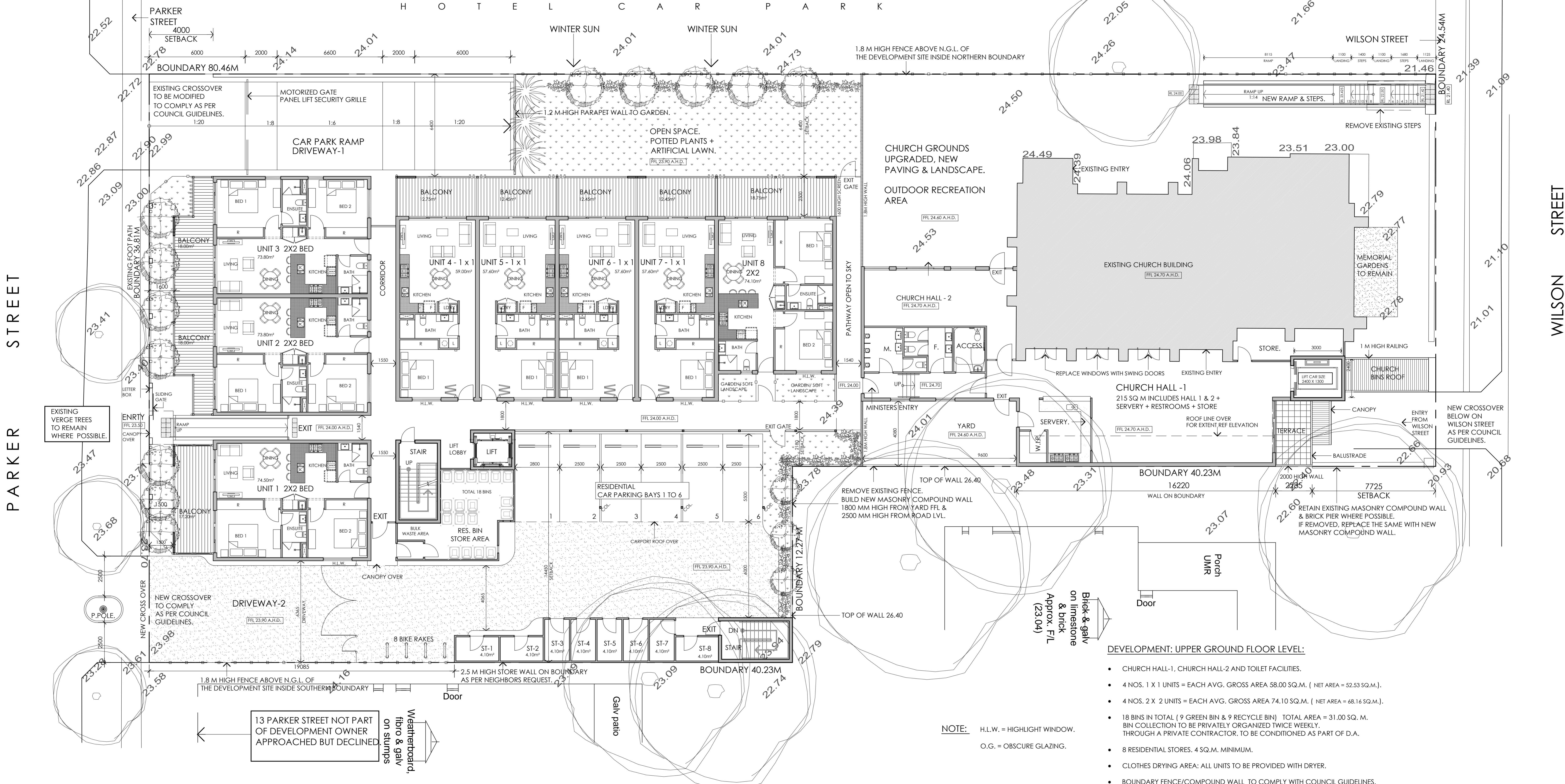
- CAR PARKING
 CHURCH/ VISITOR BAY 20 BAYS IN BASEMENT. (INCLUDES ONE ACCESS BAY)
 RESIDENTIAL 36 BAYS (INCLUDES CHURCH MINISTERS EXTRA CAR BAY)
TOTAL 56 BAYS
- BIKE BAYS
 8 BIKE BAYS IN LOWER GROUND FLOOR LEVEL.
 8 BIKE BAYS ON UPPER GROUND FLOOR LEVEL.
TOTAL 16 BAYS
- SCOOTER BAYS 3 BAYS IN LOWER GROUND FLOOR LEVEL.
- STORES 4 STORES IN LOWER GROUND FLOOR LEVEL.
- BENEFIT SHOP WITH STORE ROOM ENTRY FROM WILSON STREET.
- FOYER AND ENTRY TO CHURCH FROM WILSON STREET VIA LIFT.

DEVELOPMENT APPROVAL APPLICATION-2014



**ST MARKS ANGLICAN CHURCH
 REDEVELOPMENT o BASSENDEAN
 WILSON TO PARKER STREETS.**

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 DATE: 23 JAN 2015
DA 1.2-E
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DEVELOPMENT: UPPER GROUND FLOOR LEVEL:

- CHURCH HALL-1, CHURCH HALL-2 AND TOILET FACILITIES.
- 4 NOS. 1 X 1 UNITS = EACH AVG. GROSS AREA 58.00 SQ.M. (NET AREA = 52.53 SQ.M.).
- 4 NOS. 2 X 2 UNITS = EACH AVG. GROSS AREA 74.10 SQ.M. (NET AREA = 68.16 SQ.M.).
- 18 BINS IN TOTAL (9 GREEN BIN & 9 RECYCLE BIN) TOTAL AREA = 31.00 SQ. M. BIN COLLECTION TO BE PRIVATELY ORGANIZED TWICE WEEKLY. THROUGH A PRIVATE CONTRACTOR. TO BE CONDITIONED AS PART OF D.A.
- 8 RESIDENTIAL STORES. 4 SQ.M. MINIMUM.
- CLOTHES DRYING AREA: ALL UNITS TO BE PROVIDED WITH DRYER.
- BOUNDARY FENCE/COMPOUND WALL TO COMPLY WITH COUNCIL GUIDELINES.
- SIGHTINGS TO COMPLY WITH R-CODES.

NOTE: H.L.W. = HIGHLIGHT WINDOW.
O.G. = OBSCURE GLAZING.





**DEVELOPMENT:
FIRST FLOOR LEVEL:**

- 5 NOS. 1 X 1 UNITS = EACH GROSS AREA 57.60 SQ.M. (NET AREA = 52.5 SQ.M.).
- 3 NOS. 2 X 2 UNITS = EACH GROSS AREA 74.10 SQ.M. (NET AREA = 68.16 SQ.M.).

DEVELOPMENT APPROVAL APPLICATION-2014

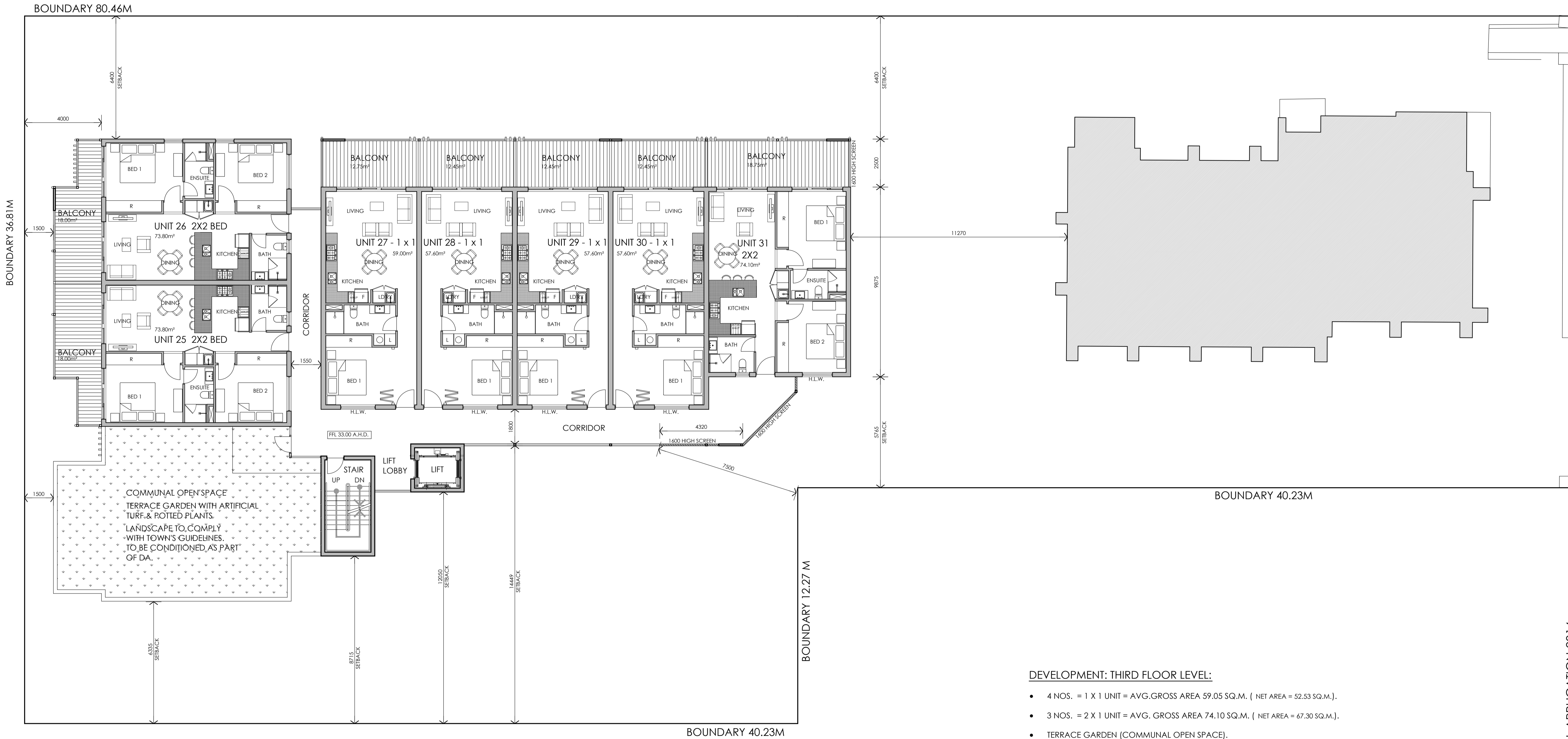


DEVELOPMENT: SECOND FLOOR LEVEL:

- 4 NOS. = 1 X 1 UNIT = AVG. GROSS AREA 59.05 SQ.M. (NET AREA = 52.53 SQ.M.).
- 4 NOS. = 2 X 1 UNIT = AVG. GROSS AREA 74.10 SQ.M. (NET AREA = 67.30 SQ.M.).
- TERRACE GARDEN (COMMUNAL OPEN SPACE).

BOUNDARY 24.54M

DEVELOPMENT APPROVAL APPLICATION-2014



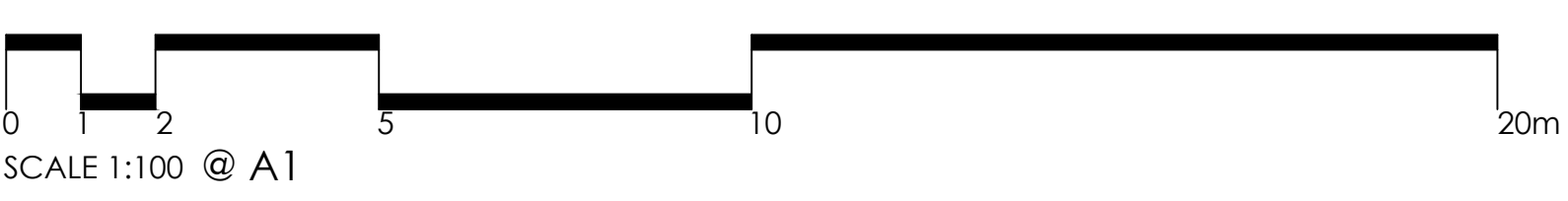
DEVELOPMENT: THIRD FLOOR LEVEL:

- 4 NOS. = 1 X 1 UNIT = AVG. GROSS AREA 59.05 SQ.M. (NET AREA = 52.53 SQ.M.).
- 3 NOS. = 2 X 1 UNIT = AVG. GROSS AREA 74.10 SQ.M. (NET AREA = 67.30 SQ.M.).
- TERRACE GARDEN (COMMUNAL OPEN SPACE).

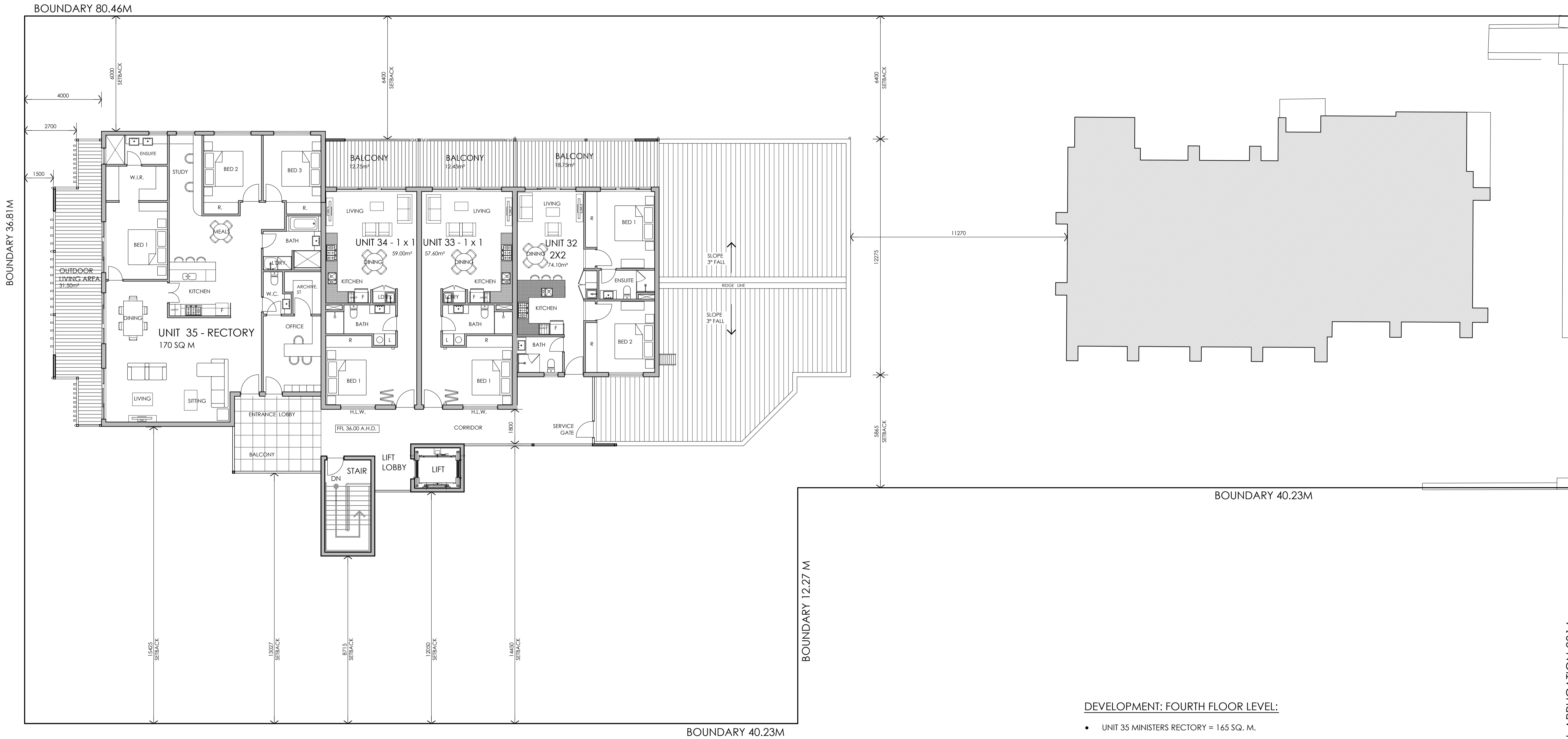
DEVELOPMENT APPROVAL APPLICATION-2014



THIRD FLOOR PLAN



ST MARKS ANGLICAN CHURCH REDEVELOPMENT o BASSENDEAN WILSON TO PARKER STREETS.

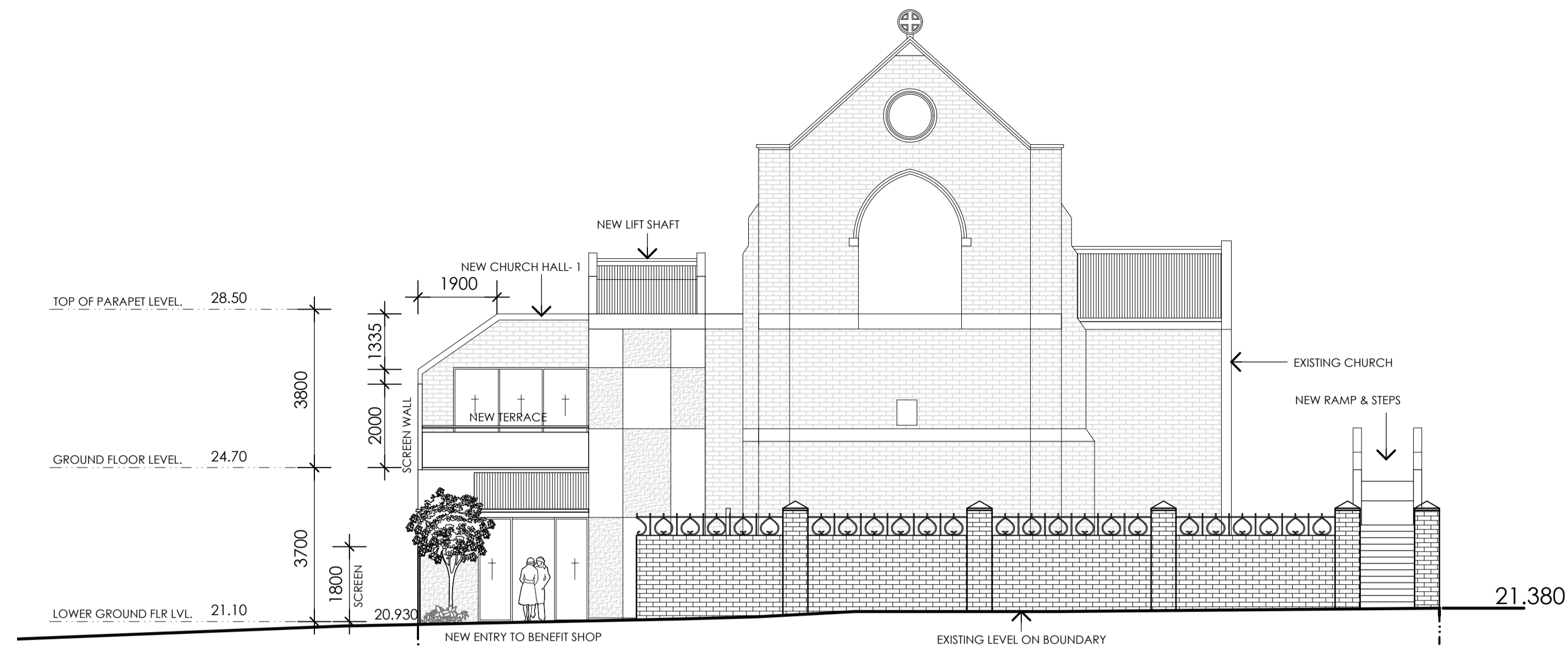


DEVELOPMENT: FOURTH FLOOR LEVEL:

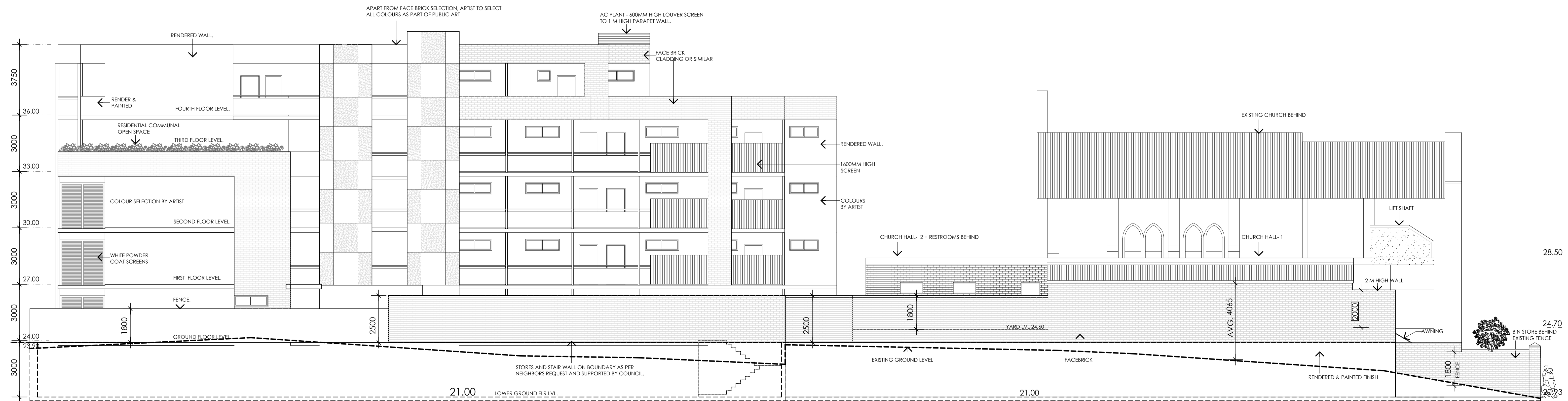
- UNIT 35 MINISTERS RECTORY = 165 SQ. M.
- 2 NOS. = 1 X 1 UNIT = GROSS AREA 57.60 SQ.M. (NET AREA = 52.53 SQ.M.).
- 1 NOS. = 2 X 1 UNIT = GROSS AREA 74.10 SQ.M. (NET AREA = 67.30 SQ.M.).
- RESIDENTIAL PLANT & EQUIPMENT STORE AREA (TENTATIVE).

DEVELOPMENT APPROVAL APPLICATION-2014





WILSON STREET ELEVATION
PAINT SELECTION BY ARTIST.



SOUTH ELEVATION
PAINT SELECTION BY ARTIST.

DEVELOPMENT APPROVAL APPLICATION-2014

**DOEPEL
MARSH**

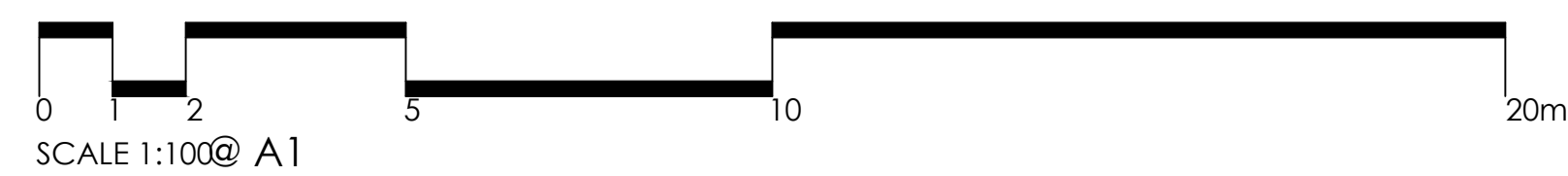
architects



**Anglican
Church**
Diocese of Perth



ELEVATIONS - SOUTH SIDE & EAST SIDE

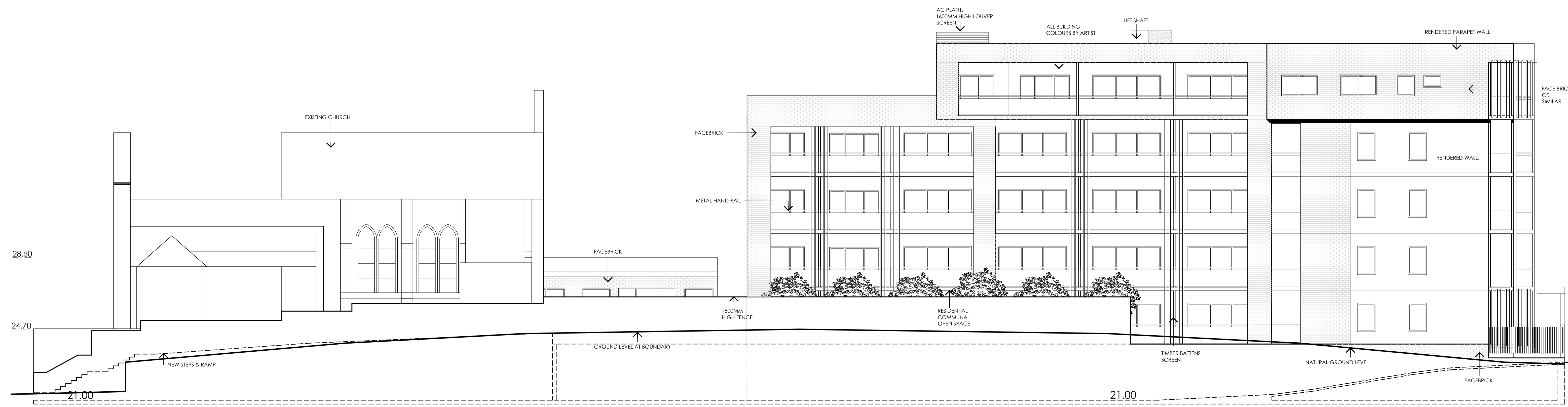


**ST MARKS ANGLICAN CHURCH
REDEVELOPMENT o BASSENDEAN
WILSON TO PARKER STREETS.**

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WEST ELEVATION - PARKER STREET
PAINT SELECTION BY ARTIST.



NORTH ELEVATION
PAINT SELECTION BY ARTIST.

NOTE: EXTERNAL COLOUR
SELECTION PART OF PUBLIC ART

DEVELOPMENT APPROVAL APPLICATION-2014

**DOEPEL
MARSH**

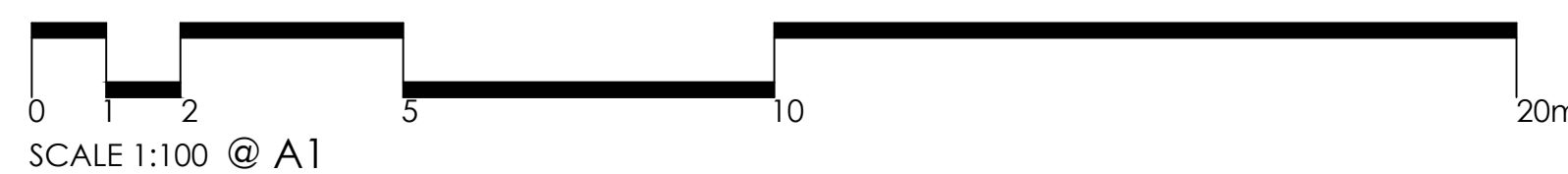
architects



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Diocese of Perth

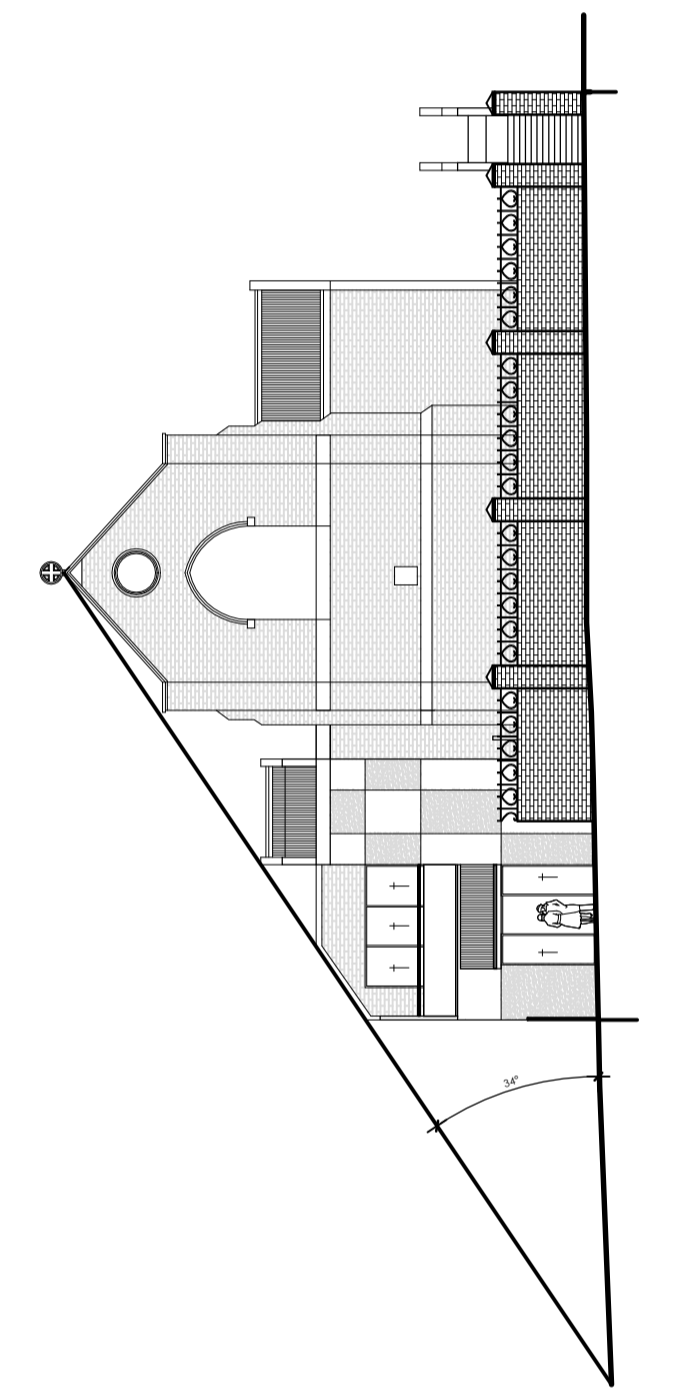
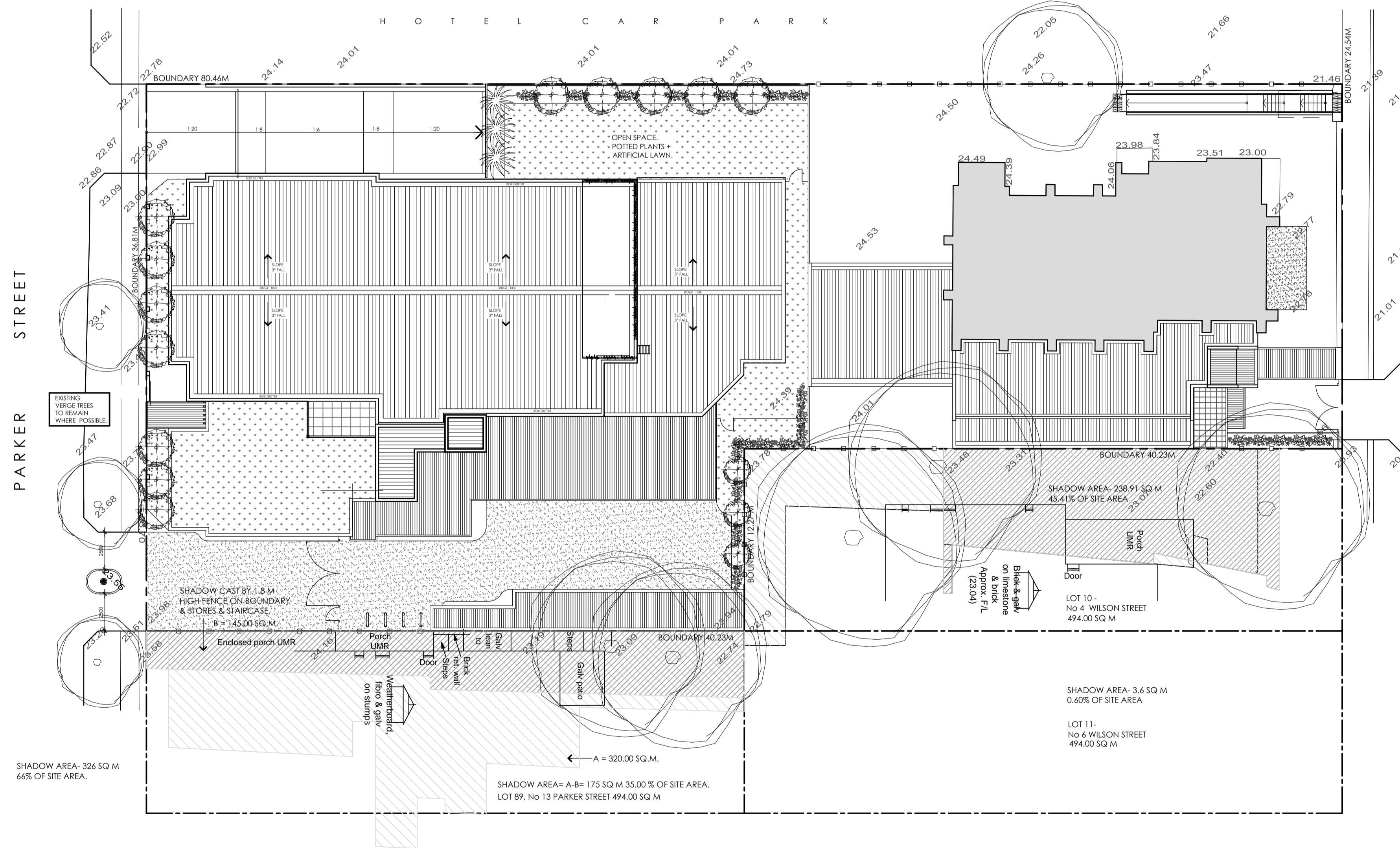
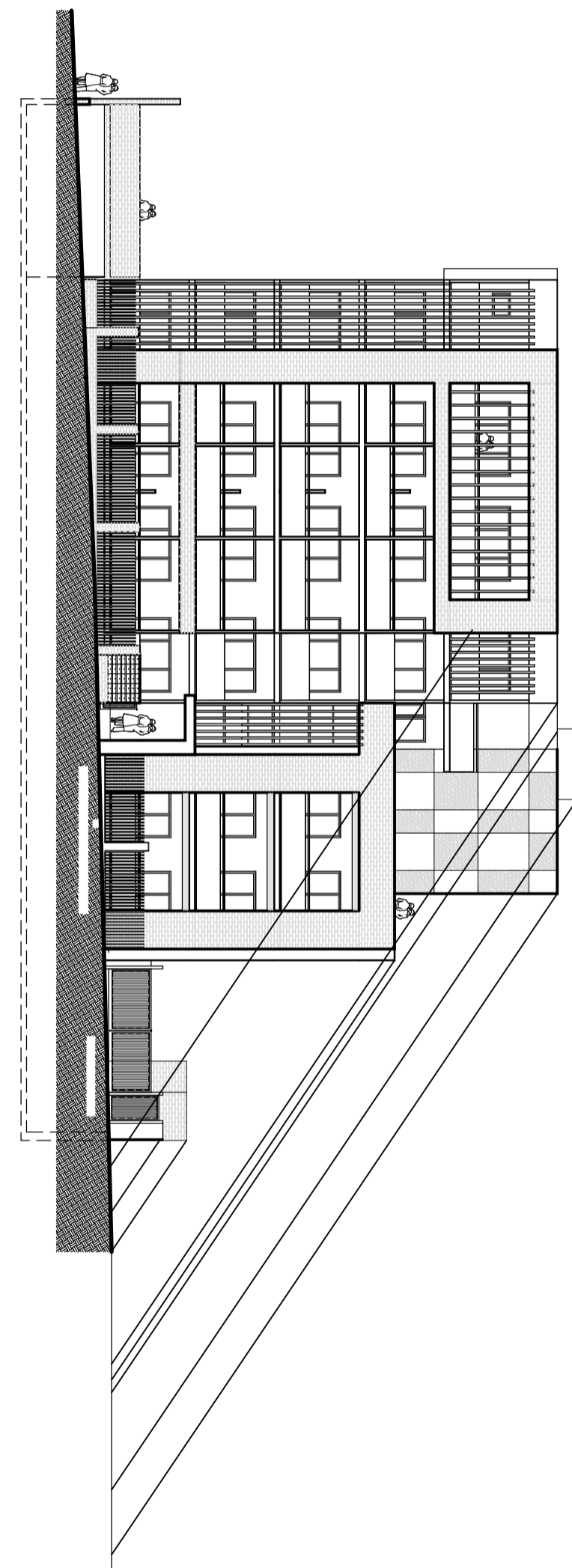


ELEVATIONS - WEST SIDE & NORTH SIDE



**ST MARKS ANGLICAN CHURCH
REDEVELOPMENT o BASSENDEAN
WILSON TO PARKER STREETS.**

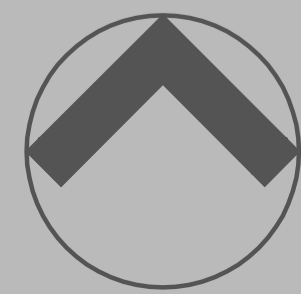
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DEVELOPMENT APPROVAL APPLICATION-2014

DOEPEL
MARSH

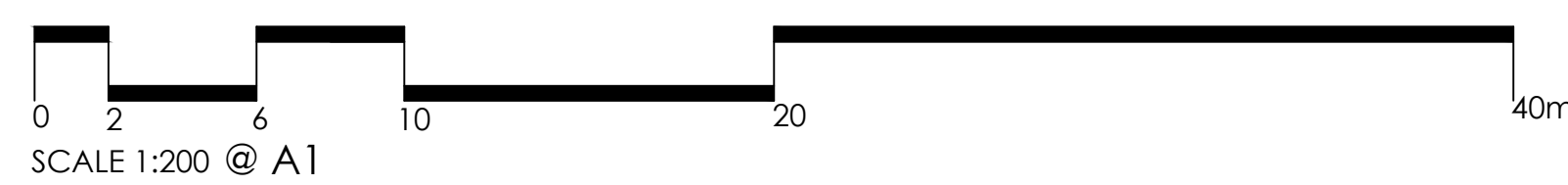
architects



Anglican
Church
Diocese of Perth



SHADOW DIAGRAM - TOTAL COVERAGE



ST MARKS ANGLICAN CHURCH
REDEVELOPMENT o BASSENDEAN
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Telephone (08) 9384-6166 Facsimile (08) 9385-2341
ronaldbodycoatarchitect@iinet.net.au

Our Reference: 2393

15 April 2014

Mr Kim Doepel
Doepel Marsh Architects
61 Forrest Street
SUBIACO WA 6009

Dear Kim

**RE: ST. MARK'S CHURCH, BASSENDEAN
HERITAGE IMPACT STATEMENT**

Acting on your instructions of 8 April 2014, I have inspected the Church of St. Mark in Bassendean and examined the documents for proposed new development on the Church property.

This Heritage Impact Statement conforms to the guide document prepared by the State Heritage Office. The attached photographs record the current status of the Church building and its context on the property.

1. Statement

A Heritage Impact Statement is intended to describe and evaluate the likely impact of a development proposal on an existing heritage listed building, in a concise assessment. Reference should be made to the photographs attached of the existing building and site, and architectural drawings for the new development.

2. Statement of Significance

St. Mark's Church, Bassendean, Western Australia, is assessed to be a place of cultural heritage significance. The place is not entered in the Register of Classified Places by The National Trust of Australia (WA) and is not entered in the State Register of Heritage Places by the State Heritage Office. The place is included in the Municipal Heritage Inventory (Local Government Inventory) of the Town of Bassendean, adopted on 22 November 2005 as Management Category 1 Conservation Essential.

The Church of St. Mark, constructed in 1915 and extended and altered in 1937 and 1938, is a representative example of the Federation Gothic Revival style, red face brickwork externally, high-pitched roof form clad in corrugated metal roof sheeting, and Gothic type window openings.

3. How is the impact of the new development on the heritage significance of the Church to be minimised?

The low profile of the new development and different architectural expression negates any possible adverse impact on the prominent red brick Federation character of the existing Church building.

The existing Church continues to stand prominently on the high ground of the site above the street to the east. The new development on the south side of the Church and the adjustments for pre-eminent access at street level will be seen to be a new development not intended to compromise the Federation Gothic Revival style of the Church. Any visual impact of the new development is minimised.

4. Why is the new development required to be adjacent to a heritage place?

Review of the amenity of the total property requires a new amenity to be closely related to the existing Church. Attachment of the new amenity onto the south side of the existing Church, provides an amenity closely associated with the functions of the Church, and replaces the old out-dated and disparate amenities already in place on site.

The new development is closely related to the function of the Church; direct association is relevant and appropriate, satisfies the current requirements of the Parish, allows removal of out-dated buildings dispersed on the site, and allows sensible redevelopment of the areas of the property now occupied by redundant facilities for new appropriate redevelopment for new uses.

5. How does the new development affect views to, and from, the heritage place? What has been done to minimise negative effects?

Views to and from the heritage place, the existing Church, will not be affected adversely by the proposed development. The south side of the existing Church is currently a somewhat derelict and abandoned landscape area, incorporating tree growth which obscures views into and out from the south side of the Church, the site of proposed new development.

The proposed new development represents a positive resolution of essential relocated amenities closely associated with the Church, and satisfies that need in a low-key but positive way. Views will not be degraded by the replacement of poor landscape and deteriorated garden elements with a low-profile built form closely associated with the Church. Existing degraded buildings behind the Church will be removed in the process of new redevelopment on the entire property – a highly positive environmental outcome.

6. Is the new development sympathetic to the heritage place? In what way (e.g. form, siting, proportions, design, materials)?

In accordance with best conservation practice, the proposed new development which adjoins the existing Church on the south side does not replicate the style nor

15 April 2014

PAGE 3

RE: **ST. MARK'S CHURCH, BASSENDEAN
HERITAGE IMPACT STATEMENT**

materials of the existing early 20th Century building. A clean break in style for the development in terms of form, proportions, design and materials is assessed to be sympathetic to the existing but clearly as a statement of design for today. The existing fabric is not compromised but joins sympathetically with the new fabric directly at the south side of the building.

7. Will the new building visually dominate the heritage place? How has this been minimised?

The proposed new development will not visually dominate the heritage place. The low profile of the new development, its different architectural style and materials, will ensure that the high-profile red brick Federation Gothic character of the existing building will not be compromised.

It is important to note that the existing Church comprises a building which has been substantially extended and altered in the past by additional works carried out in 1937 and 1938 to the original 1915 fabric.

8. Will the public and users of the place still be able to view and appreciate its significance?

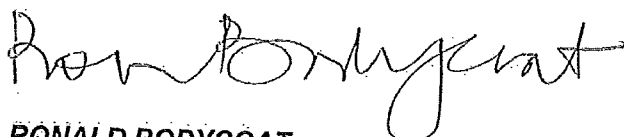
The characteristics of the existing Church building will continue to be clearly visible from the street on the eastern side; the architectural details and materials of the existing south wall of the Church will be unaltered and retained and visible within the new development; the significance of the Church and its dominant eastern elevation in particular will not be adversely affected as a consequence of its location on high ground set back a short distance above and from the street, visually dominant with no reduction in its current significance.

9. Conclusion

The proposed new development, adjoining the south side of the existing Church of St. Mark, Bassendean, and further to the west, respects the architectural characteristics of the existing building, does not detrimentally impact on the heritage significance of the Church building and constitutes essentially new elements for use in conjunction with the Church.

The proposed new development appropriately does not replicate the architectural design of the existing Church building but makes a clear statement of design for the 21st Century, substantially improves access to the Church from the main street and from the Church itself, and enhances the amenity of this Parish Church in accordance with present-day requirements for liturgical and social use of the property.

Regards

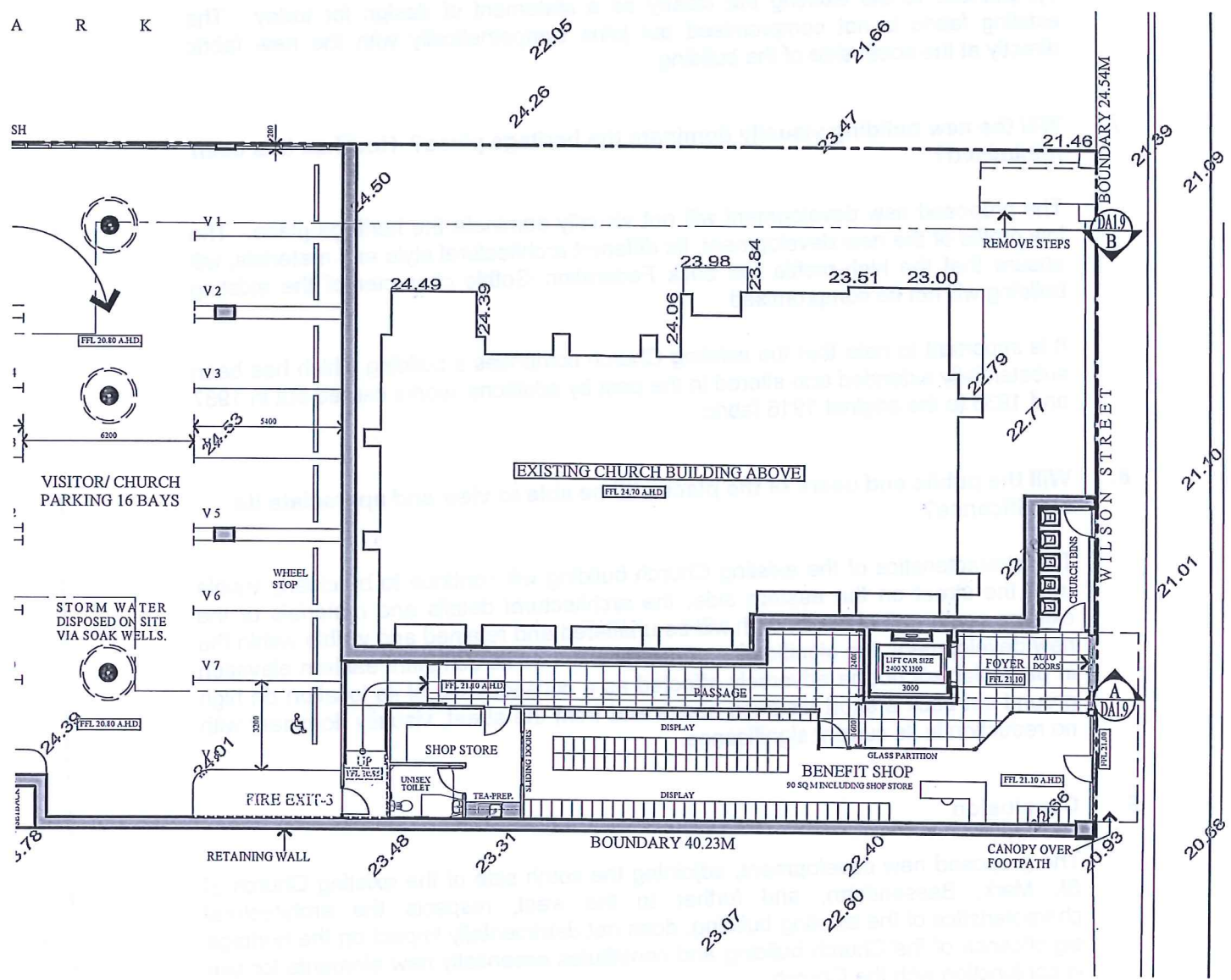


RONALD BODYCOAT
Heritage Architect

ABN 54 697 998 727

Enclosure: Photographs

A R K

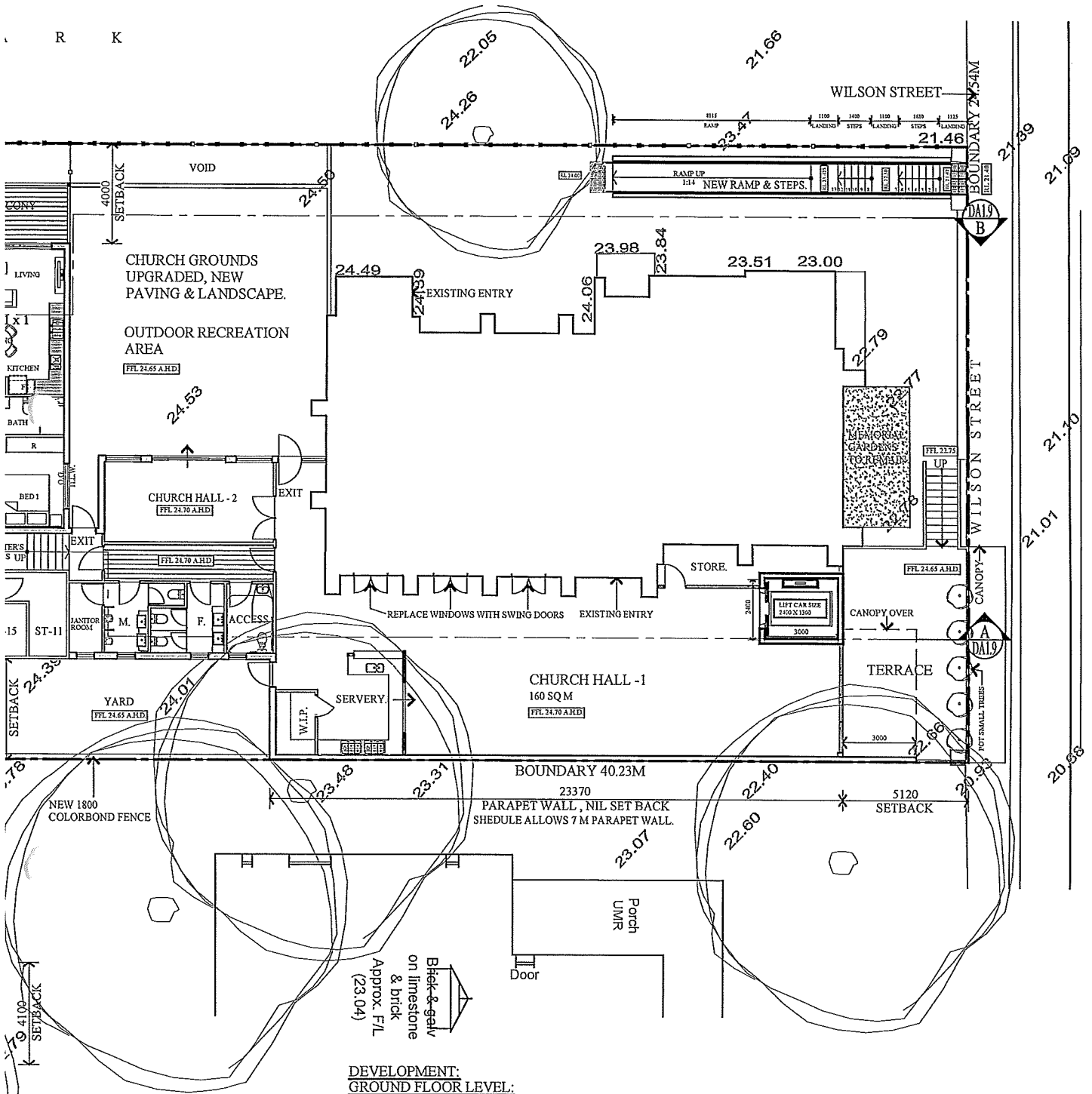


DEVELOPMENT:
CAR PARK AND LOWER GROUND FLOOR LEVEL:

- CAR PARKING
 - CHURCH/ VISITOR BAY 15 BAYS
 - RESIDENTIAL 36 BAYS (INCLUDES MINISTERS EXTRA CAR BAY)
 - 51 BAYS
- BENEFIT SHOP WITH STORE ROOM ENTRY FROM WILSON STREET.
- FOYER AND ENTRY TO CHURCH FROM WILSON STREET
- ENTRY FROM UNDERCOVER CAR PARKING DIRECT INTO CHURCH FOYER.

1-79

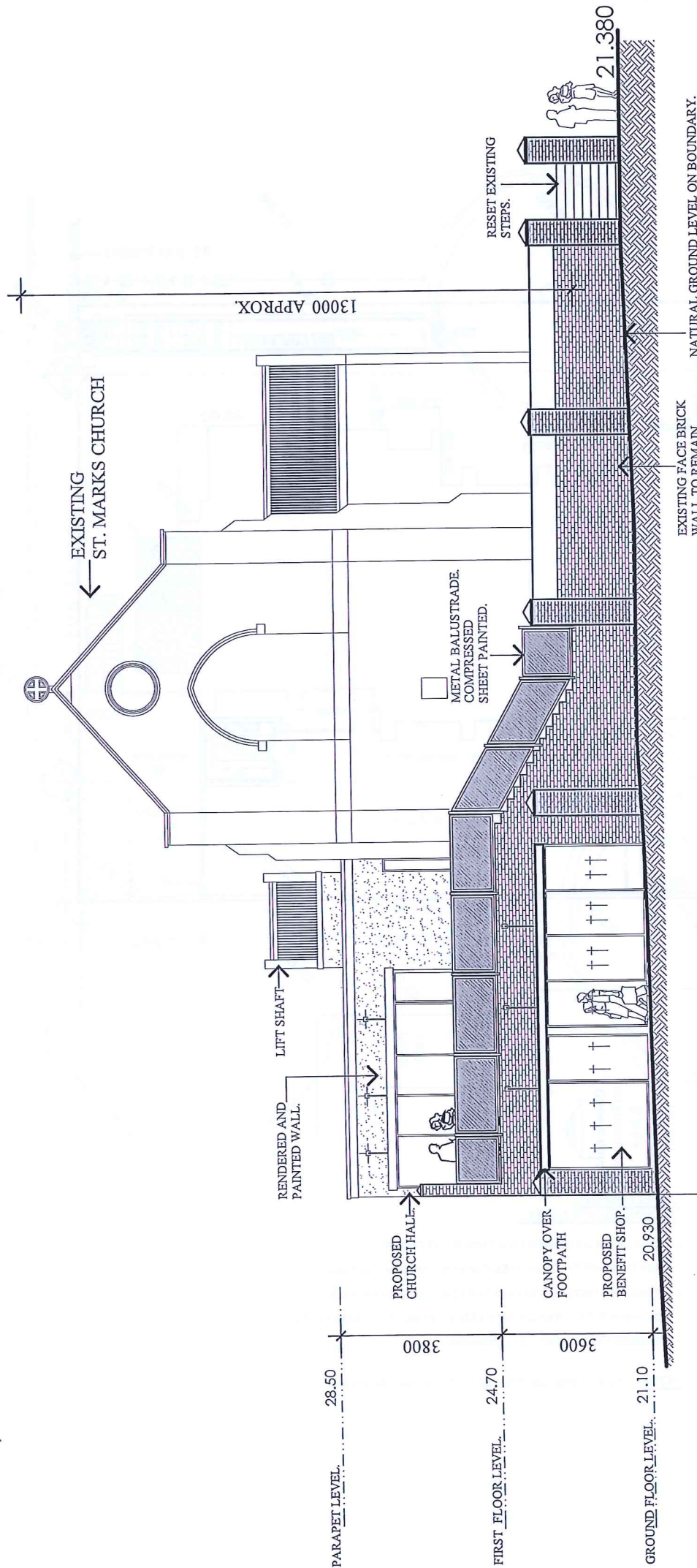
R K



DEVELOPMENT:
GROUND FLOOR LEVEL:

- CHURCH HALL-1, CHURCH HALL-2 AND TOILET FACILITIES.
- 5 NOS. 1 X 1 UNITS = GROSS AREA 57.60 SQ.M. (NET AREA = 52.5 SQ.M).
- 7 NOS. 2 X 2 UNITS = GROSS AREA 74.10 SQ.M. (NET AREA = 68.16 SQ.M).
- 36 BINS IN TOTAL (28 GREEN BIN & 8 RECYCLE BIN) TOTAL AREA = 43.5 SQ. M.
- 15 RESIDENTIAL STORES, 4 SQ.M. MINIMUM.

NOTE: H.L.W. = HIGHLIGHT WINDOW. O.G. = OBSCURE GLAZING.



WILSON STREET ELEVATION - (EAST)

WILSON STREET ELEVATION

ST. MARK'S CHURCH
Bassendean, Western Australia

PHOTOGRAPHS
taken by Ronald Bodycoat for the
preparation of a Heritage Impact Statement

April 2014



1. Eastern elevation to the street.



2. Adjoining carpark, north side of the Church.



3. South side of the property viewed from the street.



4. Adjoining property to the south – view looking west.

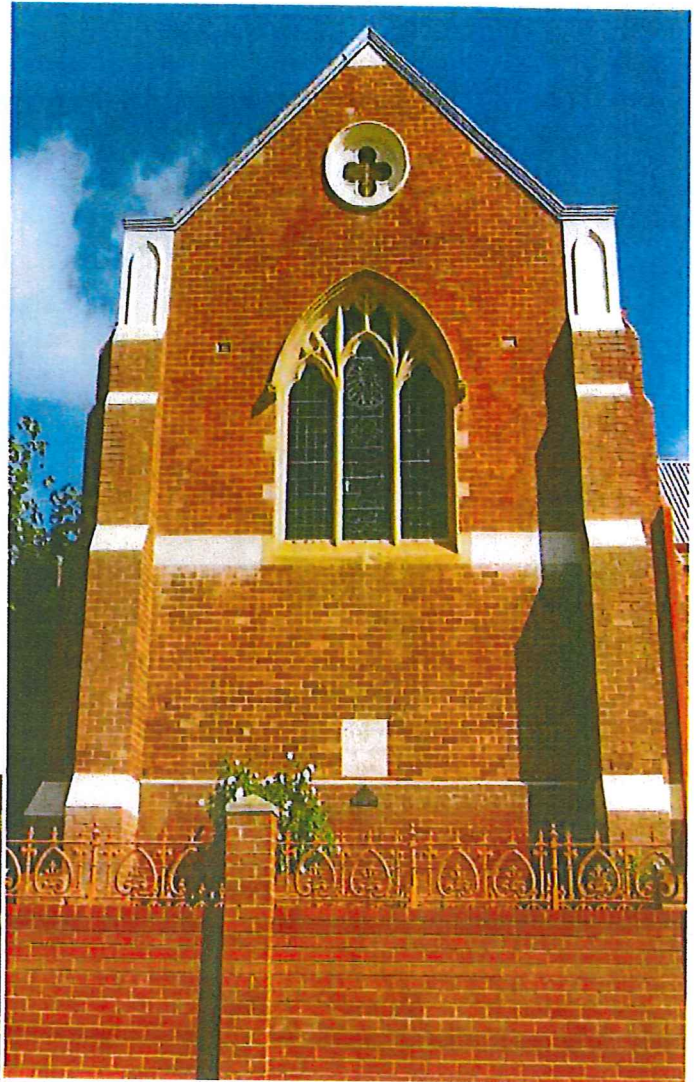


5. View south along the east wall of the Church.



6. Retaining wall to the street.

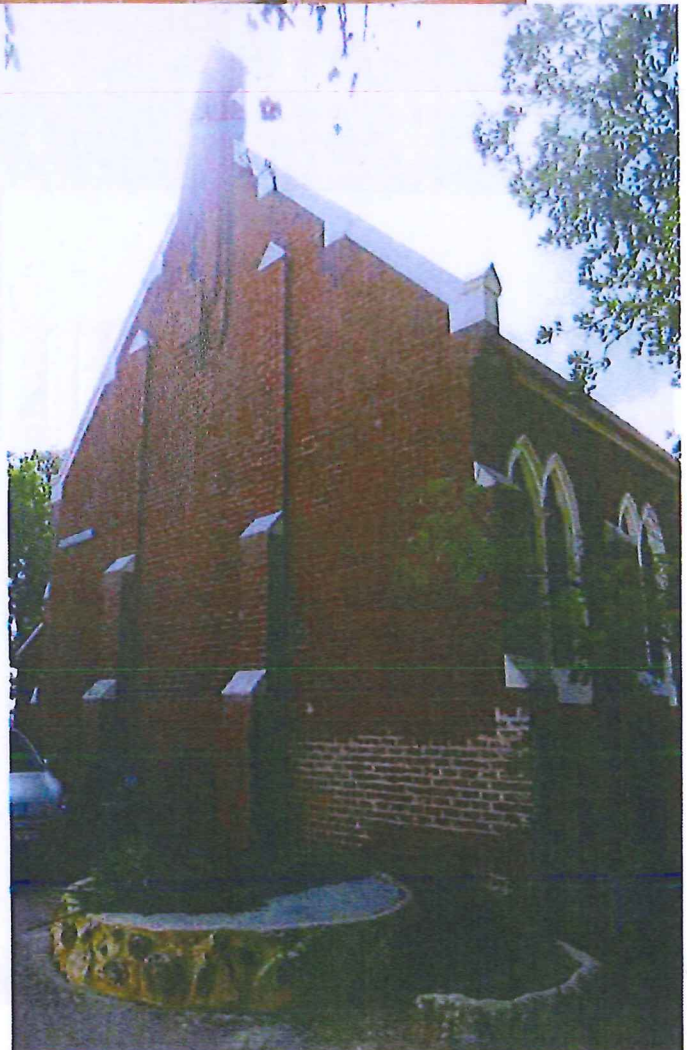
7. Eastern elevation to the street.



8. Foundation stone in the east wall of the Church – facing the street.



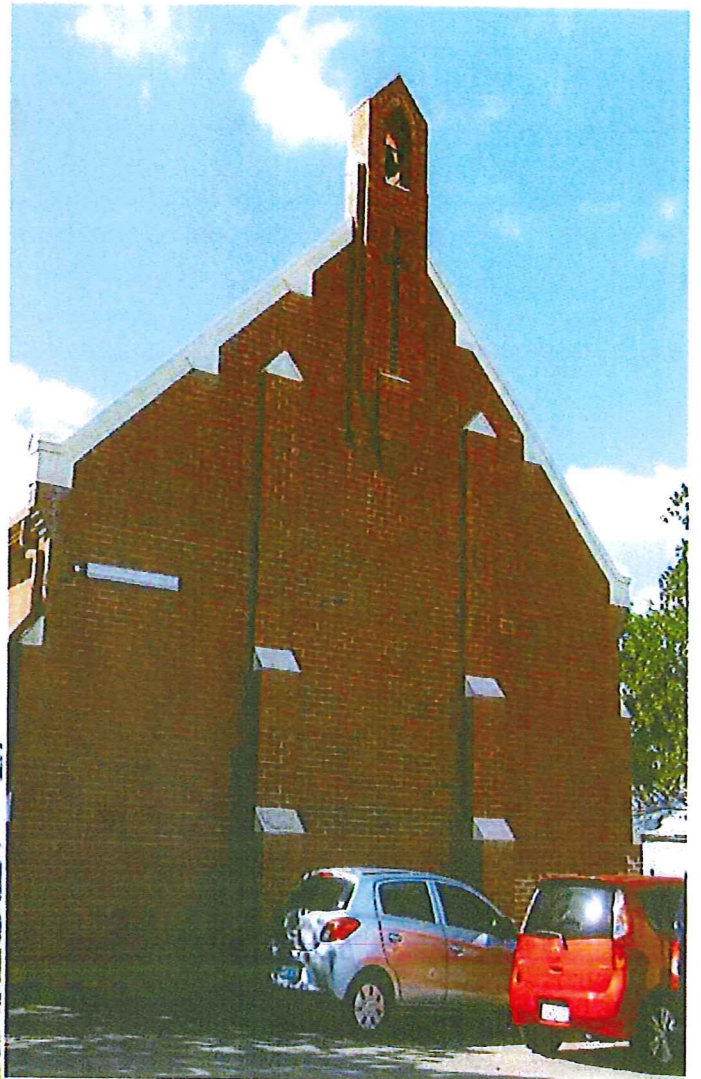
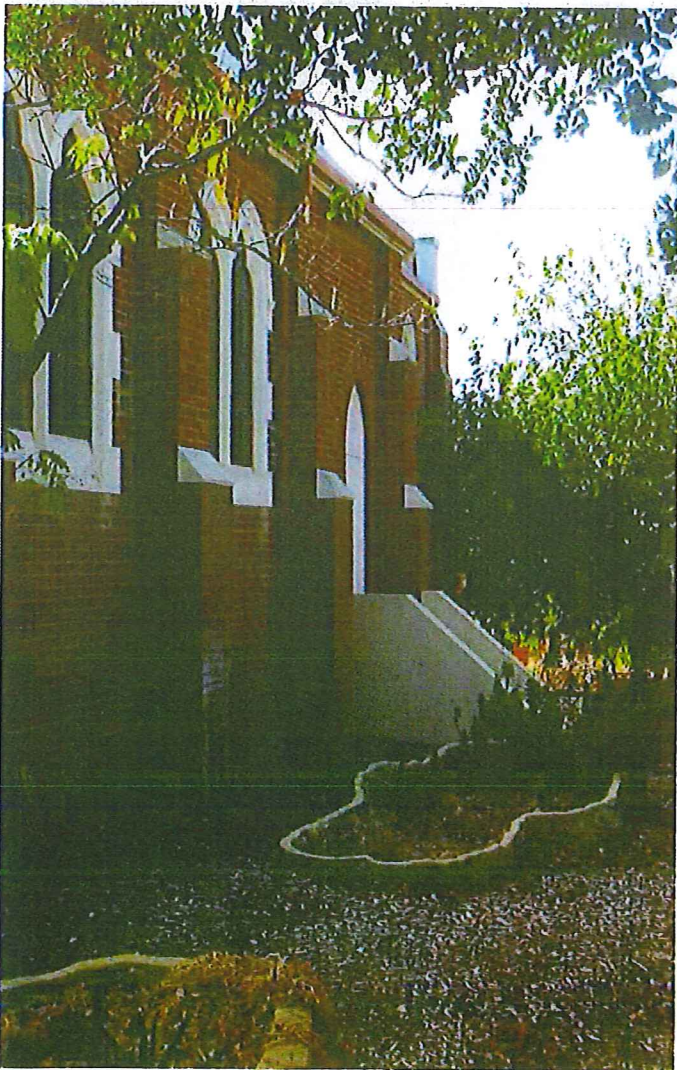
9. Eastern elevation to the street.



10. Southwest (rear) corner of the Church.

St. Mark's Church
Bassendean, Western Australia
Photographs taken April 2014
by Ronald Bodycoat

11. West elevation of the Church
(rear).



12. South side of the Church.



13. South elevation at the east end.

14. East wall, south side, of the 1937 section.



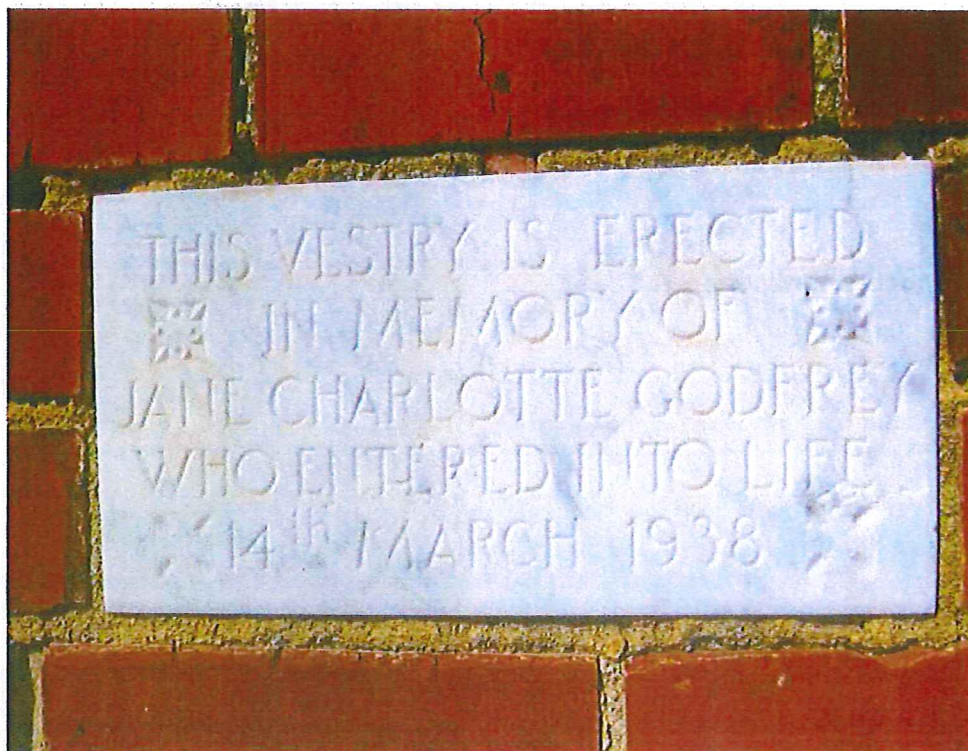
15. Southeast corner of the Church.



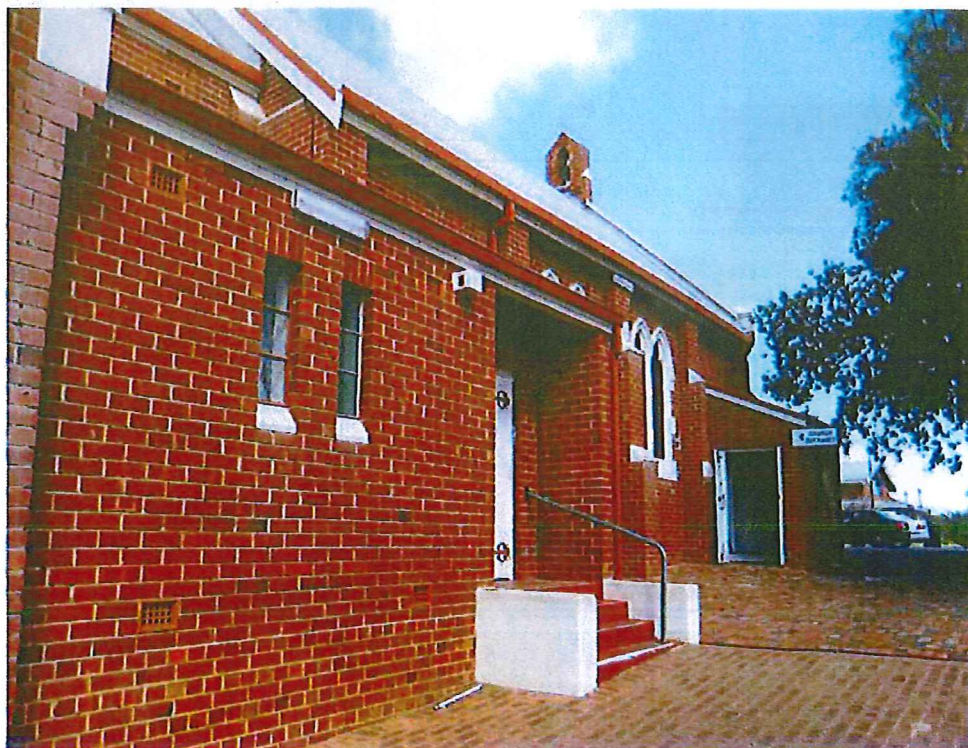
17. Foundation stone to the nave of the Church – north wall.



17. North elevation at the east end.



18. Foundation stone to the northwest addition to the Church.



19. North side of the Church at the eastern end.

20. South elevation.



21. View looking east along the south side of the Church.

**St. Mark's Church
Bassendean, Western Australia
Photographs taken April 2014
by Ronald Bodycoat**



22. Old timber-framed Hall – west behind the Church.



23. Church Hall – located west side of the property.

Appendix 2: Existing Parking Plan

ST MARKS ANGLICAN CHURCH
REDEVELOPMENT - BASSENDEAN
WILSON TO PARKER STREETS.

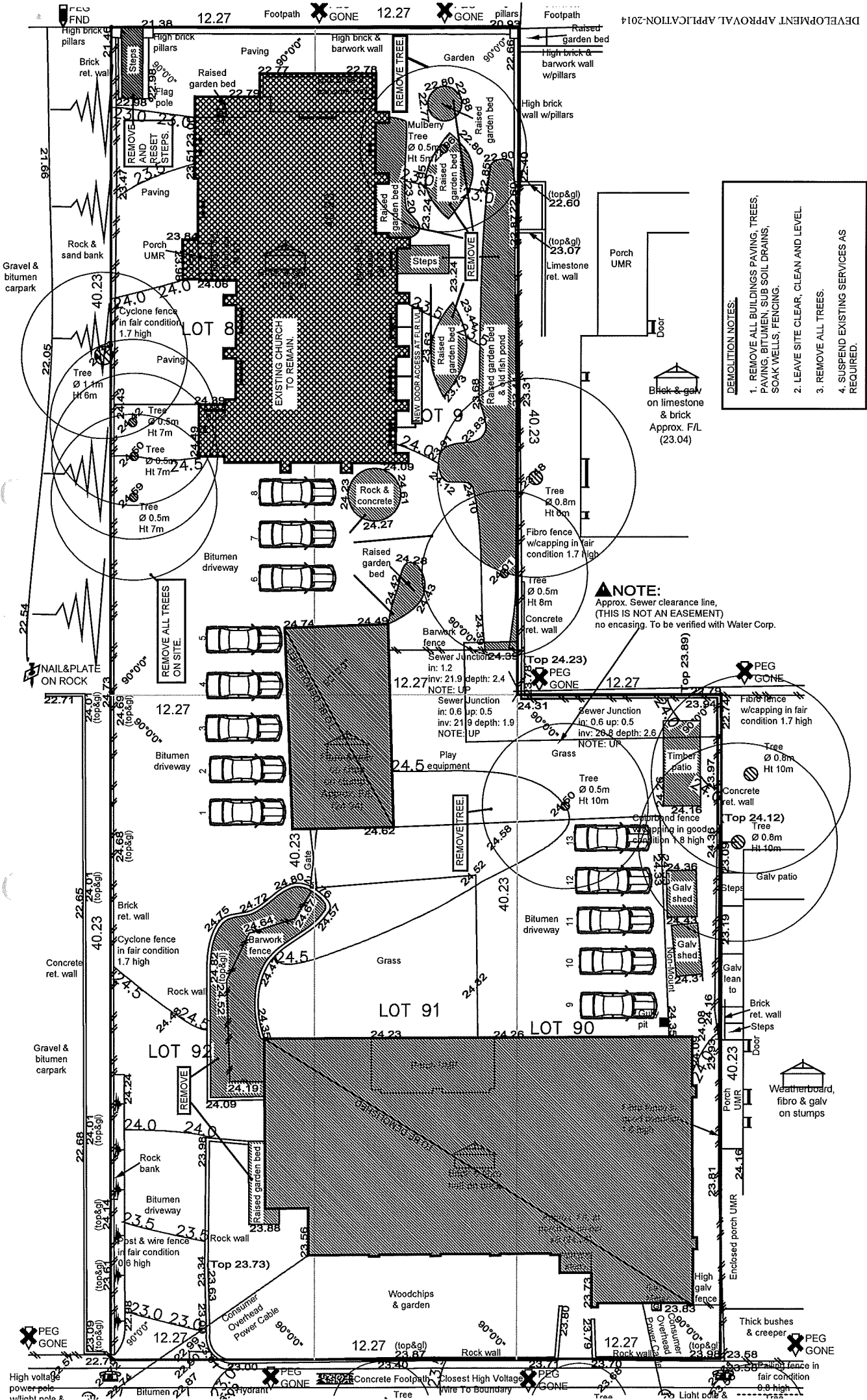
SURVEY PLAN & DEMOLITION PLAN
SCALE: 1:100 @ A1



Anglican Church
Diocese of Perth



DOEPEL
MARSH



DEMOLITION NOTES:

1. REMOVE ALL BUILDINGS PAVING, TREES, PAVING, BITUMEN, SUB SOIL DRAINS, SOAK WELLS, FENCING.
2. LEAVE SITE CLEAR, CLEAN AND LEVEL.
3. REMOVE ALL TREES.
4. SUSPEND EXISTING SERVICES AS REQUIRED.

NOTE:
Approx. Sewer clearance line,
(THIS IS NOT AN EASEMENT)
no encasing. To be verified with Water Corp.

St Mark The Evangelist Church

AUTHOR Heritage Council

PLACE NUMBER 11467

LOCATION

2 Wilson St Bassendean

LOCATION DETAILS

OTHER NAME(S)

Original St Mark's Church & Parish Hall

LOCAL GOVERNMENT Bassendean **REGION** Metropolitan

CONSTRUCTION DATE 1915, 1937 **DEMOLITION YEAR** N/A

Statutory Heritage Listings

TYPE	STATUS	DATE	DOCUMENTS
(no listings)			

Other Heritage Listings and Surveys

TYPE	STATUS	DATE	GRADING/MANAGEMENT CATEGORY
Anglican Church Inventory	YES	30 Jul 1992	Recommend RHP
Municipal Inventory	Adopted	22 Nov 2005	1

Condition

Good

Creation Date 26 Mar 1998 **Last Update** 8 Oct 2014 **Publish place record online (inHerit):** Approved

Disclaimer

This information is provided voluntarily as a public service. The information provided is made available in good faith and is derived from sources believed to be reliable and accurate. However, the information is provided solely on the basis that readers will be responsible for making their own assessment of the matters discussed herein and are advised to verify all relevant representations, statements and information.

AUTHOR Town of Bassendean



CONSTRUCTION DATE 1915, 1937

DEMOLITION YEAR N/A

Statement of Significance

A good example of Inter-War Period gothic church.

Physical Description

Ecclesiastical building in exposed red brickwork with stucco detailing. Portico entrance to one side in brickwork with gable roof. Catholic cross to top of parapet gable. Small circular window over larger pointed arch window. Concrete tracery to windows with stained leadlight glazing. Church - made from brick, circular windows facing street, Wall area is more dominant, large entrance, Buttresses. Original Church - medium pitched roof, pointed arch motif, Made from timber and fibro cement, Simple rectangular floor plan.

History

The weatherboard church wa built in 1909, destroyed and rebuilt in 1915. Subsequently, the new brick church commenced construction, with the erection of the sanctuary and the chancel. The nave was completed in 1937.

OWNER	CATEGORY
Perth Diocesan Trustees	Church Property

Last Update 19 Oct 2011 **Publish place record online (inHerit):** Approved

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Bassendean Town Centre Strategy and Guidelines



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I.O Introduction

The Bassendean Town Centre Strategy 2007 outlines a vision and objectives for development within the Bassendean Town Centre.

The guidelines provide further guidance for:

- Old Perth Road: west end to Wilson Street
- Old Perth Road central: Wilson to Whitfield Street
- Old Perth Road: east end and Bassendean Village

Detailed area plans will be prepared for:

- BIC Reserve and the civic precinct
- Bassendean Blue Steel Oval

Council should have regard to the Bassendean Town Centre Strategy, the guidelines and detailed area plans when assessing development applications and providing infrastructure within the town centre.



Bassendean Town Centre

Vision 2030-Community Plan was prepared in 2005 by the Town of Bassendean in response to the State Government's Network City strategic vision.

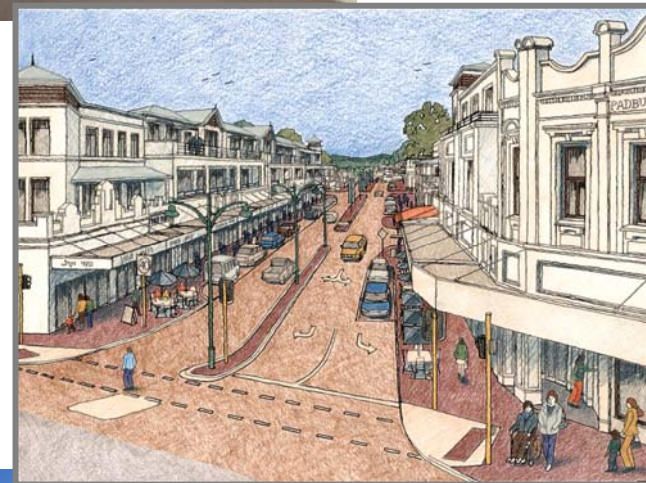
' By 2030, the Town of Bassendean will be an ideal, highly accessible urban village location where people can participate in a cohesive, vibrant and diverse community lifestyle and a thriving local business economy within a high quality built and natural environment.'

'By 2030, the town centre has been transformed into a vibrant hub of mixed uses and activities with a unique sense of place, rich in history and heritage.Bassendean has a modern village feel to it attracting well designed new development. It is a place where people want to be.

There is a wide choice of housing options and densities to suit a diversity of lifestyles. Higher density development is clustered around the town's 3 railway stations..... Attractive landscape, street lighting, public artworks, street furniture and car parking enhance the safe pedestrian friendly streets...

Bassendean is recognised as an amazing place with lots of character – ...people live and thrive in Bassendean. '

Creating a stronger heart for Bassendean



Old Perth Road perspective from Vision 2030 M.Mckay

2.0 State Planning Context

West Australian Planning Commission (WAPC) strategic planning initiatives give context to the Bassendean Town Centre Strategy:

2.1 Network City (WAPC 2005)

Network City: Community Planning Strategy for Perth and Peel is based on principles and policies for liveable neighbourhoods, water sensitive urban design, vibrant activity centres, transit oriented development, better public transport and major infrastructure investments such as the new Metro Rail.

The strategy proposes activity centres along activity corridors where a full range of activities are encouraged including retail, living, entertainment, higher education and specialised medical services.

Network City proposes 60% of new housing should be within established suburbs. Councils are encouraged to support higher density housing around key activity nodes to achieve a more compact urban form. The strategy focuses on diversity of housing type, accessibility and housing affordability.

2.2 Liveable Neighbourhoods (WAPC 2004)

Liveable Neighbourhoods is a state planning framework for communities that are sustainable, safe, vibrant and efficient. The intent is to create complete integrated communities that promote local identity and create a sense of place.

This calls for an urban structure based on walkable, mixed use towns and neighbourhoods that have a strong community focus and a compatible mix of uses. The preferred urban form is “main street” mixed use centres that offer street frontage retail and high density residential with good access to public transport. The model is based on the premise that mixed use centres are inherently more socially, environmentally and economically sustainable and adaptable to change.

2.3 Metropolitan Centres Policy No 9 (WAPC 2000)

The Metropolitan Centres Policy (MCP) (currently under review) applies to commercial activities in the Perth Metropolitan Region. It establishes a hierarchy of centres including Strategic, Regional, District, Neighbourhood and Local Centres. Bassendean is designated a District Centre.

'District Centres will be promoted as centres servicing the weekly shopping and service needs of the suburban population. They should provide mainly convenience goods, a range of comparison goods, local services and local employment. Shopping floor space should generally be confined to 15,000 sqm unless consistent with a Commission endorsed Local Planning Strategy or centre plan'

The Policy also refers to traditional 'Main Street' centres, encouraging development in accordance with traditional main street design principles and providing additional retail floor space incentives.

The policy defines 'Main Street' as:

'mixed land use developments fronting to a street in a manner whereby pedestrian access to the majority of individual businesses can be achieved directly from the street and / or where customer car parks on private property generally do not separate the road reserve boundary from the front of a building.'

Bassendean has both car based retail at Bassendean Village and traditional 'main street' retail along Old Perth Road.



2.4 Transit Oriented Development

The State Government actively encourages intensification of development around railway stations (TOD) and is considering increased residential densities and establishment or consolidation of commercial and other employment activity nodes in the Midland rail corridor.



400metre walking distances from train stations in Bassendean Town Centre

Bassendean Town Centre is an excellent model of an existing urban village on the Midland rail corridor with its historical main street and surrounding residential areas. It has excellent potential to become an employment node relating to surrounding industrial areas.

Bassendean Train Station is a modern attractive station that could become a focus for increased commercial or education activity. Success Hill Station could become a focus for more intense residential development as well as continuing its role as an events station for the Bassendean Oval.

The 2 train stations at Bassendean Town Centre provide excellent opportunity for the future of the town centre as a highly accessible and walkable urban village. Much of the town centre is within 400 metres walk of a station.

The Perth to Midland railway line itself, however, combined with heavy regional through traffic on Guildford Road results in a town that has been divided and bypassed. North-south connections, access and visibility from Guildford Road are fostered in the Strategy Plan for the town centre.

The Town of Bassendean, with good access to transport, a robust urban structure and an established historical main street is ideally placed to promote and implement the strategic initiatives of the WAPC.

3.0 Town of Bassendean Planning Framework

The Strategy Plan builds on recent planning initiatives and offers design solutions that can be implemented over time in a staged and sustainable manner.

3.1 Vision 2030-Community Plan

Vision 2030 is a long term community plan set out by the Town of Bassendean to coincide with the timeframe and principles outlined in the State Governments 'Network City' model.

3.2 Bassendean Town Centre Enquiry by Design

The Bassendean Town Centre Enquiry by Design was undertaken between Nov 2001 and Feb 2002. Community members came together in a workshop to investigate future growth of the Town using principles of Liveable Neighbourhoods and traditional town centre design. The outcomes of the "Enquiry by Design" workshop have been formally adopted by Council for inclusion into the Local Planning Strategy and Local Planning Scheme 10.

3.3 Town of Bassendean Local Planning Strategy

The Town of Bassendean Local Planning Strategy (LPS) sets out a vision for the municipality, and establishes short, medium and longer term directions for sustainable land use and development. The LPS is an expression of Council's and the community's vision for the Town of Bassendean over the next 15 – 20 years.

3.4 Town of Bassendean Commercial Strategy

The LPS incorporates a Commercial Strategy, which confirms the Bassendean Town Centre as the primary commercial, retail and civic centre of the municipality.

The Bassendean Town Centre, extending 800m along Old Perth Road, is divided into three (3) distinct sub-precincts, each having a different but complementary function that contributes to the overall vitality of the town centre.

- Traditional "Main Street" pedestrian based commercial/retail at the intersection of Old Perth Road with Guildford Road and the train station;
- "Drive-by" commercial with interspersed retail and civic uses (including a school and aged accommodation) between Wilson and Whitfield Streets; and
- Car based retail in the Bassendean Village Shopping Centre at the corner of Old Perth Road and West Road.

Objectives of the Commercial Strategy are to:

- Promote the continued importance of the Bassendean Town Centre as the commercial, retail and civic centre of the municipality and facilitate its sustainable growth and vitality;
- Promote and facilitate revitalisation of the traditional main street pedestrian based commercial retail precinct at the west end of Old Perth Road, without undermining the overall importance of Bassendean Village as a car based retail centre servicing the district.
- Ensure that different retail, commercial and civic activities in the town centre function and integrate in a manner that is mutually up-building rather than undermining of other town centre uses.

3.5 Town of Bassendean Local Planning Scheme 10

Local Planning Scheme No. 10 (LPS 10) has evolved over a number of years and is based on the Model Scheme Text.

LPS 10 aims to:

- Enhance the lifestyle of residents and provide community and leisure facilities for a range of socio-demographic groups;
- Encourage a housing stock that provides for a variety of lifestyle choices for a range of socio economic and age groups;
- Promote vibrant local shopping opportunities and provide for home businesses;

- Preserve local Aboriginal and European culture and heritage;
- Promote local tourist attractions;
- Protect and enhance the environment and natural resources of Bassendean and in particular urban bushland and the river environs; and
- Promote greater use of alternative modes of transport and public transport.

Objectives for the Town Centre Zone under LPS 10 include:

- Promote, facilitate and strengthen the town centre zone as the principal focus of the district in terms of shopping, professional, administrative, cultural, entertainment and other business activities;
- Recognise the unique and specific function of each precinct within the town centre:
- Promote traditional main street pedestrian based commercial retail, west of Wilson Street; civic, drive-by commercial and town centre living uses between Wilson and Whitfield Street; and car based retail in the Bassendean Village Shopping Centre.
- Accommodate a diversity of commercial, cultural & residential facilities;
- Encourage the integration of existing and proposed facilities within the zone so as to promote ease of pedestrian movement and the sharing of infrastructure, as well as to retain the opportunity for any future expansion of the area;
- Achieve safety and efficiency in traffic circulation;
- Ensure that buildings, ancillary structures and advertising are of high quality and achieve an architectural theme contributing to the uniqueness of the townscape;

- Provide sheltered places for pedestrians & shade to car parking areas;
- Preclude the storage of bulky and unsightly goods from public view;
- Provide landscaping appropriate to the scale of development

Residential development is encouraged in the Town Centre. The local government may, at its discretion, permit residential development within the Town Centre Zone to a maximum density of R60. Residential development shall only be permitted where the local government is satisfied that this development is complementary to the scale and character of buildings within the Town Centre Zone.

The requirement for producing design guidelines is contained in Part 2 of Town Planning Scheme No. 10.

Upon adoption, all development is required to comply with the design guidelines and any development that is deemed not to be consistent with the intention of the Strategy Plans and Guidelines may be refused by Council.

3.6 Bassendean Townscape Study 1989

The Bassendean Townscape Study was released in 1989 and provides an analysis of land use, activities, movements and parking in the Town Centre area. It outlines a preferred identity and image for the Town, and highlights several key townscape elements, including the idea of a 'heritage trail'. It describes the townscape structure at the time, and makes mention of the fact that although the Swan River is only 800 metres from the intersection of West and Old Perth Roads, it bears no relationship to the town. The Study provides guidelines for elements such as Town Centre entries, landmarks, colour schemes, materials, building height and landscape within the Town.

3.7 Municipal Heritage Inventory

The Town of Bassendean has a Municipal Heritage Inventory in place that is updated on a semi regular basis. Although not as comprehensive as the Heritage Council's Register, it does earmark several notable sites within the Town Centre, such as some sections of the BIC Reserve, Bassendean Oval, Bassendean Post Office, the Padbury Buildings, Bassendean Railway Station, and the Bassendean War Memorial for varying levels of protection.



3.8 Other studies

- Bassendean Oval Conservation Plan
- Civic Centre Redevelopment Plan
- Strategic Plan 2005-2010
- Economic Development Plan 2005-2010
- Environment and Social Plans
- Community Safety and Crime Prevention study

4.0 Place making in Bassendean

The Bassendean Town Centre Strategy Plan and Guidelines have been prepared through a process of stakeholder and community workshops and the adoption of a place making approach.

Place making is more than architecture, urban design and streetscapes. The physical aspects of place only provide a setting for activities that make a place unique and interesting. An appropriate and sustainable mix of activities is the key to a successful place.

Place making drivers appropriate to Bassendean include:

- Build and support the local economy
- Nurture and define the community's identity
- Foster frequent and meaningful community contact
- Create accessibility for all
- Provide a comfortable and safe environment
- Attract a diverse population



4.1 Create possibilities for intense people spaces

A good quality public realm along Old Perth Road will provide places for people to meet, stay and be part of the Bassendean community

People visit and stay in a town centre to see and be seen by other people. Sometimes in a quiet way to sit and have coffee or a meal alone while feeling part of the community and at other times to actively engage in community events and celebrations.

4.2 Focus on parks and gardens

Embrace the Town Park (BIC) as part of the Bassendean town centre

Our cities and suburbs are becoming more intensely developed and urbanised. Bassendean has range of open spaces close to the town centre including the Swan River parklands, BIC Reserve, Bassendean (Blue Steel) Oval and other smaller parks. These open spaces should be nurtured and integrated into the town for the enjoyment of residents and workers for both active and passive recreation and to give breathing space from the intensity of urban life.



4.3 Create a vibrant smaller retail hot spot

Create a number of 'activity nodes' along Old Perth Road with Bassendean Station precinct and Blue Steel Oval redevelopment as lively end points

The Old Perth Road is 800 metres long, this length of 'main street' can not be sustained with intense active pedestrian based retail. Focussing hot spots of activity at each end will in time facilitate activities that link the town together. The Bassendean Village is a successful food and convenience shopping place. A smaller 'hot spot' at the west end of Old Perth Road should compliment rather than compete with Bassendean Village.

4.4 Use interactive water features in the town square

Create places where people of all ages can interact and enjoy being in the town centre, water adds a cooling effect and is fun

The Swan River is part of the Bassendean landscape. Old Perth Road leads down to the river foreshore and landscape along the road should reflect this. A water feature in the town square will suggest the water connection and also offer a gentle cooling effect in the urban streetscape. The water will be safe and playful attracting children to splash and others to watch.



4.5 Use a tower to signify the town centre

Draw attention to the Bassendean town centre – open up vistas and celebrate landmarks

Towers are traditional elements of towns seen in churches and civic buildings.

A tower can be seen from a distance signifying the importance of the central place to passers by. It can also be functional perhaps providing the vertical circulation for the civic building and also offering a place for community advertising and interactive art.

4.6 Totems to signify a special place

Give Guildford Road motorists the feeling of driving through a special place –give Bassendean an address

Totems and repetitive sculptures can lead the eye along vistas and draw attention to the place that is being passed through.

The use of totems at the intersections of the town's street grid and Guildford Road will emphasise that Guildford Road passes through not past the town and that the town is a place to visit and not just by pass.



4.7 Provide diversity of uses at street level

Provide opportunity for people to work in the Bassendean town centre – flexible mixed use and commercial space

For a town centre to be lively and safe ground level uses need to be active during the day and evening.

Street life, people, light, landscape and streetscape all contribute to the ambience of a place and make it attractive to live in. The activity at the edges of buildings and the ground level uses are essential ingredients.

4.8 Provide diversity of residential opportunities

Facilitate a dramatic increase in people living in the Bassendean town centre – 24 hour life – a wide range of dwelling types

Bassendean has traditionally offered only low density single housing on large lots. To ensure a diverse and interesting local community population that is large enough to sustain local retail and commercial activity an increase in the diversity of housing beyond just smaller lot sizes and town houses will be needed.

Good rental accommodation and apartments with access to transport and services will appeal to the growing number of smaller households both older and younger.



4.9 Mix old and new architecture

Respect the history of Bassendean while giving it a new contemporary heart beat

Bassendean is a place with history and the heritage buildings in the town are important. Good quality contemporary architecture can be sympathetic to this heritage without copying or mimicking it. The counterpoint between old and new design can be very exciting while respectful of the past

4.10 Integrate parking and landscape

Create a stronger 'heart' for Bassendean

Bassendean is a walkable town centre and the streets and open places need to be pedestrian friendly. Large parking areas devoid of landscape and footpaths are inappropriate. Parking can be set in landscape with trees providing shade and a pleasant ambience to the town.



5.0 Strategy Plan

The Bassendean Town Centre Strategy has been developed with the following objectives:

- Reinforce the current strong sense of place in Bassendean
- Ensure the plan includes sustainable mixed uses along Old Perth Road as a vibrant main street
- Maximise opportunities around the 2 railway stations
- Consolidate and build upon work already achieved by the Town of Bassendean
- Ensure development proposals are economically viable and practical
- Reflect the views of the Bassendean community and stakeholders
- Ensure Bassendean Town Centre can develop over time into...

'...a place where people want to be'

Key Principles:

1. Draw attention to the Bassendean Town Centre - open up vistas.
2. Give Guildford Road motorists the feeling of driving through a special place - give Bassendean an address.
3. Create a new Town Square for Bassendean.
4. Facilitate a dramatic increase in people able to live in the town centre - 24 hour life - wide range of dwelling types.
5. Provide opportunities for people to work in the town - flexible commercial space.
6. Create a number of 'activity nodes' along Old Perth Road with station precinct and oval redevelopment as end points.
7. Retain and enhance existing landscape.
8. Embrace the Town Park as part of the Bassendean Town Centre.

Creating a stronger heart for Bassendean



- 1** Significant building such as adult education or commercial integrated with Bassendean train station.
- 2** Improved retail frontage to Guildford Road corner as a 'hot spot' and introduction to the town
- 3** Opportunity to increase intensity of use of buildings

- 4** Town Square extends across Old Perth Road as a people place (cars can drive through)
- 5** Upgrade war memorial
- 6** Landmark community building multipurpose hall (senior citizens) council chambers and administration including landmark tower and a hot spot for food and coffee

- 7** Improve links with narrow access roads
- 8** Improved frontage to retail
- 9** New 3-4 storey building for football club and function centre
- 10** Bassendean Oval re-oriented and opened up to become a combined 'people's park' and football oval

- 11** Housing fronting oval
- 12** Landscaped mound
- 13** Significant residential building
- 14** Heritage grandstands
- 15** Teenage activity area
- 16** Upgrade Success Hill train station

- 17** Improve a link to Success Hill train station and residential
- 18** Pedestrian access under Lord Street
- 19** Rationalise community sporting facilities
- 20** Totems and streetscape improvements to Guildford Road
- 21** Town Park - retain significant trees. Improve safety and integration with town centre. Develop a small seasonal wetland

- 22** Residential opportunity
- 23** Improve and open up underpass and pedestrian access into town park
- 24** Construct footpath between station and underpass
- 25** Embayment parking
- 26** Improve streetscape character and pedestrian amenity on Guildford Road



BASSENDEAN TOWN CENTRE STRATEGY PLAN

For a vibrant future

Adopted by Council August 28, 2007



Provide cafes and offices at street level below apartments



Create possibilities for intense people spaces



Create a vibrant smaller retail hot spot:



Provide a diversity of residential opportunities



Integrating parking and landscape



Focus on parks and gardens



Mixing old and new architecture



Use interactive water features in the town square



Use totems to signify a special place

Place making objectives

- Build and support the local Bassendean economy
- Nurture and define community identity of Bassendean
- Foster frequent and meaningful contact in the Bassendean community
- Create accessibility for everyone
- Provide a comfortable and safe town centre environment
- Attract a diverse population to Bassendean
- Respect the history and heritage of Bassendean

Key Outcomes

- Rationalisation of BIC sporting and recreation facilities
- A Town Square on Old Perth Rd
- A new civic building combining administration with community facilities and council chambers.
- A Town Park integrated with the town
- Town centre living creating a safer, more active place
- Bassendean Oval becomes a multi purpose 'people's park' for the community while remaining the same ground of WAFL SDFC.
- New substantial commercial opportunities
- Creation of a vibrant 'hot spot' at the west end of Old Perth Road
- Opportunity to partner with the State Government in redevelopment of key sites in support of TOD strategies.
- 340 - 400 new dwelling opportunities recommended adoption of inner city residential planning codes
- 400 - 500 car bays – potential for reciprocal parking and relaxed parking provisions due to public transport and town centre amenity.



6.0 *Planning and design guidelines*

6.1 Scope and intent

The Bassendean Town Centre guidelines encourage:

- Development consistent with the place making objectives of the Strategy Plan
- Innovative and sustainable design; and
- Development that respects and contributes to the character, scale and amenity of the Bassendean Town Centre.

The intent is to develop a built environment in Bassendean that is valued as 'cultural capital' for future generations. Sustainable development that improves the amenity of the public realm is encouraged.

The planning and design guidelines are performance based rather than prescriptive controls to encourage flexibility and design innovation.

Principles of sustainability should be incorporated into all aspects of development in the Bassendean Town Centre. A variety of activities and uses is encouraged and innovative solutions in building, landscape and urban design will be promoted.

New development should be of a high quality, respond to the climate and be appropriate in the context of a thriving town centre. Landscape and urban design should reflect and incorporate a sustainable approach and contribute to the overall amenity of the area.

Residential development should respond to changing demographics and support the social and cultural diversity of the community. A broad range of housing options including a minimum of 15% affordable housing should be provided. Dwellings designs should provide for families, singles, couples, seniors and youth.

Well designed public spaces and integrated cycle and pedestrian networks should be provided to enable ease of movement and encourage physical activity.

Amalgamation of sites is encouraged in the town centre to enable good quality integrated development to occur at a feasible scale. This will enable good design solutions to aspects of development such as building scale and parking provision. Small scale modifications to existing development particularly along Old Perth Road are not encouraged except to bring development up to an acceptable standard in the short term.

Planning and design guidelines are grouped in 3 sections:

- **Site planning and urban design;**
- **Building form and detail; and**
- **Environment and services.**

6.2 Design and approval process

These guidelines are performance based and do not attempt to control design detail. Innovative, sustainable and well considered design outcomes that respond to the context, neighbouring development and the public realm are expected. A high level of development quality will ensure a stronger, long lasting heart for Bassendean.

Close liaison with the council and its representatives is recommended from the outset of a development project, prior to commencing design. This will ensure that the objectives of both the council and the developer are understood and that the best development and design outcomes can be achieved in a collaborative manner.

The council may engage expert advice to assist in development assessment which may include design professionals (staff or consultant) such as architects, landscape architects, engineers and planners.

A design review committee made up of such professionals may be called upon from time to time to assess development.

These guidelines should be read in conjunction with the current Local Planning Scheme and current council policies.

6.3 Variation Discretion

Council has discretion to vary any part of these guidelines.

The overall objectives of the Bassendean Town Centre Strategy Plan and the quality of building and place design will be considered when granting any variation.

6.4 Development Approval requirements

In addition to normal documentation required for Development Approval the following shall be submitted to the council;

- Design report covering response to the guidelines
- Energy efficiency report
- Climate response report
- Shadow and 3D bulk and scale analysis
- Landscape and hardscape strategy, plan and concept report
- Streetscape views showing building scale and character in its setting
- Movement plan and report indicating provision for vehicles, pedestrians and cyclists and including rubbish removal and storage and servicing issues
- Signage strategy including sign locations, specifications and graphics
- Concept ,costing ,location and detail of any artworks proposed
- Report on construction timing /staging issues including impact on adjacent public realm, temporary services, access for delivery trucks, cranes etc, fencing and other construction phase issues.

7.0 *Site planning and urban design*

- 7.1 Urban setting and context
- 7.2 Landmark buildings in Bassendean
- 7.3 View corridors and vistas
- 7.4 Development type and intensity in Bassendean
- 7.5 Building envelope
- 7.6 Building orientation and address
- 7.7 Topography and floor levels
- 7.8 Pedestrian and cycle amenity
- 7.9 Vehicle movement and parking
- 7.10 Landscape and hardscape

7.1 Urban setting and context

Position

The Bassendean town centre will become an active and vibrant place for the local community and visitors. Old Perth Road is the historic main street and town focus. It is about 800 metres long and will therefore change in character along the way.

Old Perth Road is understood as 3 sub- precincts:

- The west end, between Guildford Road and Wilson Street
- The central area between Wilson Street and Whitfield Street
- The east end between Whitfield Street and West Road

The area beyond West Road is considered part of the Bassendean Blue Steel Oval and subject to a future detailed area plan.

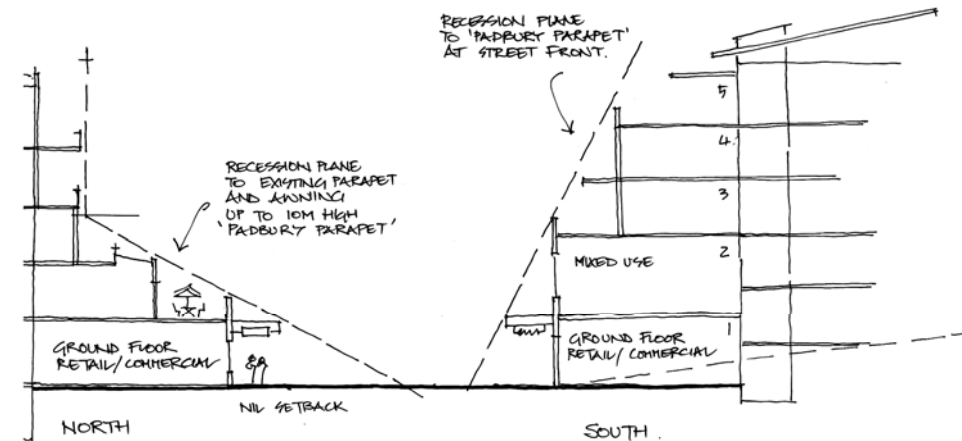
Guidelines

- Buildings should contribute positively to the desired character of the precinct and to the streets and public spaces around them.
- Refer to the following pages for guidelines for the 3 sub precincts

Variation

The council has discretion to vary this guideline where a building will not detract from the ambience of the town, is of exceptionally high quality design and will contribute to the unique urban setting of Bassendean Town Centre.

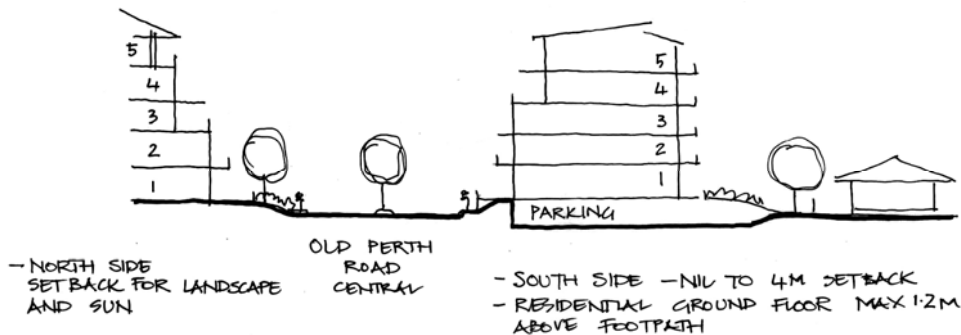
WEST END - OLD PERTH ROAD



- In the west end, a clear response to existing building character and respect for Bassendean town centre streetscape and history is expected. This should be expressed in scale and form while offering contemporary urban design character appropriate for a revitalised town centre in the twenty first century.

CENTRAL - OLD PERTH ROAD

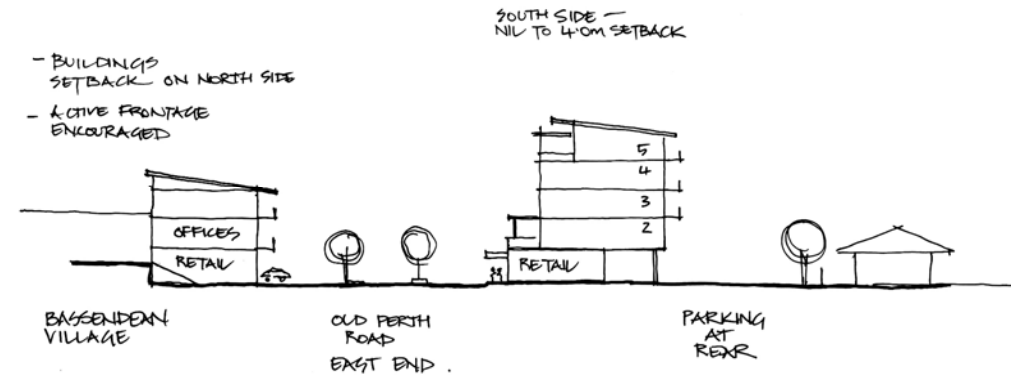
- In the central area, a softer response is expected with a more residential and landscape character. The new civic spaces will contribute to the enhanced character of this area. All buildings edging and overlooking these civic spaces will be important to the townscape and have a consistency of detail and design. A small retail node will develop at the bend on Old Perth Road (south side) and the intersection of Hamilton Street.



EAST END - OLD PERTH ROAD



- In the east end, building character should reflect contemporary retail and commercial design and recognise Bassendean Village as the retail focus. Bassendean Village should be given improved presence and activation with a pedestrian focus on Old Perth Road.



7.2 Landmark buildings in Bassendean

Position

Bassendean Train Station, the Padbury Building, Bassendean Hotel, St Marks Church, the Library, the future civic building and the proposed residential/mixed use buildings on the corners of Guildford Road and Wilson Street are and will be the landmark buildings in the Bassendean town centre.

New buildings and spaces should respect the scale, character and position of these landmark buildings. This does not necessarily mean that building height is limited to below the height of these buildings.

Guidelines

- New buildings on the south side of Old Perth Road in the west end should not extend above the parapet height of the Padbury buildings at the street front.
- Buildings on the north side of Old Perth Road should not extend above the existing parapet (Refer Building Envelope)
- New buildings fronting the central area of Old Perth Road should consider views to the church and proposed civic buildings.

Variation

The council has discretion to vary this guideline where a building is of exceptionally high quality design and will become a fitting landmark itself without detracting from the existing landmarks in the town.



Bassendean Train Station



St Marks Church



Padbury Building



Bassendean Library

7.3 View corridors and vistas

Position

Old Perth Road is an excellent urban setting with vistas east toward the hills and north down to the BIC parkland on Guildford Road. These vistas give Bassendean a unique setting.

The town centre strategy identifies some important view corridors and vistas that should be respected and celebrated in future development of the town centre.

Guidelines

- View corridors and vistas identified in the town centre strategy should not be obstructed.
- Buildings and landscape should be positioned to enhance vistas and view corridors.

Variation

This guideline may be varied where council considers that a building contributes to the overall urban quality of the town centre and that new vistas are set up through its location, scale and character.



7.4 Development type and intensity in Bassendean

Position

The town centre strategy encourages an increased intensity of residential and mixed use development in the town centre in close proximity to the amenity of the town and the Bassendean train station.

It is intended to amend LPS 10 in the future, to introduce RIC codes in the Town Centre Zone. This will increase opportunity for comprehensive redevelopment and amalgamation of sites, with the aim to achieve a diversity of residential type and size within the town centre. This increased development potential will be available to high quality development that contributes positively to the townscape in Bassendean and complies with these guidelines.

To ensure that Bassendean continues to have a diverse and cohesive community where people can continue to live through different phases of life it is important that housing in the town is affordable and adaptable.

Guidelines

- Preferred uses in the town centre include:
 - Residential such as townhouses, apartments, mews, row housing, maisonettes as well as opportunities for home office and short stay
 - Retail focussed on west and east ends of Old Perth Road
 - Civic and community
 - Commercial including small-scale office space
 - Higher intensity and mixed uses that contribute to vitality of town centre are encouraged while low intensity uses are discouraged.
- Provision of affordable single or 2 bed apartments is encouraged.
- Short-stay serviced apartments shall conform to R-IC provisions of the Residential Planning Codes.
- Affordable housing is encouraged in the town centre:
 - 15% of dwellings in any development should be affordable.
 - Smaller dwellings with, 1 bed/1bath or 2 bed/2 bath, flexible living space and limited internal fit out and finishes are encouraged to provide affordable housing for younger and older people.
 - Dwellings should not be reliant on air conditioning and should be provided with cross ventilation and solar control for passive climate control.
 - All dwellings should be suitable for disabled occupants and visitors.
- Public transport use is encouraged in the town centre and therefore parking provision should be limited to the LPS 10 requirements. Common parking areas below ground are encouraged. Large garaged frontages are discouraged.

7.5 Building envelope

Position

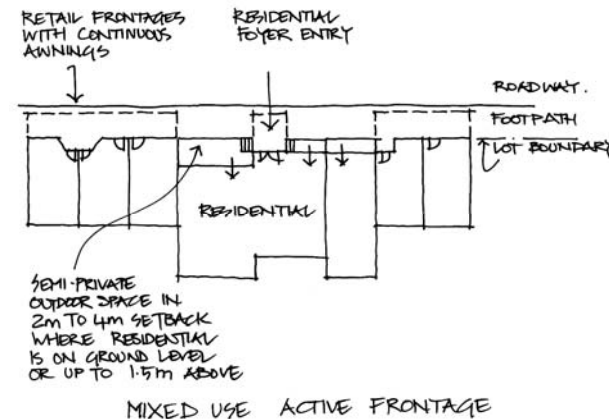
The town centre strategy indicates a general arrangement of buildings for the town centre.

Where possible buildings should be orientated with long axis and occupied spaces approximately north-south to maximise solar access.

Guidelines

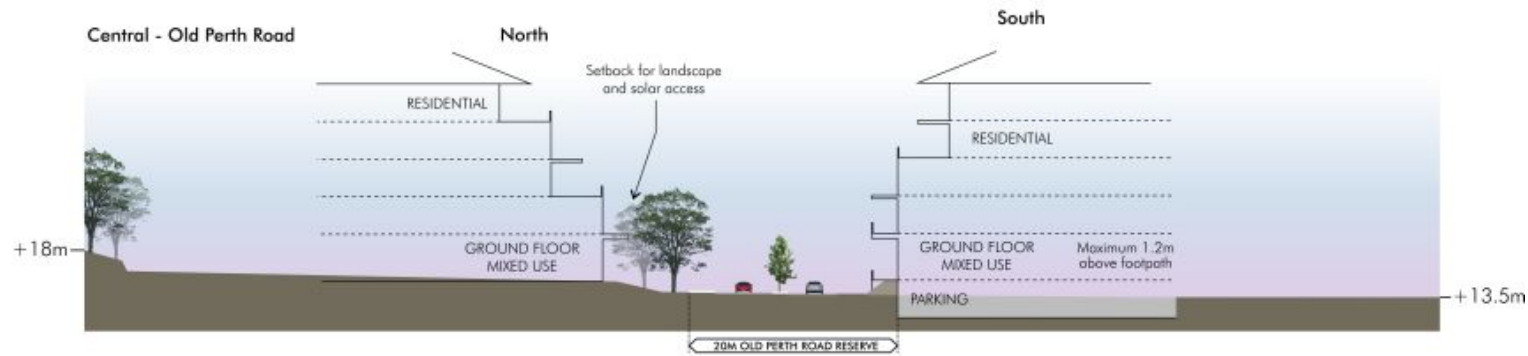
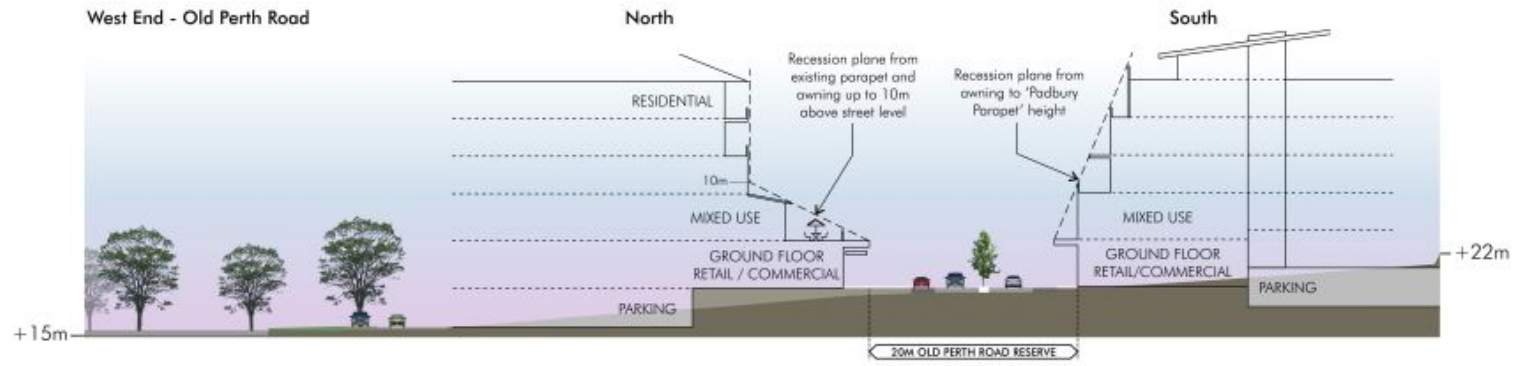
- An agreed envelope of footprint and height will define new development on each lot. There is no plot ratio limit in the town centre.
- A minimum height of 3 storeys or 10 metres is set for buildings generally in the town centre.
- A maximum height of 5 storeys is set for buildings generally on lots fronting Old Perth Road subject to streetscape, shadowing and overlooking issues.
- Buildings on the north boundary of Old Perth Road (west end) shall not be higher than the existing parapet at street front.
- Buildings on the south boundary of Old Perth Road (west end) shall not be higher than the existing Padbury building parapet at street front.
- Development should generally have nil set back to front and side boundaries.
- Residential development at ground level can be setback 2.0 to 4.0 metres to provide a transition between public and private space. Residential entry foyers at ground level can have a nil setback.
- Rear setbacks should be provided suitable to accommodate parking and avoid overshadowing of neighbouring buildings.

- Rear setbacks from residential adjoining should provide for privacy and comply with R code requirements.
- Entrances can be set back up to 4.0metres to create a sense of address; these setbacks should be co-ordinated with neighbouring buildings and detailed as small urban public spaces.



Variation

The building envelope may be varied where council considers that the building does not adversely affect neighbouring buildings and spaces or the general townscape by overshadowing or dominating through scale or character.



7.6 Building orientation and address

Position

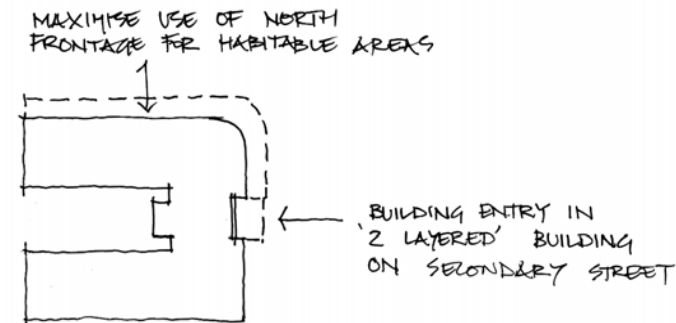
Townscape, address and solar access are all very important in orientating buildings.

Guidelines

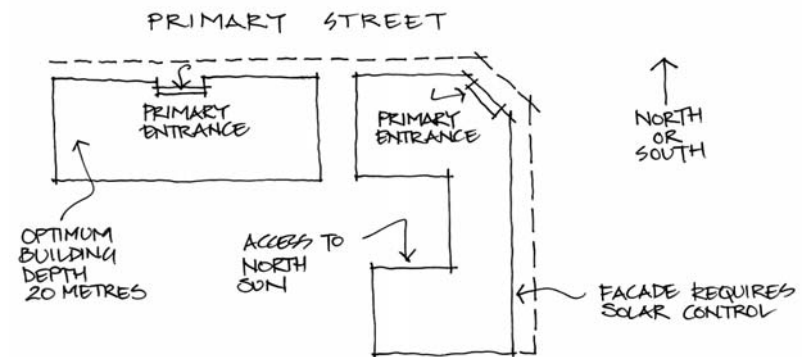
- Buildings should have the long axis east- west (or within 15 degrees of east- west) to maximise northern solar access.
- Buildings should have the primary entrance, address and frontage on or clearly identifiable from the primary street.
- Courtyards can be used to provide solar access in deeper buildings

Variation

This guideline may be varied where council considers that the climatic response of the building is not compromised and that spaces created around the building contribute positively to the urban quality of the town centre.



LOCATION OF BUILDING ENTRY TO SUIT ORIENTATION



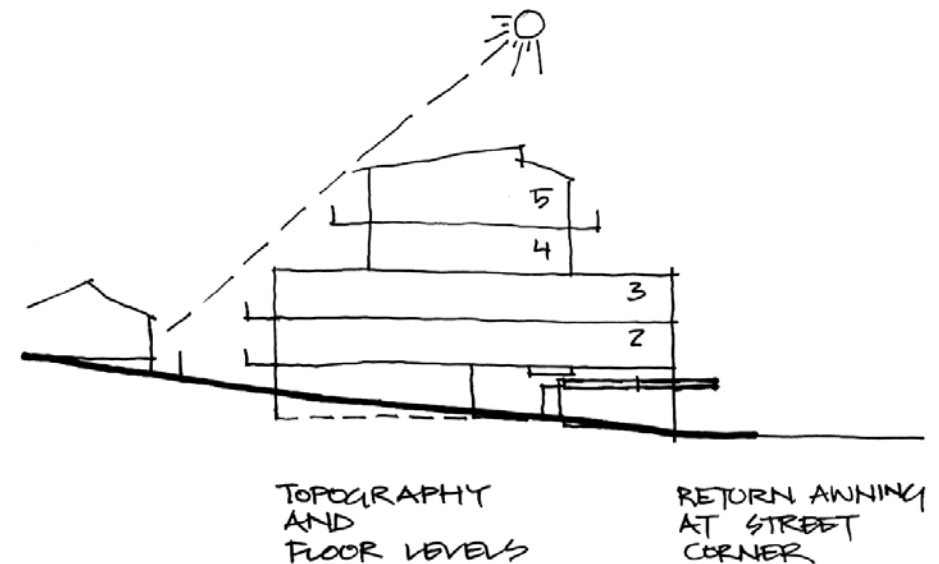
7.7 Topography and floor levels

Position

Old Perth Road slopes considerably downhill from Guildford Road. This adds interest to the built character of the town centre. Building design along Old Perth Road should reflect this change in topography. Some intersecting streets also slope considerably; this slope should be used to advantage in building design.

Guidelines

- Facades should be stepped to express change of level across the building frontage, and should relate well to neighbouring facades.
- All floor levels should be expressed in the façade design through awning or balcony elements or the design of windows within a façade.
- Care should be taken to resolve the detail relationship between adjoining building with different floor and awning levels.
- Ground floor to floor height shall be a minimum of 4.0 metres to provide a consistency with the historic buildings in the town and flexibility of use.
- Upper floor to floor heights should allow for future change of use.



7.8 Pedestrian and cycle amenity

Position

Bassendean Town Centre will be a place where pedestrian access and amenity has priority. Cycling to the town centre will also be encouraged. Buildings will provide pedestrian shelter and amenity on the street front.

Guidelines

- Provide clear, well designed paths around buildings leading to entrances that link into the public footpath network.
- Provide pedestrian shelter at entrances and along active street frontages.
- Provide good end of trip facilities, including lockers and showers for walkers and cyclists in workplaces in the town centre.
- Provide bicycle racks outside all commercial, retail and civic buildings.



7.9 Vehicle movement and parking

Position

The Bassendean Town Council encourages the reduction of car dependency. Vehicles will move slowly and safely around the town centre. People will be encouraged to walk to the town centre or to park their cars and walk to various destinations.

Guidelines

- Car parking is to be provided consistent with LPS 10.
 - Parking should be located to rear of or below buildings. Cars and parking areas should not visually dominate development.
 - Where car parking requirements limit optimum site development council may consider cash- in- lieu payment.
 - Parking for motor cycles and scooters should be provided to encourage use.
 - At- grade parking areas including the Bassendean Village car park should be well landscaped with shade trees (1 for every 4 car bays) and have clearly defined, direct and well lit pedestrian links.
 - For residential dwellings of 1 to 2 bedrooms the parking ratio shall be reduced to 1 bay per dwelling.
 - Shared surfaces are encouraged using trafficable unit paving and materials consistent with neighbouring developments and public areas.
 - Parking should be accessed from secondary streets and not from Old Perth Road.
- Crossovers should be limited to one crossover (3 – 6m wide) per development site. Crossovers should match footpath colour.
 - Service and delivery should be provided discretely and in minimal space.
 - Consideration should be given to location, access to and storage of recycling and other rubbish bins including communal bin facilities.
 - Emergency vehicle access, particularly for fire fighting vehicles, must be provided to satisfaction of Council and FESA.



7.10 Landscape and hardscape

Position

The outdoor spaces between buildings are as important as the buildings themselves in their contribution to townscape. All spaces around buildings are to be designed to offer attractive amenity for users and passers-by.

Landscape in the Bassendean Town Centre should:

- Complement street function and be appropriately scaled relative to street width and building form and scale
- Enhance pedestrian comfort and safety and reinforce desired traffic behaviour
- Reflect and consider development image and role, solar access, soils, selection of appropriate species and services
- Assist in micro climate management and
- Include 'water wise' strategies to reduce long-term water consumption.

Guidelines

- Refer to Bassendean Streetscape Policies
- A town centre public realm contribution of 2% of development cost will be payable to Council as a condition of development approval. This contribution will be used to enhance the public realm in the vicinity of the development site and will include public art, street furniture, planting, paving and amenities such as bicycle racks, bins, shade structures, signage. Etc. Timing of these enhancements will be agreed between Council and the developer to be completed shortly after construction and to suit council works programmes.
- Landscape provision will be assessed on quality rather than quantity. No specific percentage provision is required in the town centre but all outdoor areas are expected to be landscaped and maintained to a high quality appropriate to an urban setting.
- Existing healthy, mature trees of appropriate species should be retained and incorporated into new development. Where trees are removed they shall be indicated as removed on plans and their removal justified
- Generally use water- wise and indigenous plant species
- Improve microclimate of courtyards and other urban spaces with use of some deciduous shade trees and water elements. The use of deciduous trees will be limited to courtyards and other urban spaces where seasonal climate response is considered important.

- Paving materials and details shall match proposed public realm finishes or be of a quality associated with high traffic town centre and civic precincts and approved by council.
- Seating, lighting and other street furniture should match that proposed in public areas or be of high quality design durable materials and approved by Council.
- Trees planted in car parks shall be planted as mature specimens no less than 3.0 m high and protected with tree grates and bollards. Tree canopies shall be managed to allow clear visibility to building facades and signage.
- All private and public open spaces should be designed and maintained to minimise fertilising, excess watering and nutrient run-off.



8.0 *Building form and detail*

- 8.1 Adaptable buildings
- 8.2 Building character
- 8.3 Facades
- 8.4 Roofs
- 8.5 Old Perth Road frontage
- 8.6 Building entry
- 8.7 Awnings, canopies and balconies
- 8.8 Roofs
- 8.9 Materials and colour
- 8.10 Signage and art
- 8.11 Plant and equipment

8.1 Adaptable buildings

Position

The revitalisation of Bassendean Town Centre will happen over a number of years. New buildings in the town centre should be designed to accommodate a changing range of diverse and more intense uses in the future.

Guidelines

Buildings designed for adaptive re-use should include:

- Load bearing columns/walls in regular grid allowing addition or removal of dividing walls to reconfigure internal space.
- Lightweight façade systems that can be updated in future.
- Service cores and stairs at sides or rear of buildings and generous vertical circulation space for people and piping.
- Maximum number of openings in primary street facade to allow for additional entrances and/or different uses within building in future.
- Maximum natural light by limiting building depth to 20- 25m, use of light wells or internal courtyards.
- Limited internal fit-out and refit wastage
- Generous ground floor to floor heights to match existing or a minimum of 4.0metres
- Upper floor to floor heights of 3.5metres to 4.0metres

Variation

Where council considers that the life of a building is short so as not to warrant this approach.

8.2 Building character

Position

All buildings within the town centre should be designed as good urban fabric buildings that respect the history and streetscape of Bassendean while providing a contemporary response to function, technology and materials. Buildings in landmark locations should stand apart from the urban fabric buildings.

Guidelines

- Buildings should reflect contemporary lifestyle, function and materials and not mimic historic styles and building methods.
- Buildings should respond to the character of significant buildings in the town.
- Buildings should have a proportion and scale appropriate to their location within a high quality urban town setting and respecting neighbouring buildings.

8.3 Facades

Position

The design of building facades should contribute to the harmony, liveliness and safety of streetscapes.

Guidelines

- Refer to Streetscape policies on non residential property facades and security grilles and to 8.5 :Old Perth Road frontage
- Building facades should respond to neighbouring facades through use of consistent horizontal lines, good proportion and other design aspects.
- A consistent, well detailed design approach to all facades of a building is expected. Care should be taken in design of all facades that can be viewed from anywhere in the public realm, this includes window placement, proportion and relief in the wall plane.
- No façade shall appear as a “back “and blank walls should be avoided. Exposed plumbing or other services are not acceptable on any facades.
- Ground floor façades should be distinctive from upper levels, changes in wall plane, texture, material and colour can be used.
- Circulation spaces such as stairs and foyers should be positioned and glazed to add activity that is visible from the street.
- Glazing of facades is encouraged to provide visibility between inside and outside the building. Windows at ground level on active frontages shall be minimum 2.4m high. External sun shading is encouraged appropriate to orientation.
- The top of buildings should finish with a roof or expressed detail.

8.4 Roofs

Position

Roofs are important elements of buildings and townscapes and roof form should be considered as part of the overall building design.

Guidelines

- Simple roof forms complementing the linearity of buildings are desirable.
- Verge and eaves overhangs sufficient to create strong shadow lines are encouraged on expressed roofs.
- Low pitch roofs (<10 degrees) should be concealed by parapet walls.
- Pitched roofs should respect and be consistent in pitch with roofs in close proximity.

8.5 Old Perth Road frontage

Position

Old Perth Road is the central streetscape in the Bassendean town centre and care should be taken to enhance and enliven it. The pedestrian experience along Old Perth Road should be stimulating and vibrant.

Old Perth Road should have continuous active frontages of varying types along its length.

Guidelines

- Active frontage can include small landscaped spaces that are publicly accessible and contribute to the streetscape and building address
- Non- residential and mixed-use buildings shall have nil setbacks to Old Perth Road frontage.
- Mixed-use buildings should have predominantly non-residential ground floor frontages to Old Perth Road, with the exception of common foyers or home based studios/ offices.
- Residential active frontages should offer a transition such as a terrace or veranda between the public and private space where the resident can spend time and express identity through landscape and detail.
- Verandas or terraces can be raised above adjacent footpath level to a maximum of 1.2 metres.
- Glazed shopfronts are required in retail and commercial buildings. Old Perth Road facades should have a minimum of 80% clear glazed area at ground level.

- Solid frontage is accepted below 0.8 metres above footpath level to allow raised display windows and outside tables up against shopfronts.
- Blank walls longer than 2.0 metres at street level are not permitted.
- Upper levels of buildings fronting Old Perth Road should include functional size balconies.
- Where cafes, restaurants and coffee shops front Old Perth Road the provision of an outdoor eating area is encouraged.
- All frontages on Old Perth Road should be well illuminated.

Refer to

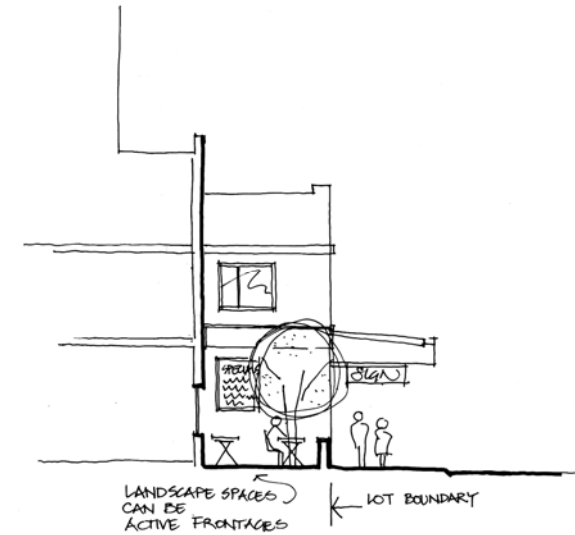
Non- residential Property Facades Policy, Trading in Public Places Policy and Outdoor Eating Policy



FLOOR LEVEL AT
ENTRY DOORS
MAX 200 ABOVE
FOOTPATH .

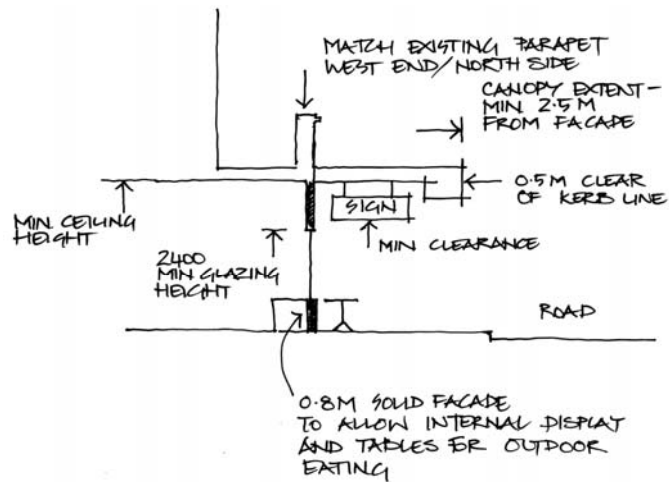
RESIDENTIAL
ENTRY FOYER

RETAIL FACADES
80% GLAZED.
MAX SOLID FACADE
0.8 ABOVE FOOTPATH

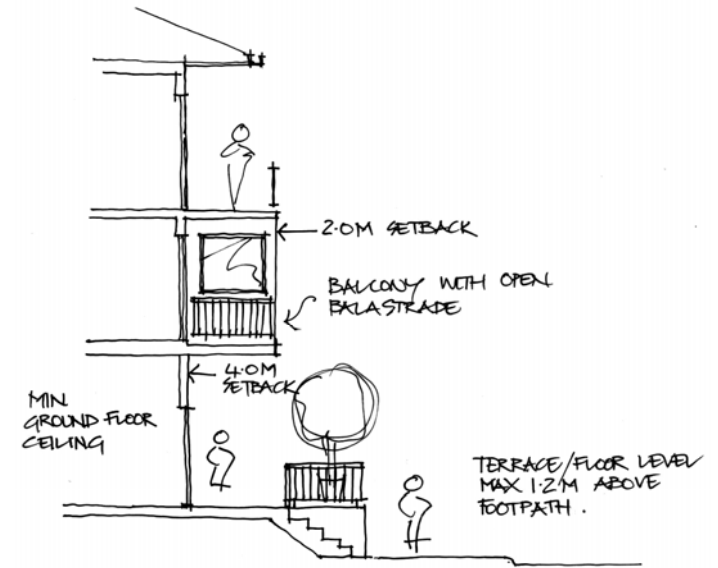


LANDSCAPE SPACES
CAN BE
ACTIVE FRONTS

← LOT BOUNDARY



ACTIVE FRONTAGE - RETAIL



RESIDENTIAL ACTIVE FRONTAGE

8.6 Building entry

Position

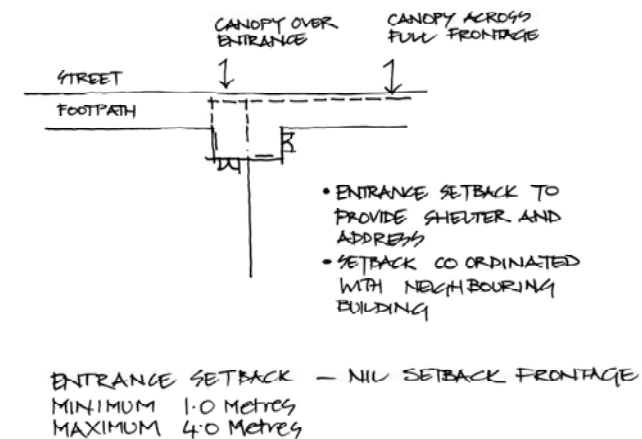
A good building entry expresses the function of the building and its character. It welcomes people in and provides information and shelter.

Guidelines

- The primary building entrance should be clearly identifiable and visible from the primary street.
- Other entrances should be scaled and designed according to their function and frequency of use.
- Entrances can be set back from the street with external treatments being consistent with the adjacent streetscape.
- Pedestrian shelter, signage and lighting should be provided at primary entrances.

Variation

Where council considers that the primary entrance is better located off the primary street, the design of the building and its surrounds should clearly lead the visitor to the entry.



8.7 Awnings, canopies & balconies

Position

Awnings and canopies provide pedestrian shelter and add interest and colour to facades along active street frontages. Other elements such as balconies and terraces provide spaces for people to be part of the street environment and contribute to passive surveillance as 'eyes on the street'.

Guidelines

- All active commercial and retail frontages in the west and east ends along Old Perth Road should have continuous pedestrian shelter over the footpath.
- Residential and mixed use buildings shall have pedestrian shelter such as awnings or canopies over entrances.
- Balconies and terraces are encouraged on street facades in residential and mixed use buildings.
- Balconies should have predominantly open balustrades, while considering the need for screening of washing and air conditioner units and solar screens.
- Awnings, canopies and balconies should :
 - Have minimum clearance to footpath of 2.7 metres
 - Have minimum extension out from building of 2.5 metres
 - Relate in height/ design to adjoining canopies/ awnings
 - Consider signage locations and dimensions
- Provision and maintenance of canopies and awnings over the footpath is the responsibility of the building owner.

8.8 Materials and colour

Position

A vibrant town centre is usually a wonderful mix of colours and materials. It is not the intention to limit the design palette of new buildings in Bassendean.

The Bassendean Town Centre should read as a harmonious grouping of buildings each with a different role and potentially a different character.

Guidelines

- Respond to neighbouring buildings with complimentary colours and materials.
- A limited palette of external colours and building materials should be used to ensure building harmony. Generally, use neutral, subtle colours for long lasting surface finishes and use bright colours only as accent and for surfaces that will be repainted or finished regularly.
- High quality durable materials that have acceptable levels of weathering and wear are preferred to materials that require constant maintenance..
- Use of tilt- up concrete is discouraged unless carefully detailed, finished and given relief in the wall plane.
- Use of highly reflective glazing is not permitted. Samples of reflective/ tinted coatings shall accompany any development application and will be to satisfaction of the Town of Bassendean.
- Strong and bright colours may be approved subject to durability, where council considers that proposed use of colour will contribute to the character of the town centre in a positive way.

8.9 Signage and public art

Position

Good signage and public art will contribute positively to the character and ambience of the town centre and reflect the image and memories of Bassendean. Both signage and art add vibrancy and interest to a place.

Guidelines

- Refer to Public Art Policy and Master Plan and Commercial Advertising Signage Policy
- A Public Realm contribution of 2% of building construction cost will be required for development in Bassendean Town Centre. This includes provision for public art.
- All building signage will be of a high standard and generally not exceed 5% of the building wall area to which it is fixed.
- Pylon signs will not generally be permitted. Signage designed as part of the building and themed to complement development is encouraged and if a building has numerous tenants, consolidated signage is preferred.
- Signage suspended below awnings, canopies or balconies or cantilevered will have a minimum clearance above footpath level of 2.7m.
- Illuminated signage (not pulsating or flashing) is preferred to externally lit signs. Signs should be lit at night.
- Signage erected above rooflines will not be permitted.
- Signage shall not obscure display windows by more than 5% area.
- Refer to 7.10 Landscape and hardscape.

- Permanent external art work should be durable and complement the themes established in the town.
- Public art should be appropriate for urban public space and should not compromise public safety.
- Opportunities for public art include: murals, tiles, mosaics or bas-relief to walkways and walls; unique, artistically devised elements which also have a functional role eg. bollards, gates, light poles, bench seating, drinking fountains.

Variation

Where art is incorporated into the building design, can be enjoyed from the public realm at all times and is of an extent and quality that satisfies the councils objectives for public art, the cost of that art can be off- set from the required public realm contribution (refer 7.10 Landscape and hardscape.) A costed concept design by the artist is required to accompany the development application.



8.10 Plant and equipment

Position

Modern buildings require plant and equipment to function. This is usually unsightly and often noisy. The impact of plant and equipment should be minimised through design and location.

Guidelines

- All plant and equipment must be concealed from public view using screening or other means that is an integral part of the building design. Surface mounted services piping and conduits will not be permitted.
- Roof mounted equipment, aerials, antennas, masts etc must be screened from all views including from above where applicable. Detail of screening shall be included in DA plans, elevations and 3D images
- Ground level or balcony mounted equipment/air conditioning plant must be well screened using materials to suit the building.
- All plant and equipment must have noise attenuation to council satisfaction.
- Telecommunications dishes are not permitted on roofs.
- Lift over runs shall be contained within the roof space or appropriately designed as an element of the building active frontages.

9.0 *Environment and services*

- 9.1 Climate and energy response
- 9.2 Services and infrastructure
- 9.3 Servicing and maintenance
- 9.4 Traffic noise attenuation
- 9.5 Safety and security
- 9.6 External lighting

9.1 Climate and energy response

Position

The Town of Bassendean has a commitment to sustainable development. It is important that new buildings are designed to be climate responsive and limit the use of energy and resources.

Guidelines

- A solar access and shadow analysis is required as part of the DA.
- Buildings should be designed to minimise energy consumed for heating, cooling and artificial light including:
 - Window design for good thermal and daylight performance
 - Building materials and insulation to contribute to comfortable thermal conditions
 - Air movement within buildings to provide comfortable thermal conditions and appropriate air quality
 - Building materials, appliances and fuel sources selected to minimise energy requirements and greenhouse gas emissions
- Building services should be designed and maintained to minimise energy and resource use including:
 - Optimum natural light
 - Optimum natural ventilation
 - Energy efficient motors and equipment ,lighting control systems, fittings and appliances
 - Energy efficient air conditioning and mechanical ventilation systems and controls

- Minimum water use and waste
- Energy efficient hot water systems
- Water efficient taps and fittings
- Minimal energy use over the whole life of the building
- Maximum use of renewable energy and use of fuels with low greenhouse gas emissions

- Current '5 star' requirements of the green star rating system can be used to demonstrate a response to this commitment. A report accompanying the DA should describe the climate response and energy requirements of the building.



9.2 Services and infrastructure

Position

A high quality, well detailed and well maintained public realm will contribute to the value of residential and commercial property in Bassendean Town Centre and provide a high level of amenity for residents and visitors.

Guidelines

- The Town of Bassendean requires infrastructure contributions to be made based on the value of development.
- All stormwater shall be contained on site or connected to drainage points where supplied.

9.3 Servicing and maintenance

Position

The town centre should be pedestrian friendly, visually attractive and safe. Service areas and delivery and maintenance vehicles should not detract from this amenity.

Guidelines

- Service yards must not be located along active frontages and shall be designed as integral parts of the building.
- All waste storage and delivered goods should be contained within buildings. Rubbish storage and collection facilities shall comply with the current general requirements of the Town of Bassendean and will be efficient, convenient and allow for collection of recyclable material.
- Doors providing access to internal waste/storage or loading dock areas should be the minimum width and height possible to serve the required loading/unloading function and be constructed of aesthetically pleasing materials.

9.4 Noise attenuation

Position

Traffic noise from Guildford Road and the rail line can impact on the amenity of the town centre. Buildings should be designed to ameliorate this.

Guidelines

- Incorporate suitable noise attenuation measures in buildings affected by train or traffic noise in windows, ceilings and insulation airport noise controls.
- All accommodation buildings are to be detailed and/or designed so that internal noise levels in bedroom areas will be in the range of 30 to 35dB.
- All plant and equipment is to have noise attenuation.

9.5 Safety and security

Position

Bassendean town centre should be a safe place at all times. Building and urban design can impact on safety through ensuring all areas are overlooked, open and well maintained.

Crime prevention through environmental design (CPTED) principles will be used to assess all new development.

Guidelines

- A diverse and complementary mix of uses will encourage public presence and activity at different times of the day and night.
- Buildings should overlook public spaces and building entries should be clearly visible from public spaces.
- Buildings should not have recesses or other unsecured areas not in full public view.
- Solid fencing/screening above 0.8m high is discouraged on street frontages.
- A clear view from 0.8m- 2.0m above ground should be maintained in landscape, walling and screening unless screening is fully secure. Landscaping, walls and fencing shall be designed to maintain clear visibility to and from doors, windows, and pedestrian paths.
- Appropriate lighting shall be provided for safety and security (Refer 12.6)
- Robust materials which are aesthetically pleasing should be used in public places. Materials vulnerable to graffiti and vandalism shall be avoided. Use of security film to windows and anti graffiti treatment to other surfaces accessible at ground level is encouraged.

9.6 External lighting

Position

Bassendean Town Centre should be a safe and interesting place in the evening. Lighting of buildings, shopfronts and external spaces and landscape is important. Buildings should be well lit at night to contribute to safety and interest in the town centre. This can be achieved by up-lighting facades, illuminated signage, display lighting in shopfronts, and good landscape lighting.

Guidelines

- Appropriate lighting for pedestrian safety shall be provided to all pedestrian paths and parking areas.
- Building entrances should be lit for safety and identity.
- All external lighting shall be robust, vandal resistant and themed to complement development character.
- Display lighting to commercial and retail premises along Old Perth Road shall be time-switched to remain on every evening until at least 15 minutes after the last train has left Bassendean Station.
- Consideration should be given to pedestrians, cyclists and drivers with regard to glare from lighting sources.





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Wilson St

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Old Perth Rd



Form 1 - Responsible Authority Report (Regulation 12)

Property Location:	Lot 1017 (3) Hawksburn Road, Rivervale
Application Details:	147 Multiple Dwellings and 6 Office tenancies
DAP Name:	Metro Central JDAP
Applicant:	Hillam Architects Pty Ltd
Owner:	Dragon Century Spring Pty Ltd
LG Reference:	648/2014
Responsible Authority:	City of Belmont
Authorising Officer:	Neville Deague – Director Community & Statutory Services
Department of Planning File No:	DAP/14/00637
Report Date:	Submitted to DAP on 30 January 2015
Application Receipt Date:	1 October 2014
Application Process Days:	122 Days – Extended by Consent of Applicant under Regulation 12 (4) of the <i>Planning and Development (Development Assessment Panels) Regulations 2011</i>
Attachment(s):	<ul style="list-style-type: none">1 – Applicant's Design Report (1 October 2014)1A – Certificate of Title;1B – Waste Management Plan;1C – Traffic Report;1D – Acoustic Report;1E – Arboriculture Report;1F – Landcorp Design review;1G – Development Plans (1 October 2014) (Superseded).2 – Additional Information – Office land use (4 December 2014)2A – Revised Plans (11 December 2014) (Superseded).3 – Additional Information – Revisions to Dwelling mix (19 January 2015)3A – Revised Plans (19 January 2015).4 – Main Roads referral response (16 January 2015).5 – Protected Tree Valuation.

Officer Recommendation:

That the Metro Central JDAP resolves to:

Approve DAP Application reference DAP/14/00637 and accompanying plans date stamped 19 January 2015 in accordance with the City of Belmont Local Planning Scheme No. 15, subject to the following conditions:

Conditions

1. The development plans, as dated marked and stamped "Approved", together with any requirements and annotations detailed thereon by the City, are the plans approved as part of this application and shall form part of the planning approval issued.
2. A geotechnical report prepared by an appropriately qualified consultant certifying that the land is capable of accommodating the proposed development shall be lodged with the City, at the cost of the owner/applicant, prior to the lodgement of an application for a building permit to the satisfaction of the City's Manager Projects & Development.
3. Prior to removal of the protected tree on the property, the applicant/owner shall pay a tree replacement contribution of \$19,792 to the City, unless otherwise agreed by the City. Upon approval by the City, the protected tree shall then be removed at the applicant/owners cost.
4. Prior to the commencement of any site works, the applicant / owner shall:
 - (i) complete and submit an Acid Sulfate Soils Self-Assessment Form to the Department of Environment Regulation and City of Belmont; and
 - (ii) if required as a result of the self-assessment, subsequently prepare and submit an Acid Sulfate Soils Report and an Acid Sulfate Soils Management Plan to the Department of Environment Regulation and the City of Belmont for approval.

Where an Acid Sulfate Soils Management Plan is required to be submitted, all site works shall be carried out in accordance with the approved management plan.

5. No earthworks shall encroach onto the Great Eastern Highway reserve.
6. No stormwater drainage shall be discharged onto the Great Eastern Highway reserve.
7. No vehicle access shall be permitted onto the Great Eastern Highway reserve.
8. The applicant shall make good any damage to the existing verge vegetation within the Great Eastern Highway reserve.
9. The applicant must obtain approval from Main Roads WA before all works are undertaken within the Great Eastern Highway reserve. The applicant seeking access to the Main Roads WA network will be required to submit an application as outlined in the "Application Kit and Guidelines" for State Roads.

10. A detailed schedule of external materials, finishes and colours to be used in the construction of the development shall be submitted to the City prior to lodgement of an application for a building permit to the satisfaction of the City's Director Community & Statutory Services, Manager Planning Services or Coordinator Planning Services.
11. Prior to the commencement of site works, the applicant shall arrange for the preparation of a construction management plan and traffic management plan in accordance with the requirements of AS1742 Pt 3 to the satisfaction of the City's Director Technical Services. The plan shall be thereafter implemented for the duration of the construction of the development.
12. A detailed landscaping and irrigation plan for the subject development site and street verge is to be prepared and submitted to the City for approval within 90 days of the date of this approval.
13. Prior to occupation or use of the development, landscaping, plants and irrigation are to be installed and thereafter maintained in accordance with the approved landscaping and irrigation plan for the duration of the approved development to the satisfaction of the City's Manager Parks and Environment.
14. No existing turf, irrigation or street trees located in the road verge abutting or adjacent to the subject land may be damaged or removed during the course of the development, unless separately approved in writing by the City.
15. No services, such as air conditioners or water heaters shall be visible from the street.
16. All clothes drying devices and clothes drying areas shall be located and positioned so as not to be visible from the street or a public place.
17. Prior to use or occupation of the development, on-site sustainability measures are to be implemented to the satisfaction of the City's Director Community & Statutory Services or Manager Planning Services.
18. Prior to occupation or use of the development, vehicle parking, manoeuvring and circulation areas shall be designed, constructed, sealed, drained, line marked and kerbed in accordance with:
 - (a) The approved plan (total of 266 spaces);
 - (b) Australian Standard 2890.1; and
 - (c) Council's engineering requirements and design guidelines.

The areas must be sealed in concrete or brick paving in accordance with the City of Belmont specifications, unless otherwise approved by the City's Director Technical Services. All parking bays must be clearly line marked.
19. A minimum of 21 visitor car parking bays are to be provided for the use of visitors at all times, and maintained to the satisfaction of the City's Manager Projects and Development. A further 16 bays on the Ground Floor or Mezzanine Floor of the development shall be marked 'Visitors (outside business hours)' to the satisfaction of the City's Manager Projects and Development.
20. Prior to occupation of use or development, a Car Parking Management Plan with respect to reciprocal car parking arrangements between the visitor car parking spaces and office tenancies shall be prepared to the satisfaction of the City's Director Community and Statutory Services, Manager Planning Services or

Coordinator Planning Services. The Management Strategy shall then be incorporated to the Strata By-law of the development to the satisfaction of the City; or if otherwise approved by the City, suitably implemented by other means for the life of the development.

21. Prior to occupation of the development commencement of the use, a minimum of 21 bicycle bays accessible to visitors, and end-of-trip facilities for the office tenancies are to be installed and maintained for the course of the development to the specifications contained within the City's Supplementary Planning Guidelines for End of Trip Facilities, to the satisfaction of the City's TravelSmart Officer.
22. All access ways, parking areas and hard stand areas shall be maintained in accordance with the City's engineering requirements and design guidelines.
23. All stormwater from roofed and paved areas shall be collected and disposed of on-site in accordance with the City of Belmont's engineering requirements and design guidelines.
24. Any lighting installed on the building, yard areas or car parking areas shall be located and designed in a manner that ensures:
 - (i) all illumination is confined within the boundaries of the property; and
 - (ii) there will not be any nuisance caused to an adjoining residents or the local areato the satisfaction of the City's Manager Health and Rangers Services.
25. Within 90 days of the date of this approval, an updated waste and rubbish collection plan shall be submitted for approval by the City's Manager Health and Ranger Services. The approved waste and rubbish collection management plan shall then be implemented for the duration of the development to the satisfaction of the City's Manager Health and Ranger Services.
26. Within 120 days of the date of this approval, the owner/applicant shall elect to either:
 - Seek approval from the City of Belmont for an artist to provide public art on the development site to a minimum value of \$400,000; or
 - Make arrangements with the City of Belmont for a cash-in-lieu payment of \$400,000 being 1% of the estimated cost of the developmentto the satisfaction of the City's Coordinator Community Wellbeing.
27. Where public art will be provided on the development site in accordance with Condition 19, the approved concept/strategy shall be implemented and the artwork constructed prior to use or occupation of the development, and maintained for the life of the development to the satisfaction of the City's Coordinator Community Wellbeing.

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

Advice Notes

1. A planning approval is not an approval to commence any works associated with the development. A building permit must be obtained prior to commencement of any site and building works. An application for a building permit will not be accepted unless proof of payment of all bonds and guarantees accompanies the application documents.
2. Fire requirements to be in accordance with the Building Code of Australia.
3. As of the 1 July 2003, Energy Efficiency requirements were implemented via the Building Code of Australia (BCA) Volume 2 and all residential buildings need to comply with the 'deemed to satisfy' requirements, or alternatively a compliant Energy Audit Report can be submitted by an accredited person. Please be advised that the granting of planning approval from the City is no indication that the approved plans conform to the BCA Volume 2 as amended.
4. Where construction works of the development may encroach onto the road reserve (verge) the applicant shall obtain a Materials On Verge licence for the entire verge for the entire duration of construction works.
5. Application Kits for any work to be undertaken within the Great Eastern Highway reserve can be found on the Main Roads WA website, >"Our Roads">"Conducting Works on Roads">"Application to undertake Works on State Roads">"Application Kit and Guidelines".
6. The required geotechnical report under Condition 2 must identify the geotechnical conditions of the site (including acid sulphate soils) and certify to the City that any earthworks proposed are structurally sound. The earthworks must be carried out in accordance with the geotechnical report as modified (if at all) by the City. Due to excavation to proposed basement levels, the suitability of soil conditions and water table for drainage purposes shall be confirmed with the results of geotechnical investigation.
7. The required "Acid Sulfate Soils Self-Assessment Form" can be downloaded from the Western Australian Planning Commission's website at [http://www.planning.wa.gov.au/dop_pub_pdf/ASS_\(ver_4.0\)_Aug09_interactive.pdf](http://www.planning.wa.gov.au/dop_pub_pdf/ASS_(ver_4.0)_Aug09_interactive.pdf).

Where required:

- any Acid Sulfate Soils investigation shall follow the provisions of the DEC's *Identification and Investigation of Acid Sulphate Soils and Acidic Landscapes* (May 2009), which can be downloaded from the DER website <http://www.dec.wa.gov.au/content/view/2864/1698/>; and
 - any Acid Sulfate Soils management plan shall follow the provisions of the DEC's *Treatment and Management of Soils and Water in Acid Sulfate Soil Landscapes* (July 2011), which can be downloaded from the DER website <http://www.dec.wa.gov.au/content/view/2864/1698/>.
8. The construction and traffic management plan shall include a dilapidation survey, dust and noise management arrangements, location of site office, materials storage, construction vehicles access, parking and any temporary road closures. The applicant is advised that any signage, road works or road marking made

necessary by the proposed development shall be carried out at the developer's cost.

9. The replacement tree contribution of \$19,792 is based on the City's Arborist valuation on 27 May 2014. The applicant is advised to liaise with the City's Parks Technical Officer in relation to payment of the tree replacement contribution.
10. The landscaping and reticulation plan shall be a minimum size of A3, and is to contain a north point and a scale. The plan must show by numerical code, the botanical name of each plant species, proposed pot size, quantity and must also include the proposed treatments of:
 - (a) all areas of the property visible from the street; and
 - (b) the Great Eastern Highway street verge/interface with the subject property.
11. With regard to implementation of the landscaping plan, the plants are to be nurtured until they reach their typical mature dimensions, and shall thereafter be maintained at those mature dimensions unless Council approves otherwise in writing.
12. This planning approval is not approval for the removal or alteration of any turf, irrigation or street tree. If during the course of the development any existing turf and/or irrigation is damaged or destroyed, the owner/applicant shall:
 - (a) repair, reinstate or replace the item in accordance with any written direction of the City's Manager Parks & Environment; and
 - (b) thereafter maintain the item for a period of 12 months, to the satisfaction of the City's Manager Parks & Environment.

If during the course of the development any existing street tree is damaged or destroyed, the City shall repair or replace the street tree in accordance with any written direction of the City's Manager Parks & Environment. The owner/applicant shall:

 - (a) be responsible for any costs associated with repair or replacement; and
 - (b) thereafter maintain the street tree for a period of 12 months, to the satisfaction of the City's Manager Parks & Environment.
13. With regard to maintenance of access ways, parking areas and hard stand areas, in the event that the areas are not satisfactorily maintained, the City's Director Technical Services may require by notice, in writing, that the area be brought up to a satisfactory standard within a specified period of time and the notice shall be complied with within that period. Without limitation, the notice may require that lines marking car bays be re-painted, pot holes be repaired, damaged kerbs be replaced and degraded access or parking areas be resurfaced generally in accordance with Council's Engineering Requirements and Design Guidelines.
14. Council's Engineering Requirements and Design Guidelines contains detailed specifications which must be adhered to in the preparation of plans submitted for approval in respect of such matters as drainage, paving, parking, accessways, crossovers, land fill and retaining.

15. Neither a planning approval nor a building permit constitutes an approval to construct a crossover to a property. Prior to occupation or use of the development, a separate application must be made to the City's Technical Services Department for approval to construct a crossover to the property (i.e. from the road to connect with the property's internal driveway). Failure to submit a separate application for crossover approval may result in delays in receiving a vehicle crossover subsidy.
16. Specification for construction of the crossover is outlined under item ST01D, contained within the Materials Schedule – Landscape Work Rev C2 (February 2010) for The Springs, the Applicant is advised to liaise with the City's Technical Services Department in regard to these specifications.
17. Signage is not approved as part of this application. A separate application for planning approval and building permit is required prior to display of any advertisements/signage.
18. In relation to the required public art contribution, the City's Community Wellbeing Services will be required to give final consent for the proposed public art, including any cash-in-lieu arrangement. Full details and specifications should be submitted at the earliest opportunity to ensure that the finalisation of the public art does not delay the progression of the development.
19. The applicant and owner are advised that the City's Rates Department will confirm under separate letter the street numbering applicable for this property.

ac ground:

Property Address:		3 Hawksburn Road, Rivervale WA 6103
Zoning	MRS:	Urban/Abuts Primary Regional Road (Great Eastern Highway)
	LPS:	Special Development Precinct – The Springs
Use Class:		Multiple Dwellings – 'D' use Office – 'D' use
Structure Plan:		The Springs Structure Plan (2009)
Policy:		Local Planning Policy No. 7 (The Spring Design Guidelines)
Lot Size:		2826m ²
Existing Land Use:		Vacant Land
Value of Development:		\$40 million

The subject land shown in Figures 1A and 1B has its main street frontage to Great Eastern Highway to the southeast; vehicle access to the site is gained via Hawksburn Road to the southeast. The subject site abuts 5 Hawksburn Road, 19 Rowe Avenue and 21 Rowe Avenue along the northwest boundary, and 23 Rowe Avenue to the northeast boundary. The land is currently vacant.

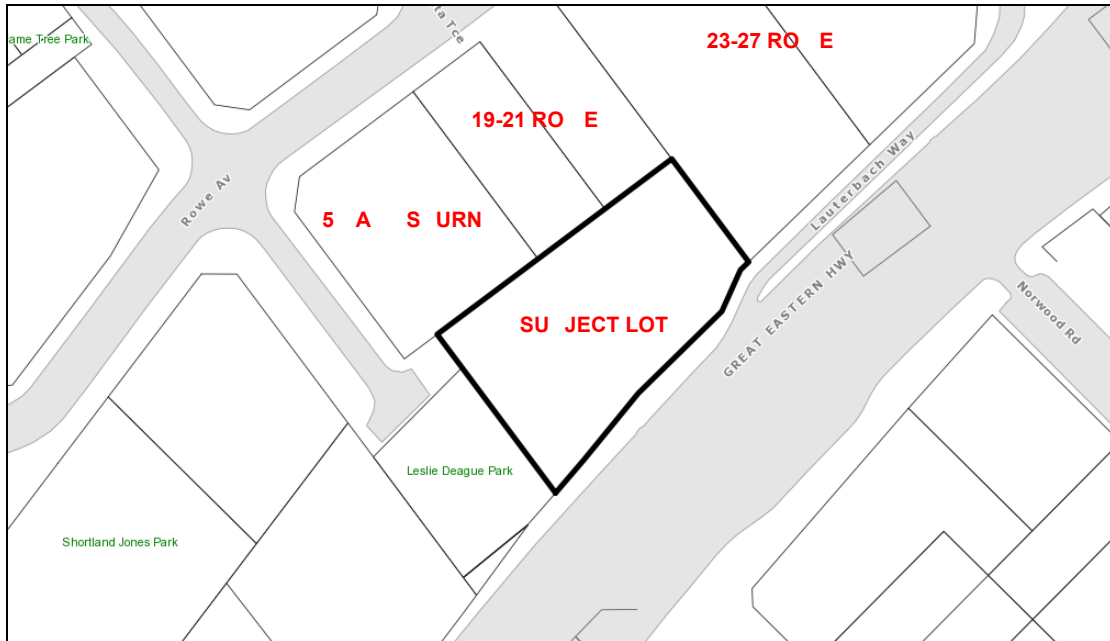


Figure 1A – Location Plan – 3 Hawksburn Road, Rivervale



Figure 1B – Aerial Photo, 3 Hawksburn Road, Rivervale

Details:

Development Application and Extension of Time

It is noted that the DAP Form 1 and MRS Form 1 describes the proposed development as '147 Multiple Dwellings and 6 Commercial Units (Convenience Store and Offices)'.

In the initial assessment of the proposal, the City raised concerns over the suitability of the proposed Convenience Store land use – the City considered that further review of such a land use was required to establish its consistency with the planning framework.

The City also identified a number of minor design details to be resolved – such as treatment of the ground floor private/public interface along the Great Eastern Highway boundary, and the provision of adequate pedestrian areas in the ground and mezzanine car park levels.

The application was also referred to Main Roads as the statutory agency for development abutting the Great Eastern Highway Primary Regional Road reserve. Main Roads noted that the development plans reflected an awning attached to the proposed building which significantly encroached over the Primary Regional Road reserve. Main Road's support for the proposal was withheld on the basis of the unacceptable encroachment.

The above matters were conveyed to the applicant, and the applicant confirmed that they propose Office tenancies in lieu of the Convenience Store (Attachment 2). Amended plans were provided on 11 December 2014. To enable re-assessment of the amended plans by the City and Main Roads WA, the applicant consented to an Extension of Time for this Responsible Authority Report to be submitted on 30 January 2015, rather than 18 December 2014.

Further minor amendments to the development plans were submitted by the applicant on 19 January 2015 (Attachment 3). These minor amendments were to reduce the number of single-bedroom dwellings in lieu of two-bedroom dwellings, and consequent marginal increase in plot ratio area. The total number of dwellings remained unchanged, and the minor modification did effect any external changes to the proposed development.

Amended Proposal

The subject proposal is for a 9-storey building incorporating 147 multiple dwellings with 6 office tenancies on the ground floor.

A total of 266 car parking spaces are proposed for the development, including 24 car spaces on car stackers. The car parking is accommodated in two basement levels, as well as parking decks on the ground floor and mezzanine level. Access to the car park is via Hawksburn Road.

A mix of one-bedroom, two-bed-room, and three-bedroom dwellings are proposed. Access to the multiple dwellings is gained via a dedicated residential lobby to the Hawksburn Road façade.

The office tenancies front Great Eastern Highway, with pedestrian access and landscaping designed to define the private property and Great Eastern Highway Primary Regional Road reserve boundary.

A design report prepared by the applicant is contained in Attachment 1, which includes the following appendices:

- Attachment 1A – Certificate of Title;
- Attachment 1B – Waste Management Plan;
- Attachment 1C – Traffic Report;
- Attachment 1D – Acoustic Report;
- Attachment 1E – Arboriculture Report;
- Attachment 1F – Landcorp Design review; and
- Attachment 1G – Development Plans (1 October 2014 – Superseded).

A set of revised plans (Attachment 2A) to address matters raised by the City and Main Roads were submitted on 11 December 2014 – these plans have also been superseded.

Further revised Development Plans (19 January 2015), the subject of this determination is contained in Attachment 3A.

Legislation policy:

Legislation

- Metropolitan Region Scheme (MRS)

The subject site is zoned Urban under the MRS, and abuts land reserved for Primary Regional Roads (Great Eastern Highway), as shown in Figure 2. The site is appropriately zoned under the MRS for the proposed uses.



Figure 2 – Extract from MRS map

As the site abuts land reserved for Primary Regional Road, the application was referred to Main Roads WA for comment. Comments from Main Roads WA are included in the Consultation section of this report.

- Local Planning Scheme No. 15 (LPS15)

The subject site is zoned 'Special Development Precinct – The Springs' under City of Belmont LPS15, and also identified as 'Development Area 11'. An extract of the LPS15 zoning map is shown in Figure 3.

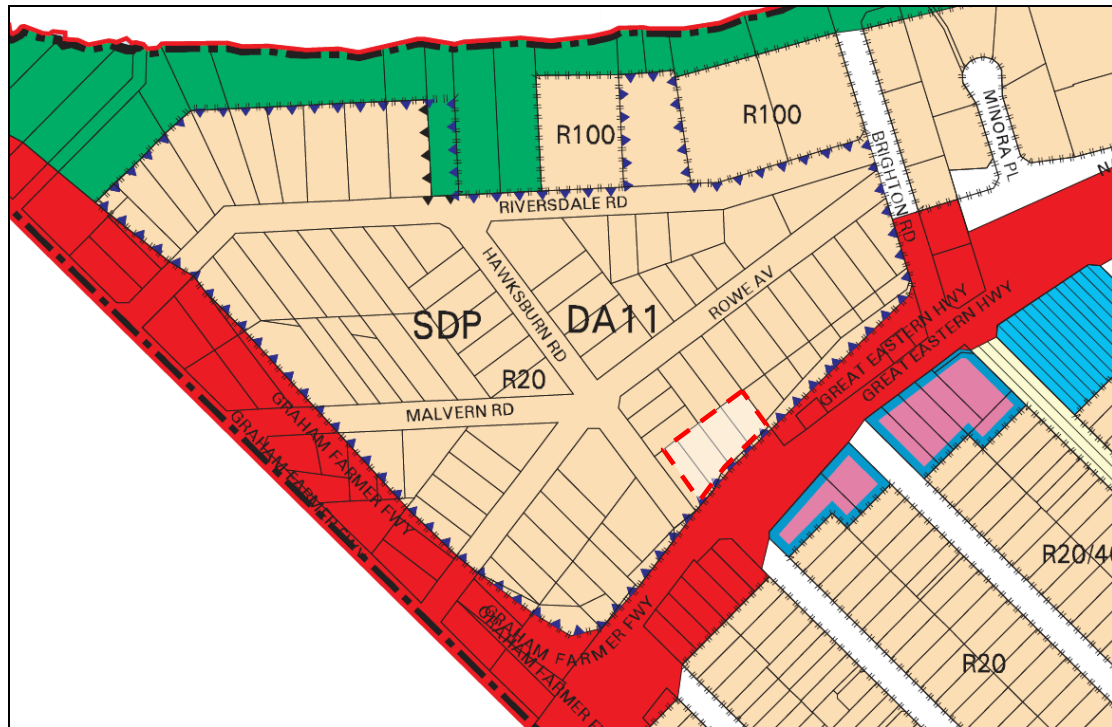


Figure 3 – Extract from LPS15 map

LPS15 requires a structure plan to be endorsed prior to supporting development and/or subdivision in a Development Area. The Springs Structure Plan was adopted by Council in November 2009 and endorsed by the WA Planning Commission in December 2009.

Table 1 of LPS15 states that land uses with a 'D' classification are discretionary and may be permitted if the decision maker has exercised discretion and determines that the land use is appropriate in its setting.

Table 2 of LPS15 contains development requirements for vehicle parking for non-residential development.

Clause 5.20 of LPS15 states that the height of structures within the Scheme Area shall be subject to, and not exceed, the WAC Structures Height Control Contours Map contained in Schedule 12.

Structure Plans Planning Policies

The Springs Structure Plan

The Springs Structure Plan identifies the subject site as being located within both the 'Great Eastern Highway' precinct and the 'Rowe Avenue East (Mixed Use) precinct, both of which have a sub-zoning of 'Mixed Use'. An extract from The Springs Structure Plan is shown in Figure 4.

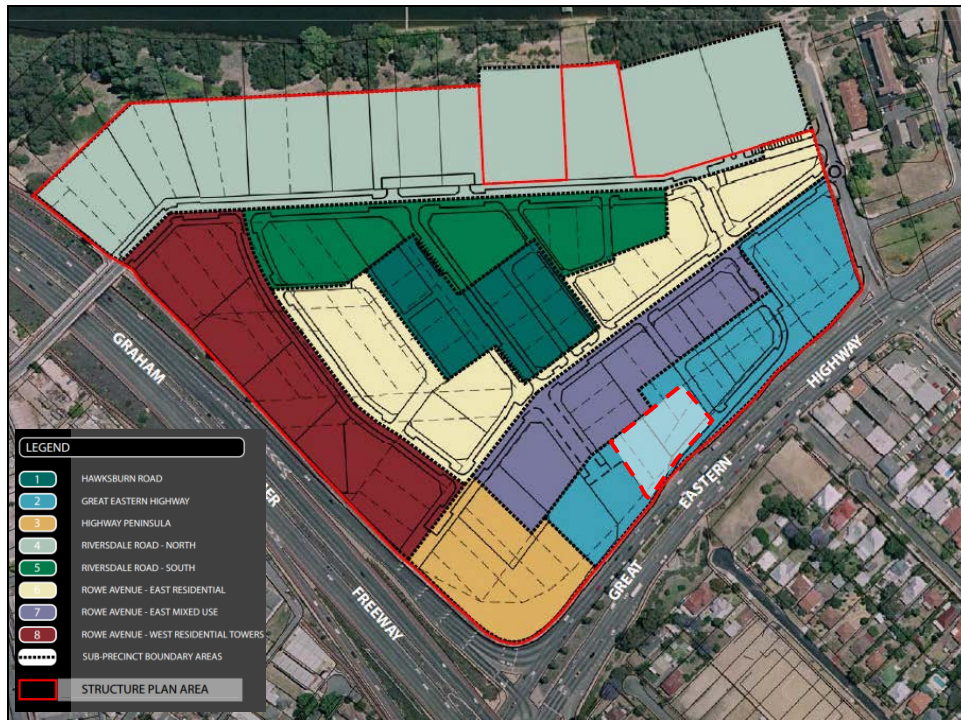


Figure 4 – Extract from The Springs Structure Plan map

Under the Structure Plan, the Great Eastern Highway precinct is intended to present itself as a strong, unified commercial and mixed-use edge for the precinct, characterised by commercial activities at lower levels in buildings with a four-storey height limit. Where applicable, upper level residential units will be setback from the building edges.

The Rowe Avenue East (Mixed Use) precinct is intended as a transitional area from commercial on Great Eastern Highway to more moderately scaled internal residential streets. The structure plan identifies the area as having a predominantly residential character, with the street scale along Rowe Avenue primarily supporting three to four-storey Mixed Use buildings.

The Springs Structure Plan identifies a number of key development standards for each precinct, which are further elaborated on in Local Planning Policy No. 7 (The Springs Design Guidelines), in particular, it is noted that Local Planning Policy No. 7 has been developed to specify greater height limits for this site.

Local Planning Policy No. 7 (The Springs Design Guidelines)

Design Guidelines for The Springs have been prepared by LandCorp and adopted by Council as Local Planning Policy No. 7 (LPP7). Various iterations of the design

guidelines have existed since 2007, however the current format has existed since 26 July 2011 after LandCorp undertook a substantive review. Additionally, a series of amendments have since been made, with the most recent of these being adopted by Council on 24 July 2012.

LPP7 contains specific development standards and design guidance for all development within The Springs. The Policy includes a series of detailed area plans, which contain 'Maximum Building Envelopes (MBEs)' for individual sites. The relevant Detailed Area Plan in LPP7 (Figure 5) generally identifies:

- Lower height (podium 13.8m);
- Greater height (tower 27m) setback 5m-8m from the Great Eastern Highway boundary, 3m from the Hawksburn Road boundary, and 5m from the boundary with Lot 1016.
- The detailed area plan reflects two tower components on the subject lot, with an 18m separation between the towers.
- A protected tree to the southern corner of the site, adjacent to the Great Eastern Highway boundary.



Figure 5: Extract from The Springs Design Guidelines detailed area plan

Clause 3.1.1 of LPP7 states that the MBE is intended to define the expected built form and ensure enhancement of streetscape, promote built form diversity and coordinate density. Where plot ratio is not defined, the permissible floor area shall be determined by the constraints of the MBE. Minor variations can be supported where

the design outcome is consistent with the objectives of The Springs Structure Plan and the design objectives outlined in the Design Guidelines.

Local Planning Policy No. 11 (Public Art Contribution Policy)

Local Planning Policy No. 11 (LPP11) requires the provision of public art for developments with a value in excess of \$4.5 million in certain zones. Development within The Springs Special Development Precinct is identified in LPP11 as being applicable for a public art contribution equivalent to 1% of the estimated cost of development.

State Planning Policy No. 5.4 (Road & Rail Transport Noise and Freight Considerations in Land Use Planning)

State Planning Policy 5.4 (SPP5.4) seeks to minimise the adverse impact of transport and freight noise on noise-sensitive developments. The policy does this primarily by:

- Identifying the situations in which it would be appropriate to assess proposals for transport noise impacts;
- Establishing noise criteria to be used in the assessment of these proposals; and
- Identifying measures that can be adopted to reduce road and rail transport noise in these instances.

In summary, the Policy requires noise-sensitive development in the vicinity of a major road to comply with certain noise targets and limits. In doing so, additional noise mitigation measures may apply, as outlined in the Policy.

Consultation:

Public Consultation

The application was advertised to the owners of the surrounding properties (15 Rowe Avenue, 19-21 Rowe Avenue, 23-27 Rowe Avenue, 31 Rowe Avenue and 3 Homelea Court) for a period of 14 days from Tuesday 2 December 2014 to Monday 15 December 2014. No submissions were received from advertising of the proposal.

Consultation with other Agencies or Consultants

The application was referred to Main Roads WA for comment as the subject land abuts the Great Eastern Highway Primary Regional Road reserve. Main Roads were not supportive of the initial development plans (dated 1 October 2014) as the awning attached to the Great Eastern Highway façade of the development encroached over the Primary Regional Road reserve.

The applicant subsequently submitted amended plans (dated 11 December 2014) to address the encroachment. Main Roads reviewed the amended plans and advised that the development was acceptable subject to the following conditions:

1. No earthworks shall encroach onto the Great Eastern Highway reserve.
2. No stormwater drainage shall be discharged onto the Great Eastern Highway reserve.

3. No vehicle access shall be permitted onto the Great Eastern Highway reserve.
4. The applicant shall make good any damage to the existing verge vegetation within the Great Eastern Highway reserve.
5. The applicant must obtain approval from Main Roads WA before all works are undertaken within the Great Eastern Highway reserve. The applicant seeking access to the Main Roads WA network will be required to submit an application as outlined in the "Application Kit and Guidelines" for State Roads.

Application Kits can be found on the Main Roads WA website, >"Our Roads">"Conducting Works on Roads">"Application to undertake Works on State Roads">"Application Kit and Guidelines".

Main Roads has also provided the following advice to the City:

1. As there will be no direct access from this site onto the Great Eastern Highway, it is not anticipated that this development will have a major impact other than added traffic on the existing network.
2. The assessment of the Preliminary Building Acoustics Design Report, (Ref Vipac 60W-14-0050-DRP-531454-0), has been found to be adequate on this proposed multi storey development in Rivervale, in terms of State Planning Policy SPP 5.4.

In regards to outdoor living areas, SPP 5.4 noise levels apply to "within at least one outdoor living area on each residential lot", but this appears not to relate very well to high rise unit developments. This report does not include noise impact assessment and achievement of SPP5.4 noise levels on balconies, but it suggests application of absorptive material on the ceilings of balconies facing Great Eastern Highway. This report indicates that balconies facing Great Eastern Highway will experience high levels of noise, so even with some absorptive treatment as mentioned there is likely to be a poor level of acoustic amenity on these balconies.

Main Roads WA suggests that it be recommended to the proponent that consideration should be given to how reasonable acoustic amenity could be practically provided to balconies facing Great Eastern Highway.

Conditions and matters raised by Main Roads have been incorporated in the recommended conditions of approval for the proposed development.

A copy of Main Road's referral response is contained in Attachment 4.

Planning assessment:

The subject development has been assessed by the City of Belmont in accordance with LPS15, The Springs Structure Plan, and the relevant local and state planning policies. The table below is a summary of the assessment against the development requirements:

Development Component	Required / Permitted	Proposed	Comment
Land Use	Any use with a use class of P, D or A may be considered.	Multiple Dwellings – 'D'. Office – 'D'.	The Scheme provides discretion for approval; Multiple Dwellings are a development type consistent with LPP7. An Office land use in a Special Development Precinct may be considered under Table 1 of LPS15.
Development Density	Max. plot ratio for Mixed Use development not specified – permissible floor area to be determined by constraints of building envelope and height limits.	Multiple Dwellings – 3.46 (9778m) Office – 0.31 (873m) Total 3.77	The Design Guidelines do not specify a maximum plot ratio for this precinct. The ratio of floor space to site area for this development is considered to be acceptable taking into account the context of the site and the high architectural design standard. Refer to discussion section of this report.
Dwelling diversity	15% 90m ² or less; and a further 15% 60m ² or less. Except Precincts 1, 5 and 6.	Subject property is in Precinct 2 – Dwelling Diversity requirements apply. Proposed 47% 90m ² or less; and a further 42% 60m ² or less.	Complies.
Building Height	<ul style="list-style-type: none"> • Max. 12m (podium); • Max. 27m (tower); • Min. 7.4m (tower). 	<ul style="list-style-type: none"> • 11.2m approx. (podium); • 27.96m fascia and lift overrun (Tower). 	Minor variation to maximum building height supported. Refer to discussion section of this report.
Building Separation	Min. 4.5m (<14m height), 6.5m (14-27m height), 9m (>27m height) - in accordance with Figure 3.1.5 of LPP7.	<ul style="list-style-type: none"> • 3.3m (podium <14m, northwest boundary), Nil. Northeast boundary (podium <14m) proposed. • 3.3m (tower 14-27m, northwest boundary), 3.97m northeast boundary. 	Complies. The development is suitably contained within the Maximum Building Envelope and is considered to comply with the building separation requirements.
Maximum Building Envelope/Setbacks (6.3 of LLP7)	<ul style="list-style-type: none"> • Hawksburn Rd – Nil. to ground floor, 3m to upper floors; • Great Eastern Hwy 5m-8m; • Lot 1016 – 5m; 	Minor protrusion of middle portion of building above podium (13.8m limit).	Variation supported. Refer to discussion section of this report.

Development Component	Required / Permitted	Proposed	Comment
	<ul style="list-style-type: none"> • Lots to Northeast – Nil. • Tower component separation – 18m. 		
Protected Tree	Part 6.3 of LPP7 indicates a protected tree to be retained on the subject site.	The applicant proposes removal of the protected tree.	Variation supported. Refer to discussion section of this report.
Balustrades – Ground floor	60% visually permeable	No ground floor dwellings with street facing balustrades proposed.	Not applicable / Complies.
Building Facades	Street and POS facades well articulated, no openings smaller than 1m ² .	Well articulated facades to Great Eastern Hwy and Hawksburn Rd.	Complies.
Balconies on street facing facades	Balconies are mandatory on street facing facades.	Balconies provided to Great Eastern Hwy and Hawksburn Rd facade.	Complies.
Buildings on street corners	Must address both streets and have strong architectural expression to corner.	Design of dwellings to address corner, with distinct architectural treatment of the corner of the building to address Great Eastern Hwy and Hawksburn Rd	Complies.
Roof services	Must not be visible from public realm.	Roof services not visible from the street.	Complies.
Entry points	Pedestrian and vehicle entry points must be separate and defined.	Entry points separate and defined without need for signage.	Complies.
Street level awnings	Must be provided with a minimum depth of 2m in accordance with Detailed Area Plan.	Depth of awning ranges from approx. 1.6m to 2+m.	Minor variation supported. Refer to discussion section of this report.
Fencing	Max. 1.2m above retaining wall, timber steel or masonry construction, 40% visually permeable.	No street fencing or fencing along Great Eastern Hwy boundary proposed.	Not applicable / Complies.
Balconies accessible from main living area	Where private open space is not provided, one primary balcony adjacent to main living area to be provided for each dwelling.	Each dwelling provided with balcony located next to main living area.	Complies.
Balconies setback from boundary	2m from all boundaries except where a balcony extends to the side boundary line	All balconies setback min. 2m from side boundary / appropriately	Complies.

Development Component	Re uired / Permitted	Proposed	Comment
	(LPP7 - Fig 3.3.1.2)	screened.	
Balcony minimum area	<ul style="list-style-type: none"> Dwellings > 90m² = min. dimension of 2.4m. Dwellings 90m² or < = min. 3.6m² and ,in. dimension of 1.8m. 	All dwellings provided with balconies > 3.6m ² and > 1.8m.	Complies.
Balcony – Visual Privacy	Screened if necessary	Screening provided for balconies as required.	Complies.
Ground floor dwellings – outdoor living area	<ul style="list-style-type: none"> Private courtyards to be provided. Directly accessible from main living area. Covered area with min. dimension of 2.4m. 	No dwellings proposed on the ground floor of this development.	Not applicable / Complies.
Sound attenuation	Development must comply with sound levels in Table 1 of AS 2107:2000.	The applicant has submitted an Acoustic Management Plan prepared by an acoustic consultant to address sound attenuation requirements.	<p>Condition to be imposed to ensure implementation of noise attenuation measures.</p> <p>Refer to discussion section of this report.</p>
Road and Rail Transport Noise	Development must comply with SPP5.4	The applicant has submitted an Acoustic Management Plan prepared by an acoustic consultant to address the requirements of SPP5.4.	<p>Condition to be imposed to ensure implementation of noise attenuation measures.</p> <p>Refer to discussion section of this report.</p>
Crime Prevention Through Environmental Design (CPTED)	Development to be secured, promote opportunities for visibility and casual surveillance, avoid blind or dark alcoves, appropriate illumination.	The proposed development is consistent with CPTED principles.	Complies.
Storerooms	4m ² with a min. dimension of 1.5m.	Each dwelling is provided with a storeroom of at least 4m ² .	Complies.
Waste Management	Waste Management Plan to be prepared in consultation with the City of Belmont	Applicant has engaged with the City to develop an acceptable waste management plan – minor refinement of the waste	<p>Condition re uired for refinement of aste Management Plan and for aste Management Plan to be implemented thereafter.</p> <p>Refer to discussion section</p>

Development Component	Re uired / Permitted	Proposed	Comment
		management plan is required prior to final approval by the City.	of this report.
Car Parking	<p>Multiple dwellings under Part 7 of the R-Codes:</p> <ul style="list-style-type: none"> Dwellings <75m² = 0.75/dwelling (69 required); Dwellings 75-110m² = 1/dwelling (47 required); Dwellings >110m² = 1.25/dwelling (10 required); Visitor = 0.25/dwelling (36.75 required); and Office = 1 space/30m² NLA (29.1 required). <p>Required = 126 for residents, 36.75 (37) for visitors and 29.1 (30) for office.</p> <p>(Total 193)</p>	<ul style="list-style-type: none"> Proposed 215 car par ing bays for residents 21 dedicated car par ing bays for visitors 30 dedicated car par ing bays for the office land use. <p>(Total 266)</p> <p>The applicant proposes a reciprocal arrangement for visitor and office car par ing.</p>	<p>Variation supported.</p> <p>Shortfall of visitor car par ing spaces but surplus resident and office par ing. Total surplus of 73 car par ing spaces.</p> <p>Refer to Discussion section of this report.</p>
Bicycle Parking/End of Trip Facilities	<ul style="list-style-type: none"> 1 space/3 dwellings for residents; 1 space /10 dwellings for visitors; and Bicycle parking standard for office at 1/200m² GFA for staff + 1/750m² GFA for visitors. <p>Required = 49 for residents; and 15 for visitors; and 6 for office land use.</p>	<ul style="list-style-type: none"> 95 bicycle parking facilities provided for residents, plus 53 storerooms larger than 4.5m² to accommodate resident bicycle parking. 20 bicycle parking spaces provided for visitors/office. 	<p>Bicycle parking for residents is compliant.</p> <p>20 visitor/office bicycle par ing spaces provided in lieu of re uired 21 spaces. Condition re uired for the provision of 21 visitor/office bicycle par ing spaces.</p>
Traffic / Vehicular Access	In accordance with Detailed Area Plan.	Vehicle access points consistent with Detailed Area Plan.	Complies.
Landscaping	<ul style="list-style-type: none"> Designed for high water efficiency in accordance with Water Corporation's Water Wise Development 	<p>A landscaping concept plan has been submitted.</p> <p>Detailed landscaping and reticulation plan to</p>	Condition.

Development Component	Required / Permitted	Proposed	Comment
	Criteria. <ul style="list-style-type: none"> Minimum of 60% local native flora. 	be submitted to the satisfaction of the City.	
Sustainability	Where possible: <ul style="list-style-type: none"> On site power generation – min. 1kW/dwelling. Min. 70% of dwellings must receive 3 hours direct sunlight between 9am and 3pm mid winter. Development shall not reduce solar access of dwellings on neighbouring properties. North facing openings to be provided with 80% shading at noon summer solstice. 	Applicant has indicated compliance with requirements.	Condition to be imposed to ensure implementation of sustainability measures.
Public Art	1% of \$40m estimated development cost (\$400,000)	Applicant has indicated that public art will be provided in kind in the form of off-form concrete wall panels and metallic artwork screens on the Lawburn Rd and Great Eastern Hwy facades of the development.	Condition. Refer to discussion section of this report.
Signage	Limited to one wall/tenancy. Sign strategy required.	No signage is proposed.	Advice note to be included to inform applicant that separate planning approval required for any signage on the property.
Consultation / Referral to other Statutory Agencies	The subject property is adjacent to the Great Eastern Hwy Primary Regional Road reserve; as required under the delegations for development on land adjacent to the Great Eastern Hwy Primary Regional Road reserve, the application must be	The application was referred to Main Roads WA for comment.	The matters raised in the response form Main Roads have been incorporated in the planning assessment and the recommendation in determining this application.

Development Component	Required / Permitted	Proposed	Comment
	referred to Main Roads WA for comment.		

Table 1 – Development Assessment against Planning Requirements

Discussion:

Land Use

The proposed Multiple Dwelling and Office land uses both have a ‘D’ use classification under the City of Belmont Local Planning Scheme No. 15 (LPS15). This means that the land use may be approved, but the decision maker is required to exercise its discretion in considering whether such land uses are appropriate in their setting. In this case, the Multiple Dwelling and Office land uses are consistent with land use activities envisaged under the Structure Plan and the Design Guidelines for the precinct. The documents outline that *“Commercial activities will activate the lower levels of the buildings with residential units taking up the upper storeys...”*

On this basis, the Multiple Dwelling and Office land uses are supported.

Protected Tree

A total of 323 ‘significant’ trees have been identified in the precinct as outlined under Part 5.2.1 of The Springs Structure Plan, and reflected in Figure 6 below.

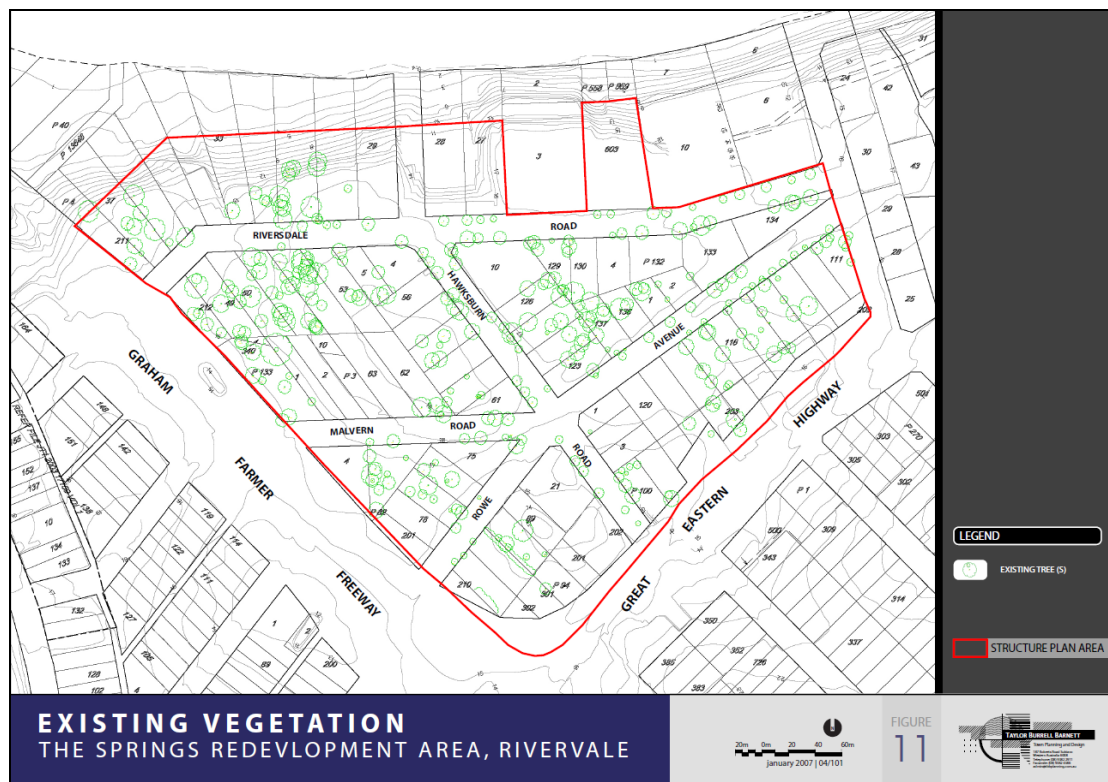


Figure 6 – Trees within The Springs Precinct (Extract from Structure Plan)

These trees were considered ‘significant’ as they were healthy and aesthetically pleasing specimens, and on this basis were earmarked to be retained in development of the precinct. As is the case on the subject lot, the Detailed Area Plans in Part 6 of Local Planning Policy No. 7 – The Springs Design Guidelines

(LPP7) goes on to specify particular trees on certain lots as 'Protected Trees' to be retained in development of those lots.

Distinct from the 'Protected Trees' identified in the Detail Area Plans, Part 5.3.1 of the Structure Plan outlines the greater significance of the Hawksburn Road Flame Trees (*Erythrina indica*) located within the Public Open Space reserve along Hawksburn Road, north of the subject property. These trees are believed to have been planted by the Belmont Young Men's Club during or before 1926. These trees are listed on the City of Belmont Inventory 2012 as being of heritage significance, with the requirement for a high level of protection and conservation.

It is considered that the tree on the subject lot is afforded protection under LPP7 only on the basis that it was considered a healthy and aesthetically pleasing tree. This tree is not afforded the high level of protection under the Heritage or Tree Preservation provisions under Part 7 of LPS15. As such, removal of the tree may be considered.

The Arboriculture report (Attachment 1E) submitted by the applicant identifies that the value in retaining the tree is questionable. The report outlines that while the tree appears to be in good health, the structure of the tree is severely compromised with failure of the eastern stem imminent (Figure 7). Changes to the soil levels around the tree for the purpose of developing the site will exacerbate the problem.



Figure 7 – View of Tree from Great Eastern Highway (looking north)

Given the poor form of the tree, the Arboriculture report recommends removal of the tree and replacing it with a more suitable specimen in a 500 litre size after construction of the building is completed.

The City's Arborist has reviewed the report and contends that the compromised structure of the tree can be remedied, and the tree can be retained. The City's Arborist notes that if the tree were to be retained, a strict Tree Protection Zone of 6-

8m is required to ensure the wellbeing of the tree. An appraisal by the City's Arborist values the tree at \$19,792 (Attachment 5).

Notwithstanding the above, the applicant has proposed removal of the tree, and for the building to be developed over that portion of the land. The applicant has not provided justification for removal of the tree, or any information in relation to a replacement tree.

The City is of the view that the sizeable tree undoubtedly contributes character to the Great Eastern Highway streetscape, and it is regrettable that the applicant has chosen to pursue removal of the tree. The City has dealt with a similar matter in the precinct where the developer of 3 Homelea Court sought removal of a sizeable tree on that property. The intricacies of that matter were attended to and resolved prior to receipt of a planning application to develop the land, so there was no need to consider the issue of tree removal in determining the planning application; however, it is beneficial to consider the basis for consent to removal of the tree on 3 Homelea Court. The City had consented to removal of the tree after extensive negotiations with Landcorp (who were the lead developer of the precinct and the vendor of that land) and the developer of that land. It eventuated that the developer paid a contribution of \$60,000 to the City for replacement planting. The contribution was to be added to a reserve fund for Public Open Space in the precinct; at that time, it was identified that Cracknell Park in the north of The Springs precinct was in need of upgrades.

Although the feasibility of retaining the tree is contentious, the City accepts the proposal to remove the tree subject to the proponent providing a contribution based on the value of the tree as consistent with the case of 3 Homelea Court. The City's data shows that between 2001 and 2012, the suburb of Rivervale experienced a 19% (or 10.3 Hectare) decline in tree canopy cover; given the rate of depleting tree canopy cover within the City of Belmont, the City considers such a contribution essential in assisting to restore tree canopy cover. The City considers the contribution amount of \$19,792 to be reasonable in comparison to the advantage of developable floor space gained by the applicant in removal of the tree.

Apart from the above, it is noted that the applicant has suitably proposed a landscaped area straddling the subject property boundary and the Great Eastern Highway reserve (Figure 8). This landscaped area helps delineate the private property boundary and the public realm, and at the same time remediates the amenity lost from the removal of the tree.

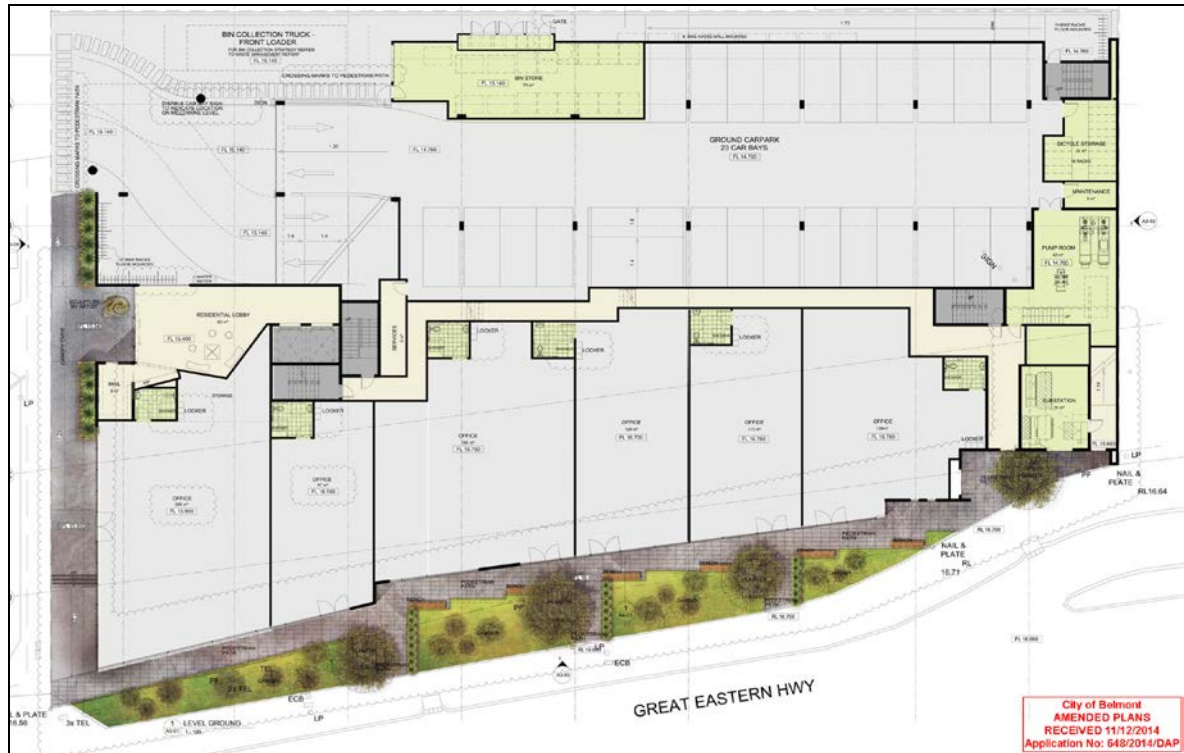


Figure 8 – Proposed landscaping to delineate boundary

It is noted that the proposed landscaping concept will need to be approved by the City's Manager Parks and Environment, and further approvals will be required from Main Roads WA.

Given the above, the City considers that removal of the protected tree is acceptable subject to payment of a tree replacement contribution by the applicant and implementation of a landscaped area along the Great Eastern Highway boundary to produce an acceptable development outcome.

Conditions requiring landscaping specific to the Great Eastern Highway boundary and a contribution for tree replacement to the satisfaction of the City have been recommended.

Development Density

The Detailed Area Plan for the subject lot provides for Mixed Use development on the property. Where only residential development is proposed, the Detailed Area Plan specifies an R80/R100 development density. Part 3.1.1 of LPP7 outlines that a maximum plot ratio for Mixed Use development is not specified, rather the permissible floor area for a development is to be determined by the constraints of the Maximum Building Envelope and height limits.

The proposed density of the development is therefore deemed to be acceptable, albeit with minor variations to the maximum building envelope and height limits which are discussed in the following section of this report.

Building Height and Maximum Building Envelopes

The Detailed Area Plan for the subject site specifies a maximum permitted building height of 27m, which is to include roof elements, extrusions and lift overrun structures. LPP7 outlines that this design control is intended to ensure that

development responds to the desired urban scale and character of the street, with expressions of height at key points and reference to human scale at others.

The applicant proposes a building height (to the top of the lift overrun) of 29.66m. The roof level of the proposed development is at a height of 27.96m, the 0.4m high fascia brings the height of the building to 28.36m. In essence, the building exceeds the maximum permitted height by 1.36m, with the lift overrun exceeding the maximum permitted height by 2.66m.

It is noted that the lift overrun is set to the centre of the proposed building, so although the lift overrun structure can clearly be seen in the elevation drawings of the development, it will be obscure from view at pedestrian level – i.e. along the Great Eastern Highway or Hawksburn Road footpath (Figure 9). The City is satisfied that the lift overrun structure will not compromise the intent of LPP7 in protecting the character of the street and human scale amenity.



Figure 9 – Lift overrun is not visible from street level

Having regard for LPP7's intent for development to respond to the urban scale and character of the street, the City considers the proposed 28.36m height in lieu of the permitted 27m height inconsequential in the context of the surround approved development, and is of the view that the height of the proposed development is acceptable. Figure 10 below illustrates the scale of the proposed development in context with approved development on the adjoining sites.

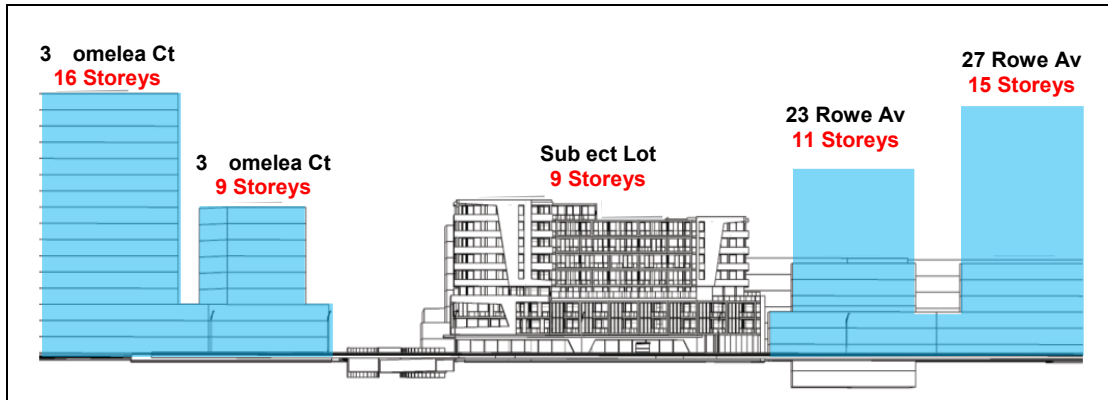


Figure 10 – Height of proposed development in context with other development

The Detailed Area Plan prescribes a height limit of 13.8m to the central portion of the building as highlighted in ‘Orange’ in Figure 11 below. The applicant has proposed development in this portion to a height of 24.96m. The applicant submits that it is appropriate to vary this portion of the maximum building envelope as it avoids implementation of the two relatively narrow towers envisaged under the Detailed Area Plan (which is less likely to appropriately address the scale of the approved development on the adjoining sites). The applicant notes that the variation results in only a minor variation to permitted floor area, as the proposed design leaves compensating portions of the building envelope undeveloped (highlighted in ‘Green’ in Figure 11). The applicant also notes that the proposed design provides a recess in the façade in the central portion of the building to create relief in building bulk – this acknowledges the intent of the Detailed Area Plan in prescribing two tower components with limited height in the central portion of the site.

The City considers the proposed design to be an appropriate response to development on the adjoining properties, which creates a better design and streetscape outcome.



Figure 11 – Variation to maximum building envelope

Protrusion of balconies and other minor portions of the building as illustrated in Figure 12 below is considered acceptable on the basis that the façades of the development are visually engaging, well articulated, and does not add bulkiness to the building.

Given the above, the City is supportive of the proposed variations to the building height and protrusions from the maximum building envelope.

Street Level Awnings

LPP7 requires the provision of 2m deep awning for development on the subject site. In lieu of awnings, the upper level of the development over hangs the façade of the office tenancies on the ground floor. This overhang in lieu of an awning is acceptable as it has the same effect as an awning in providing shade and shelter for pedestrians.

The depth of the overhang varies from approximately 1.6m to over 2m. The variation in depth is purely due to the staggered 'plate-shape' of the upper floor – intended to create articulation to the façade of the building. In order to comply with the required 2m depth, an awning can simply be added to the fascia – however, this detracts from the architectural design of the building and will compromise the aesthetics of the building. It is therefore recommended that the variation to the depth of the awning is acceptable.

Noise Attenuation (SPP 5.4)

The applicant has submitted an Acoustic Assessment (Attachment 1D) to accompany the development application. The acoustic assessment addresses the noise targets and noise limits outlined under SPP5.4, the design standards under AS2107:2000 as required under LPP7. Additionally, the assessment has incorporated considerations for compliance with the assigned noise levels under the *Environmental Protection (Noise) Regulations 1997*.

To address SPP5.4 and AS2107:2000, the acoustic consultant has recommended certain measures including the use of suitable glazing and acoustic insulation. Notwithstanding this, Main Roads WA have noted in their referral response (Attachment 4) that balconies facing Great Eastern Highway will experience high levels of noise, even with some absorptive acoustic treatment. Main Roads considers that there is likely to be a poor level of acoustic amenity on these balconies. On this basis, Main Roads have recommended that the proponent should consider how reasonable acoustic amenity could be practically provided to balconies facing Great Eastern Highway.

A condition of planning approval has been recommended for measures to be implemented such that the development complies with the requirements of SPP5.4 and AS2107:200. As suggested by Main Roads, a footnote has been recommended to draw the proponent's attention to the matter of acoustic amenity for balconies facing Great Eastern Highway.

Waste Management

The waste management plan provided by the applicant (Attachment 1B) has been reviewed by the City's Manager Health & Ranger Services and the City's waste collection contractor. In summary, the City is satisfied with the proposed waste management arrangements and will provide the following:

- General waste – 5 x 3m³ bulk bins collected twice a week from the service bay accessed from Hawksburn Road (abutting the northern boundary of the site);
- Recycling – 12 x 1100L bins collected weekly from the service bay;
- Bulk waste – 30m² bin provided annually in the easement area of the shared service bay with the development on 5 Hawksburn Road.

It is noted that the specific traffic safety measures outlined in Part 5.2 of the applicant's Waste Management Plan (Attachment 1B) will need to be further discussed with the City and the City's waste collection contractor, so that clear operational practices can be established.

Given the above, a condition of planning approval requiring the proponent to update the waste management plan to reflect the agreed traffic safety practices has been recommended. The condition will also reflect that waste management practices on the property shall occur in accordance with the approved waste management plan.

Car Parking

The requirements under Part 6 of the R-Codes require 126 car parking bays for residents, 37 bays for visitors. Table 2 of LPS15 requires a total of 30 car parking bays for the office tenancies. This represents a total requirement of 193 car parking bays for the development. The development plans indicate a total of 266 car parking bays for the development which equates to an overall surplus of 73 car parking bays.

It is noted that 48 of the car parking spaces on the first basement level are provided as car-stacker bays – i.e. 24 conventional car bays with a mechanical car stacker providing one additional space over the top of each of those bays. Where the car stacker is in use, the bottom car will need to be removed to allow the top car to exit. The applicant has verbally confirmed that these bays will be assigned for use by the residents of the development rather than for visitors or by the office tenants. For practicality sake, it is reasonable to anticipate that a car stacker bay will be associated with some of the larger dwellings which may be assigned two car parking bays (given the overall surplus in the number of car parking spaces, and the practical scenario where at least once car parking bay is provided for each dwelling, 52 dwellings in the development can be assigned 2 car parking bays each). Given this, the City is supportive of the proposed car stacker arrangement.

Notwithstanding the overall surplus of 73 car parking bays, the applicant has proposed reciprocal use of car parking spaces between visitors and office tenants. In accordance with the R-Code and LPS15 standards, a total of 67 bays are required for visitors and the office tenancies. The applicant proposes that parking for visitors and the office tenancies will be provided by the 51 bays on the Ground Floor and Mezzanine Floors only – parking spaces in the basement levels will be provided for use by residents only. The applicant has mistakenly indicated (Attachment 2) that based on a Nett Lettable Area (NLA) of 850m², 28 bays are required for the offices. The development plans in fact reflect a NLA of 873m², on this basis 30 (rounded up from 29.1) car bays are required for the office component of the development. Given this 21 bays remain for the dedicated use of visitors at any time.

The applicant submits that most, if not all of the 30 bays provided for the offices can be available for use by visitors outside of business hours on weekdays, and at

anytime of the day on weekends and public holidays. The applicant has indicated that this arrangement can be included in the office tenancy sales contract.

In determining whether or not the reciprocal parking arrangement proposed in this application is acceptable, it is appropriate to consider the decision by the Metro Central JDAP on a similar matter for the mixed use development on the adjoining 5 Hawksburn Road. In that application, 23 parking bays for visitors, and 7 parking bays for the two office tenancies were required. The Metro Central JDAP accepted the provision of 16 bays dedicated for the use of visitors at any time, with the 7 bays allocated to the office units made available for the use of visitors outside business hours.

Having regard for the above, the City considers the proposed car parking arrangement acceptable. It is noted that contention over allocation of the car parking bays is more likely to arise where Strata subdivision occurs. On this basis, the City requires the applicant to implement a reciprocal car parking clause in the Strata By-law prior to the transfer of any of the strata lots. The By-law/reciprocal parking clause must outline how the suitable reciprocal parking arrangements will be managed, to the City's satisfaction. Where the property is not strata titled prior to use or occupation, the City will require implementation of an approved car parking management plan. A condition of planning approval to this effect has been recommended.

Public Art

Given the estimated development cost of \$40,000,000, the cost of the public artwork is to be no less than \$400,000 to be consistent with the 1% requirement of LPP11. The provision of public art needs to be consistent with the City's Public Art Master Plan, and is subject to assessment by the City's Public Art Advisory Panel (PAAP).

Where a proposal for public art contribution in kind does not satisfy the assessment criteria under the City's Public Art Master Plan, the applicant may consider paying cash-in-lieu of the public art contribution. The cash-in-lieu arrangement is subject to approval by the City.

The applicant has proposed public art contribution in the form of 'off-form concrete wall panels', as well as metallic artwork screens to the Hawksburn Road and Great Eastern Highway facades of the development.

The proposed public art concept has not been approved by the City's Public Art Advisory Panel (PAAP) at this stage. The PAAP adopts the following principles in assessing artwork:

- Concept Innovation – The artwork is to be designed by a professional artist that shows strong vision, craftsmanship, choice of materials, uniqueness and public engagement.
- Context (sensitive to surroundings) – the artwork is to be designed for the specific site and considers the relevant themes, architectural, historical, geographical and/or socio-cultural context of the site and community identity.
- Public Domain – the artwork must be clearly seen and/or accessible from the public realm, and must positively impact on the visual amenity of the development.

- Public Safety – the artwork is designed, constructed and installed with best practice risk management and the artwork does not present a hazard to public safety.
- Longevity – the artwork is design is structurally sound and resistant to theft, vandalism, weathering and excessive maintenance.
- Diversity – artworks should be diverse in style, scale and media, ranging from experimental to established art forms. This may also refer to artists from assorted backgrounds and ranges of experience.

Further workshopping between the applicant and the City's PAAP is required in order to achieve a satisfactory outcome.

It has been recommended that a condition of planning approval outlines the requirement for satisfactory provision of public art.

Conclusion:

The subject proposal has been assessed in accordance with the relevant statutory planning documents and considered to be consistent with the intent and objectives of The Springs Structure Plan, and Design Guidelines. The variations to the development standards are not considered to present any adverse amenity impacts and the development is expected to enhance the locality. On this basis, the application is recommended for approval subject to conditions.

ATTACHMENT 1 – Applicant's Design Report (1 October 2014)

Lot 1017 (3) Lawburn Road Rivervale

LG Reference: 648/2014

DAP Reference: DAP/14/00637

DEVELOPMENT APPLICATION

1017 SPRINGS | RIVERVALE

OCTOBER 2014



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MIXED – USE RESIDENTIAL DEVELOPMENT
1017 SPRINGS | RIVERVALE

1.0 INTRODUCTION

This report forms the Development Application in support of the proposed commercial and residential eight (8) storey mixed use development on Lot 1017 Rowe Avenue The Springs, Rivervale on the corner of Hawksburn Road and Rowe Avenue.

The proposed development comprises 147 apartments together with 6 commercial tenancies with shared residence Pool Deck and Amenity Area including a Residence Lounge, Barbeque Cabana, Gymnasium and Pool.

This report accompanies an application for planning approval to the City of Belmont. It represents details of the proposed development and addresses all planning issues relevant to the proposal in accordance with The Springs Rivervale, Design Guidelines.

1.1 SITE INFORMATION

The proposed development is situated on the south east portion of The Springs, Rivervale development adjacent to Great Eastern Highway, Belmont within the City of Belmont. Lot 1017 has a land area of 2,826 sqm, and has a street frontage to Hawksburn Road and Great Eastern Highway.

Address:	Lot 1017 The Springs, Rivervale (3 Hawksburn Rd, Rivervale)
Developer:	Dragon Century Springs Pty Ltd
Architect:	Hillam Architects
Planning Authority:	City of Belmont
Local Council:	City of Belmont
Planning Data:	
Site Area:	2,826 m ²
Zoning:	Mixed Use
R-Code:	R80/ R100
Plot Ratio:	1.25
Boundary Setback:	Refer to Table 03 Planning Assessment
Building Height:	Podium 12.0m, Tower 27.0m
Finished Levels:	Various, refer Architects Drawings appendix

Refer also to Certificate of Title attached in Appendices.

Image 01: Proposed Development from Great Eastern Highway





1.2 DESIGN SUMMARY

Hillam Architects have an excellent track record in designing and delivering innovative high quality mixed use buildings.

In the design of the commercial spaces and apartments for Lot 1017 we believe the project will enhance the public domain and streetscape, whilst providing appropriate entry level housing in a desired location that is close to the river, city and major transport infrastructure including the domestic and international airline terminals.

The project consists of some 148 studio, one and two bedroom apartments of varying design and sizes. The project is also provided with 266 parking bays inclusive of two disabled bays which is in excess of the 233 parking bays required. Significant points of interest are:

1. DESIGN QUALITY

The vision for the project is to provide the high quality of building design demonstrated in other apartment projects designed by Hillam Architects. The highly articulated building form coupled with a diverse range of materials will be a positive addition to the streetscape.

2. COMPLIANCE

The majority of the building mass fits well within the 27 metre height limitation as outlined in The Springs, Rivervale Design Guidelines and is lower than the limit by 1.3m. The South-West component of the building however exceeds the height limit by 2.3m. It is in our view that a building form that steps down from South-West to North-East responds well and appropriately to the building form and mass of the adjoining developments. The design proposes some additional variations to the building envelope for reasons explained later in this report. The proposed variations improve the design outcome, particularly in reference to sustainability measures and streetscape response. Particular care has been taken to ensure where variations occur the impact on the amenity of the street or neighbouring lots is minimal.

3. DIVERSE AND AFFORDABLE HOUSING

The mix of compact studio, one and two bedroom apartments provide a diverse range of affordable housing options. The provision of 148 dwellings in this location is an excellent outcome given the dwelling targets set out in the State Government's 2031 Policy. Apartments have been sized with a particular focus on providing high quality dwellings at price points which will allow greater accessibility to those who may have traditionally found it difficult to afford to live in inner urban areas.

4. SUSTAINABILITY

Hillam Architects have an excellent track record in providing highly sustainable apartment buildings. The Verde Apartments in East Perth are an excellent example of this. Various progressive systems will be employed to ensure appropriate and practical sustainable outcomes will be provided.

Image 02: Proposed Development from Great Eastern Highway





1.3 RESIDENTIAL SUMMARY

The application seeks approval for an eight (8) storey mixed used development comprising 148 apartments configured over seven and eight levels with parking provided on ground with two basement levels. The proposed design provides a good mix of apartment types with a primary focus on providing a diverse range of housing that is also affordable.

In summary the proposed design consists of:

- Two basement levels, Ground Floor and a mezzanine level with 266 residential and commercial parking bays, 154 residential stores, 157 bicycle racks, bicycle storage, fire pump room, fire tanks, bin store, and Western Power Sub Station.
- Seven different studio apartment types, six different one bedroom apartment types, two different two bedroom / one bathroom apartment types, ten different two bedroom / two bathroom apartments and a three bedroom / two bathroom apartment type have been provided. The areas of these apartments vary significantly providing entry level apartment buyers with many options which are both affordable and also of higher amenity.
- Residence amenities located at the podium level include the Roof Terrace, Pool Deck and Amenity Area including a Residence Lounge, Barbeque Cabana, Gymnasium and Pool.

Table 01 Simplified Apartment Summary

Unit Mix	Number of Apartments	Percentage (rounded)
Studio	24	16%
1 x 1 Bed	63	43%
2 x 1 Bed	5	3%
2 x 2 Bed	48	33%
3 x 2 Bed	7	5%
TOTAL	147	100%

1.4 COMMERCIAL SUMMARY

The proposed development has five (5) commercial tenancies intended to be used as a potential single combined convenience store or a combination of convenience store or office use, although no specific tenants have been determined at this time. The commercial tenancies all front Great Eastern Highway with the corner tenancy also having frontage to Hawksburn Road and the adjacent Public Open Space. The tenancies are provided with unisex disabled ablutions, which also contain shower facilities together with the inclusion of secure lockers as part of the commercial End of Trip Facilities.

The commercial tenancies are of various size, and have large glazed shop fronts with direct street access together with a feature awning to the full elevation, which combine to activate the street frontage.

Tentatively the parking provisions are based on the higher requirement for a convenience store as identified within the Local Planning Scheme No 15 Table 2 with a maximum of 52 commercial parking bays being provided.

Table 02 Schedule of Apartments & Commercial Tenancies

Type	Plot Ratio Area (sqm)	Ground	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	TOTAL MIX	Plot Ratio Area (sqm)
COMMERCIAL												
Tenancy 1	203										1	
Tenancy 2	147										1	
Tenancy 3	162										1	
Tenancy 4	124										1	
Tenancy 5	119										1	
Tenancy 6	149										1	
TOTAL	904										6	904
Studio	E1	46	0	0	1	1	1	1	1	0	5	230
Studio	E1a	46	1	1	1	1	1	1	1	0	7	322
Studio	E1b	46	1	1	0	0	0	0	0	0	2	92
Studio	E1c	50	1	1	0	0	0	0	0	0	2	100
Studio	E1d	44	1	0	0	0	0	0	0	0	1	44
Studio	E1e	52	0	0	1	1	1	1	1	0	5	260
Studio	E1f	60	1	1	0	0	0	0	0	0	2	120
1 x 1 Bed	A1	55	4	4	1	0	0	0	0	0	9	495
1 x 1 Bed	A1a	55	4	3	0	4	4	4	4	0	23	1265
1 x 1 Bed	A1b	58	1	1	0	0	0	0	0	0	2	116
1 x 1 Bed	A2	51	0	0	4	4	4	4	4	0	20	1020
1 x 1 Bed	A2a	49	0	0	1	1	1	1	1	0	5	245
1 x 1 Bed	A3	56	2	2	0	0	0	0	0	0	4	224
2 x 1 Bed	B1	67	0	0	0	1	1	1	1	0	4	268
2 x 1 Bed	B1a	72	0	0	1	0	0	0	0	0	1	72
2 x 2 Bed	C2	77	2	2	2	2	2	2	2	2	16	1232
2 x 2 Bed	C3	80	1	1	1	1	1	1	1	1	8	640
2 x 2 Bed	C3a	84	0	0	1	1	1	1	1	0	5	420
2 x 2 Bed	C4	83	0	1	1	1	1	1	1	1	7	581
2 x 2 Bed	C4a	78	0	0	0	0	0	0	0	1	1	78
2 x 2 Bed	C5	82	0	0	0	1	1	1	1	0	4	328
2 x 2 Bed	C6	83	1	1	0	0	0	0	0	0	2	166
2 x 2 Bed	C7	83	0	0	1	0	0	0	0	0	1	83
2 x 2 Bed	C8	81	0	0	0	0	0	0	0	2	2	162
2 x 2 Bed	C9	78	1	0	0	0	0	0	0	0	1	78
2 x 2 Bed	C10	101	1	0	0	0	0	0	0	0	1	101
3 x 2 Bed	D1	102	0	1	1	1	1	1	1	1	7	714
Total per floor			22	20	17	20	20	20	20	8	153	
											Total Plot Ratio Area (sqm)	10360
											Site Area (sqm)	2826
											Proposed Plot Ratio	3.67



2.0 SITE PLANNING

2.1 SITE CONTEXT & PLAN ANALYSIS

Figure 01 Site Context



Figure 02 Plan Analysis



Lot 1017, Hawksburn Road is situated within the Great Eastern Highway – Mixed Use Precinct of The Springs, Rivervale in the City of Belmont. The corner site is accessed off the secondary Hawksburn Road which runs perpendicular to Great Eastern Highway, and has frontage to the adjacent Public Open Space.

The vision for this precinct is the establishment of a fresh and unique residential area that creates a well-designed gateway into the city. As noted within the design guidelines the proximity of the site to the City of Perth and City of Belmont, public transport and high quality natural amenity creates a unique opportunity for the proposed development.

There has been strong demand in the area for medium to high density mixed use residential together with an appropriate level of public open space. The proposed development provides active uses at the ground level which promote an active, inner suburban lifestyle to emphasise a sense of local community whilst creating a strong urban edge to Great Eastern Highway.

Figure 03 Land Survey





3.0 URBAN DESIGN

3.1 PRECINCTS

Lot 1017 is situated within the Block Three - Great Eastern Highway Precinct at the corner of Hawksburn Road and Great Eastern Highway. The vision for this precinct is the establishment of a strong, unified commercial and mixed-use edge that will be pivotal to the thriving of The Springs, Rivervale.

Our design responds to the proposed identity for the precinct with an eight storey residential tower that is setback atop three storey podium which sits over the ground level residential entry, ground level commercial tenancies, two basement levels and a mezzanine levels parking.

3.2 TOPOGRAPHY

The land is currently a vacant sandy site typically flat with a gentle fall of approximately 1.4 metres to the south west corner and the boundary facing the adjacent Public Open Space and the cul-de-sac of Hawksburn Road. The proposed development addresses this natural topography in a manner that allows simplified access to the residential lobby and parking facilities from Hawksburn Road as well as direct pedestrian access to the proposed commercial tenancies facing Great Eastern Highway

Landscape planting along the south west boundary will be at natural ground level separating the development from the footpath and adjacent reserve.

As identified within the Guideline the primary objective of the proposed development is to retain and enhance the existing typography whilst retaining view corridors with visual and physical access to the river maximised. However given the proximity and frontage of the site to Great Eastern Highway, the opportunity to gain views to the river is limited. In lieu of this the proposed development looks to respond to the context of the major arterial roadway, addressing the signposting opportunity of the corner of the cul-de-sac of Hawksburn Road and Great Eastern Highway, and the mass and scale of the adjacent development on Lot 1019 and 1020.

3.3 NEIGHBOURHOOD CONTEXT

The project forms a part of the City of Belmont's lively diversity with distinct apartments, many with individual characteristics, embracing both Great Eastern Hwy and Hawksburn Road. The adjacent lots to the south of the site is Lot 1019 and Lot 1020, which are both under construction and represent the maximum height limit within The Springs development addressing Great Eastern Highway.

To the north the adjacent lots while yet to be developed include Lot 1016 which has street frontage to both Great Eastern Highway and Rowe Avenue, and Lot 1015 both Great Eastern Highway, Rowe Avenue and the major entry to The Springs Road Five. The area is generally described as a mixed use precinct with the proposed built form along Great Eastern Highway typically having a consistent built form in response to the Design Guidelines.

Sophisticated architectural form and rich material articulation will encourage a diverse range of residents and users who will contribute to the local community. The design incorporates public art and quality landscaping which will contribute to celebrate the location, with the public art to specifically reference aspects of local history and the immediate environment.

3.4 BUILDING SEPARATION PRINCIPLES

The design approach acknowledges the proximity of buildings should not be detrimental to the amenity of the neighbouring lots, ensuring adequate access to the necessary natural elements of sunlight and prevailing breezes. The configuration of the project is mindful of the impact on the original building envelope proposed by the Guidelines and does not seek to significantly vary from this.

However as noted within the submission it is proposed to seek a variance in regards to the design response to the two tower elements within the Design Guideline.

3.5 VIEW CORRIDORS

We recognise the principal of view corridors however it is suggested the design guidelines do not practically envisaged those lots on Great Eastern Highway would necessarily also have views toward the river. However the proposed development looks to maximise the view opportunities along Hawksburn Road while responding to Great Eastern Highway together with the precedent of the adjacent developments and maintains an expansive outlook in virtually all directions. It is suggested the proposed development still maximises those view corridors identified within the Guideline towards the Swan River, the city and peninsula beyond, whilst also not diminishing any of the available views from the public realm given its location and aspect.

3.6 PODIUM AND TOWER TYPOLOGY

The proposed development maintains the proposed tower and podium typology as envisaged for Lot 1017 within the Guidelines.

However the design response proposes a high level of architectural expression including the use of materials and form to articulate the built form to read as two separate towers in the spirit of the Design Guidelines. It is envisaged the podium level will enhance the pedestrian experience by setting back the upper levels to diminish the perception of the building bulk. Furthermore, the podium aspect serves to mitigate unwanted wind effects whilst consolidating the intended scale and commercial function of the Great Eastern Highway and Hawksburn Road at the street levels.

3.7 TREE RETENTION

Noting the Design Guideline requirement to retain the existing *Melaleuca lanceolata* (Moonah) situated on the southern side of the property an initial assessment was made in terms of the condition of the tree and the for the management of the tree throughout the life of the project.

The report compiled by Paperbark Technologies Pty Ltd highlights the existing tree displays very poor form, with the structure of the tree severely compromised given the eastern stem has already started to crack and fail, decay within the centre of the stems, previous limb failures and inverted wounds displaying an increase in wood tissue degradation. In summary it is highlighted the specimen is not an ideal tree to be retained. In addition the changes in soil level following the proposed development will be significant, the proximity of the proposed building and further area required to excavate near the tree will render the tree a safety issue and either experience the eastern stem to fail onto the ground



or the tree will rapidly decline.

The Arboriculture Report recommend to remove this tree and replace it with a more suitable specimen in a 500lt size once construction of the building is finished. On this basis it is envisaged the location of the replacement tree will be resolved with the City in greater detail during the design development stage and it is proposed this is initially conditioned as part of the approval for the proposed development to allow a suitable dialogue between all parties.

Refer also to Appendix E and the Arboriculture Report prepared by the Paperbark Technologies Pty Ltd attached.

3.8 PUBLIC ART

In accordance with The City of Belmont Local Planning Policy No. 11 (LPP 11) one percent of the total construction cost will be allocated for the provision of public art. Current concepts indicate the manner in which Hillam Architects propose to work with an artist to integrate the artwork into the building fabric. In previous apartment projects including The Foundry in Roydhouse Street, Subiaco and Verde in Wittenoom Street, East Perth we have successfully worked with nationally acclaimed local artist, Stuart Green who has created excellent artworks integrated into the publically accessible areas of each of these projects.

Within The Springs Precinct itself, we have also successfully worked with a number of individual artists such as Stuart Green (i.e. Lot 1018), Rick Vermey (i.e. Lot 1013), and Jennie Nayton (i.e. Lot 1012) together with John Terry (i.e. Fusion Apartments, Burswood) to create unique responses to each site. In keeping with this approach we will work with an artist whose work is keeping with the design philosophy and who is critically well versed in the proposed materials of concrete and metal.

The current public art concepts for Lot 1017 The Springs include:

1. Off form concrete wall panels

The façade treatment to the Commercial Tenancies is proposed to be an artist designed off form concrete panel. The simple geometric forms will be enriched by the robust textured of off form concrete elements that will punctuate the shop front glazing with a dynamic textural patterning. These are envisaged as high quality elements with the form work designed by the engaged artist and will be a real collaborative process between the artist, architect, builder and its sub-contractors.

Critical to the success of these elements will be the reinterpretation of the geometric elements of the façade together with the artist theme relevant to the precinct, embracing the location's heritage and history will also be key to the refinement of these elements. We note given the very tactile immediacy this element will have to the pedestrian key questions of scale, clarity and readability will be critically to the artwork.

2. Metallic art screens

The proposed privacy screens to the residential balconies will be commissioned metallic art screens. The screens will reflect a theme which is relevant to the precinct, embracing the location's heritage and history. In this instance the extensive screening at street level potentially offers the opportunity for a story to be told. This should enrich the pedestrian experience offering occupants, visitors and passers-by an insight into local heritage. We envisage that a number of metallic finishes may be employed as part of the artwork to create a rich luxurious palette.

It is also anticipated key element of these screens will be back lit to ensure the effect and interest is also part of the night time experience of the streetscape.

Whilst the proposed extent of the metallic art screens is typically indicated on Figure 04 and Figure 05, what is not clearly indicated is the additional area of screening provided to the car parking entry off Hawksburn Road and adjacent to Lot 1018. This double height panelling is seen as a larger element that will again also be illuminated at night and will be an opportunity or canvas to further articulate the artist's vision.

Image 03 - Verde Apartments, East Perth - Hillam Architects & Stuart Green



Image 04 Roydhouse Apartments, Subiaco - Hillam Architects & Stuart Green





3.8 PUBLIC ART

Figure 04 Great Eastern Highway artwork integration



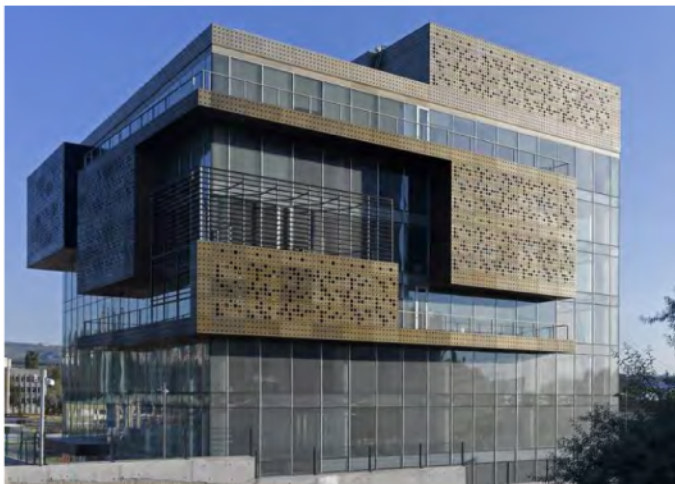
Figure 05 Hawksburn Road artwork integration - PUBLIC ART





3.8 PUBLIC ART

Image 05-08: Precedent Images of Perforated Metal Art Screens





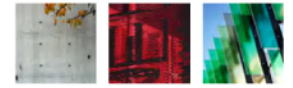
4.0 PLANNING ASSESSMENT

As part of our design process particular consideration was given to the response to the Springs Rivervale Design Guidelines and the requirements specific to Lot 1017.

Outlined below is a planning assessment of the proposal against the relevant statutory and policy requirements applicable to the proposed development. A development assessment summary table has been provided together with detailed discussion and justification of the key areas of compliance

Table 03 Planning Assessment Table

Matter	Document	Requirement	Compliance
Zoning (Use)	Guideline	Mixed Use	Compliant. The proposed development includes five (6) commercial tenancies at ground facing Great Eastern Highway and 148 residential apartments above.
Density	Guideline	R80/100	Refer to the detailed discussion below.
Plot Ratio	LPS 15	Maximum plot ratio 1.25	The proposed development seeks to apply the requirement of Local Planning Scheme, Clause 5.3.4 in terms of the bulk and scale. Refer to the detailed discussion below.
Maximum Built Envelope	LPS 15 R-Codes	Plot ratio for Mixed Use Zoning will be determined by the Maximum Building of; Envelope (MBE) as follows: - Podium 12.0m - Tower 27.0m City of Belmont LPS 15 Clause 5.3.4 allows the plot ratio to be varied at the discretion of the City where the development is in accordance with the Character of The Springs	The proposed development seeks to apply the requirements - Local Planning Scheme, Clause 5.3.4 in terms of the bulk and scale; and - the design principle requirement of the R-Codes Clause 6.1.1 (P1). Refer to the detailed discussion below.
Building Depth	Guideline	All residential building and residential sections of mixed use buildings should have a plan depth of no greater than 18.0m. Podium levels may be excluded when their use is for commercial or retail function or the provision of parking.	Compliant.
Height	Guideline	Minimum – 7.4m Maximum Podium – 12.0m Maximum Tower – 27.0m	The proposed western tower element, addressing the intersection of Hawksburn Road and Great Eastern Highway, is noted as slightly higher than the maximum height limit however the proposed eastern tower element is slightly under. Considering the height and mass of the adjacent developments and the fall across the frontage to Great Eastern Highway, it is suggested the general massing of the height to this frontage sits below the maximum limit. Refer to the detailed discussion below
Setbacks	Guidelines	Podium setbacks: - North Eastern – Nil - North Western – Nil - South Eastern – Nil - South Western – Nil Tower setbacks: - North Eastern – Nil	Podium setbacks: Compliant North Eastern – 3.0m North Western – Nil South Eastern – Nil South Western – Nil Tower setbacks: Variation Sought - North Eastern – 3.0 to 7.0m



Matter	Document	Requirement	Compliance
		<ul style="list-style-type: none"> - North Western – 5.0m - South Eastern Upper 1 – 5.0m - South Eastern Upper 2 – 8.0m - South Western – 3.0m 	<ul style="list-style-type: none"> - North Western (Building) – 5.0m - North Western (Balconies) – 4.2m - South Eastern Upper 1 (Building) – 5.0m - South Eastern Upper 1 (Balconies) – 3.3m - South Eastern Upper 2 (Building) – 4.19m - South Western (Building) – 3.0m - South Western (Balconies) – 2.2m Refer to the detailed discussion below.
Open Space	R-Codes	Each dwelling requires 10sqm with a minimum dimension of 2.5m and access from a Living Room.	Compliant.
	Guideline	Each dwelling requires minimum balcony size of 3.6sqm with minimum dimension of 1.8sqm	Compliant.
Vehicle Access	Guideline	The Detailed Area Plan Figure 6.3 Block Three indicates a crossover location parallel to the boundary with Lot 1018.	Compliant.
Car Parking	R-Codes	1 space per dwelling (for medium sized dwellings 75-100 sqm) plus 0.25 visitor bays per dwelling	Compliant. The basement levels provide car parking accessed via a single point of access. The design of the car park and access enables vehicles to enter and exit the development in forward gear. Residential: 185 + 24 Car Stackers (B1 & B2) Visitor: 6 (B1) Commercial: 28 (Upper) Reciprocal: 24 (Ground) 6 spaces for every 100sqm of commercial Net Leasable Area (i.e. NLA) Including: Therefore 148 resident bays plus, 54 - 52 Commercial bays provided including 2 disabled commercial bays and 37 visitor bays provided required. - 27 Reciprocal visitor bays provided Refer to the detailed discussion below.
End of Trip Facilities	Guidelines	1 private storage bay for bicycle/scooter/ motorcycle plus 1 secure bicycle bay publically accessible and sheltered for every 8 units	Compliant. Including: 95 Residential bicycle bays provided 53 stores larger than 4.5sqm 20 Visitor bays 167 TOTAL
	LPS 15	Commercial staff shower, changing facilities and lockers at the discretion of the City. 1 secure bicycle bay publically accessible and sheltered for every 25sqm	Compliant. Including: 39 Bicycle bays

Matter	Document	Requirement	Compliance
Visual Privacy	R-Codes	Major openings and unenclosed outdoor active habitable spaces, which space	Compliant
Solar Access	R-Codes	Development designed such that at midday 21 June it does not cast a shadow onto the adjoining property greater than 50% of the adjacent site.	Compliant. Refer to Overshadowing Diagram.
Tree Retention	Guideline	Design guidelines highlight	Following an assessment of the protected tree Melaleuca Lanceolata (Moonah) (i.e. Rottnest Island Tea Tree) by an independent specialist, Paperbark Technologies Pty Ltd it recommend the removal of the tree. It is proposed the tree is replaced with a new 500 lt specimen installed prior to Practical Completion of the development. Refer to the detailed discussion below.
Public Art	Guideline	City of Belmont Local Planning Policy No 11 (LPP 11) requires all development proposals greater than \$4.5m to provide	Compliant.
Sustainability	Guidelines	Acceptable requirements include: Minimum 1kW on site renewable power generation per residential unit Minimum 1kW per 100sqm on site renewable power generation per commercial tenancy Peak energy demand demonstrable reduced in commercial tenancies using good solar design.	The proposed development will provide a 5kW photovoltaic solar energy system to provide on-site renewable power for the common area lighting, together with low-energy efficiency fittings. Refer to the detailed discussion below.



4.1 MAXIMUM BUILDING ENVELOPES

The Guidelines indicate a configuration of two towers on a podium level for Lot 1017 with a 27 metre maximum building height with a 12.0 metre maximum podium height. However our initial design studies for the site suggested this represented a far from ideal solution in respect to the proximity of the potential towers to each other and issues of dwellings overlooking and privacy. In addition the aesthetics of two relatively narrow towers as indicated in the Guidelines in relation to the overall street scape is also in question. It is our view that a continuous tower with eight levels to the South West and seven levels to the North East would better complement the form of the adjoining developments on Lot 1019 and Lot 1020 Great Eastern Highway and would create a bridging transition between the taller development to one side and the lower development to the other side. In order to follow the spirit of the guidelines the proposed tower is articulated as two separate and distinctive elements. It is our view that there is some scope for flexibility in respect to the configuration of the tower on Lot 1017.

Adopting a performance based approach and with regard to the ‘design principle’ requirements of the R-Codes (i.e. Clause 6.1.1 (P1)) and Local Planning Scheme, Clause 5.3.4; the proposed development is considered to meet the requirements in that the bulk and scale is consistent with the type of development envisaged in the Guideline at this location.

The façade of the proposed development incorporates strong articulation and visual interest through the folded vertical cladding, cantilevered balconies, and a material / colour palate which assist together with the massing of the building to address the issue of the two tower form. The architectural expression and articulation of the building form together with the selection of materials and finishes has been highly considered to emphasis the expression of the tower elements, with a simplified paired back palette and massing between, to ensure the intent of the Guidelines is reiterated in full.

As noted subsequently within the Report the proposed development contributes to the creation of a vibrant streetscape and potential for interaction with pedestrians that will facilitate the creation of a sense of community. This is achieved with the provision of commercial activity at street level facing Great Eastern Highway, large functional balconies to the street creating a living façade, no blank walls, strong built form and articulation and pedestrian awnings to the street.

The Guideline indicate plot ratios are not applicable to sites nominated as Mixed Use in accordance with and in accordance with the Local Planning Scheme, Clause 5.3.4 the plot ratio may be varied at the discretion of the City where it is considered the development is in accordance with the character of The Springs locality.

The ‘Maximum Building Envelope Overlay’ diagram indicates the minor variance by which the proposed development seeks to modify the maximum building envelope identified within the Guideline. It is noted the footprint of the two tower maximum building envelope as indicated within the Guideline is sought to be modified with a continuous floor plate, which is however clearly articulated in material and building mass in elevation as two towers to all street frontages.

Accordingly with minor variance it is suggested the proposed development complies with the intent of the Guidelines in respect of the maximum building envelope.

Figure 06: Maximum Building Envelope Overlay



4.2 BUILDING DEPTH

The Guidelines articulate the design objectives as ensuring the bulk of the proposed development is in scale with the future context which is understood to be in keeping with the maximum building envelope of the Guidelines themselves.

Accordingly with minor variance it is suggested the proposed development complies with the intent of the Guidelines in respect of the maximum building envelope.



4.3 PLOT RATIO

The Guideline indicate plot ratios are not applicable to sites nominated as Mixed Use in accordance with and in accordance with the Local Planning Scheme, Clause 5.3.4 the plot ratio may be varied at the discretion of the City where it is considered the development is in accordance with the character of The Springs locality.

The early design process that was undertaken was therefore cognisant of both this and also the key criteria essential for the consideration of variations to the plot ratio. The overall design ethos was one of achieving a very high architectural design outcome while providing superior amenities to the project, both for residents of the building as well as the public.

These elements have been described in detail throughout the report, but some of the key examples are summarised below:

- Appropriate view corridors Informal surveillance of the street and/ or other public spaces
- Superior tenant amenity on the podium level, including pool, large gymnasium, barbeque dining and cabana areas, and residence lounge
- Large commercial tenancies addressing both Hawksburn Road and Great Eastern Highway
- Podium roof terrace with feature pebble paving and plantings
- High level architectural design
- Resident facilities such as bike storage provided to encourage high resident usage
- Ample and excess car parking facilities
- A significant contribution to the public art for the community

In addition it was considered an important factor in the overall design that the apartments should provide a broad spectrum of price points, though with the majority of apartments generally fitting the affordable end of the market. This was considered a strong means by which to ensure an optimal mix of tenants and residents to add to the vibrancy of the local community.

It became clear that additional plot ratio would be required to facilitate meeting all of the above criteria.

The resultant plot ratio of 3.58 delivers on providing the associated high level facilities fitting of the significance of the project's location and ensures apartments will meet the required affordability profile and not just cater to the high end luxury market.

Importantly it is suggested the design achieves the important view corridor setbacks and bulk and scale requirements for the site.

4.4 BUILDING HEIGHT

As noted the Guidelines identifies for Lot 1017 two tower elements of a maximum height of 27.0m, the height of the main section of the building is 1300mm below the required height limit, whilst the Western portion of the tower exceeds the height limit by 2.3m. The proposed additional height is considered to be a minor variation and is a result of achieving effective floor to ceiling heights, and a response to the height of the adjacent Lot 1019 emphasising the corner intersection

The proposed height is generally in keeping with the intent of the Precinct Plan

The Guidelines require the podium does not exceed 12.0 metres and all of the podium building elements of the proposed development sit well below the required maximum height.

The development proposes a 29.5m height limit of the South West tower element in lieu of 27 metres detailed in the Guidelines for the tower typology. Again, this tower element is proposed to be constructed up to the western boundary to enable the site to be developed to its full potential and provide a viable amount of apartments and services.

Adopting a performance based approach and with regard to the 'design principle' requirements of the R-Codes (i.e. Clause 6.1.1 (P1)) and Local Planning Scheme, Clause 5.3.4; the proposed development is considered to meet the requirements in that the building height is consistent with the type of development envisaged in the Guideline at this location.

Again the Guideline contemplates two tower elements with one located to the South West of the site and a thinner tower element running east and west to the North West. However we understand, following discussions between the applicant and the City's officers, the City is supportive of the modified tower element, as detailed in Section 3.1 of this Development Application report.

In addition it is understood that Landcorp are also supportive of the proposed development and the minor variance to the building height limited noting it responds to the corner site location and the adjacent Lot 1019. The comments from the Landcorp Review Panel and its meeting with the design team have also been included for reference as an Appendix to the Report.

The alternative design solution will not impact on the adjacent Lot 1018 to gain adequate access to daylight as it is located to the east of the subject site. The extent of overshadowing from the proposed development only marginally varies from that prescribed by the maximum building envelope as defined in the Guideline. It is also noted there is a very limited potential view corridor through the adjacent Lot 1018 towards Rowe Avenue due to the approved building design on the adjacent property.

With regard to visual privacy, the openings facing the eastern boundary are fully compliant with the provisions of the R-Codes.

The alternative design solution will not impact on the streetscape, character or scale of the development and the proposed tower element is well set back from Great Eastern Highway. The perceived bulk of the building is mitigated by the podium element at street level.

The alternative design solution will not impact on the provision of open space as an abundance of open



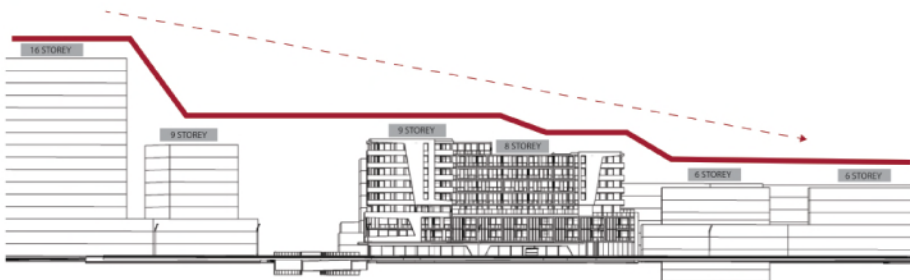
space and landscaping has been provided throughout the site.

This alternative design solution will have no adverse impact on the visual links to the river.

The 'Comparative Building Height Diagram' indicates the key relationship achieved by the proposed development with its immediate neighbours Lot 1019 and Lot 1016.

Accordingly with minor variance it is suggested the alternative proposed tower satisfies the intent of the Design Guidelines, and warrants support and approval.

Figure 07 Comparative Building Height Diagram



4.5 BUILDING SEPARATION

The Guidelines identify the spatial relationship between buildings as being potentially a significant determinant of urban form and a key design objective.

The design objectives seek to ensure:

- Each building having adequate access to daylight and natural ventilation as well as visual and acoustic privacy.
- Create proportional streetscapes and massing scale
- Maximise visual links to the river from all precincts.
- Allow for the provision of open space with appropriate size and proportion for recreational activities for building occupants.

The development proposes an alternative design solutions for two tower elements identified within the Guideline to enable the site to be developed to its full potential whilst also in harmony with the Design Objectives. It is suggested the proposed development and the alternative tower does not adversely impact the streetscape, access to daylight and natural ventilation, visual and acoustic privacy and open space.

The alternative design solution will not adversely impact on the adjacent Lot's to gain adequate access to daylight as they are typically located to the east of the subject site. The overshadowing diagrams prepared to represent the proposed development indicates the adjacent Lot 1019 is not affected at all, and the impact on the adjacent Public Open Space is less than permissible using the Guideline maximum building envelope.

The Detailed Area Plan within the Guideline also nominate a large 'undeveloped' area above the podium level, understood to be created by the nominated 18.0 metre separation within the centre of the site extensively interpreted as providing view corridors through the site only. However noting this undeveloped area would be substantially overshadowed by the second tower element it would therefore be largely undesirable as a communal outdoor area. This 18.0 metre separation between the tower elements would simply be a waste of urban land, and would result in areas of low amenity and limited functionality.

It is suggested the adjacent Lot 120 and Lot 1017 will have adequate access to natural ventilation and will not be subjected to any visual privacy concerns as there are no major openings, at either podium or tower level, overlooking the sites from the proposed development.

This alternative design solution will have no adverse impact on the visual links to the river.

Accordingly with minor variance it is suggested the alternative proposed tower satisfies the intent of the Design Guidelines, and warrants support and approval.



4.6 SETBACKS

The Guidelines outline Nil setbacks to the podium level and the proposed development fully complies with this. However the proposed development provides an additional 3.0 metre setback provided to the North Eastern boundary in response to the Water Corporation sewer main easement along this boundary.

The proposed tower element typically complies with the setback requirements as outlined within the Guideline with minor variance occurring to the North Western and South Western elevations with balcony elements encroaching the setback by 0.8m. The Guideline also nominate a setback to the South Western tower of 5.0 metres and a setback to the North Western tower of 8.0 metres however the proposed development achieves a setback of 5.0 metres and 4.2 metres respectively. The modified tower element to the South West typically achieves a greater setback to Great Eastern Highway given its reduced width than the maximum building envelope identified within the Guideline.

Due to the orientation of the site, the alternative design solution will not have an adverse impact on the adjacent Lot 1019 with regards to adequate access to daylight and natural ventilation. The bulk of the associated overshadow by the development, will occur within the road reserve of Great Eastern Highway

The proposed variance to the tower element typically does not affect the adjacent Lot 1019, 1018, 120, 119 or 1016 due to the orientation of the Lot with the view corridors limited to the east and the over shadowing orientated towards the road reserve of Great Eastern Highway.

The Guidelines nominate the provision of a view corridor between the nominated two tower elements

Due to the orientation of the site, the alternative tower proposed does not have an adversely impact on the adjacent Lots with regards to adequate access to daylight and natural ventilation. With regard to visual and acoustic privacy, the openings facing the North Western and South Western boundaries are fully compliant with the provisions of the R-Codes, and accordingly, the minor setback variation will not impact on visual or acoustic privacy.

With regard to streetscape impacts, only a small portion of the development abuts the Hawksburn Road cul-de-sac and is in keeping with the Guideline requirements and the impact is largely to Great Eastern Highway where the podium level will mitigate the perceived bulk of the tower element.

The alternative design solution will not have an impact on the provision of open space given the degree of open space and landscaping been provided throughout the site.

Given the orientation of the site, it is submitted that the provision of open space in the south-western portion would be undesirable, as this area would be substantially impacted by overshadowing from any form of development on the subject site.

Accordingly with minor variance it is suggested the alternative proposed tower satisfies the intent of the Design Guidelines, and warrants support and approval.

Figure 08: Setback Overlay Diagram





4.7 FLOOR LEVELS

The Design Guidelines suggest commercial developments should set the first floor at 4.2 metres above the street. Given when building ‘turns the corner’ down Hawksburn Road the site falls away significantly creating a very generous floor to floor height this does not seem practical. Accordingly while the proposed commercial tenancies facing Great Eastern Highway achieve the nominated floor to floor dimension we propose to utilise the fall along Hawksburn Road to achieve an additional mezzanine of car parking.

4.8 VIEW CORRIDORS

We recognise the importance of protecting and enhancing view corridors to and through the various components of the public realm together with secondary views towards the river. We believe that the current proposal fully meets all expectations in relation to retaining all view corridors and setback provisions to adjoining sites. Sensitivity towards the visual experience of pedestrians on the street and requirements for privacy for residence are also carefully considered. Removing apartment construction from the boundary improves the amenity for neighbours and allows more natural light into internal courtyards. This will also improve our capacity to articulate the boundary construction, reducing the visual impact of the side walls of apartments. We propose planting in the space between apartments and the fence line. This will further soften the impact of these walls on the surrounds and from the foreshore.

4.9 VISITOR PARKING BAYS

Visitor parking in large projects is a consistent challenge. In the design of this proposal we have gone to great effort to ensure as many visitor bays are located on the ground (i.e. lower ground) and mezzanine (i.e. upper ground) levels as possible. The City of Belmont have adopted a ratio of one visitor bay per 5 apartments on larger projects such as the recent approval for ‘Park on Swan’. If this alternative ratio was adopted on the proposed development, we calculate thirty (30) residential visitor parking bays would be required in lieu of the 37 residential visitor parking bays currently provided.

In addition we propose to allocate fifty two (52) visitor parking bays including two (2) disabled bays to service the commercial tenancies with provision for some twenty four (24) reciprocal residential visitor parking bays after hours (i.e. 08:30 to 17:30). It is suggested the increased availability of visitor parking bays after hours is in line with the anticipated resident profile for The Springs and the proposed development. As noted previously the proposed development has yet to define the commercial tenancy use and have adopted what is forecast as the ‘worst-case scenario’ to calculate the number of commercial parking bays for these. Based on our discussions with both Landcorp and the City we believe there is a real need within The Springs development for a convenience store, given the growing residential population within The Springs and its proximity to Great Eastern Highway this type of use would be supported by both Authorities. It is noted that should the commercial tenancies be utilised as office in lieu of a convenience store the number of bays required would be significantly less with only thirty (30) visitor parking bays required.

The provision of the two levels as visitor parking only allows for a combined use by both residential and commercial visitors and it is suggested the use by both activities will be compatible in terms of demand thereby warranting reciprocal parking arrangements.

It is suggested the provision of secure visitor parking and residence parking bays is critical, which is

why the visitor bays have been isolated to the ground and mezzanine levels to ensure a level of passive security is achieved. In addition depending on their use the residents’ visitor bays will not be used regularly and perhaps only typically after hours.

The following summary outlines the performance criteria assessment of the reduced visitor parking allocation which is in line with the City’s previous decision to reduce the allocation of visitor bays:

A) On street parking

Numerous on-street parking bays will be available within walking distance of the site and, given the anticipated mix of uses in the locality, peak demands will be complementary (e.g. the commercial/office uses are generally closed on weekends, and entertainment and retail precincts are generally quieter on weekdays), meaning parking will generally be readily available in line with demand.

Historically, Perth has made poor use of on-street parking outside the Central Business District; however, it is a perfectly legitimate use of road reserves to provide additional verge parking, and the provision of on-street parking for use by occasional visitors generating high turnover (i.e. not employees or residents) assists in generating street-level activity, creating vibrant urban spaces.

In light of the above, we submit the proposed parking allocation is expected to be sufficient to cater for the demand likely to be generated by the proposed development.

B) Type, number and size of dwellings

The development comprises a mix of studio, one and two bedroom apartments and given the weighting to smaller compact apartments, it is felt the demand for onsite visitor parking is likely to be low in comparison with a comparable development with larger dwellings.

C) Public transport

Given the access to public transport within the immediate vicinity there is a strong focus on promoting public transport, pedestrian and bicycle transport within the proposed development. Noting the site fronts Great Eastern highway and residence can access the high frequency bus route zone it is suggested this will be highly utilised by the residents.

The site is within close proximity to high frequency public transport including the train and bus services; accordingly parking demand during a typical day will vary and it is suggested a relaxation of the statutory requirement is justified.

Accordingly with minor variance it is suggested the alternative visitor parking bay allocations and the factored over supply of the Commercial visitor bays satisfy the intent of the Design Guidelines, and warrants support and approval.



4.10 RESIDENTIAL PARKING BAYS

In response to market feedback the proposed development incorporates additional residential parking bays as a purchaser's option with the provision of thirty seven (37) traditional bays and twenty four (24) car-stacker bays. The two bedroom apartments will be typically provided with two bays; the traditional bays will be allocated initially to the higher value apartments and the option of upgrading to two bays with a car stacker provided to the balance of the two bedroom apartments.

The technical implication of car-stackers will be fully addressed as part of the Building Permit submission to ensure compliance with all requirements of the City and the relevant authorities.



5.0 BUILT FORM DESIGN

The vision for the project is to provide a high quality of building design demonstrated in other apartment projects designed by Hillam Architects. The highly articulated building capitalises on its corner location, demonstrating careful consideration of sensitivity to scale proportion views and aesthetic interest. This coupled with a diverse range of materials will be a positive addition to the streetscape. It is envisaged a diverse range of apartment types will provide future residence with a unique choice in the precinct.

It is understood the Guideline indicate a flexible R80/ R100 density coding providing the proposed design can demonstrate it meets the set performance criteria including:

- Appropriate view corridors
- Informal surveillance of the street and/ or other public spaces
- Exceptional urban design standard and enhancing the street scape with high quality material and architectural detailing etc.
- Maximum direct winter sunlight and ventilation whilst maintaining privacy of adjoin properties
- Not exceed 50% overshadowing to adjacent properties to the south
- Commitment to sustainability principals
- Provide direct amenity to the City of Belmont including affordable housing, street art, courtyards, arbors, street furniture, rooftop gardens etc.
- Commitment to sustainability principals
- Regard for the history associated with the site incorporated in public art etc.

The current proposed design in summary demonstrates it is consistent with the acceptable set performance criteria which warrants the adoption of the higher density code.

5.1 PRIMARY BUILDING CONTROLS

Maximum Building Envelopes

While the Design Guidelines suggest a two towers configuration, our initial design studies suggested this was not the ideal solution given the proximity of the proposed towers facing each other and potential issues of overlooking and privacy.

The aesthetics of such narrow towers in relation to the streetscape was also questioned. It is suggested an articulated tower with 8 levels to the South West and 7 levels to the North East would complement the form of the adjoining developments on Great Eastern Highway whilst also creating transition between the taller development to one side and the lower development to the other side.

In order to follow the spirit of the guidelines the proposed tower is articulated as two separate and distinctive elements. Hillam Architects have met on a number of occasions to discuss proposals with The City of Belmont's Planning Department and Landcorp, and these discussions have been both practical and productive.

5.2 ARCHITECTURAL CHARACTER

Facades

The building is highly articulated in a contemporary manner with a mix of hard and softer materials composed in a cohesive manner. The proposed development has been conceived in a classic podium base and tower with lower levels more highly articulated to the benefit of the pedestrian experience. The first and second floors are treated with more solid elements to address the frontage of-form the solid base creating a dramatic articulation of the reducing the impression on the street of the apartments above.

The tower with a mix of refined edges, down turned roof elements, glass balustrades and wrapping frame elements break down the mass of the apartment levels while looking to extenuate the articulation of the two tower elements. Extruded or folded frames are used to express the balcony elements as projections from the vertical bringing distinguished layers of interest and vitality to the street front.

The integrity of this design approach is complimented by a concrete base with integrated public art components, as well as warmer cladding accents that sit within balcony spaces. The composition of functional elements activates the public domain by bringing the ritual of living into the street, with balconies an extension of the internal living and kitchen spaces. These elements are deliberately expressed in the façade with the Ground floor commercial tenancies and the residential entry are provided with alternate treatments enhancing the vitality at the ground level.

Varied use of contrasting materials and textures, cantilever balconies and frames help to provide a customisation of each of the apartments and the articulation of the facades, where residents are made to feel that their home is unique in the group. The subsequent composition looks to elevate the project as a sophisticated manipulation of the apartment vernacular, whilst establishing a local landmark.

Building corners

As noted within the Guidelines, corner buildings have the potential to become urban landmarks and the proposed design responds to this opportunity by subtly increasing the building height to address the corner of Hawksburn Road and Great Eastern Highway. This increase in height also provides an appropriate counter to the adjacent development on the opposite corner currently under construction by Finbar.

Accordingly the proposed design responds to the corner location by the layering of a number of architectural element to address both street frontages. The proposed development provides for 'living; and detailed facades through the provision of extensive balconies, large opening, articulation and materials that provide texture and detailing. The proposed development provides activated facades to each street frontage with a combination of operable perforated screens, cantilevered balconies, alternative solid and transparent balcony treatments and textural material changes. Indeed the very deliberate changes in the façade materials has been used to highlight the articulation of the tower elements to ensure a high level of interest and detail within the façade treatment.

Roof Forms

The flat roof form of the tower element has been designed to fold down forming feature walls in the elevation. It is noted the flat roof minimises height and sustainable systems, services and the lift overruns are concealed from view due to their setback and the height of the building.



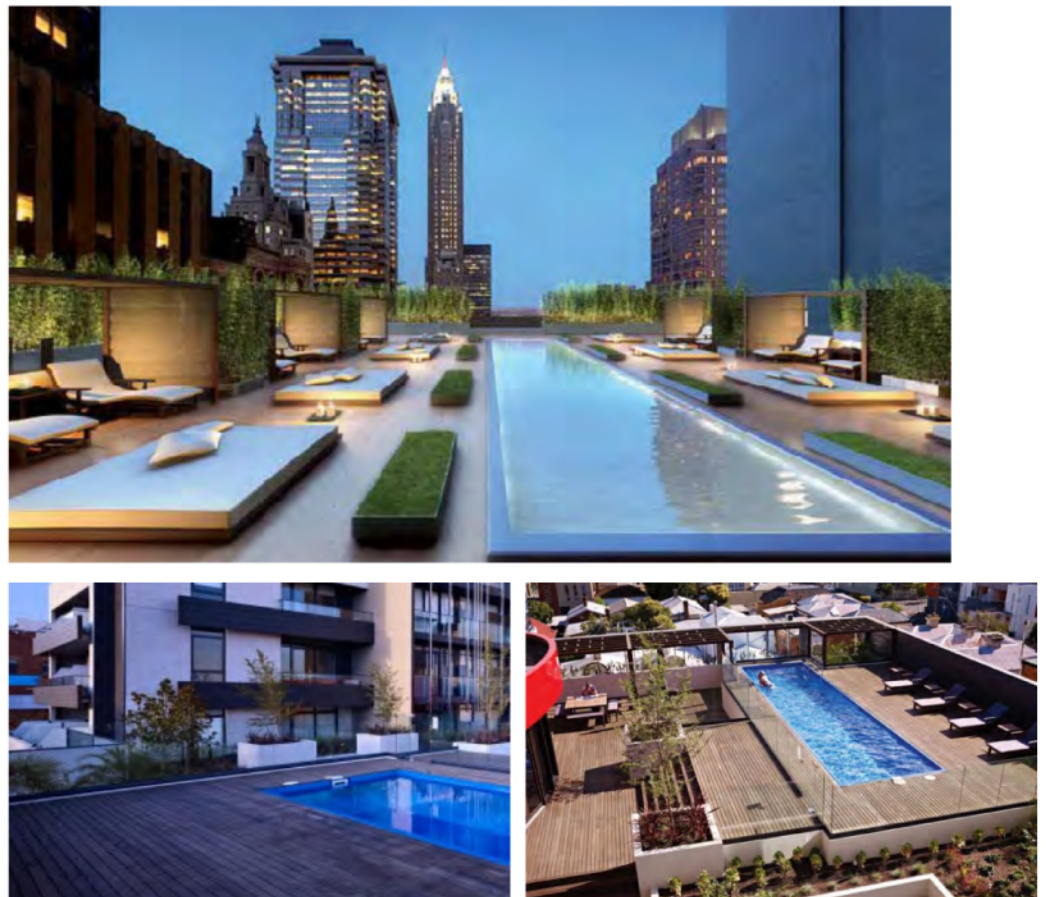
5.3 DESIGN EXEMPLARS

A varied pallet of materials and finishes articulates the development. A combination of light and dark renders, stone, tile, timber like screening and cladding, perforated metal, translucent sheeting, and aluminium shutters provide a cohesive and sophisticated mix. These materials and their subsequent finishes have been selected for their inherent beauty with particular focus being the contrast between the raw and the refined.

Images 09-12: Angled Openings



Images 13-16: Communal Spaces





5.4 DETAILED CONTROLS

Building Entrances

The main residential entry is located on Hawksburn Road and is effectively signposted by a feature of form concrete architectural sculptural element which flows along the façade.

Pedestrian and vehicle entry points are separate and defined, with the accentuated residential entry occurring on the corner of Rowe Avenue and Hawksburn Road, with the vehicle crossover locations occurring at the most further boundary points along Hawksburn Road.

Awnings and Shade

At ground level the residential entry and commercial tenancies have been provided with a strong horizontal canopy providing shade to pedestrian traffic along the street frontage to both Hawksburn and Great Eastern Highway.

Various other shading devices have been employed to provide appropriate sun protection where required.

Fencing

Given the majority of the proposed development at the podium level extends to the lot boundary the opportunity for fencing has been minimised. However were applicable to the north eastern boundary only, given the three metre setback proposed, the fencing at this location will not have street frontage and will be solid to the extent of the rear boundary.

Balconies

In recognition of outdoor lifestyle opportunities afforded by the Perth climate, apartments are typically provided with generous private outdoor balconies with dimensions exceeding minimum requirements set out in the design guidelines. The majority of these areas are orientated north or south with a minimum of balconies facing west.

The balconies that face the street encourage passive surveillance as well as express the sophistication of the facade by their integration into the projects building envelope. The cantilevered balconies have been used to articulate the façade creating drama and interest, in addition the use of alternative solid and transparent balcony treatments have been used selectively to respond to the potential noise of Great Eastern Highway.

Regard has been paid towards the separation of habitable rooms, with windows and doors orientated so to not impose on neighbouring dwellings

Visual Privacy

Appropriate screening will be introduced to the apartments that have the potential to overlook neighbouring properties. The details of the screening will be provided with the Building License application, with schematic planning for the screening annotated on the attached development plans.

Typically the upper floors are setback from the podium level to create a tower element that minimises the bulk of the height, achieving site lines and minimising overshadowing, while enhancing visual privacy to the adjacent sites. It is noted the front setback reflects the desire to create an activated street scape with passive security, and all apartment construction above natural ground level set back from the boundary.

Building for Safety and Surveillance

Building for safety and surveillance

We understand it is critical the residents all feel safe and sound when at home, and their apartment are equally secure whenever they are away from home. The site will provide secure parking, keyless entry codes or passes, or traditional lock-and-key doors, with or without security cameras.

In addition the setbacks of balconies with varied screening elements above also reinforce the impression of activity and surveillance. Access control systems will provide secure access to apartments and parking areas. Clear signage of pathways, entrances and exits will differentiate public and private spaces.

Our aim is to design the architecture that has a sense of place and is responsive CPTED (Crime Prevention Through Environmental Design) principles.

Some of the principles below will be explored and implemented where applicable:

- Building form to visually link and create interaction, providing for informal surveillance of adjacent public areas.
- Integrated specialist lighting design that provides well illuminated spaces that create ambience while eliminating uncontrolled shadow areas.
- Selection of robust and textured materials to prevent anti-social behavior, vandalism and graffiti.
- Areas designated for passive recreational uses to incorporate safe and accessible activities for all age groups.
- Universal accessible design.
- Vandal proof and passive security measures, robust in materials to prevent vandalism and graffiti.

Signage

The building signage for the proposed development is generally restrained and will comply with the City of Belmont requirements.

It is envisaged the main building signage will be located adjacent to the residential front entry on Hawksburn Road and secondary signage under the awnings and adjacent to the entry of each commercial tenancy. Access control systems will provide secure access to apartments and parking areas and clear signage of pathways, entrances and exits will differentiate public and private spaces.

5.5 BUILDING SERVICES

Air Conditioning and Plant

In accordance with the Guideline the proposed development has positioned all services to ensure they provide no adverse visual impact on the overall aesthetic. On this basis air-conditioning units have been located on the roof level set back with screening elements to ensure they are unobtrusive from adjacent residential developments and the public view integrated within the overall development

In addition a Western Power Substation has been accommodated to the rear of the site and is fully screened from view within the basement level.



Storage

Each apartment is provided with a functional, lockable and accessible storage area located either at the basement, ground or an apartment floor levels. All residential stores satisfy the minimum 4sqm requirement however there are also some 53 (approximately forty percent) of the stores that are larger than 4.5sqm area providing for a combined storage and bicycle facility to some apartments.

As noted within the Design Guidelines the proposed development looks to encourage the use of bicycles and alternative modes of transport by providing secure storage bays for bicycle, scooter and motorcycles for residents and visitors.

Waste Collection

Waste minimisation strategies have been developed including the provision of a large bin store located off Hawksburn Road. The residential bin store is located at ground level and concealed from site with a bin layout area that is contained within the property for the City pick-up. Typically the transporting of bins from the bin store to the verge layout area will be addressed by the Body Corporate in accordance with the Council pick-up schedule.

It is proposed the Commercial Tenancies will store waste within the individual tenancy and arrange for a private contractor collection.

Refer also to the attached Appendix B for a copy of the Waste Management Plan prepared by the Consultant Encycle.

Acoustic Response

Sound attenuation treatments will be in accordance with

- National Construction Code Volume One and referenced Australian Standards.
- State Planning Policy 5.4 "Road and Rail Transport Noise and Freight Considerations in Land Use Planning".

Noting the proximity of the site to Great Eastern Highway a number of design solutions have been implemented to assist with the noise minimisation as part of the building articulation including the following elements:

- Operable openings to living and bedroom spaces typically orientated facing away from Great Eastern Highway
- Operable openings setback within the façade treatment
- Solid balustrade elements typically to balconies facing Great Eastern Highway
- Operable privacy and acoustic screens to balconies

Refer also to the attached Appendix D for a copy of the Acoustic Management Plan prepared by the Acoustic Consultant Vipac.



6.0 LANDSCAPING

The Guidelines state careful consideration should go towards achieving landscaping and open space that minimises water use and includes appropriate structures or plants to provide shade in summer and solar access in winter. The Design Guidelines contain a list of recommended water wise plant species for landscaping. The lot owner shall provide reticulation to the adjacent verge as part of its landscaping treatment and will be responsible for maintenance of the verge.

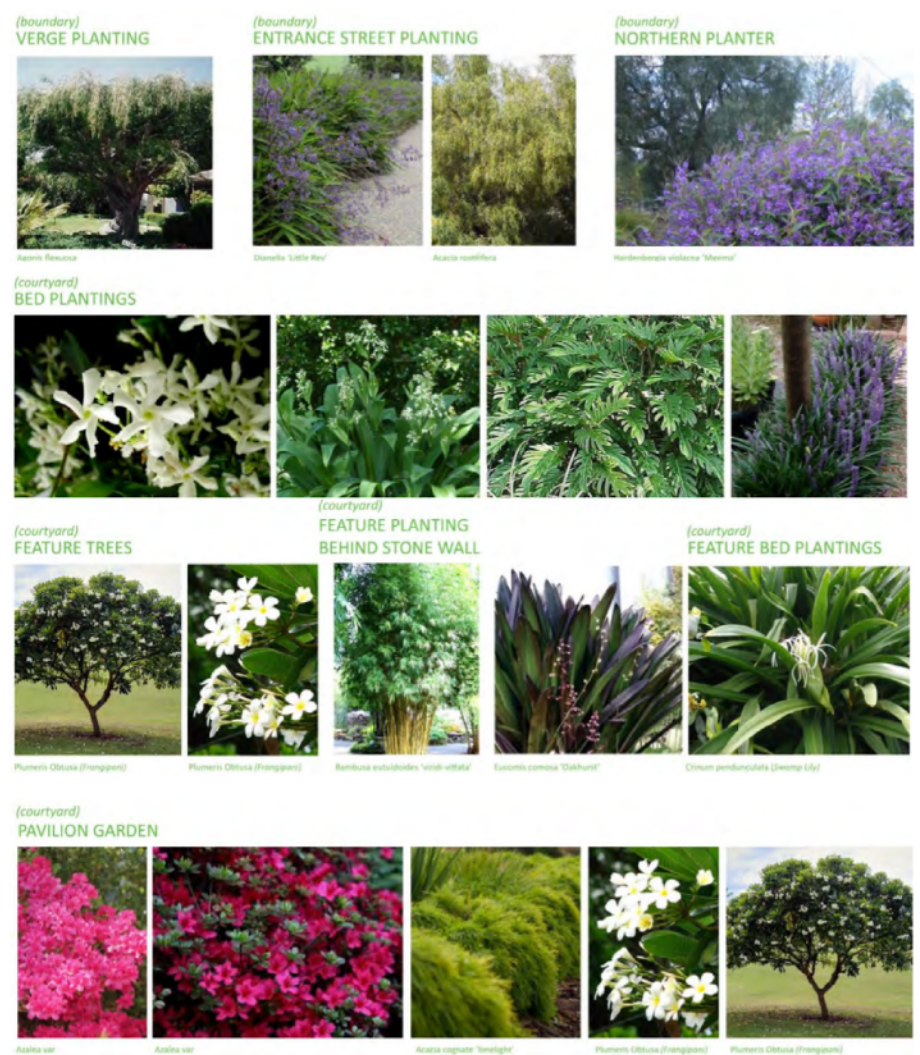
Landscaping provided for the subject site will appropriately consider water usage, shade provision and solar access, using species from the recommended list. It will include landscaping and reticulation of the adjacent verge. The proposal can be considered generally in accordance with the landscaping requirements of the Design Guidelines.

6.1 LANDSCAPING CONCEPT

The landscape design for the project draws upon two contrasting worlds the Perthian bushland setting and the surprise of the exotic. The project's proximity to the river foreshore has inspired a design that can connect with the natural surrounds whilst also offering a sanctuary-style environment for the residents of the proposed development. Planters along the periphery blur the boundary between the development and its surrounds through the use of native vegetation. As the planters curve into the amenities areas, the native setting blurs into the deep colours of more exotic landscaping, making the space feel like a tranquil paradise.

The rooftop terrace offers a more modern twist on the urban paradise through the use of a common herb garden. The garden is designed to include built in seating with a balance of private spaces for reflection and a large cabana area with BBQ for group meetings. The aroma of the herb garden and other landscaping elements such as frangipani will enhance the rooftop and offer a unique space for the residents to relax.

Figure 09: Indicative Planting Selections for Proposed Landscaping



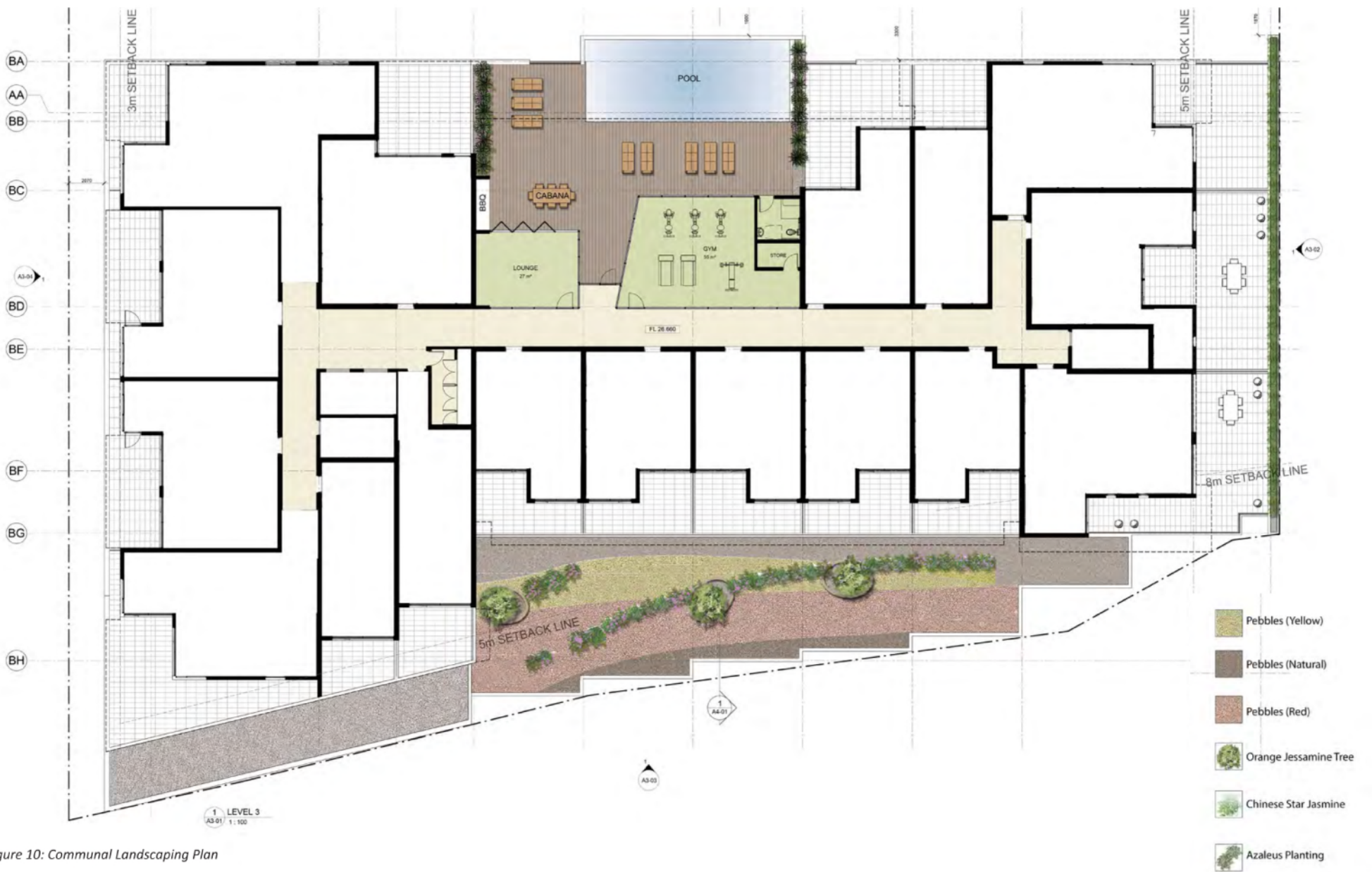


Figure 10: Communal Landscaping Plan

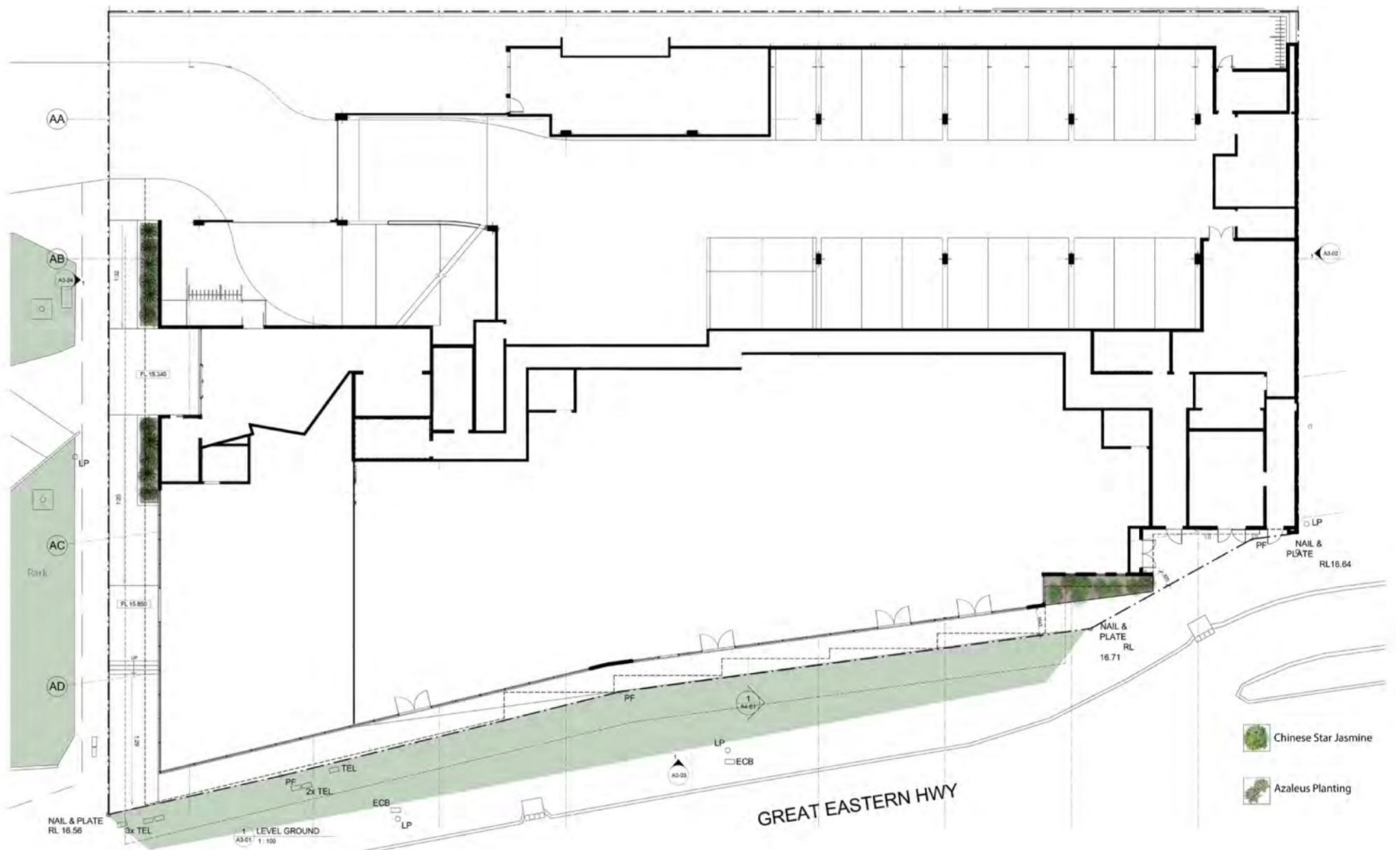


Figure 11: Ground Floor Landscaping Plan



7.0 SUSTAINABILITY

Hillam Architects have an excellent track record in providing sustainable apartment buildings in Perth. In particular Verde Apartments in East Perth provides various passive and active sustainable systems delivering positive environmental outcomes.

Whilst we are committed to good environmental design and construction, our experience is that the Green Star process is particularly cumbersome and does not always result in the best environmental outcomes. Rather than seeking to avoid the environmental aspirations of The Springs Rivervale Design Guidelines and the City of Bayswater, we are simply seeking a different process of implementation. A summary of some of the additional measures that will be implemented as part of the developments is follows.

7.1 ENERGY EFFICIENCY

The overall design of the development responds to energy efficiency principals.

Some measures that will be implemented as part of the development will include but will not be limited to the following:

- a) Central hot water system using heat pump technology.
- b) The building has been designed to maximise solar access, facilitate cross ventilation and reduce energy consumption.
- c) All landscaped areas to be designed for low water requirements in compliance with Water Corporation's Water Wise Development Criteria, a minimum of 60% local native flora will be used in any garden areas.
- d) Natural light and ventilation to common corridors.
- e) Highly insulated structure including if necessary roof, walls and slabs.
- f) Sensor controlled lighting to car parking and common corridors
- g) Car park ventilation system controlled by CO2 sensors
- h) Electrical sub-metering of major building services to allow for effective management of power usage with a view to using off peak power where possible.
- i) Maximisation of natural ventilation to ground floor car park and car park ventilation systems minimised through natural ventilation and controlled by CO2 sensors.
- j) Provision of water-wise fixtures and fittings to meet and exceed BCA requirements for WELS star ratings where technically possible.
- k) Investigation of low energy hot water heating services.
- l) Provision of energy efficient appliances and light fittings to apartment and commercial units.
- m) A grid-connected solar photovoltaic (PV) system to provide the majority of energy needed for common area lighting, which includes compact fluorescent lamps and automatic movement sensors in common areas to ensure lights are not left on unnecessarily, whilst also providing security

n) Provision of bicycle storage facilities to encourage tenants to use more environmentally friendly transport alternatives and live an active lifestyle

o) Air-conditioners fitted to lounge rooms and master bedroom only to reduce the energy use for heating and cooling in the building

p) Effective shading of glazed areas and increases in glazing specification where deemed necessary.

7.2 PASSIVE SOLAR DESIGN / SOLAR ACCESS AND SHADING

The proposed development apartment layout minimises east and west facing apartments, while also looking to prioritise the north and south orientation.

Good solar orientation and appropriate opening sizes and locations have also been considered in determining the apartment layout with an emphasis given to the northern orientation, where the deep set external facing balconies provide significant shading to glazing to living areas in apartments.

The overall impact of overshadowing over the southern sites opposite in aggregate when measured at noon on the 21st June is slightly higher than the maximum building envelope outlined within the Guidelines however the impact on the Public Open Space adjacent is actually lower.

The proposed development complies with the solar access requirements of the Guidelines and the R-Codes. The siting of the development with respect to the adjacent existing and proposed developments ensures that no significant over shadowing will occur.

The extent of overshadowing to the adjacent Lot 1019, the Public Open Space and the Great Eastern Road Reserve is as follows:

- Lot 1019: 0sqm (0%) of the site
- Public Open Space: 1,030sqm (75.5%) of the site
- Great Eastern Highway road reserve 1,210 sqm
- Total overshadowing: 2,240sqm

The 'Figure 13 Overshadowing Diagram based on the Proposed Development' also indicates the impact of the maximum allowable building envelope in comparison to the proposed design. It is noted based on the Guidelines the allowable scale and mass of the proposed development a significantly larger total overshadowing area of some 303sqm would be permissible.

As mentioned previously in the report, the City has been in favour of higher density development and have approved similar developments in the past.

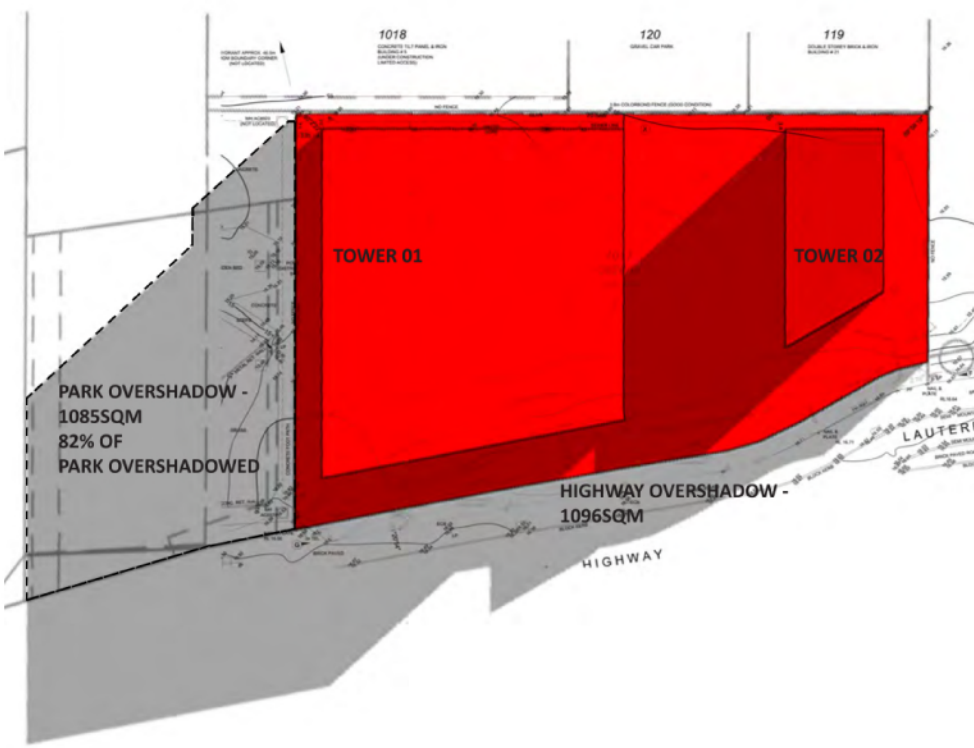


Figure 12 - Guideline Document - Overshadowing Diagram

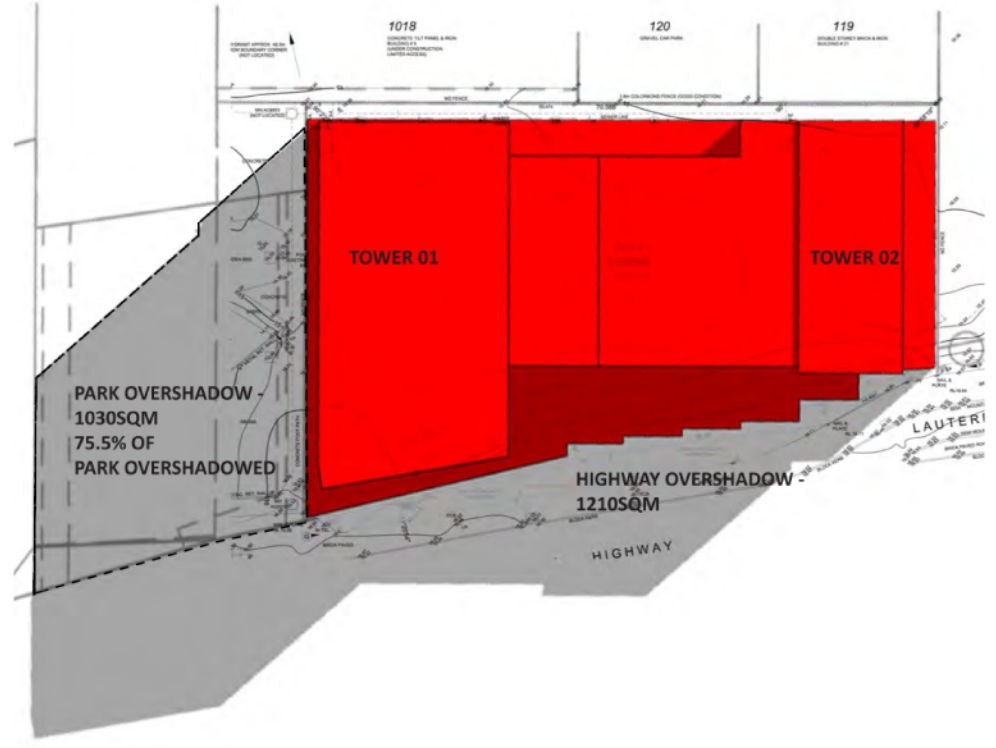


Figure 13 - Proposed Development - Overshadowing Diagram



7.3 CROSS VENTILATION PRINCIPLES

The proposed development has been designed to maximise natural ventilation by orientating the apartments and the operable windows to maximise air flow. All bedrooms are supplied with operable windows and the interior living spaces open out to the balconies. As a fundamental requirement all habitable rooms are provided with direct access to fresh air. The overall design maximises the building perimeter, providing many corner apartments with cross ventilation.

Mechanical ventilation will be incorporated into the bathroom spaces that do not have an external facing wall. Internal circulation corridors also pierce through the north, south and east of the site, carrying natural breezes through this space.

Parking areas will also be naturally ventilated to as great an extent as possible.

7.4 WATER MANAGEMENT

Each apartment will be installed with water-wise fixtures and fittings, with these components exceeding BCA requirements for WELS star ratings where practicable and economically viable.

The swimming pool will incorporate measures to diminish evaporation and water use.

7.5 ENERGY EFFICIENT AND SOLAR DESIGN

A grid-connected solar photovoltaic (PV) system to provide the majority of energy needed for common area lighting, which includes compact fluorescent lamps and automatic movement sensors in common areas to ensure lights are not left on unnecessarily, whilst also providing security.

It is envisaged this will be a 5 kW photovoltaic solar energy system to provide on-site renewable power for the communal components of the building, together with the light fixtures for these spaces embodying low-energy efficiency.

7.6 VEGETATION AND GREEN ROOF DESIGN

Landscape and the connection with outdoor spaces is a key element of the proposed development.

The inclusion of garden and planter boxes within the communal spaces is seen as a means of articulating and softening these spaces to encourage use and create amenity. It is proposed to have a strong focus on water wise plantings providing seasonal indicators with elements such as flower, foliage and scent being critical to create unique outdoor 'rooms' for the residents. Setback zones are also used to advantage with landscape elements softening the contemporary building form.

The landscaping on the podium pool terrace and podium roof terrace couples with significant planting employed along the street frontages, as well as along the entire length of the north western boundary at the podium level. Setback zones are used to advantage with landscape elements softening the contemporary building form.

A landscape plan illustrating commitment to the Water Corporations Water Wise Development criteria will be included with the Building License Application.

7.7 POOL AREA

A focus of the podium level is the proposed landscaping of the Pool Deck and Amenity Area including a Residence Lounge, Barbeque Cabana, Gymnasium and Pool.

These elements are proposed to be screened behind plantings from the adjacent apartments while also creating a lush resort style pool area. Hillam Architects have a well established reputation for creating highly attractive and functional outdoor spaces within its developments and again this is the focus here.

The swimming pool forms an integral part of the communal area abutting a gym and a BBQ and seating area featuring internal street views. It is proposed the area will potentially include public art as a feature to create a backdrop to the swimming area with a generous seating area for apartment residents. A variety of heights in ceiling and floor levels in conjunction with differing materials will be used to provide tiered areas surrounding the pool resulting in an integrated communal space that maintains a distinct designation for each space.

Shaded areas will be created by the apartments above, while other areas allow direct sunlight for cooler times of the year.

Balconies from several apartments have direct access or overlook the space providing good amenity and passive surveillance, yet privacy is maintained by appropriate soft landscaping in planter boxes.

Access will be provided by the building security system and controls in place to ensure use is within appropriate times.

7.8 PODIUM ROOF TERRACE

Balconies from several apartments have direct access and / or overlook the Podium Roof Terrace space providing good amenity and passive surveillance. Special consideration has been given to the visual aspect given a number of apartments will overlook this space and it was intentionally addressed as a unique landscaped space as opposed to a simple roofed area.

Appendix

A. LAND TITLE

B. WASTE MANAGEMENT - ENCYCLE

C. TRAFFIC MANAGEMENT - SHAWMAC

D. ACOUSTIC MANAGEMENT - VIPAC

E. ABORICULTURE MANAGEMENT - PAPERBACK TECHNOLOGIES

F. DESIGN REVIEW - LANDCORP

G. ARCHITECTURAL DRAWINGS

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ATTACHMENT 1A – Certificate of Title

Lot 1017 (3) Dawson Road Rivervale

LG Reference: 648/2014

DAP Reference: DAP/14/00637

APPENDIX A

LAND TITLE

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APPENDIX A

WESTERN AUSTRALIA

REGISTER NUMBER 1017/DP74279	
DUPLICATE EDITION 2	DATE OF PUBLICATION 30/10/2013

RECORD OF CERTIFICATE OF TITLE
UNDER THE TRANSFER OF LAND ACT 1893

VOLUME **2809** FOLIO **680**

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

REGISTRAR OF TITLES

RECORD OF CERTIFICATE OF TITLE

REGISTER NUMBER: 1017/DP74279 VOLUME/FOLIO: 2809-680 PAGE 2

LOCAL GOVERNMENT AREA: CITY OF BELMONT.

NOTE 1: DUPLICATE CERTIFICATE OF TITLE NOT ISSUED AS REQUESTED BY DEALING M677231

LAND DESCRIPTION:

LOT 1017 ON DEPOSITED PLAN 74279

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

DRAGON CENTURY SPRING PTY LTD OF UNIT 11, 143-147 SOMERVILLE BOULEVARD, WINTHROP
(T M677230) REGISTERED 20 JUNE 2014

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

1. THE RIGHT TO MINES OF COAL OR OTHER MINERALS BEING EXCLUDED FROM PORTION OF THE SAID LAND AS TO PORTION ONLY SEE DEPOSITED PLAN 74279.
2. EASEMENT BURDEN CREATED UNDER SECTION 167 P. & D. ACT FOR SEWERAGE PURPOSES TO WATER CORPORATION - SEE DEPOSITED PLAN 74279 AS CREATED ON DEPOSITED PLAN 72650.
3. COVENANT BURDEN CREATED UNDER SECTION 150 P&D ACT TO MAIN ROADS SEE DEPOSITED PLAN 74279
4. *M220842 NOTIFICATION CONTAINS FACTORS AFFECTING THE WITHIN LAND. LODGED 25.3.2013.
5. M396972 EASEMENT TO CITY OF BELMONT FOR ACCESS PURPOSES. SEE SKETCH ON DEPOSITED PLAN 400179. REGISTERED 9.9.2013.
6. *M677231 MORTGAGE TO AUSTRALIA & NEW ZEALAND BANKING GROUP LTD REGISTERED 20.6.2014.
7. *M677232 CAVEAT BY WESTERN AUSTRALIAN LAND AUTHORITY LODGED 20.6.2014.

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

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

STATEMENTS:

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

SKETCH OF LAND: DP74279.
PREVIOUS TITLE: 2806-623, 2803-631.
PROPERTY STREET ADDRESS: 3 HAWKSBURN RD, RIVERVALE.

END OF PAGE 1 - CONTINUED OVER

APPENDIX B

WASTE MANAGEMENT REPORT - ENCYCLE

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ATTACHMENT 1 – Waste Management Plan

Lot 1017 (3) Lawburn Road Rivervale

LG Reference: 648/2014

DAP Reference: DAP/14/00637

APPENDIX B



Lot 1017, The Springs, Perth

Waste Management Plan (Revised v4)

30 September 2014



30 September 2014

Lot 1017, The Springs



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Subsequent drafts	J Campbell	6 June 2014
Subsequent drafts	K Stocker	25 July 2014
Reviewed	J Campbell	28 July 2014
Revised Draft v1 - issued	K Stocker	28 July 2014
Revised Draft v2	J Campbell	5 September 2014
Reviewed	A Bremner	5 September 2014
Revised v2a - issued	J Campbell	17 September 2014
Revised v2b - issued	J Campbell	17 September 2014
Revised v3 - draft	J Campbell	29 September 2014
Revised v4 - draft	K Stocker	30 September 2014

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APPENDIX B

30 September 2014

Lot 1017, The Springs

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Glossary of terms and acronyms

Commingled recycling	Common recyclables, mostly packaging: such as glass, plastics, aluminium, steel, liquid paper board (milk cartons). Commingled recycling may include paper but often, and particularly in offices, paper and cardboard are collected separately.
General Waste	Material that is intended for disposal to landfill (or in some States, incineration), normally what remains after the recyclables have been collected separately.
MGB	Mobile Garbage Bin – A wheeled bin with a lid often used for kerbside collection of waste or recyclables. (Often called a 'wheelie bin').
MRB	Mobile Recycling Bin – A wheeled bin ("wheelie" bin) with a lid often used for kerbside collection of recyclables (similar to an MGB). Generally have a different colour body and/or lid to MGBs.
Recyclable	Material that can be collected separately from the general waste and sent for recycling. The precise definition will vary, depending upon location [i.e. systems exist for the recycling of some materials in some areas and not in others].
Recycling	Where a material or product undergoes a form of processing to produce a feedstock suitable for the manufacture of new products.
Reuse	The transfer of a product to another user, with no major dismantling or processing required. The term "reuse" can also be applied in circumstances where an otherwise disposable item is replaced by a more durable item hence avoiding the creation of waste (e.g. using a ceramic coffee mug in place of disposable cups).

APPENDIX B

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Lot 1017, The Springs

1 Introduction

This Waste Management Plan (WMP) has been prepared for Hiram Architects for the Development Application for the proposed multi-residential development at Lot 1017, The Springs, Perth.

The development consists of 148 apartments, and 4 commercial premises (883m²).

This WMP has been prepared based on the following information:

- Architectural plans provided by Hiram Architects (4 September 2014)
- Extensive consultation with the City of Belmont and their service provider Transpacific Industries (TPI), regarding waste management requirements in City of Belmont for multi-residential developments, access and occupational health and safety aspects
- The Council of City of Sydney Policy for Waste Minimisation in New Developments, 2005 (as a guide)

1.1 Context

For efficient and effective waste management, the collection and centralisation of waste and recyclables should be carefully considered at the building design phase. Key factors to consider at the design phase include:

- The volumes of waste and recyclables likely to be generated during building operation
- Size of bin storage area
- Safety for all operatives involved in waste management
- Access to bins and storage areas from within the building
- Access for trucks for waste collection
- Local council requirements
- Amenity (odours and noise)
- The ongoing management of waste and recycling services

1.2 Key components of the WMP

This WMP consists of six core components. The following report will present detailed information on each of the following components.



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Lot 1017, The Springs

2 Estimated waste and recycling volumes



2.1 Local government minimum requirements for waste volumes and bin type

The City of Belmont requires that sufficient bins are provided for units in multi-residential apartments at a rate of 70% provision of standard bins (i.e. 70 x 240 L bins per 100 apartments).

The City of Belmont provides a weekly waste and a fortnightly recycling collection service as standard, however for multi-residential apartments, the collection frequency can be doubled to:

- Twice weekly for general waste (Monday and Friday)
- Weekly for recycling (Wednesday)

For the commercial tenancies bin numbers have been calculated using relevant City of Sydney waste generation rates. Commercial bins will be collected by private waste service providers.

2.2 Number and type of bins required for development

Based on City of Belmont requirements, the bin requirements for the 148 apartments are shown in Table 1. Table 2 shows bin numbers for the commercial tenancies.

Where there is limited space to present bins on the kerbside for collection by a side-lift vehicle, the City of Belmont permit the use 3 m³ skips for general waste collected by a front-lift vehicle, and for this development, recycling can be stored in 1,100 L bins collected by a rear-lift vehicle.

Due to the nature of the location of Lot 1017 and the limited access, general waste must be collected using a front-lift vehicle in 3 m³ skips and commingled recyclables collected using a rear lift vehicle in 1,100 L bins.

Table 1: Apartments: estimated waste and recycling volumes and bin requirements assuming twice weekly collections for waste and weekly collections for recycling

148 Apartments	Bin type	Number of bins	Collection frequency
General waste	3m ³ skip	5	Twice weekly (Mon and Fri)
Commingled recycling	1100 L MRB*	12	Weekly (Wed)

* Mobile recycling bin

Table 2: Offices: estimated waste and recycling volumes and bin requirements

Office (NLA 883 m ²) 4 Tenancies	Bin type	Number of bins	Collection frequency
General waste	240 L MGB	4	2/3 times a week as needed
Commingled recycling	360 L MRB	4	2/3 times a week as needed

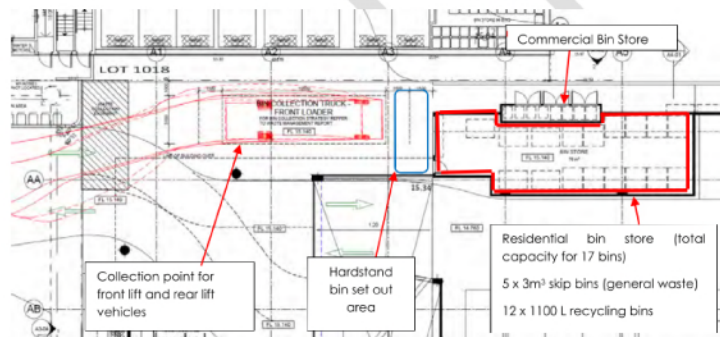
3 Bin storage room design



The building will have two bin stores (refer figure 1) to allow for the separate collection of:

- residential waste and recycling; and
- commercial waste and recycling

Figure 1: Ground floor plan showing bin stores and hardstand area for set out of bins prior to collection (further detailed plan provided in Appendix C)



3.1 Bin store amenity

Bin Transfer and collection	
Isle Door and Lift Width:	Stairs and ramps are avoided in areas where bins will be moved between points of generation, storage and collection. All doors, corridors and lifts on the internal transfer route are designed for the largest bin to fit through.
General health and safety:	Waste systems are designed to ensure that bins (particularly when full) are not required to be moved over any significant distances, up/down steep ramps (grade of slope <1:14) and avoid stairs or other potential hazards. Manual handling of waste in garbage bags is excluded from the waste management systems where possible.
Wheel stops for waste front-lift collection vehicles	Wheel stops shall not obstruct accessible travel paths for people with disabilities. All wheel stops shall be surfaced in a colour contrasting with their surroundings. Wheel stops shall be: (i) Between 90 and 100 mm in height, and (ii) 1650.50 mm in width
Bin store	
Washing bins and waste storage area:	Impermeable floors grading to an industrial floor waste (including a charged 'water-trap' connected to sewer or an approved septic system), with a hose cock to enable bins and /or the enclosure to be washed out. 100mm floor waste gully to waste outlet. Both hot and cold water will be available.
Bin store walls and ceilings:	All internal walls in bin stores will be cement rendered (solid and impervious) to enable easy cleaning. Ceilings will be finished with a smooth faced, non-absorbent material capable of being easily cleaned. Walls and ceilings will be finished or painted in a light colour.
Ventilation and odour:	The design of bin store room will provide for adequate separate ventilation with a system that complies with Australian Standard 1668 (AS1668). The ventilation outlet is not in the vicinity of windows or intake vents associated with other ventilation systems.
Doors:	Ventilated roller doors will be specified both internally and externally to enable bins to be easily wheeled into and out of the bin store.
Vermis:	Self-closing doors to the bin stores will be installed to eliminate access by vermin
Lighting:	Bin stores will be provided with artificial lighting, sensor or switch controlled both internal/external to the room.

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Noise:	Noise is to be minimised to prevent disruption to occupants or neighbours.
Fully Enclosed:	The bin store room will be fully enclosed and only be accessible by residents, tenancy staff and the waste service provider.
Aesthetics:	The bin store room to be consistent with the overall aesthetics of the development.
Signage:	Visual aids and signage to be provided to ensure that the area works as intended.

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4 Transfer and Collection



4.1 Transfer of waste from apartments to bin storage room

Tenants will store waste and recyclables separately within their apartments and then bring items down to the bin store and transfer them into either the general waste (3m³ skip bins) or recycling (1100 L bins).

Residents will manually transfer their waste and recycling down from apartments via the lifts into the lobby of the building. From the lobby there is access to the car park and bin store. Residents will cross the driveway via a safe pedestrian route and access the bin store through the pedestrian door way (as opposed to the collection access door). Residents will not be permitted to access the bin store during bin servicing operations, due to the potential health & safety risks.

Residential tenants will be encouraged to use crates for recyclables to avoid plastic bags being used to transport recyclables to the bin store.

4.2 Collection service

The City of Belmont's waste and recycling collection service is sub-contracted to Transpacific Industries (TPI). TPI will carry out the collections twice weekly for general waste (Mondays and Fridays) and weekly for recycling (Wednesdays).

The caretaker will play a crucial role in both presenting bins for collection and in the safe entry and exiting of waste collection vehicles to the development for servicing the bins (refer section 5).

Commercial tenancies' waste and recycling will be collected 2 to 3 times per week by a private service provider using rear-lift vehicles.

As a safety measure, the waste collection point will paved or painted a different colour to distinguish it as a separate area to the entrance to the building.

4.3 Bulk waste collection from residential apartments

Residents in the building will produce some bulk waste such as unwanted furniture, white goods etc. Bulk waste can be stored in individual residents' storage rooms which are located on the ground and basement floors.

City of Belmont provides a service for removal of bulk waste on specifically designated weekend days at regular times throughout the year. An open skip bin will be placed within the easement/waste collection zone for several hours on the collection day. The collection day will be on one of the days not designated for standard waste or recycling collections.

Due to the location and limited space to place a skip for bulk waste, the residents from Lot 1017 will share a bulk bin with residents from Lot 1018. Residents from both properties will be

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able to remove unwanted goods from their apartments or storage rooms and place them in the skip for disposal by the City of Belmont.

The route to the collection point that residents will use from their apartments is down the lift to the ground floor and out via the lobby to the car park. Residents will cross the driveway via a safe pedestrian route to the bin store on the right hand side.

The bulk waste service is available to residential tenants only.

5 Collection points and vehicle access



5.1 Coordination of collections

On collection days, the building caretaker will liaise closely with the drivers of the front-lift and rear-lift vehicles to determine the times of arrival on site so that the caretaker can assist with traffic control (reversing vehicles) and transferring the 3m³ skips and 1100 L recycling bins from the bin store and placing them into position on the hardstand in front of the bins store for collection.

The front-lift vehicles will enter the site in a forward motion and after servicing the bins will reverse out of the site into the cul-de-sac where they can turn and drive up Hawksburn Road in forward motion. The rear-lift vehicles will reverse into the site up to the bin store and after servicing the bins leave the site in forward motion. The driveway leading onto the ramp, and the area designated for the operation of the waste vehicles will be clearly distinguished by different treatment on the surface/paving (colour pattern etc.).

During the servicing of the front-lift bins, the caretaker will coordinate with the driver and position each bin in front of the vehicle.

The boundary between Lots 1017 & 1018 has no structured separation, which will allow manoeuvrability of the waste collection vehicles in the waste collection areas.

The collection time for commercial bins will be coordinated so as not to coincide with the residential collection.

5.2 Safety considerations

Key safety features will be incorporated to ensure the safe operation of waste collection vehicles within the development. These items include:

- Traffic light system to control flow of traffic entering and exiting the basement and ground level car parks during waste collection servicing times
- Wheel stops to be placed in front of the bin area to physically restrain drivers from moving too far forward.

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- Wheel stops to be painted in accordance with design guidelines to minimise the risk of pedestrians not seeing them and tripping.
- A retractable wheel stop will be located at the rear of the vehicle bay. The wheel stop will be activated upon arrival and remain activated until the truck is clear to reverse from the bay.
- When the truck is reversing from the bay, maintenance personnel will be stationed at the entrance to the carpark to act as spotter, direct the driver of the waste vehicle and as necessary to signal to entering vehicles the need to stop and yield to the exiting vehicle.

To ensure a safe system of work a safety in design risk assessment has been performed by a qualified consultant employed by ShawMac Consulting Inc that takes into consideration the access and egress of the front-lift vehicle to/from the bin store. See table 3 below:

Item	RISK	L	C	Primary Risk Rating	PRIMARY RISK TREATMENT	S	US	IMP	RESIDUAL RISK
1.3	Trucks operating within the bin area or reversing from the bin area are placed in conflict with vehicles entering the site to access the parking areas.	Possible	Moderate	Medium	A retractable wheel stop will be located at the rear of the truck bay approximately 1500mm from the rear of the truck when parked in operating position. The wheel stop will be activated upon arrival and remain activated until the truck is clear to reverse from the bay.	<input type="checkbox"/>			Low

Table 3: Risk assessment completed by ShowMac Consulting Inc

L – Likelihood of an event occurring C – Consequence of the event S – Satisfactory Treatment; US – Unsatisfactory or No Treatment in place IMP – Existing Treatment Needs Improvement

Item	RISK	L	C	Primary Risk Rating	PRIMARY RISK TREATMENT	S	US	IMP	RESIDUAL RISK
1.1.	Truck accessing bin area in forward gear misjudges the distance to the bins and collides with the bins.	Possible	Moderate	Medium	Place wheel stops in front of the bin area to physically restrain drivers from moving too far forward.	<input type="checkbox"/>			Low
1.2	Pedestrians accessing the bin area may trip no wheel stops	Possible	Minor	Low	Wheel stops to be painted in accordance with design guidelines to minimise the risk of pedestrians not seeing them and tripping.	<input type="checkbox"/>			Low

Item	RISK	L	C	Primary Risk Rating	PRIMARY RISK TREATMENT	S	US	IMP	RESIDUAL RISK
1.4	Truck accessing bin area in reverse gear and eventually leaving the site in forward gear. It is placed in contact with vehicles entering the site to access the parking areas.	Possible	Moderate	Medium	and yield to the exiting truck. When the truck is reversing into the bay on arrival as well as exiting in forward gear on departure, maintenance personnel will be stationed at the entrance to the car park to act as spotter, direct the driver of the waste truck and as necessary to signal to entering vehicles the need to stop and yield to the exiting truck.	□			Low

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6 Ongoing communication and management



6.1 Management

The building caretaker must be a person who is appropriately trained and has adequate experience in traffic management and occupational health and safety associated with waste management collection services. The level of qualifications and experience that the caretaker must have are to be documented in the Strata Management document for Lot 1017, The Springs.

The building caretaker will be responsible for overseeing the waste management systems and for ensuring that the bin stores are kept clean and tidy. The building caretaker will ensure that empty bins in the residential bin store are placed in accessible locations for tenants and full bins are transferred to the rear of the store.

6.2 Communication

All residents will be made aware through a body corporate document (or equivalent) of the waste and recycling systems and how they should be used. An operational Waste Management Plan suitable for presenting to building users, including how the plan should be communicated should be developed and implemented during both the initial occupation and ongoing management of the building. The residents will be advised on the scheduled times of waste collections and when access to the bin store is not permitted.

Building management will be responsible for the continuing education of residents on correct segregation of waste and recyclables to encourage ongoing waste diversion from landfill.

Appendix A: Design Guidelines for The Springs

3.4.3: WASTE COLLECTION

The minimisation and management of waste from residential apartments and commercial developments can contribute to the visual and physical amenity of the building, as well as limiting potentially harmful impacts on the environment. Minimising waste is relevant to all stages of the building's life cycle, from construction to demolition. It also includes the way in which waste is stored and collected.

DESIGN OBJECTIVE

- To avoid the generation of waste through design, material selection and building practices.
- To encourage waste minimisation, including source separation, reuse and recycling.
- To ensure efficient storage and collection of waste and quality design of facilities.

ACCEPTABLE DEVELOPMENT CONTROLS

- A Waste Management Plan is to be prepared in consultation with the City of Belmont Health Services, and submitted with all Development Applications.
- In addition to this, the following is also required:
- Preliminary engagement prior to the submission of the Development Application with the City of Belmont to confirm a waste collection strategy.
 - Rubbish storage areas must be located away from the front of development and be completely screened from the street in a manner that does not have a detrimental impact on the desired streetscape.
 - Screen rubbish/storage areas from adjoining residential units that overlook the areas.
 - The arrangements for the collection of bulk waste shall be included in the Waste Management Plan and determined in consultation with the City of Belmont.
 - Provide every dwelling with a waste cupboard or temporary storage area of sufficient size to hold a single day's waste and to enable source separation.

DESIGN GUIDANCE

Due to the high density of development in The Springs and the provision of extensive on-street parking, waste collection from the street may not be feasible for all developments. The required Waste Management Plan therefore must be prepared to address and identify the most suitable arrangements for waste collection, having regard to:

- Availability of verge space for bin presentation, having regard to number of required bins, on-street car parking, crossovers, verge vegetation and infrastructure, etc).
- Ability for on-street collection, having regard to on-street car parking, footpaths, bicycle lanes, traffic islands, distance to intersections, etc).
- Building design, site layout, access and manoeuvrability where collection is proposed to occur on-site.
- Ability for the City to provide a bulk waste collection system (not verge-side pick up) several times a year.

The Waste Management Plan for each development will require the endorsement of the City's Manager Health & Ranger Services in consultation with the City's Waste Collection service provider prior to being adopted.

It is recommended that developers contact that City of Belmont Health Services early in the design process to avoid waste collection becoming an afterthought or causing future issues.

On-site composting is also encouraged, where possible, in self-contained composting units as part of the site's facilities. Note: When a Development Application is being considered, City of Belmont Health Services in conjunction with their waste collection contractors, will assess the Waste Management Plan of the development, including vehicular access and provide feedback if amendments are required.

Appendix B: City of Belmont recycling guidance for residents

Recycling Guide A-Z

Green-top rubbish bin
 Buckets (one & plastic)
 Black plastic sheeting
 Bubble-glass
 Bubble wrap
 Cigarette tapers / CDs
 CD-ROMs
 Cellphones
 Computers (desktop/printers & parts)
 Cookwash liquid (plastic)
 Cosmetics jars
 Cutlery (plastic, metal & rubber)
 Foam boxes
 Foam meat trays
 Foam roofing containers
 Food & vegetable containers*
 Garden hoses
 Glass beer
 Glass proof paper
 Groceries (big bins required)*
 Juice cartons (also food) LMT
 Kity liner
 Lunch boxes
 Mirrors / animal droppings
 Meat trays
 Milk cartons (also food) LMT
 Nappies

Yellow-top recycling bin
NO PLASTIC BAGS OR GREENWASTE IN YOUR RECYCLING BINS
 Keep all items in your recycling bin loose and separate.
 Accepted items (empty):
 Aluminium cans
 Aluminium foil
 Bottles
 Car Detail (Detergent)
 Cardboard boxes
 Dish cans
 Drink cans
 Envelopes (including plastic-lined)
 Foli
 Food cans
 Glass jars & bottles
 Heavy magazines & brochures
 Printing cards
 Tin cans
 Tin cream containers (cardboard & plastic)

Hazardous Waste
 Take to HW drop off locations (see Hazardous Waste & Deposit Sites page)

Take to HW drop off locations (see Hazardous Waste & Deposit Sites page)
 Acids
 Aerosols
 Batteries (lead, nickel)
 Batteries (dry cell, rechargeable)
 Can trays or battery recycle bin or other office
 Bleach
 Brake fluid
 Cleaners (e.g. floor, carpet, other)
 Fuel/air
 Fluorescent light tubes / globes
 Gas cylinders
 Garden chemicals / pesticides
 Gas cylinders
 Hairbrushes
 Insecticides
 Kerosene
 Mineral spirits
 Nailbed / solvent
 Paint (oil and water-based)
 Pesticides
 Petrol & kerosene liquids
 Pesticide (Depot/Shop) 02-97
 Pool chemicals
 Rattle can
 Rat poison
 Spinal fluid
 Smoke detectors
 Thinners

Take to Red Hill Waste Management Facility city
 Appliances & Dry & soil
 Medicines (don't include pharmaceuticals)
 Motor oil
 Household items (don't include small electrical)
 Tins - unopened jars*
 Lightly coloured
 Tins - dark hardware
 * The City of Belmont holds collection drop off days. See BULK BINS & DROP OFF DAYS page for more information.
 * This Be Award Campaign Home Bin is a destructive part of unsorted city generated. There are restrictions on the amount, timing & disposal of unsorted bins. Call 1800 855 955 or visit www.rgana.org.au

General enquiries to the R-Gang Hotline: 1800 855 955
 Or visit: www.rgana.org.au

Recycle in the community
 Community organisations and commercial recyclers take some of the items below. See WASTE REDUCTION and BULK BINS & DROP OFF DAYS pages on this guide or visit www.recyclinginformation.com.au

Electronics	Books
Bricks	Building materials/waste*
Car bodies*	Car parts*
Clothing/shoes	Computer equipment*
Concrete*	Cookware
Electronic equipment	Furniture (in good condition)
Kitchenware (in good condition)	Picture frames (undamaged)
Mobile phones	Printer cartridges
Printer cartridges	Refrigerators
Tape	Stoves (undamaged)
Tires*	White goods*

*Can also be taken to Red Hill Waste Management Facility. (See page 16 for more information.)

Bulk bins (blue & green)
 See BULK BINS & DROP OFF DAYS page for more information.

Yellow-top recycling bin ready reckoner

- GLASS BOTTLES & JARS (empty)
- STEEL, ALUMINIUM CANS & BOTTLES
- NEWSPAPERS, PAPER, CARDBOARD & MAGAZINES (flat)
- PLASTIC BOTTLES & CONTAINERS (in plastic wrap or plastic bags)
- WINE & JUICE CARTONS (in silver lined BIF cartons)

Want to start a compost or worm farm and reduce your household waste going to landfill? See www.rgana.org.au for information.

APPENDIX B

30 September 2014

Lot 1017, The Springs

Appendix C: Architectural drawings Lot 1017, The Springs

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APPENDIX C

TRAFFIC MANAGEMENT - SHAWMAC

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ATTAC MENT 1C – Traffic Report

Lot 1017 (3) aw sburn Road Rivervale

LG Reference: 648/2014

DAP Reference: DAP/14/00637

APPENDIX C



CONSULTING CIVIL & TRAFFIC ENGINEERS, RISK MANAGERS.



Project: Transport Statement for the Development of Lot 1017,
Hawksburn Rd, The Springs, Rivervale.

Client: Hillam Architects.

Author: T Shaw

Signature:

Date: 6th June 2014

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APPENDIX C



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APPENDIX C



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1. Summary.

Shawmac was commissioned to assess the impacts associated with parking and traffic generation from the proposed residential development comprising a total of 148 residential apartments and 833 m² of commercial floor space.

The assessment followed the recommended outline contained in the West Australian Planning Commission draft guideline "Transport Statement Guidelines for Developments". Traffic flow from the site was estimated by applying generation rates recommended by the New South Wales Roads and Traffic Authority publication "Guide to Traffic Generating Developments" and the Institute of Transportation Engineers, "Trip Generation".

Traffic was assigned to the adjacent existing road network and flows used as a basis for assessing traffic impacts. Based on the assessment it was shown that the flows predicted can be accommodated within the existing network without unacceptable adverse impacts.

2. Introduction and Background.

2.1. Proponent.

Shawmac Pty Ltd has been commissioned by the Hiram Architects, on behalf of the developer to review the proposed development of the site which is located on Lot 1017, Hawksburn Rd, The Springs, Rivervale.

2.2. Site Location and Land Use.

The site is located as shown on Figure 1 and is within the City of Belmont.



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Figure 1. Site Location.

The study site is currently undeveloped and is shown on the aerial photograph on Figure 2.



Figure 2. Site Aerial Photograph.

APPENDIX C



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2.3. Referenced Information.

In undertaking the study, the information listed below was referenced. Where used in the body of the report, references are further noted by footnotes.

- Land Use Traffic Generation Guidelines, March 1987 - Director General of Transport, South Australia;
- Guide to Traffic Generating Developments Version 2.2, October 2002 – Roads and Traffic Authority, New South Wales; and
- Trip Generation 8th edition, 2009 - Institute of Transportation Engineers, Washington, USA.

3. Site Proposal.

3.1. Regional Context.

The site is located within the City of Belmont on Lot 1017, Hawksburn Rd, The Springs locality of Rivervale and is approximately 9 km from the Perth Central Business District. It has direct street frontage to Hawksburn Road and is highly accessible to Great Eastern Highway and the Graham Farmer Freeway via Rowe Avenue and Brighton Road.

3.2. Proposed Land Use.

The application proposes the redevelopment of the subject site. The land use is consistent with the "Special Development Precinct" zoning of the site and the "Urban" zoning of the Metropolitan Planning Scheme. A mixture of one bedroom, two bedroom and studio dwellings of varying floor areas together with commercial areas is proposed.

An onsite car park is proposed with access provided from Riversdale Road.

The proposed development will comprise the following:



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	Car bays required	Car allocations provided	Commercial - strata area	1x1 bed	2x2 bed	Studio	Total
Basement 2	0	97	0	0	0	0	0
Basement 1	0	95	0	0	0	0	0
Ground Floor	67	38	883	0	0	0	0
1st Floor	23	0	0	12	5	6	23
2nd Floor	21	0	0	10	5	6	21
3rd Floor	16	0	0	7	8	1	16
4th Floor	20	0	0	10	7	3	20
5th Floor	20	0	0	10	7	3	20
6th Floor	20	0	0	10	7	3	20
7th Floor	20	0	0	10	7	3	20
8th Floor	8	0	0	0	8	0	8
TOTAL	215	230	883	69	54	25	148

Table 1. Proposed Development Quantum

The proposed development is consistent with the City of Belmont's permissible uses under the Town Planning Scheme No. 14, the subject site is zoned Mixed Use (R100 / R80).



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The Springs Structure Plan



Figure 3. Structure Plan

The proposed development site layout is shown in Appendix A.

3.3. Major Attractors and Generators of Traffic.

The main attractors and generators expected to influence traffic flows to and from the site include:

- The Perth CBD and associated employment and retail centres;
- Belmont and Victoria Park retail precincts; and,
- The adjacent river and recreational facilities.

4. Existing Situation.

4.1. Existing Roads.

Hawksburn Road is a local access road under the care and control of the City of Belmont. Adjacent to the site, Hawksburn Road comprises a single kerbed carriageway. Hawksburn Road connects to Rowe Avenue to the north



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and then connects to Brighton Road to the east. Brighton Road provides connection to Great Eastern Highway via a signalised intersection. The speed zone on Hawksburn Road, Rowe Avenue and Brighton Road is 50 km/h.

Traffic flows along adjacent streets are not available; however based on a review of the current traffic catchment areas and likely desire lines, a local model was developed and is shown on Figure 4.



Figure 4. Modelled Traffic Generation - Existing Development

4.1.1. Road Hierarchy vs Actual Flows

Table 2 details the comparison of actual flows against the maximum desirable flows under the MRWA Functional Hierarchy criteria / Liveable Neighbourhood Guidelines.

Location and date of count.		Classification	Indicative Traffic Volume (vpd)	Actual Daily Traffic Flows (vpd)
Hawksburn Road	Adjacent to the site	Local Access Road	3,000 vpd	850 vpd (estimated).
Rowe Avenue		Local Access Road	3,000 vpd	1,140 vpd (estimated).
Brighton Road		Local Distributor Road	7,000 vpd	3,260 vpd (estimated).

Table 2. Desirable Maximum Flows vs Actual Flows

The table above indicates that both roads currently operate at indicative volumes.

4.1.2. Changes to Surrounding Transport Networks

APPENDIX C



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There are no known changes to the adjacent road network.

4.1.3. Assessment Years

The development is assessed on current network conditions.

5. Time Periods for Assessment

Assessment is based on both daily traffic and peak hour periods.

6. Development Generation and Distribution.

In order to estimate the impact of traffic generated by the proposed development, the Road and Traffic Authority (RTA), NSW "Guide to Traffic Generating Developments", the Institute of Transportation Engineers "Trip Generation" and the Director General of Transport, South Australia Land Use Traffic Generation Guidelines, March 1987 were referred to.

Land use	Generation rate			Unit	Quantum	Estimated Generation			Source
	ADT	AM Peak	PM Peak			ADT	AM Peak	PM Peak	
Residential dwelling - Medium density residential flat building (1-2BR)	4.50	0.45	0.45	Units	148	666	67	67	RTA Guide.
Office - commercial general RTA	10.00	2.00	2.00	GFA (m2)	883	88	18	18	RTA Guide.
Total						754	84	84	

Table 3. Predicted Daily Trip Generation.

Land use	Peak Distribution			
	AM Peak in	AM Peak out	PM Peak in	PM Peak out
Residential dwelling - Medium density residential flat building (1-2BR)	25	41	41	25
Office - commercial general RTA	16	2	3	15
Total	41	43	44	41

Table 4. Predicted Peak Hour Movements

It is estimated that the proposed development has the potential to generate about 1,020 vehicle trips per day or approximately 102 vehicles in the peak hour periods.

6.1. External Roads

The following summarises the impact of predicted flows on midblock network based on previously adopted desire lines and introduction of the predicted flows from Lot 1017 onto the road networks.



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Figure 5. Modelled Traffic Generation – Incorporating Lot 1017

In terms of impact on immediately adjacent roads, Table 5 summarises expected changes in flows.

Location	Daily	AM Peak	PM Peak
Hawksburn Road adjacent to the site			
Predicted flow before development	100	10	10
Predicted flow after development	675	68	68
Rowe Avenue east of Hawksburn Road			
Predicted flow before development	505	50	50
Predicted flow after development	1,178	118	118
Rowe Avenue west of Brighton Road			
Predicted flow before development	1,530	153	153
Predicted flow after development	1,944	194	194
Brighton Road south of Rowe Avenue			
Predicted flow before development	1,598	159	159
Predicted flow after development	2,027	203	203

Table 5. Predicted Mid Block Traffic.

Traffic volumes are within the indicative volumes for the relative road classifications and no adverse or unacceptable impacts are predicted.

6.1.1. Impact on Intersections

Increased traffic has the potential to impact primarily on the Riversdale Road - Rowe Avenue and the Rowe Avenue and Brighton Road intersections where it is predicted the majority of traffic will be distributed. A preliminary assessment of impacts is shown on Table 6.

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Intersection.	Configuration	Estimated peak hour major flow	Estimated peak hour minor flow	Comment
Rowe Avenue - Brighton Road	4 way - roundabout control	300 vph	160 vph	The existing intersection is expected to currently operate at a good LOS in peak periods; the impact of the development is predicted to increase peak hour flows into and out of the intersection by approximately 80 to 85 vehicles an hour. This is unlikely to measurably change performance.
Rowe Avenue - Hawksburn Road	4 way - Giveaway sign control	70 vph	40 vpd	The existing intersection is expected to currently operate at a good LOS in peak periods; the impact of the development is predicted to increase peak hour flows into and out of the intersection by approximately 50 to 60 vehicles an hour. This is unlikely to measurably change performance.

Table 6. Predicted impacts on intersections.

7. Pedestrian Access and Cycle Access.

Cycle facilities in the general vicinity of the site are shown on Figure 6. A shared path is provided on Riversdale Road west of Hawksburn Road, Graham Farmer Freeway and Great Eastern Highway. Hawksburn Road forms part of the Perth Bicycle Network while Riversdale Road east of Hawksburn Road and Brighton Road provide good riding environments. Pedestrian paths are also provided on Hawksburn Road, Rowe Avenue, Brighton Road and on adjacent residential streets.



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Figure 6. Cycle Facilities

8. Public Transport

Public Transport.

Comprehensive public transport services are provided by bus services as shown on Figure 7.

APPENDIX C



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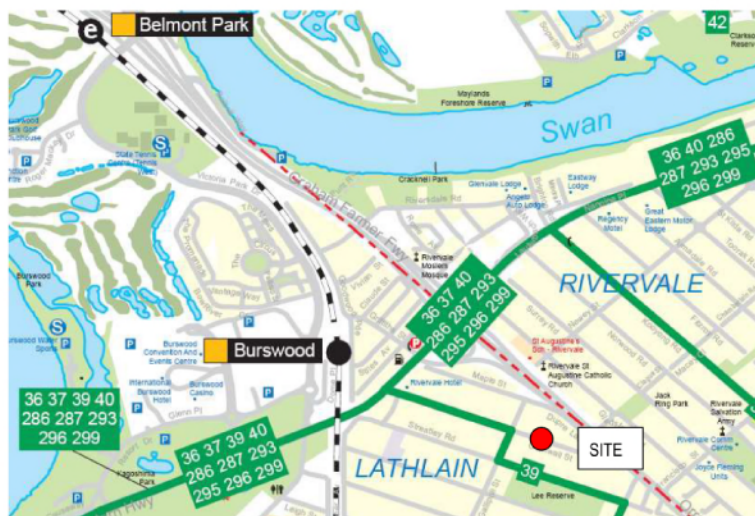


Figure 7. Public Transport Routes

9. Site Access and Parking

9.1. Parking.

Car parking is proposed to be located on the basement and ground floor levels with access off Riversdale Road.

The City of Belmont TPS 5 requires parking to be consistent with the R-Codes which indicate parking requirements for multiple dwellings in areas with a coding of R30 or greater and within mixed use development and activity centres. Calculation of bay numbers is as detailed below. Also indicated is the provision of bicycle bays consistent with the City of Belmont's requirement.



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Requirement	Allocation
CAR BAYS	
At least 1 per residential unit = 148 bays;	Basement 2 = 97 residential bays
1 space for every 30m ² of NLA or 1 space for each employee, whichever is greater = 48 bays	Basement 1 = 105 residential bays and 13 visitor bays
Residential visitors require 0.25 per dwelling = 37 bays	Ground = 20 reciprocal bays, 4 visitor bays
Total required = 233 bays	Mezzanine = 28 (including 2 universal bays)
	Total bay allocation = 267 bays
BICYCLE STORAGE	
Shops visitor = 35	Basement 2 = 38 Wall mounted, 14 floor mount
Shops employee = 4	Basement 1 = 30 Wall mounted, 14 floor mount
Residents = 148	Ground = 52 floor mounted (13 residential visitor and 39 commercial)
Residential visitors = 18	Stores bigger than 4.5sqm = 53
Total requirement = 205	Total bike bay provided = 148 bays + 53 in stores = 210

Table 7. Parking determination

The site is classed as a 1 or 1A parking facility and comparison of the required dimensions versus the provided dimensions are summarised on Table 8.

Situation	Class	Configuration	AS 2890 Required Bay dimensions		
			Length	Width	Aisle
b) Residential, domestic and employee parking	1A	C1 - where parking is to a wall or high kerb not allowing any overhang.	5.4	2.4	5.8
Proposed Bay dimensions (scaled)			5.4	2.4	5.8
Compliance			Complies	Complies	Complies

Table 8. Parking Details.

Bay dimensions comply with the requirements of AS 2890.1 – Parking Facilities – Off street Car Parking.

Basement end bays at the end of the blind aisles are located within 1000 mm of the wall or have clear egress when reversing and as such comply with the Australian Standard which requires a 1 metre clearance between the end bay and the wall.

For parking near obstacles, AS2890.1:2004 in its Figure 5.2 provides dimensions for clear zones to be provided around a parked car. This is relevant when columns or walls occur near the sides of the bays.

APPENDIX C



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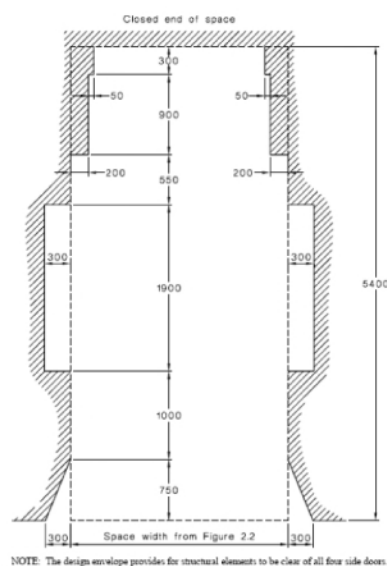


FIGURE 5.2 DESIGN ENVELOPE AROUND PARKED VEHICLE TO BE KEPT CLEAR OF COLUMNS, WALLS AND OBSTRUCTIONS

Figure 8. AS 2890 Figure 5.2 extract

Most column locations are outside the area influenced by front car doors and bay dimensions are generally considered to be adequate.

Access to the basement car parks is via a graded ramps between basement floors and onto the ground floor parking area. Access to the ground floor parking area is via a crossover off Hawksburn Road. AS 2890 requires that ramps to car parking facilities comply with a number of requirements, including:

- For ramps up to 20 m long, a maximum grade of 1 in 4 (25%) is permitted.
- The 20 m maximum length shall include any parts of grade change transitions at each end that exceed 1 in 5 (20%).
- Grade change transitions will be required in both cases where grades are at or near the maximum.



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The drawings do not indicate ramp grades or ramp dimensions and levels and as such compliance cannot be confirmed. Review of the drawings suggests that ramp grades are likely to be compliant; however confirmation is required that grades comply with the requirements of the Standard.

9.2. Access Movements

Access to and from the development is via a crossover off Hawksburn Road. The Australian Standard AS2890.1:2004 Parking Facilities Part 1 Off-Street Parking Facilities recommends the crossover gradients to be 1 in 20 as specified in Section 3.3(a).

3.3 GRADIENTS OF ACCESS DRIVEWAYS

At entry and exit points, the access driveway should be graded to minimize problems associated with crossing the footpath and entering the traffic in the frontage road.

Maximum gradients on and near access driveways, other than at domestic properties (see Clause 2.6), shall be as follows:

- (a) *Property line/building alignment/pedestrian path*—max. 1 in 20 (5%) between edge of frontage road and the property line, building alignment or pedestrian path (except as provided in Item (d)), and for at least the first 6 m into the car park (except as provided below).

The grade of the first 6 m into the car park may be increased to 1 in 8 (12.5%) under the following conditions:

- The grade is a downgrade for traffic leaving the property and entering the frontage road.
- The user class is Class 1, 1A or 2 only.
- The maximum car park size is—
 - for entry into an arterial road—25 car spaces, or
 - for entry onto a local road—100 car spaces.

The maximum grade across the property line shall remain at 1 in 20 (5%).

The site plan does not indicate grade across the crossover; however inspection on site confirms that proposed levels will result in compliant crossovers.

Rubbish collection will be via a dedicated collection bay accessed from Hawksburn Road on the northwest corner of the site. Rubbish collection vehicles will be required to reverse from Hawksburn Road into the collection area and then exit in a forward gear. Given that Hawksburn Road terminates at a cul de sac immediately south of the access point, no adverse impacts from reversing rubbish collection vehicles are envisaged. The configuration may also result in the rubbish collection vehicle being placed in potential conflict with vehicles entering or exiting the parking area. Notwithstanding this, the low frequency of movements by rubbish collection vehicles together with the low number of movements expected to and from the site will result in a low likelihood of conflict. Added to this, movement by vehicles is expected to be at low speed further reducing the risk of conflict. Given the above, the configuration as proposed is considered to be acceptable.

APPENDIX C



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10. Conclusions

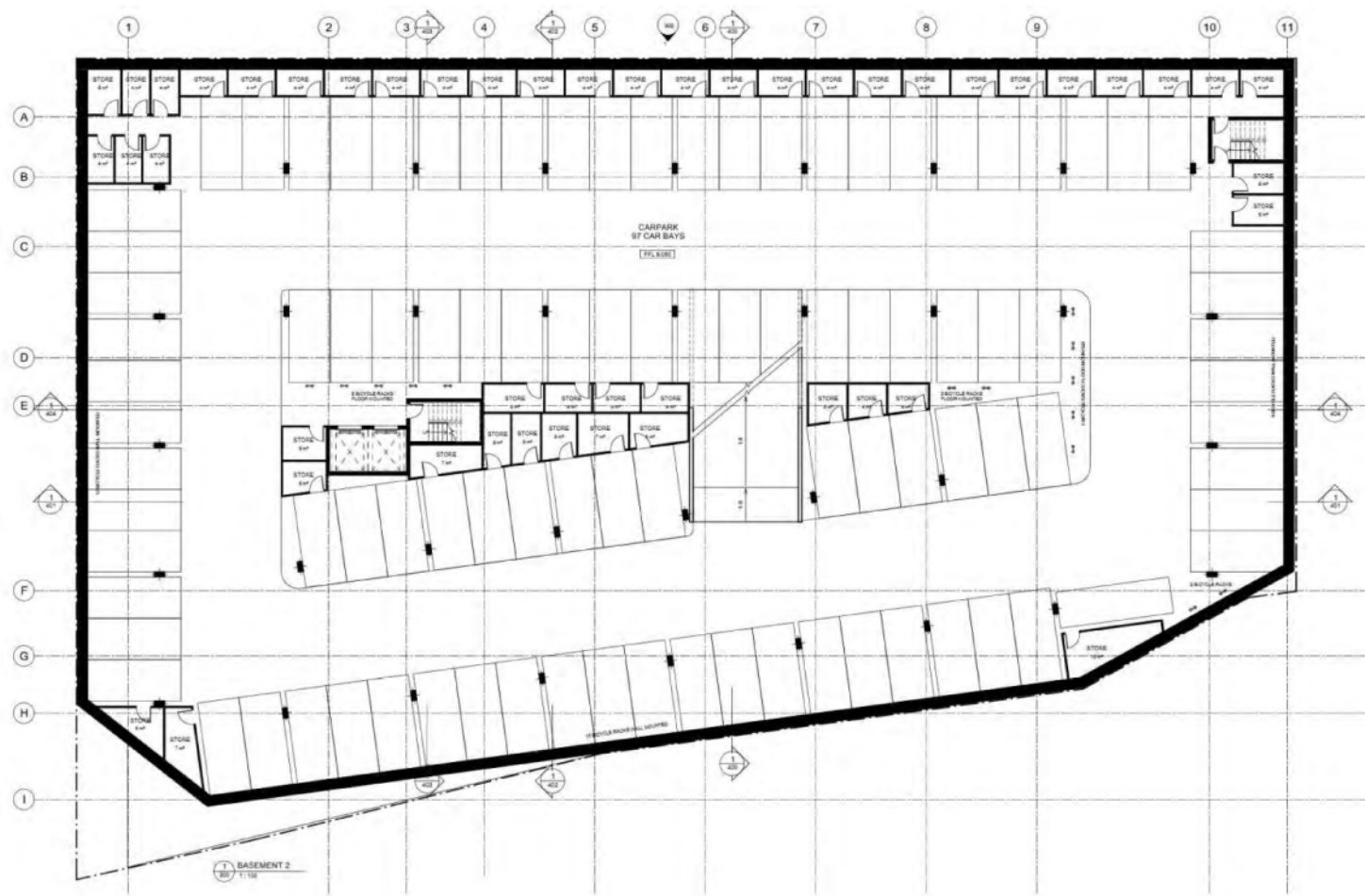
Based on the assessment of traffic generation it is predicted that there will be no unacceptable impact on the adjacent road segments.

With respect to the proposed development, the following is concluded;

- The location of the proposed access and egress is considered appropriate and the access and egress will operate safely.
- Based on the expected usage pattern and the prevalence of high frequency public transport services, it is considered that the proposed parking is adequate to service the land use.
- Internal parking areas cater for all expected classes of vehicles.

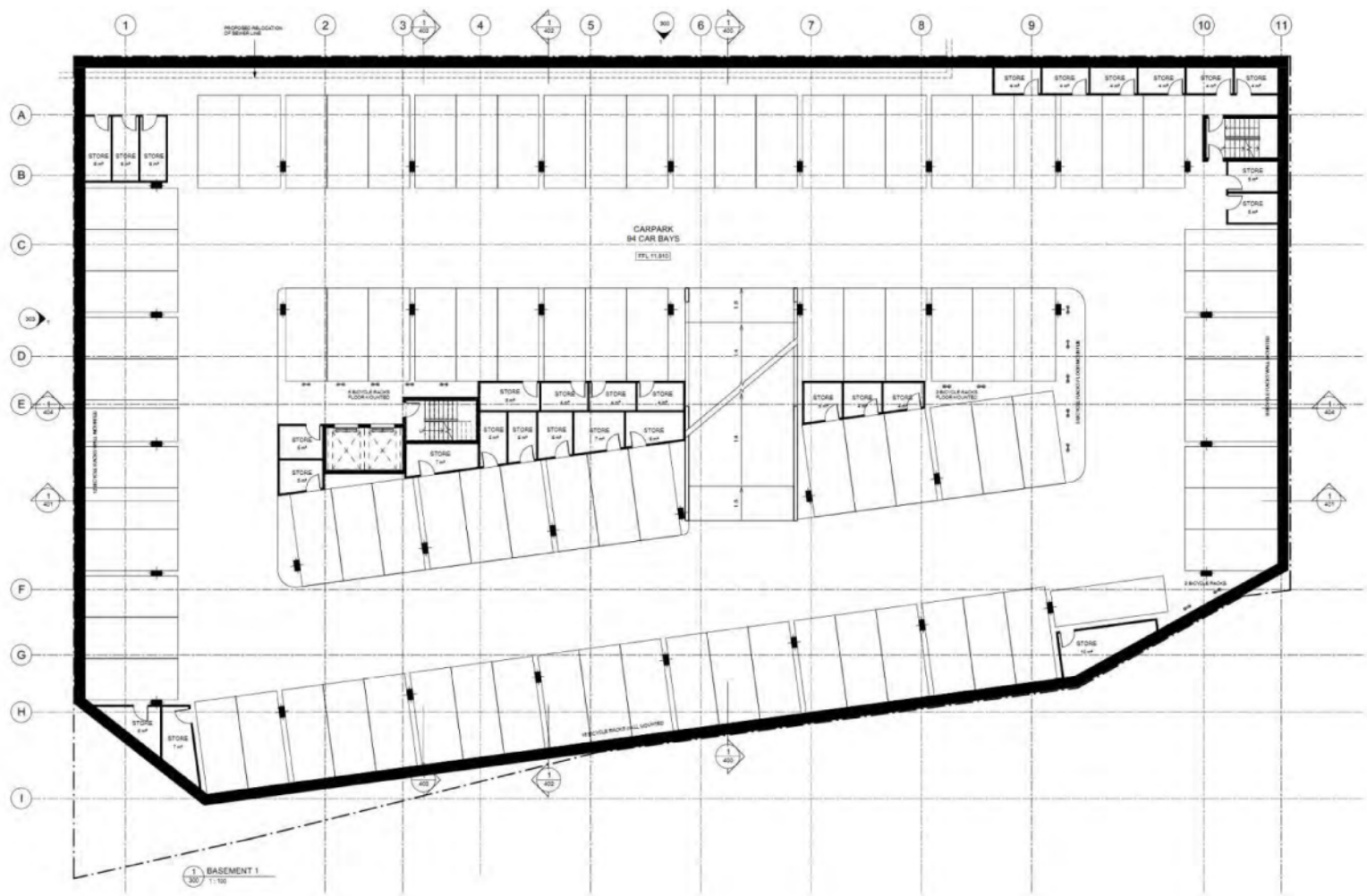


11. Appendix 1- Site Plans



EVEL BASEMENT 2
402 PROPOSED NEW RESIDENTIAL APARTMENTS
37 2017 SPRING RIVERVALE
A40000000

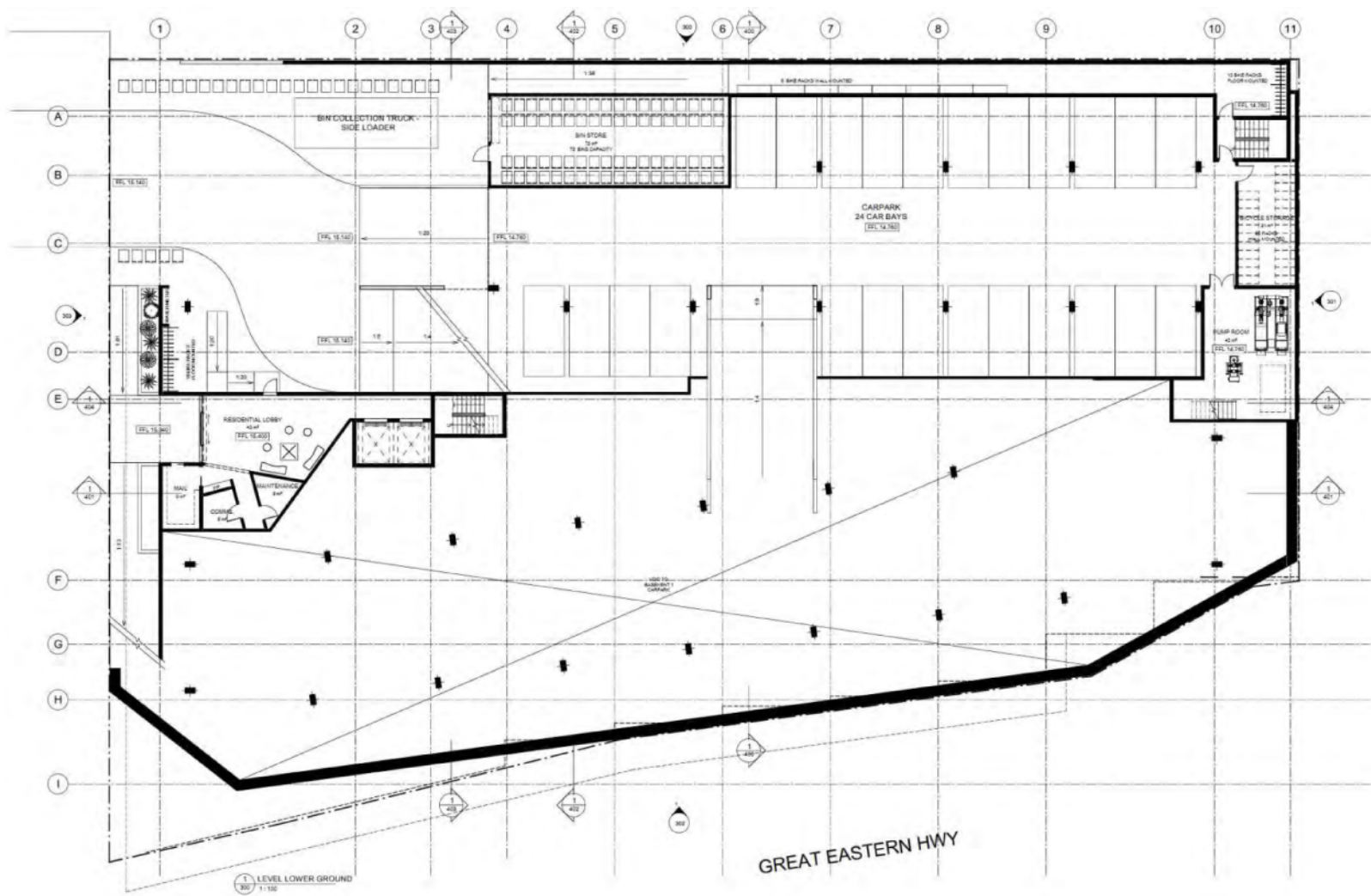
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'EL BASEMENT 1
PROPOSED NEW RESIDENTIAL APARTMENTS
1077 SPRINGS RIVERVALE



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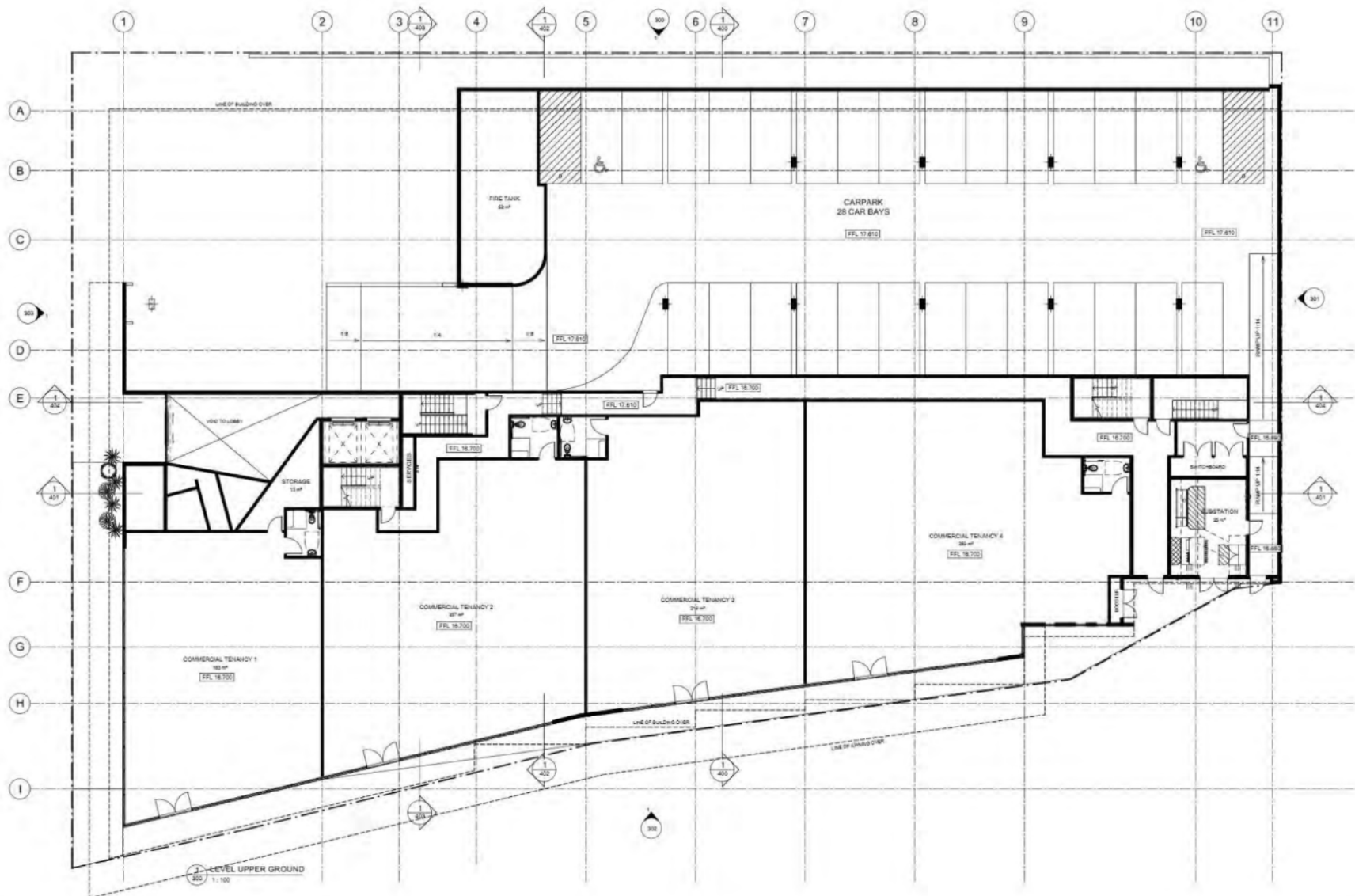


VEL LOWER GROUND
12 PROPOSED NEW RESIDENTIAL APARTMENTS
1 3017 SPRINGS RIVERVALE
MAY 2014

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L UPPER GROUND
PROPOSED NEW RESIDENTIAL APARTMENTS
7 SPRINGS RIVERVALE

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HILLAM ARCHITECTS

APPENDIX D

ACOUSTIC MANAGEMENT - VIPAC

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ATTAC MENT 1D – Acoustic Report

Lot 1017 (3) aw sburn Road Rivervale

LG Reference: 648/2014

DAP Reference: DAP/14/00637

APPENDIX D



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Vipac Engineers & Scientists

Hillam Architects

Hilliam - Lot 1017 The Springs

Preliminary Building Acoustics Design Report



60W-14-0050-DRP-531454-0

6 June 2014



Hillam Architects
 Hilliam - Lot 1017 The Springs
 Preliminary Building Acoustics Design Report

Report Title: Preliminary Building Acoustics Design Report Job Title: Hilliam - Lot 1017 The Springs		
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6 June 2014

60W-14-0050-DRP-531454-0

Commercial-In-Confidence

APPENDIX D



Hillam Architects
Hillam - Lot 1017 The Springs
Preliminary Building Acoustics Design Report

EXECUTIVE SUMMARY

VIPAC Engineers & Scientists were engaged by Dragon Century Springs Pty Ltd C/O Hillam Architects to review the proposed multi-residential mixed-use development at Lot 1017 Hawksburn Rd, The Springs, Rivervale. The proposed development is located at Hawksburn Rd and directly facing Great Eastern Highway. The site location is presented in **Figure 1.1** below.

The proposed development is a 9 storey mixed-development building comprising of a total of 148 residential apartments. Four commercial spaces are proposed at the ground floor (southern side) of the development. In addition, common facilities for the residents such as swimming pool, Gymnasium, BBQ area/Cabana are located on the 3rd level of the development. A total of 230 parking bays are allocated for car parking on two basement levels and on the ground floor of the development.

Initial acoustic design has been addressed in relation to Environmental Protection Act 1986 (EPA) – “Environmental Protection (Noise) Regulations 1997” (EPNR 1997), Australian Standard AS/NZS 2107:2000, “Acoustics – Recommended design sound levels and reverberation times for building interiors”, Western Australia Planning Commission State Planning Policy 5.4 “Road & Rail Transport Noise & Freight Considerations in Land Use Planning” and the National Construction Code (NCC, formerly known as BCA, also referred to as BCA herein) 2013.

Recommendations on glazing for the development have been made in Section 5.2.2 of this report in meeting AS 2107 [1] indoor noise requirements.

Sound insulation performance requirements for different inter-tenancy walls are marked-up on the architectural plans and presented in Appendix D of this report.

Details of mechanical ventilation system and other mechanical equipment are not yet available. Vipac will assess noise from mechanical services when relevant data are made available.



Hillam Architects
Hillam - Lot 1017 The Springs
Preliminary Building Acoustics Design Report

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1. INTRODUCTION

VIPAC Engineers & Scientists were engaged by Dragon Century Springs Pty Ltd C/O Hillam Architects to review the proposed multi-residential mixed-use development at Lot 1017 Hawksburn Rd, The Springs, Rivervale. The proposed development is located at Hawksburn Rd and directly facing Great Eastern Highway. The site location is presented in **Figure 1.1** below.

The proposed development is a 9 storey mixed-development building comprising of a total of 148 residential apartments. Four commercial spaces are proposed at the ground floor (southern side) of the development. In addition, common facilities for the residents such as swimming pool, Gymnasium, BBQ area/Cabana are located on the 3rd level of the development. A total of 230 parking bays are allocated for car parking on two basement levels and on the ground floor of the development.

Initial acoustic design has been addressed in relation to Environmental Protection Act 1986 (EPA) – “Environmental Protection (Noise) Regulations 1997” (EPNR 1997), Australian Standard AS/NZS 2107:2000, “Acoustics – Recommended design sound levels and reverberation times for building interiors”, Western Australia Planning Commission State Planning Policy 5.4 “Road & Rail Transport Noise & Freight Considerations in Land Use Planning” and the National Construction Code (NCC, formerly known as BCA, also referred to as BCA herein) 2013.



Figure 1.1: Google image showing the site location and nearest noise sensitive receiver (NSR)



2. REFERENCES

- [1] Australian Standard AS/NZS 2107:2000, “Acoustics – Recommended design sound levels and reverberation times for building interiors”.
- [2] National Construction Code (NCC) 2013.
- [3] Environmental Protection Act 1986 (EPA) – “Environmental Protection (Noise) Regulations 1997”.
- [4] AS/NZS 1668.1:1998 - “The use of ventilation and air-conditioning in buildings - Fire and smoke control in multi-compartment buildings”.
- [5] Architectural drawings provided by Hillam Architects on 4th April 2013 via email.
- [6] Western Australia Planning Commission State Planning Policy 5.4 ‘Road & Rail Transport Noise & Freight Considerations in Land Use Planning’.
- [7] WAPC: attachment 2 - implementation guidelines for state planning Policy 5.4 “Road and rail transport noise and freight considerations in Land Use Planning”.
- [8] Zoning Intramaps – City of Belmont.
- [9] AS1055.1, 2 & 3 – 1997: Acoustics-Description and Measurement of Environmental Noise.
- [10] Association of Australian Acoustical Consultants – Guideline for Commercial Building Acoustics 2011.

3. ACOUSTIC BUILD CRITERIA

3.1. State Planning Policy 5.4

Noise emissions from vehicles on public roads are, under regulation 3b, exempt from the requirements of EPNR 1997 [3]. There is no doubt, however, that where developments are built in areas where traffic noise is the dominant source, consideration must be made of the possible negative acoustic impact on residents within these new developments. WAPC SPP 5.4 [6] provides criteria by which to assess the current acoustic environment in proximity to main freight roads, and where applicable provide guidance on noise mitigation considerations in new builds.

Great Eastern Highway IS recognised as primary freight roads of the Perth Metropolitan area, as per Schedule 1 Primary Freight Roads and Rail Routes.

The criteria for assessment of road traffic noise with regards to noise sensitive developments (such as a new residential building) are given in Section 5.3 of WAPC SPP 5.4 [6] as presented below.

5.3 Noise criteria

Table 1 sets out the outdoor noise criteria that apply to proposals for new noise sensitive development or new major roads and railways assessed under this policy.

[...]

The outdoor noise criteria set out in Table 1 apply to the emission of road and rail transport noise as received at a noise sensitive land use. These noise levels apply to the following locations-

[...]

- For new noise-sensitive development proposals, at 1m from the most exposed, habitable façade of the proposed building, at each floor level, and within at least one outdoor living area on each residential lot.

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Table 3.1.1: Outdoor noise criteria in accordance with WAPC SPP 5.4

Time of the Day	Noise Target	Noise Limit
Day (0600 – 2200)	$L_{Aeq(Day)} = 55 \text{ dB(A)}$	$L_{Aeq(Day)} = 60 \text{ dB(A)}$
Night (2200 – 0600)	$L_{Aeq(Night)} = 50 \text{ dB(A)}$	$L_{Aeq(Night)} = 55 \text{ dB(A)}$

3.2. EPNR 1997

The objective of this section is to assess noise sources introduced by the proposed development (other than traffic), such as extraction fans, air conditioning systems potentially impacting on:

- Adjacent Single Occupancy Units (SOUs)
- Properties nearby the proposed development

Noise generated by proposed development should comply with Table 3.2.1 The EPA [3] sets out the maximum allowable noise levels based on the time of day and land use, applicable at nearby premises. The maximum allowable noise levels (L_{A10} , L_{A1} and L_{Amax}) are determined using the Influencing Factor (IF) calculated in accordance with the regulations and taking into account the land zoning. They are called the Assigned Noise Levels.

The nearest noise sensitive premise is taken to be Lot 1018 Hawksburn Rd, which is immediate behind (northern boundary) the proposed development. The assigned noise levels - not including the influencing factor (IF) - for noise sensitive premises within 15m of the development are shown in Table 3.2.1.

Table 3.2.1 - Assigned levels from EPNR 1997

Type of premises receiving noise	Time of day	Assigned level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise sensitive premises: Highly Sensitive Area	0700 to 1900 hours Monday to Saturday	45 + IF	55 + IF	65 + IF
	0900 to 1900 hours Sunday and public holidays	40 + IF	50 + IF	65 + IF
	1900 to 2200 hours all days	40 + IF	50 + IF	55 + IF
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays	35 + IF	45 + IF	55 + IF
Noise sensitive premises: any area other than highly sensitive area	Anytime of the day and week	60	75	80
Commercial premises	Anytime of the day and week	60	75	80

The influencing factor has been calculated for the nearest Noise Sensitive Receiver (NSR). The calculation is summed below, taking into account the percentage of land zoned 'residential', 'commercial' or 'industrial' in both 100m and 450m radius circles, as well as the number of major and secondary roads in each circle.



These are based on Metropolitan Region Schemes Maps obtained from the Western Australian Planning Commission (shown in Appendix A). For zoning of Special Development Precinct, mixed-use developments, it has been thought prudent to treat them as residential, as this results in more stringent criteria and thus better protection of amenity for residents.

Table 3.2.2 - Detail of Influencing Factor calculation at NSR

100m Radius Circle			450m Radius Circle		
Residential	Commercial	Industrial	Residential	Commercial	Industrial
100.0	0.0	0.0	95.0	5.0	0.0
I					
0					
C					
0.3					
100m Radius Circle		450m Radius Circle			
No. of major roads	No. of secondary roads	No. of major roads	No. of secondary roads		
1	0	2	0		
TF					
6					
IF (I+C+TF)					
6					

The Traffic factor has been calculated on the following basis (from Main Roads WA's Traffic Volume Report dated January 2009):

- Major Road: One in 100m (Great Eastern Hwy) and two in 450m circle (Great Eastern Hwy & Graham Farmer Fwy)
- Secondary Roads: None in 100m radius circle

Given the IF calculated above the following assigned levels apply:

Table 3.2.3- Assigned Noise Levels

Type of premises receiving noise	Time of day	Assigned level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise sensitive premises: Highly Sensitive Area	0700 to 1900 hours Monday to Saturday	51	61	71
	0900 to 1900 hours Sunday and public holidays	46	56	71
	1900 to 2200 hours all days	46	56	61
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays	41	51	61
Noise sensitive premises: any area other than highly sensitive area	Anytime of the day and week	60	75	80
Commercial premises	Anytime of the day and week	60	75	80

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It is our recommendation that noise emissions (especially from mechanical plant) from the proposed development should not be impulsive, tonal or have modulation. Equipment should be selected so that these sound attributes are not featured. If this cannot be avoided then the following penalty must be applied (cumulative to a maximum of 15dB), in accordance with EPA [3].

Table 3.2.4- Penalty assessment table

Adjustment where noise emission is not music*			Adjustment where noise emission is music	
Where tonality is present	Where modulation is present	Impulsiveness present	Where impulsiveness is not present	Where impulsiveness is present
+ 5 dB	+ 5 dB	+ 10 dB	+ 10 dB	+ 15 dB

3.3. AS 2107: Indoor Noise Guidance Criteria

Guidance is taken from AS2107 Acoustics— Recommended design sound levels and reverberation times for building interiors [1]. Prescribed indoors noise levels are set in [1] and are determined by room use as follows:

Table 3.3.1 - Recommended internal noise levels (AS 2107 : 2000), LAeq dB

Type of Occupancy/Activity	Recommended design sound level, LAeq, dBA	
	Satisfactory	Maximum
Living areas (near minor roads)	30	40
Living areas (near major roads)	35	45
Sleeping areas (near minor roads)	30	35
Sleeping areas (near major roads)	30	40
Kitchen	45	55
Dining rooms	40	45
Work Areas	35	45
Common areas (foyer, lobbies etc..)	45	55
Enclosed Car Parks	55	65
Washrooms and toilets	45	55
Laundry and maintenance areas	45	55
Games rooms	45	50
	(RT < 1 Sec)	
Foyer and recreation areas	45	50
Lounges and Bars	45	50
Small Retail Stores	45	50
General Offices	40	45
Computer rooms	45	50
Control rooms	50	60
Gymnasium	45	55
Cafeteria	45	50
	(RT < 1 Sec)	



3.4. NCC 2013: Sound Insulation Requirements

National Construction Code (NCC, formerly known as BCA) 2013 [2] defines a block of residential flats or apartments to be a Class 2 building and requires minimum sound isolation ratings for this class of buildings as follows:

Table 3.4.1: Airborne and Impact Sound Insulation Requirement for Walls and Floor

SEPARATING PARTITIONS	Minimum NCC 2013 Requirement
WALLS AND FLOORS	
Walls between sole occupancy units	R _w + C _{tr} 50
Walls between apartments and stairway, public corridors, public lobby or the like, between units of different classification.	R _w 50
Walls between wet areas (bathrooms, sanitary compartment, laundry or kitchen) and a habitable room (other than kitchen) in adjoining apartments	R _w + C _{tr} 50 & of discontinuous construction
Walls between a plant room or lift shaft and a sole occupancy unit	R _w 50 & of discontinuous construction
Doors assemblies located in a wall between an apartment and a stairway, public corridor, public lobby or the like	R _w 30
Floors between sole occupancy units or between a sole occupancy unit and plant room, lift shaft, stairway, public corridor, public lobby or the like, between units of different classification.	R _w + C _{tr} 50 & L _{n,w} < 62

Table 3.4.2: Sound Insulation requirements for services

SEPARATING PARTITIONS	Minimum NCC 2013 Requirement
SERVICES	
(a) a duct, soil, waste or water supply pipe including a duct or pipe that is located in a wall or floor cavity serves or passes through more than one sole occupancy unit	
(i) if the adjacent room is a habitable room (other than a kitchen); or	R _w + C _{tr} 40
(ii) if the room is a non-habitable room	R _w + C _{tr} 25
(b) a storm water pipe passes through a sole occupancy unit	
(i) if the adjacent room is a habitable room (other than a kitchen); or	R _w + C _{tr} 40
(ii) if the room is a non-habitable room	R _w + C _{tr} 25

3.4.1. Walls requiring discontinuous construction

Discontinuous construction is understood to mean (from NCC 2013):

"For the purpose of this part, discontinuous construction means a wall having a minimum 20mm cavity between 2 separate leaves and:

- (i) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type

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(ii) for other than masonry, there is no mechanical linkage between leaves except at the periphery”.

3.4.2. Walls between lift shafts and apartments

In accordance with the NCC 2013 [2] all walls separating a lift shaft must be of discontinuous construction.

3.4.3. Building services

Construction Requirements

For building services to comply with NCC 2013 [2] they must abide with the following, which is an extract from BCA Section F5.2:

- (e) Services
 - (i) Services must not be chased into concrete or masonry elements
 - (ii) A door or panel required to have a certain R_w+C_{tr} that provides access to a duct, pipe or other service must –
 - (A) not open into any Habitable room (other than a kitchen); and
 - (B) be firmly fixed so as to overlap the frame or rebate of the frame by not less than 10 mm, be fitted with a sealing gasket along all edges and be constructed of –
 - (aa) wood, particleboard or blockboard not less than 33 mm thick; or
 - (bb) compressed fibre reinforced cement sheeting not less than 9 mm thick; or
 - (cc) other suitable material with a mass per unit area not less than 24 kg/m²
 - (iii) A water supply pipe must –
 - (A) only be installed in the cavity of discontinuous construction; and
 - (B) in the case of a pipe that serves only one sole-occupancy unit, not be fixed to the wall leaf on the side adjoining any other sole-occupancy unit and have a clearance not less than 10 mm to the other wall leaf.
 - (iv) Electrical outlets must be offset from each other –
 - (A) in masonry walling, not less than 100 mm; and
 - (B) in timber or steel framed walling, not less than 300 mm

Isolation Requirements

BCA prescribes minimum airborne sound insulation parameters for service duct walls that separate building services from residential spaces, in order to preserve acoustic amenity for future building occupants.

A service duct is created when:

- Concealed services are installed (e.g. mechanical air handling duct work; hydraulic piping passing through a building).

See Table 3.4.2 for sound isolation requirements.

4. CURRENT AMBIENT NOISE

Vipac has carried out numerous noise measurements in the vicinity of the proposed development due to Vipac’s involvement in building acoustics design in a number of developments in this area. The ambient



noise level for the proposed development is retrieved from Vipac’s earlier measured ambient noise data (unattended) taken for Lot 1017 in Year 2013. Noise data and measurement locations are shown in Appendix B of this report. Attended noise measurements were carried out at various positions on 27th May 2014 (also indicated in Appendix B). The aim of the survey was to quantify existing underlying ambient noise levels that would impact the proposed development at the various facades and elevations.

Site observations showed that the most significant source of noise break-in to the proposed development during both daytime and night would be from traffic on Great Eastern Highway.

The results of the environmental noise survey for evaluation against WAPC Policy 5.4 [6] have been summarised in Table 4.1. It is noted that the façade noise levels (with the inclusion of +2.5 dB correction) exceed the noise target but within the noise limit as stated in WAPC Policy 5.4 [6].

Table 4.1 – Results of WAPC assessment

	DAYTIME (6AM-10PM) AVERAGE LEVELS					NIGHTTIME (10PM-6AM) AVERAGE LEVELS				
	LAeq	LAmx	LA(1)	LA(10)	L(90)	LAeq	LAmx	LA(1)	LA(10)	L(90)
Measured Average	54.4	68.8	61.0	56.3	51.0	50.7	63.2	57.5	52.4	47.7
Façade Correction (dB)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Outdoor Noise Levels (dBA)	56.9	71.3	63.5	58.8	53.5	53.2	65.7	60.0	54.9	50.2
Noise Target	55.0					50.0				
Noise Limit	60.0					55.0				
Remarks	Ambient level exceed Noise Target by 2 dB					Ambient level exceed Noise Target by 3 dB				

Based on the implementation guideline [7], a future transport factor of 3 dB is considered for the future façade noise level used for the acoustic design of the building. This 3 dB is basically based on the assumption that the traffic volume will be doubled in next 15 to 20 years. In addition to the traffic factor, another 4 dB factor is added to the South and east Façade due to vertical propagation of noise to the development from the Great Eastern Highway. Façade acoustic design is based on indoor noise requirements as per AS 2107. Table 4.3 presents the predicted future façade noise levels which are used for the acoustic design of the proposed development.

Table 4.2 – Predicted future façade noise levels

	Day-time (6am-10pm) average levels LAeq (dBA)	Night-time (10pm-6am) average levels LAeq (dBA)
North Façade	43	40
South and East Façade	64	60
West Façade	45	41



5. BUILDING ACOUSTIC DESIGN REVIEW AND RECOMMENDATIONS

5.1. Review of Outdoor Noise

Section 4 of this report illustrates the measured outdoor noise levels at the proposed development. It is found that the façade noise levels (with the inclusion of +2.5 dB correction) exceed the "Noise Target" during the day and night time by 2 dB and 3 dB respectively.

Implementation guidelines for State planning Policy 5.4 [7] provides a "deemed to comply" package for residential development in areas adjacent to major roads or passenger railways where transport noise levels exceed the noise "Target" but are within the noise "Limit" and is presented in Table 5.1.1 below. **The deemed-to-comply specifications are intended to simplify compliance with the noise criteria. However, Implementation guidelines for State planning Policy 5.4 [7] states that "deemed-to-comply" option should not remove the option to pursue alternative measures or designs. Departures from the deemed-to-comply specifications need to be accompanied by acoustic certification from a competent person, to the effect that the development will achieve the requirements of the policy.** Vipac evaluates the entire development in terms of acoustic requirements and design in order to achieve AS 2107 [1] indoor noise requirements.

Area type	Orientation	Package A measures
Indoors		
Bedrooms	Facing road/trail corridor	<ul style="list-style-type: none"> 6 mm laminated glazing Casement or awning windows No external doors Closed eaves No vents to outside walls/eaves Mechanical ventilation/airconditioning (see 4.5.3)
	Side-on to corridor	<ul style="list-style-type: none"> 6 mm laminated glazing Closed eaves Mechanical ventilation/airconditioning
	Away from corridor	No requirements
Living and work areas ⁷	Facing corridor	<ul style="list-style-type: none"> 6 mm laminated glazing Casement or awning windows 35 mm (minimum) solid core external doors with acoustic seals⁸ Sliding doors must be fitted with acoustic seals Closed eaves No vents to outside walls/eaves Mechanical ventilation/airconditioning
	Side-on to corridor	<ul style="list-style-type: none"> 6 mm glazing Closed eaves Mechanical ventilation/airconditioning
	Away from corridor	No requirements
Other indoor areas	Any	No requirements
Outdoors		
Outdoor living area ⁷	Facing corridor	<ul style="list-style-type: none"> Minimum 2.0 m high solid fence (e.g. Hardifence, pinelap, or Colorbond) Picket fences are not acceptable
	Side-on to corridor	
	Away from corridor	No requirements

Figure 5.1.1 – Deemed to comply package for residential development



It is understood that the State Planning Policy 5.4 [6] requires that at least one outdoor living area be reasonably protected from transport noise. Recommendation is made in the "deemed to comply" package to erect a 2.4m Solid Fence to protect the outdoor living area facing the transport corridor.

It is noted for the proposed development that commercial spaces and car parking facilities are located at the ground floor of the development and as such this results in avoidance of the higher indoor noise levels in residential units if located at the lower levels. This can be considered as an alternative design to erection of a noise barrier.

In addition to the above, Vipac suggest that it is a "good practice" to acoustically treat the balcony ceiling/soffit facing great eastern highway (south and east facade) if it does not conflict with other aspect of building design such as lighting, moisture resistance etc. Acoustic treatment of the balcony ceiling would bring down the noise level (due to reflection) by 2 to 3 dB. The options for ceiling acoustic treatment are as follows:

1. A 10mm perforated plasterboard (at least 20% opening) ceiling with 25mm thick mineral wool backing. A minimum air spacing of 100mm above ceiling is preferable. **OR**
2. Acoustic spray on the ceiling (i.e. Enviro Acoustics Thermospray 300/800 or equivalent). **OR**
3. Any suitable perforated acoustic ceiling meeting the acoustic specification given in Table 5.1.1

Table 5.1.1 – Sound absorption specification of the acoustic ceiling on the balcony

125Hz	250Hz	500Hz	1k Hz	2k Hz	4k Hz	NRC
0.15	0.51	0.95	1.00	0.99	0.98	0.90

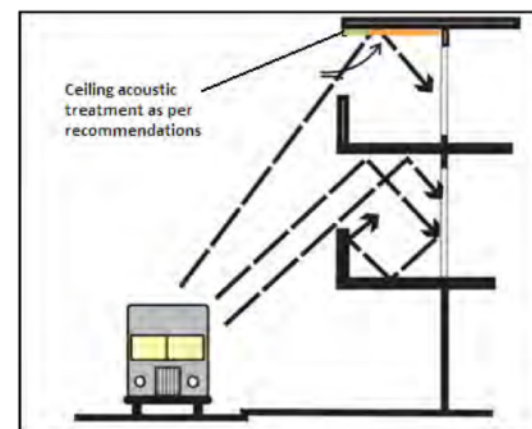


Figure 5.1.1 – Acoustic treatment for the ceiling at the balcony facing the great eastern highway

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5.2. Mechanical Ventilation / Air-conditioning

Where outdoor noise levels are above the “noise target”, State Planning Policy 5.4 [6] require mechanical ventilation or air-conditioning to ensure that windows can remain closed in order to achieve the indoor noise standards. The following need to be observed as stated in Implementation Guideline for Road and rail Transport Noise Policy 5.4 [6]:

- Evaporative air-conditioning systems will meet the requirements.
- Attenuated air vents are provided in the ceiling space. Without such vents, these systems require windows to remain open.
- Refrigerative air-conditioning systems need to be designed to achieve fresh air ventilation requirements.
- Air inlets need to be positioned facing away from the corridor where practicable.
- Ductwork needs to be provided with adequate silencing, particularly in higher noise areas, to prevent noise intrusion.

5.3. Review of Sound Attenuation Performance of Building Envelope

5.3.1. Sound Insulation of Façade Wall

NCC 2013 [2] currently gives no guidance as to the sound insulation performance of the façade of a residential building. However, it is good practice to design the façade walls to achieve a minimum Rw of 50 dB (for example a 125mm concrete wall would be able to provide a Rw 50 dB).

5.3.2. Sound Insulation of Window Glazing

Based on the measured noise levels at the proposed development and the indoor noise requirements as specified in AS 2107 [1], recommendation for minimum glazing performance for the development is presented in Table 5.3.2.1 below.

Predicted sound insulation performance of the proposed glazing and the predicted indoor noise levels achieved with these glazing are presented in Appendix C of this report. It is noted that, a glazing that is suitable in meeting indoor noise requirement for bedroom is also able to meet the indoor noise requirement of living room.

Great care should be taken to ensure the airborne sound insulation performance of all frames supporting door and windows match the Rw ratings recommended for the façade elements. All frames must be caulked with recommended acoustic grading sealants as listed in Appendix F of this report.

Table 5.3.2.1 – Glazing requirements for the Residential Units

Façade	Space Usage	Design Façade Noise Level (dBA)	Indoor Noise Criteria (dBA) as per AS 2107	Recommended Glazing/Façade Wall
North (All Levels)	Bed	43	40	6mm Standard Glazing (Rw 31 dB)
	Living		45	
South and East (All Levels)	Bed	64	40	8mm Standard Glazing (Rw 32 dB)
	Living		45	6mm Standard Glazing (Rw 31 dB)
West (All Levels)	Bed	45	40	6mm Standard Glazing (Rw 31 dB)
	Living		45	



Casement or Awning windows are strongly recommended for South and East Façade. If sliding doors and windows are used, recommendations are given in the following section.

A minimum 6mm standard glazing is recommended for the commercial components of the development.

The direction/orientation of the facades is shown in Appendix C of this report.

5.3.3. Glazing Panes and Balcony Sliding Door Sets

In order to maintain the predicted acoustic amenity, all operable windows must be fitted with good quality seals (e.g. Schlegel Q-Lon, Raven) to minimise transmission of noise through the façade. Even what could be considered as very small air gaps can be severely detrimental to the composite window/façade performance, resulting in non-compliant internal noise levels. Great care should be taken to ensure the airborne sound insulation performance of all frames supporting doors and windows match the Rw ratings recommended for these façade elements. All frames must be caulked with approved acoustic grading sealants.

It is important to ensure that sliding doors or windows are well sealed (e.g. Raven and Schlegel Q-Lon) with recommended acoustic seals. Acoustic seals around the perimeter of a window will help to reduce noise by providing a tight seal when the window is shut. Rubber seals are the best. It is also possible to fit brush seals with a vinyl fin down the middle which provides better noise protection than traditional brush seals. On the verticals of the frame, brush seals are recommended which can be changed for a longer or shorter brush depending on the offset from the frame to the door. It is essential to install and adjust the seals so that the window and frame both contact the seals when closed. The tighter a seal is, the better the noise reduction, provided it is not too thick to prevent the window from being able to be closed properly.

With appropriate seals (e.g. Raven, Schlegel Q-Lon), recommended glazing and quality workmanship, the proposed development will be able to achieve the indoor noise requirement both in bed and living areas.

5.3.4. Sound Insulation of Roof (Rain Noise)

The recommended design criteria defined in terms of maximum rain noise level based on a design rainfall rate for non-tropical areas (nominally 10mm/hr.) for internal spaces is 5dB above the specified background noise level (i.e. The allowable indoor noise levels would be 40dBA for bedrooms. Therefore, the criterion of 45dBA would apply for bedrooms while subject to rain noise).

Construction detail for the roof is not available at this stage of the development. VIPAC will further evaluate the sound insulation performance of the roof once construction design is made available.

5.4. Review of Sound Insulation of Inter-tenancy Walls, Floors and Doors

5.4.1. Walls

A wall mark-up showing NCC 2013 [2] sound insulation requirements for this development can be found in Appendix D of this report. Vipac would further review the sound insulation performances of the different walls used for the development in meeting the NCC/BCA sound insulation requirements at a later stage when construction details are made available to Vipac.

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Preliminary Building Acoustics Design Report

5.4.2. Floors

Due to unavailability of the floor construction details at this point of the development, Vipac assumes a floor of minimum 200mm reinforced concrete is used for the development. To ensure compliance with maximum $L_{n,w} < 62$ dB prescribed in NCC 2013 [2], it is advised that a resilient layer (such as 'Damtec', 'Embelton', 'Regupol' or 'Duraseal' or equivalent) be installed underneath all residential floor finishes. **Areas that are carpeted must also include underlay.** This can be reviewed once floor finish and plant equipment is made available to Vipac.

Particular attention needs to be paid to floors in plant room on top levels (if any) and ceiling in apartments below. These will require a high performance acoustic insulating ceiling to be installed. Rooftop plant must be mechanically isolated from the building.

5.4.3. Doors

Entry doors to apartments are required to provide R_w 30, dB as a minimum as per NCC 2013 [2]. In most cases, a thick solid core (40mm to 45mm solid core timber door set in sealed frame), in conjunction with well manufactured and installed perimeter seals, will ensure a good level of sound insulation (R_w 30 – 33). However, it is important that acoustical test data provided by accredited acoustical laboratory is reviewed in determining the sound insulation performances of doors.

5.5. Review of Noise Ingress (Other than Outdoor Traffic Noise)

The noise survey at the proposed development has already considered (measured) noise from surrounding environment (including road traffic, air condensers at neighboring premises, etc.). No other dominant source of noise was noted during the site visit. It is noted that the measured noise data was used for the glazing design of the proposed development in meeting the AS2107 [1] indoor noise requirement. This is discussed in Section 5 of this report.

5.5.1. Common Areas

Common areas such as the foyer and corridors are very likely to be reverberant spaces given the materials usually employed for surface finishes. In order to prevent excessive reverberant noise levels from building up in these spaces, Vipac strongly recommends the use of carpets on the floor. For all common rooms with a large volume (i.e. more than 50m³) use of an absorbing ceiling in conjunction with a carpeted floor is strongly recommended. This could be done by using perforated plasterboard for the ceilings or other absorptive materials. Keeping the reverberation time (RT) down in the common spaces can help towards AS 2107 compliance and is vital to maintain speech intelligibility as well as reducing noise transfer between adjacent spaces.

5.5.2. Noise Ingress from Mechanical Equipment

Mechanical plant noise data is unavailable at this stage of the development. Vipac will assess the noise levels at the indoor environment when relevant information is made available.

Where plant rooms are located above apartments, appropriate vibration mounts are required to be installed to reduce the structure-borne noise and vibration. In addition, it is recommended to provide suspended plasterboard ceiling at the apartments below (minimum 10mm plasterboard) and the cavity lined with mineral wool.

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5.6. Review of Noise Egress

It is very likely that mechanical services will be running at night time, thus potentially impacting nearby developments. For residential properties near the proposed development, the assigned level not to be exceeded is 41 dB, L_{A10} .

A detailed assessment of plant room/mechanical plant and external shell around plant rooms will be undertaken when equipment has been selected and required data are made available to Vipac (noise emission data for each fan in octave bands, fan type, volume of air, total static pressure, diffuser/return air grid size, noise data for substations, pumps etc.).

5.7. Review of Sound Insulation for Services

5.7.1. Hydraulic Services

Hydraulic Services are taken to include to all concealed piping installations relating to sewerage, storm water, hot and cold water supply and gas.

In all instances where hydraulic pipes run adjacent to **non-habitable spaces** (i.e. wet areas), the procedure is to lag pipes with an acoustically rated wrap (for example Soundlag 4525C), of minimum surface density 4kg/m², equivalent to or greater than. The suspended plasterboard ceiling should be minimum 10mm plasterboard, and the cavity lined with mineral wool. This specification is expected to meet or exceed the BCA acoustic performance requirement of $R_w + C_{tr}$ 25dB separation from shared building services.

In the case of hydraulic pipe work reticulated above or adjacent to **habitable spaces**, (i.e. living rooms, bedrooms etc.), pipes are to be *double-lagged with an appropriately-rated wrap, and the suspended plasterboard skin to be 2 x 10mm plasterboard or 1 x 13mm Gyprock Soundchek (or equivalent) plasterboard layer.* This specification is expected to meet or exceed the BCA acoustic performance requirement of $R_w + C_{tr}$ 40dB separation from shared building services in this circumstance.

Some other recommendations for services pipes/rises noise control are presented in **Appendix E** of this report.

5.7.2. Anti-Vibration Pipe Clips:

All pipes should be secured in cavities, voids or service risers using resilient pipe clip connections, which incorporate an isolating rubber or neoprene collar, to avoid introducing pipe-borne noise into the surrounding structural elements.

Vipac recommends all pipe runs connected to hydraulic circulation pumps or similar plant equipment must be connected via flexible couplings to avoid the introduction of structure borne noise through rigid connections.

5.8. Smoke Control System Noise

The criterion applicable to noise from operation of smoke control systems (such as smoke-spill fans and air pressurisation fans) in the event of fire are provided in the Australian/New Zealand Standard AS/NZS

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1668.1 [4]. The standard states that the noise level during operation of smoke control systems should not exceed:

- 65dB(A) in occupied spaces or 5dB above the ambient noise levels to a maximum of 80dBA
- 80dB(A) in fire-isolation exits.

5.9. Swimming Pool and Gymnasium

Airborne noise from people using communal pools will need consideration (its use in the night time would likely disturb adjacent apartments/residences). It is understood that amplified music/speech will be not be featured in the gym or the swimming pool area; therefore no issues are expected with noise emissions provided windows remained shut (gym) during operating hours.

Resilient flooring or matting must be installed underneath any impact equipment as well as the free-weights area.

Any pumps and services connected with the operation of the swimming pools must be fully enclosed and mechanically isolated from the building structure to control noise breakout.

6. SOUND INSULATION REQUIREMENTS FOR COMMERCIAL COMPONENT

There are no specific acoustic separation requirements for retail/office spaces adjacent to each other provided they share the same 'Building Class'; however, NCC 2013 [2] does require that partitions separating spaces of different classifications follow minimum requirements as specified in Table 3.4.1.

Guidance can be taken from the AAAC Guidelines for Commercial Building Acoustics [10] for recommended sound insulation performance between spaces. Table 6.1 provides guidance on acceptable Rw values depending on a room's noise level and its tolerance. Table 6.2 provides a guide as to the source level expected in a particular room and that same room's tolerance to noise. In some circumstances, the use of the spaces either side of a common wall may not be known and therefore criteria have been provided in terms of acoustic quality in Table 6.3.

To achieve a reasonable acoustic separation between tenancies, it is highly recommended to extend the wall to full height.

Table 6.1: Recommended sound insulation between spaces [10]

Noise Tolerance in Receiving Room	Sound Room Activity Noise			
	Low	Average	High	Very High
High	Rw 35	Rw 40	Rw 45	Rw 50
Medium	Rw 40	Rw 45	Rw 50	Rw 55
Low	Rw 45	Rw 50	Rw 55	Rw 60
Very Low	Rw 50	Rw 55	Rw 60	Rw 65

Table 6.2: Guidance on activity level and tolerance [10]

Type of Occupancy/Activity	Source Activity Level	Noise Tolerance
----------------------------	-----------------------	-----------------



Type of Occupancy/Activity	Source Activity Level	Noise Tolerance
Board and Conference Rooms	High	Very Low
Cafeterias	Very High	High
Call Centres	Average – High	Low-Medium
Computer (Server) Rooms	High	Medium-High
Corridors and Lobbies	Average	High
Design Offices	Average	Low
Drafting Offices	Average	Low
General Office Areas	Average	Medium
Private Offices	Low	Low
Public Spaces	Average	High
Reception Areas	Average	Medium
Rest Rooms and Tea Rooms	High	High
Toilets	Average	High
Undercover Car Parks	Very High	High

Table 6.3: Performance requirement between separate tenancies [10]

Weighted Sound Reduction Index (Rw) dB				
Poor	Average	Good	Very Good	Excellent
40	45	50	55	60

7. CONCLUSION

VIPAC Engineers & Scientists were engaged by Dragon Century Springs Pty Ltd C/O Hillam Architects to review the proposed multi-residential mixed-use development at Lot 1017 Hawksburn Rd, The Springs, Rivervale. The proposed development is located at Hawksburn Rd and directly facing Great Eastern Highway.

The proposed development is a 9 storey mixed-development building comprising of a total of 148 residential apartments. Four commercial spaces are proposed at the ground floor (southern side) of the development. In addition, common facilities for the residents such as swimming pool, Gymnasium, BBQ area/Cabana are located on the 3rd level of the development. A total of 230 parking bays are allocated for car parking on two basement levels and on the ground floor of the development.

Initial acoustic design has been addressed in relation to Environmental Protection Act 1986 (EPA) – "Environmental Protection (Noise) Regulations 1997" (EPNR 1997), Australian Standard AS/NZS 2107:2000, "Acoustics – Recommended design sound levels and reverberation times for building interiors", Western Australia Planning Commission State Planning Policy 5.4 "Road & Rail Transport Noise

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& Freight Considerations in Land Use Planning” and the National Construction Code (NCC, formerly known as BCA, also referred to as BCA herein) 2013.

Recommendations on glazing for the development have been made in Section 5.2.2 of this report in meeting AS 2107 [1] indoor noise requirements.

Sound insulation performance requirements for different inter-tenancy walls are marked-up on the architectural plans and presented in Appendix D of this report.

Details of mechanical ventilation system and other mechanical equipment are not yet available. Vipac will assess noise from mechanical services when relevant data are made available.



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Appendix A: ZONING MAP



Figure A1: Land zoning around proposed development

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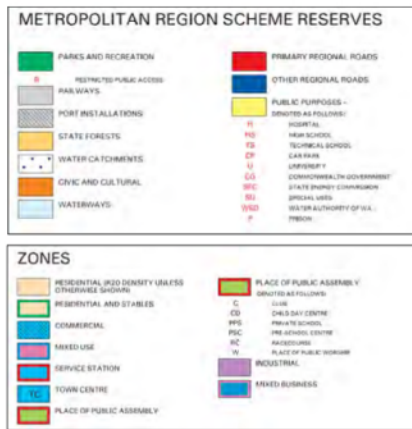


Figure A2: Legend for Zoning Map
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Appendix B: NOISE SURVEY



Figure B1: 'Google maps' Satellite picture overlaid with locations of measurements in relation to existing site

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Table B1: Survey results for short noise measurements

Locations	L _{Aeq}	L _A F(max)	L _{A1}	L _{A10}	L _{A90}
A	55.7	60.9	60	58	50.7
B	53.2	59.1	56.7	55	51.1
C	53.6	58.5	57.6	55.9	49.4
D	58.1	63.2	62.6	60.4	54.7
E	58.3	63.9	63.3	60.6	55.6

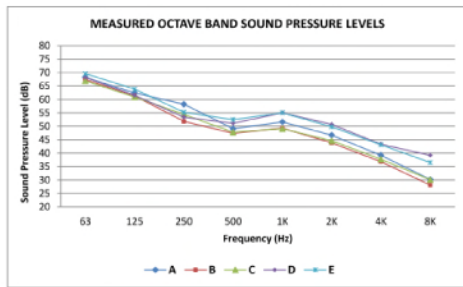


Figure B2: Octave band sound pressure level of the measured noise data (short measurements)

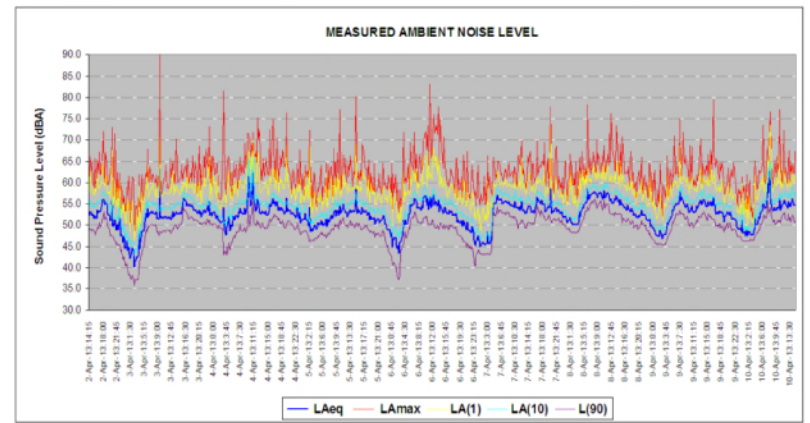


Figure B3: Graph showing time history of ambient noise data

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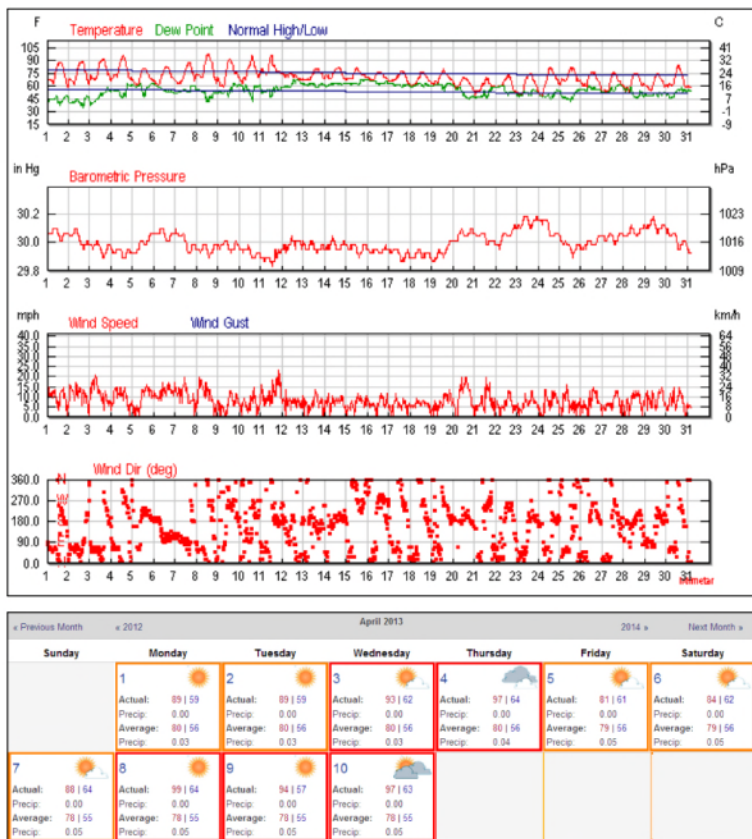
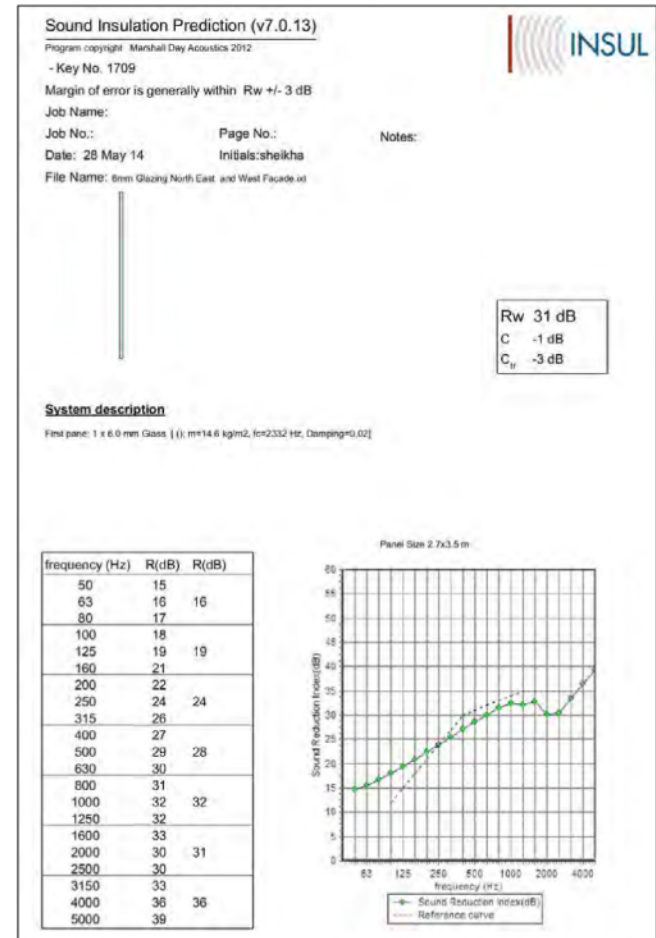


Figure B4: Weather data during measurement period (retrieved from weather station near Perth Airport)

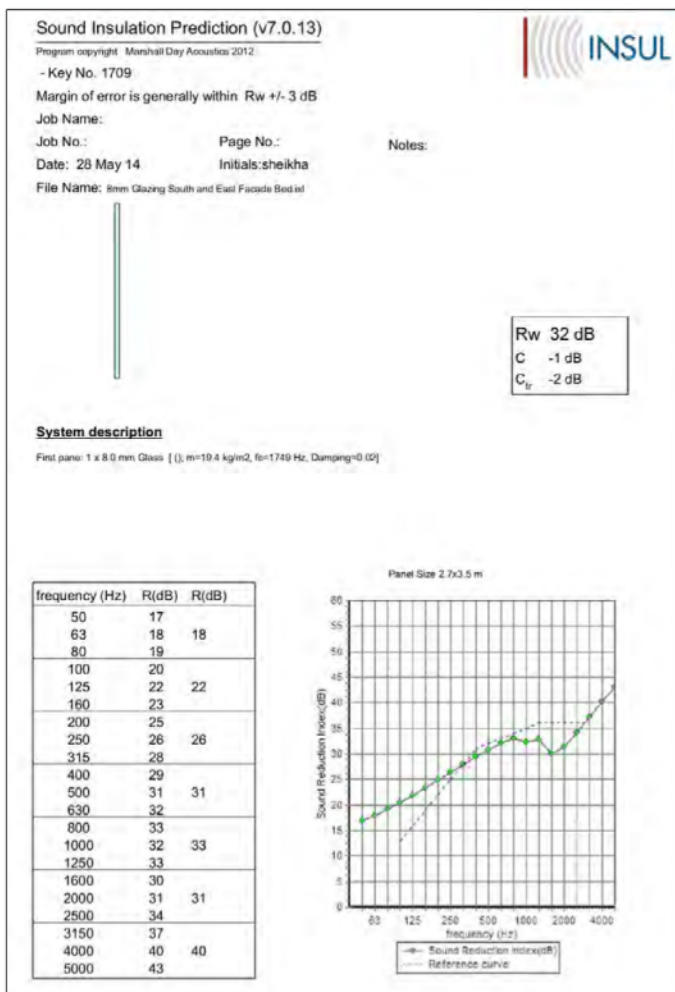


Appendix C: GLAZING DESIGN

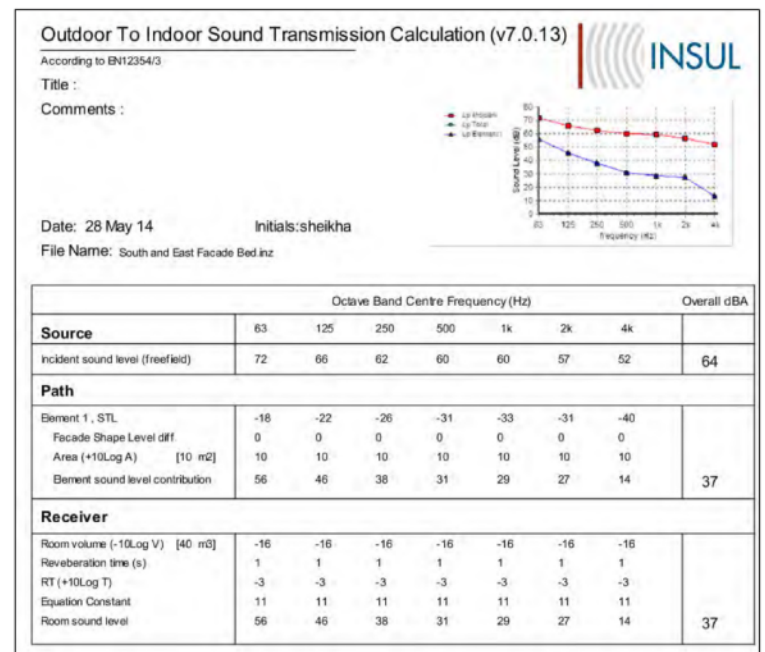


Figures C1: Sound insulation performance of 6mm Standard Glass

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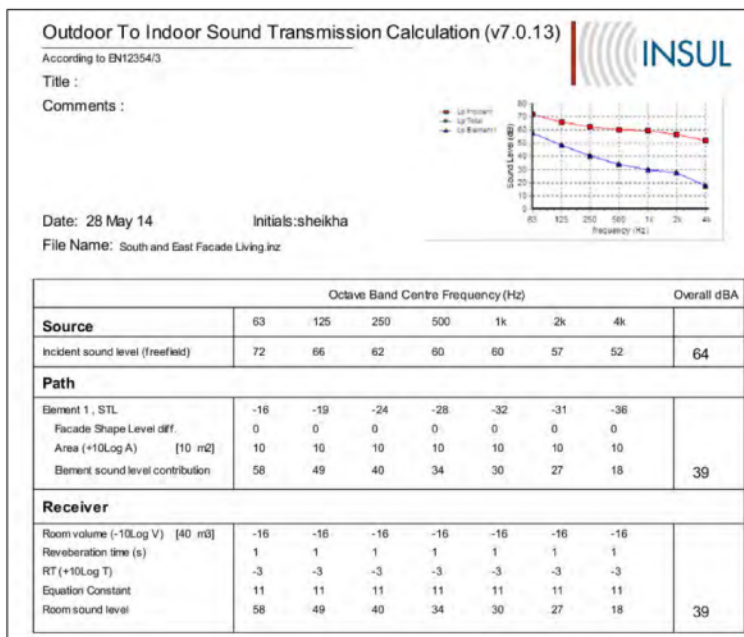


Figures C2: Sound insulation performance of 8mm standard glass



Figures C3: Indoor noise prediction for bed room on south and east façade with 8mm standard glazing

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Figures C4: Indoor noise prediction for living room on south and east façade with 6mm standard glazing



Figures C5: façade Orientation of the proposed development

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Appendix D: WALL MARKUP

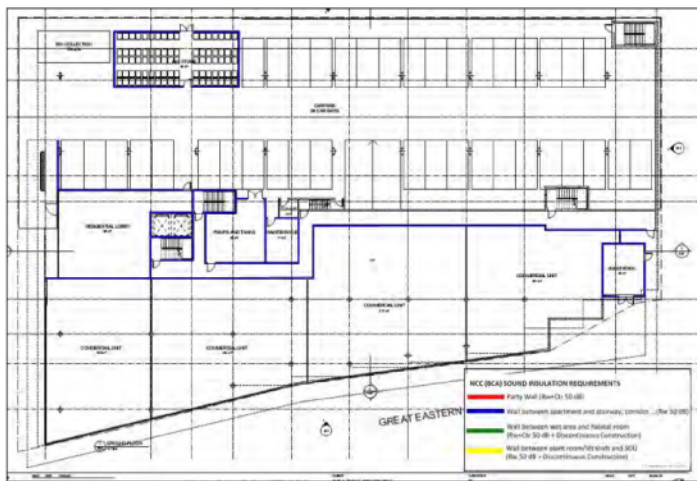


Figure D1: Wall mark-up for Ground Floor



Figure D2: Wall mark-up for Level 1



Figure D3: Wall mark-up for Level 2

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Figure D4: Wall mark-up for Level 3



Figure D5: Wall mark-up for Level 4 to Level 7

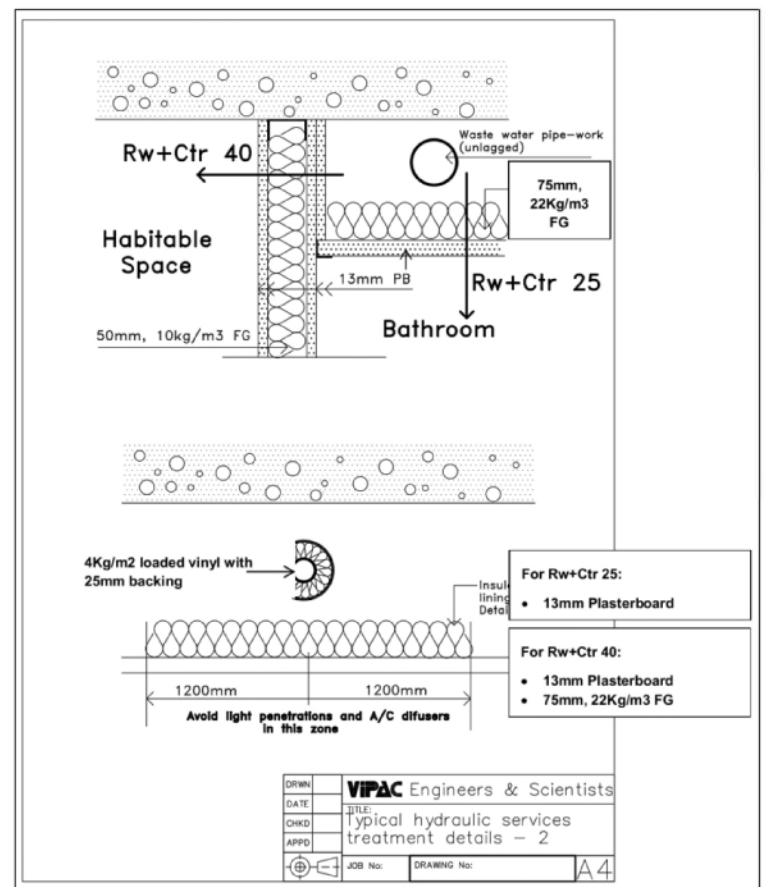
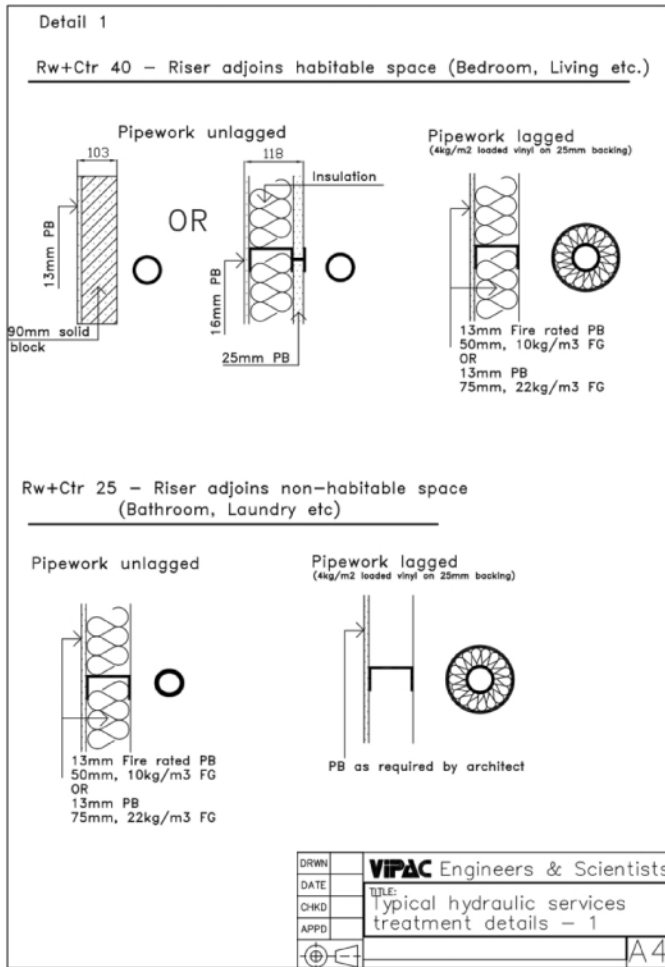


Figure D6: Wall mark-up for Level 8

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Appendix E: NOISE CONTROL DESIGN FOR SERVICE PIPES



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Appendix F: EQUIPMENT DETAIL

Equipment	Manufacturer	Model	Serial Number
Type 1 Sound Level Meter	Norsonic	118	31794
Calibrator	Norsonic	1251	31464
Type 2 Sound Level Meter (noise logger)	Larson Davis	720	144

Table F.1: List of equipment used during environmental noise survey

Manual measurements were carried out in general accordance with AS 1055.1, 2 and 3-1997 Acoustics-Description and Measurement of Environmental Noise.

Weather conditions are shown in **Appendix D**. Weather conditions have been logged by a weather station located in Perth, WA. For the purpose of this assessment the weather conditions are taken to be representative of site conditions. Where there was an occurrence of winds of 19km/h and above or precipitation, data has been excluded from the assessment. Data was also excluded from the assessment when drilling occurred on site.



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Appendix G: RECOMMENDED ACOUSTIC PRODUCTS

Acoustic sealants

For the acoustic integrity of building elements to be maintained, all gaps and interfaces along the junctions and joints of linings must be sealed with an appropriate acoustic grade sealant. Penetrations for mechanical or electrical services must be properly blocked and sealed around the ductwork/cabling to ensure the intended acoustic rating of the partition is retained.

Appropriate acoustic caulking products include:

- Bostik Firemastic
- Bostik Seal-n-flex 1
- Pyropanel Multiflex
- Boral Fyreflex
- Dow-Corning 790 Silicone
- Dow-Corning 795 Silicone
- Sika Sikaflex-11 FC
- Fosroc Flamex 3

Cavity Infill

Where cavity infill is recommended, equivalent alternatives are:

- Fibreglass – 50mm 12kg/m³
- Rockwool – 50mm, 38kg/m³
- Polyester – 50mm, 32 kg/m³

Ceiling Overlay

Where ceiling overlay is recommended, equivalent alternatives are:

- Glasswool – 100mm, 12kg/m³
- Rockwool – 100mm, 38kg/m³
- Polyester – 100mm, 32kg/m³

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Appendix H: ACOUSTIC GLOSSARY

Airborne sound

Sound that arrives at the point of interest, such as one side of a partition, by propagation through air.

Ambient noise

The composite of airborne sound from many sources near and far associated with a given environment. No particular sound is singled out for interest.

Background noise

Noise from all sources unrelated to a particular sound that is the object of interest. Background noise may include airborne, structure borne, and instrument noise.

DW : Weighted Difference Level

D the Difference Level = (S - R) where S is the Source room levels and R is the Receiver room levels). Then Dw is a single integer number found from comparing the D-spectrum with the 'standard' curves for airborne and impact insulation and the unfavourable deviation is 32 dB. The value of the reference curve at 500Hz is taken as the **Weighted Difference Level, D_w**. This is considered to be approximately equal to the A-weighted level difference which would be observed if normal speech was used as the test signal.

Impact Noise

Noise resulting from direct impact on a building element (e.g. footsteps or furniture movement on a floor).

Impact sound Level Reduction L_w

The measured improvement of impact sound insulation resulting from the installation of a floor covering or floating floor on a test floor in a laboratory (ISO 717-2:1997)

Weighted Normalised Impact Sound Level L_{n,w}

The lower the L_{n,w} rating the better the performance of the building element at insulating impact noise. The table below gives the subjective impression of different ratings:

For L_{n,w}: > 66, subjective rating is Clearly audible

For L_{n,w}: 61-65, subjective rating is Clearly audible

For L_{n,w}: 56-60, subjective rating is Audible

For L_{n,w}: 51-50, subjective rating is Audible

For L_{n,w}: 46-50, subjective rating is Just audible

For L_{n,w}: <45, subjective rating is inaudible

Indoor Ambient Noise Level

The A-weighted Sound Pressure level inside a given room resulting from the transmission of sound energy from noise sources located outside of the room.

Reverberation time (RT)

Time required by sound in an enclosure to decrease by 60 dB.

Mid Frequency Reverberation Time

Arithmetic average of RT in octave band centre frequencies 500 and 1000Hz.

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Sound Absorption

Removal of sound energy from a room or area of the room by conversion into another form of energy (e.g. heat: "dissipation") or exit of the sound from the area under consideration ("transmission").

Sound Insulation

The capacity of a structure (e.g. a partition such as a wall or a floor) to prevent sound from reaching a receiving location. Sound energy is not necessarily absorbed; impedance mismatch, or reflection back toward the source, is often the principal mechanism.

Sound Transmission Loss (TL)

Of a partition, in a specified frequency band, ten times the common logarithm of the ratio of the airborne sound power incident on the partition to the sound power transmitted by the partition and radiated on the other side. The quantity so obtained is expressed in decibels. The reduction in sound level when sound passes through a partition or ceiling system.

Sound Transmission Class (STC)

A single-number rating (defined in ASTM E413), calculated using values of sound transmission loss. It provides an estimate of the performance of a partition in terms of airborne sound insulation in the 125Hz to 4kHz frequency range. In instances where a noise source has significant sound energy below 125Hz (e.g. aircraft, music, road traffic, machinery) STC is regarded as inadequate to fully quantify sound insulation and D_w or R_w may be used as an alternative.

Sound Reduction Index (measured in Laboratory Conditions), R

Of a partition, in a specified frequency band, the fraction of the airborne sound power incident on the partition that is transmitted by the partition and radiated on the other side. Unlike R', R is measured in a laboratory.

Sound Reduction Index (measured in situ), R'

Of a partition, in a specified frequency band, the fraction of the airborne sound power incident on the partition that is transmitted by the partition and radiated on the other side. Unlike R, R' is measured in situ.

Speech Privacy

When a partition separates two spaces speech privacy can only exist if mitigation of speech intelligibility on the other side of the partition is successfully achieved. Speech privacy depends on factors such as sound insulation of the partition, masking, and background noise in the receive room considered.

Weighted Sound Reduction Index (measured in a lab), R_w

A single-number quantity, which characterises the airborne sound insulation of a material or building element over a range of frequencies (typically from 100Hz to 3.15kHz)- based on the laboratory measurement of R.

R_w + C_v R_w plus Spectrum Adaptation Term

R_w + C_v is equal to R_w with the addition of a low frequency sound correction, C_v. The use of R_w + C_v has become more relevant due to the increase in low frequency sound sources such as surround sound systems, traffic and aircraft noise, drums and bass guitars. Two walls can have the same R_w rating, but have different resistance to low frequency sound, thus a different R_w + C_v.

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R_w	$R_w + C_{tr}$	Subjective rating
<30	<24	Normal speech easily audible
30-34	25-27	Loud speech easily audible
35-41	28-34	Loud speech audible but not legible
42-44	35-37	Loud speech faintly audible
45-47	38-39	Loud speech barely audible
48-52	40-43	Loud speech audible but not intrusive
53-62	44-54	Loud speech inaudible
63-69	55-59	Loud music slightly audible: bass notes 'thump'
>70	>60	Loud Music faintly audible

ATTAC MENT 1E – Arboriculture Report

Lot 1017 (3) aw sburn Road Rivervale

LG Reference: 648/2014

DAP Reference: DAP/14/00637

APPENDIX E

ABORICULTURE MANAGEMENT - PAPERBACK TECHNOLOGIES

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Arboricultural Inspection Report for Hillam Architects

Date inspected: 19th of March 2014

Location: Lot 1017 Hawksburn Road, Rivervale (Springs)

Tree species: *Melaleuca lanceolata* (Moonah)

1. Reason for Assessment

- 1.1. In accordance with your instructions, I confirm that you have employed this consultant to carry out an inspection of the *Melaleuca lanceolata* (Moonah) situated on the southern side of the property known as Lot 1017 Hawksburn Road, Rivervale. The report has been generated due to the poor form of the tree and its position in relation to changing levels around the base of the tree due to the development of the block.
- 1.2. The purpose of this report is to assess the trees health and structural condition, therefore to ascertain if the tree will withstand level changes and root pruning due to the installation and close proximity of the proposed building.
- 1.3. This consultant confirms that a site visit to inspect the tree situated at the above location was carried out on the 19th of March 2014.

2. Tree Observations

- 2.1. The tree is identified as a mature specimen of *Melaleuca lanceolata* (Moonah).
- 2.2. As confirmed it is located on the southern side of the property known as Lot 1017 Hawksburn Road, Rivervale.
- 2.3. The tree has a clinometer height reading of 9.9m, with a canopy spread of 11.9m north/south & 13.6m east/west and a combined trunk diameter of 0.74m taken at 1.4 meters above ground level.
- 2.4. The tree trunk is situated 2.28m to the proposed new building and approximately 2.7m to the property boundary on Great Eastern Highway.

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3. Ground level Inspection

- 3.1. An examination at ground level revealed the development of a buttress root system, with no visual signs of harmful root pathogens or fungi.
- 3.2. The tree has developed as a twin stem formation with the eastern stem displaying a significant lean. The root flare at ground level revealed that the eastern stem displays open cracks and soft soil at the base of the stem indicating that this stem has been moving therefore confirming that this eastern stem is unstable.
- 3.3. The tree is currently situated within a low point on a vacant lot with soil built up on the Great Eastern Highway side. The soil level difference is between 0.7-1m. The soil level rises almost immediately from the trunk of the tree indicating that this is not a natural slope.

4. Trunk Inspection

- 4.1. As confirmed an inspection of the main trunk revealed that it has previously developed a twin stem formation where the eastern stem significantly leans out to vertical in an eastern direction.
- 4.2. An inspection of the twin stem formation revealed a basal cavity within the centre of the stems and evidence of recent separation of the eastern stem from the more upright western stem. There are fresh bark wounds, cracking and separation where the weight of the eastern stem has pulled the twin stems apart. The underside of this eastern stem displays compression buckles due to the weight and extent of lean.
- 4.3. The western stem displays a previous significant limb failure on the western side resulting in an inverted wound. This wound has been occluding well however decay of the heartwood is visible and the wood tissues are degrading. Previous removal of a few limbs on this western stem is displaying incipient decay.

5. Crown Inspection

- 5.1. An inspection of the canopy revealed that this specimen has not been extensively reduced or lopped. However over time the twin stem formation which has developed into the canopy structure has splayed apart due to weight on the apical sections of the stems.
- 5.2. There was evidence of a number of previous limb failures throughout the canopy. The 2nd, 3rd and 4th order limbs display a high amount of included unions and crossed limbs.
- 5.3. As confirmed the eastern stem displays excessive limb loading with foliage almost touching the ground. Using Google Street view we were able to view a previous image of the tree a few years ago. This image showed the twin stem formation was more upright and the eastern stem was not as splayed out as much as it is now.
- 5.4. The canopy was holding sporadic sections of deadwood, which consists of mostly light material and the target underneath this tree is considered low and occasional use at this time.

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- 5.5. The canopy was displaying satisfactory overall foliage coverage with lateral and apical growth showing satisfactory extension.

6. Conclusions

- 6.1. This consultant confirms that an inspection of this mature specimen of *Melaleuca lanceolata* revealed that while this tree appears to be in good health the structure of the tree is severely compromised as the eastern stem has already started to crack and fail. Due to the decay within the centre of the stems, previous limb failures and inverted wounds displaying an increase in wood tissue degradation this specimen is not an ideal tree to retain where soil levels require raising and the proximity of the proposed building will impact on the trees root zone.
- 6.2. Using the Australian Standards 4970-2009 *Protection of trees on development sites*. We can work out Tree Protection Zone radius (TPZ) and Structural Root Zone radius (SRZ). This specimen's TPZ radius works out to 8.8m and SRZ radius works out to 2.9m from the centre of the trunk. This means that encroachment into these zones will impact the trees root system, impact the canopy of the tree due to possible pruning to allow for the building to be constructed and has the potential for a tree to decline in health and condition or become structurally unstable if a large amount of roots are severed. The building is proposed to be built 2.28m away from the trunk of this tree. Extra area will be required to excavate the basement level car park or sheet piling that may be required therefore removing structural and feeder roots. This will also impact on the canopy of the tree as the canopy to the north is approximately 5m from the centre of the trunk. (2.28m -5m = 2.72m) rendering 2.7m of canopy as a minimum to be pruned, further causing the tree to become unbalanced.
- 6.3. The raised soil on the Great Eastern Highway side of the tree is approximately 0.7-1m higher than the natural grade where this tree has developed. This has already impacted on this tree. Raising soil levels around trees is not sound Arboricultural Practice. The action of raising soil more than 100mm above the natural grade has the potential to kill a tree due to a decrease in oxygen levels, soil compaction and loss of water infiltration to the root zone.
- 6.4. This consultant therefore recommends that as this tree displays poor form, the changes in soil level will be significant, the proximity of the proposed building and further area required to excavate near the tree that this tree will become a safety issue and either experience the eastern stem to fail onto the ground or the tree will rapidly decline. It is recommended to remove this tree and replace it with a more suitable specimen in a 500lt size after construction of the building is finished.

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7. Recommendations

- 7.1. Remove tree and grind out stump
- 7.2. Replace tree after construction of building with a suitable tree species with 500lt stock.

8. Method of Assessment

This consultant has made recommendations based upon the following criteria.

- The existing health and condition of the tree.
- The location of the tree to Great Eastern Highway and proposed building.
- The structural integrity of the eastern stem.
- The change in soil levels.
- The level of risk that the tree represents to property and to persons.
- The aesthetic quality and amenity value that the tree provides to the surrounding streetscape.



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Limitation of liability

Trees can be managed, but they cannot be controlled. To live or work near a tree involves a degree of risk.

This report only covers identifiable defects present at the time of inspection. Paperbark Technologies accepts no responsibility and cannot be held liable for any structural defect or unforeseen event/situation or adverse weather conditions that may occur after the time of inspection.

Paperbark Technologies cannot guarantee that the tree/s contained within this report will be structurally sound under all circumstances, and is not able to detect every condition that may possibly lead to the structural failure of a tree. Paperbark Technologies cannot guarantee that the recommendations made will categorically result in the tree being made safe.

Unless specifically mentioned this report will only be concerned with above ground inspections, as such all observations have been visually assessed from ground level. Trees are living organisms and as such cannot be classified as safe under any circumstances. Trees fail in ways that the arboriculture industry does not fully understand.

The recommendations are made on the basis of what can be reasonably identified at the time of inspection therefore Paperbark Technologies accepts no liability for any recommendations made.

All care has been taken to obtain information from reliable sources, however Paperbark Technologies can neither guarantee or be responsible for the accuracy of information provided by others. In the event that reinspection of the tree/s is recommended it is the client's responsibility to make arrangements with Paperbark Technologies

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9. Photos



Delineates the tree in question as at 19 March 2014



Google Street View image some years ago. Note that the eastern stem is not splayed out and leaning as the top image.

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APPENDIX E



Showing a side image where the building will encroach onto canopy.

Note also the change in soil levels from Great Eastern Hwy



Displaying decay in centre of stems



Significant inverted wound on western stem



Displays fresh bark splits and open soil cracks around the base of eastern stem

APPENDIX E



Evidence of recent separation of the twin stems.



Displaying the extent of weight and lean on the eastern stem

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10. Glossary

Branch attachment	The structural union of a lateral limb to the trunk or another branch.
Branch bark ridge	Enlarged area of bark tissue on the upper side of a branch junction; a normal pattern of development.
Branch collar	Wood which forms around a branch attachment, frequently more pronounced below the branch.
Canker	A localised area of dead tissue on a stem or branch, caused by fungal or bacterial organisms.
Cavity	An open wound, characterized by the presence of decay and resulting in a hollow.
Central leader	The main stem of the tree.
Chlorotic	Lacking chlorophyll, typically yellow in colour.
Codominant	Equal in size and relative importance, usually associated with either the trunks/stems or scaffold limbs/branches in the crown.
Crack	Longitudinal split in the stem, involving bark, cambium and xylem; may be vertical and horizontally oriented.
Crotch	The point at which two branches (or branch and leader) meets.
DBH	Diameter breast height. Diameter of the trunk, measured at breast height - 1.4 m above ground level.
Decay	Process of degradation of woody tissues by fungi and bacteria through the decomposition of cellulose and lignin.
Decurrent	Referring to the growth habit of the tree being rounded or spreading.
Defect	Any structural weakness or deformity.
Dieback	Progressive death of twigs and small branches, generally from tips.
Dripline	The width of the crown, as measured by the lateral extent of foliage.
End Weight	The concentration of the foliage at the distal ends of branches.
Epicormic shoot	Shoot that arises from latent or adventitious buds that occur on stems and from poorly pruned branches.
Excurrent	Tree growth habit with pyramidal crown and a central leader.

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APPENDIX E

Flush cut	Pruning technique where both branch and stem tissue are removed; Flush cutting usually is a poor practice.
Fork	Bifurcation of branches, usually equal in size and occurring at a narrow angle.
Girdling roots	Roots that grow around the trunk in a circular manner, constricting other roots or restricting trunk growth.
Growth crack	Longitudinal split in the bark due to normal expansion of cambium and xylem; not considered a defect.
Hanger	Both partially attached (but clearly broken) and unattached, lodged branches in the crown.
Heart rot	Decay in the centre (heartwood) of a branch, trunk, or large root.
Included bark	Pattern of development at branch junctions where bark is turned inward and embedded in a crotch between branches or stems causing a weakened structure.
Lion tailing	The removal of excessive number of inner laterals and foliage. This practice displaces foliar weight to the ends of the branches and may result in sunburned bark tissue, water sprouts, reduced branch taper, weakened branch structure and breakage from high wind exposure.
Necrotic	Localised death of tissue in a living organism.
pH	A measure of the acidity or alkalinity of a soil. pH of 7.0 is neutral, acidic soil has a pH less than 7.0, and alkaline soil is greater the 7.0.
Pollard	Pruning technique where young trees or branches are initially lopped, then re-lopped on an annual basis without disturbing the callus.
Scaffold limb	Primary structural branch of the crown.
Structural Root Zone (SRZ)	The area required for tree stability. The SRZ radius is calculated by the diameter at root flare using the following formula $(D \times 50)^{0.42} \times 0.64$.
Stub	Short length of branch remaining following pruning or limb failure.
Suppressed	Trees which have been overtopped by adjacent trees and whose crown development is restricted from above.
Topping	Pruning technique to reduce a trees height, heading of large branches. Generally considered poor practice.
Tree Protection Zone (TPZ)	The tree protection zone is the principal means of protecting trees on development sites. It is an area isolated from construction disturbance, so that the tree remains viable. The radius of the TPZ is calculated for each tree by multiplying its DBH x 12.

11. References

- Mattheck, C & Breloer H, (1994) *The body language of trees, a handbook for failure analysis*. London TSO (The Stationery Office)
- Lonsdale David, (1999) *Principles of Tree Hazard Assessment and Management*. London TSO (The Stationery Office).
- Hayes, Ed (2007) *Evaluating Tree Defects, second edition*. Safetrees Rochester.
- Mattheck, Claus, (2007) *Updated Field Guide for Visual Tree Assessment*. Karlsruhe, Karlsruhe Research Centre
- Australian Standard 4970-2009 *Protection of trees on development sites*.
- Australian Standard 4373-2007 *Pruning of amenity trees*.
- https://www.google.com.au/maps/@-31.957035,115.905355,3a,75y,304.38h,93.04t/data=!3m4!1e1!3m2!1sn6XxfEotRYsm8Zfjz_6czQl2e0

ATTAC MENT 1F – Landcorp Design review

Lot 1017 (3) aw sburn Road Rivervale

LG Reference: 648/2014

DAP Reference: DAP/14/00637

APPENDIX F

DESIGN REVIEW - LANDCORP

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APPENDIX F

**The Springs
Lot 1017: Dragon Century (Hillam Architects)
Design Reviews**

Design Review 1

Comments from Review Panel & Project Team Response



Date: 17 April 2014 Venue: LandCorp Time: 3:00pm- 4:30pm

Design Review Panel: Brett White (Cox Architects)

LandCorp Team: Dan Chatley, Glenn Bliss,

Consultant Team: David Hillam (Hillam Architects)

Mandy Leung (Hillam Architects)

Zoe Wong (Dragon Century)

Maggie (Dragon Century)

Review	Status
Design Review 1	Supported

This report documents the outcomes of The Springs Project Design Review held on the above date.

Design Review (1) Status: Supported- Finalise for Planning Submission

Under the terms of the contract for the sale of Lot 1017, LandCorp requested approval of the design submitted for Development Approval.

Dragon Century with Hillam Architects presented their development design to LandCorp on 17 April 2014.

Overall LandCorp is satisfied with the design of the scheme and supports the presented design. A response to the comments of this design review is requested before finalisation of the Development Application being submitted to the City of Belmont.

**The Springs
Lot 1017: Dragon Century (Hillam Architects)
Design Reviews**

Design Review 1

Comments from Review Panel & Project Team Response

Panel Comments	Project Team Response (Hillam Architects)
1.1. The general massing of the residential development is supported and indicates sound design principles.	1.1 Noted.
1.2. It is acknowledged that the proposed development is slightly outside the development envelope in height as identified in the Design Guides. It was presented that the eastern 'tower' was slightly under and the western 'tower' slightly over – however considering the heights and mass of the adjacent developments the proposal in its present form should be supported.	1.2 Noted.
1.3. Architectural expression and articulation in the building forms was generally perceived positively and reflects site context. The design strategy is emphasising the 'tower elements' with a simple built form between, thus balances the intent of the Design Guidelines with the proposed yield.	1.3 Noted.
1.4. The 3 story podium is articulated well along the Great Eastern Highway, cleverly articulated in a series of setbacks, addressing the road itself.	1.4 Noted.
1.5. Retail as proposed at the ground floor level is more robust response and requires further consideration as to its intended usage, access and signage. However, the current layout is supported in principal and it is recommended that this ground floor area be 'future proofed' as much as practicable, to cater for various retail future responses.	1.5 We strongly believe that there is a demand for retail to the area. We are proposing both retail and offices the ground floor commercial units to suit various commercial demand. The commercial space is subdivided into several smaller tenancy units to suit various retail/office use. The small commercial units can be combined to form a larger retail space if required. We will continue to liaise with the City of Belmont in relation to the commercial usage.

APPENDIX F

**The Springs
Lot 1017: Dragon Century (Hillam Architects)
Design Reviews**

Comments from Review Panel & Project Team Response

Design Review 1

<p>1.6. Consideration should be made to directly link the car park area with the ground floor Retail space promoting greater service and flexibility – acknowledging grade differences need to be resolved.</p>	<p>1.6 Noted. Stair access from the commercial units to the ground floor car park will be provided. It will be demonstrated in the DA plans.</p>
<p>1.7. The general emphasis of the proposed Residential entry requires more design consideration from the external appearance as well as its relationship with the Carpark entry. An appropriate and more congenial connection between the Carpark and the Residential Lobby is highly recommended whilst maintaining relevant security.</p>	<p>1.7 Noted. It will be demonstrated in the DA plans.</p>
<p>1.8. The Bin Store area requires further design resolution to address access from both the Residential Lobby and the Service vehicles. Addressing security will be important.</p>	<p>1.8 A waste management consultant is engaged to review the bin store design. We are in the progress of resolving the bin store design with the Engineering Department of the City of Belmont.</p>
<p>1.9. Level 1 and 2 internal planning requires further design refinement with respect to the corridor space/environment and unit Store rooms.</p>	<p>1.9 Noted. The corridors are reconfigured to add more dynamics to the passageway. It will be demonstrated in the DA plans.</p>
<p>1.10. Balcony depth and design also requires refinement – particularly the southern facing Units addressing the great Eastern Highway at Levels 2 and 3. Privacy screens should be considered for the immediate Units above these larger balconies as well.</p>	<p>1.10 Noted. It will be demonstrated in the DA plans.</p>
<p>1.11. General material pallet as presented is considered appropriate for the project and precinct in general. The proposal as presented included imagery incorporating material typologies intended for the project and reflecting a high level of external finishes. Require this level of quality of material and detail to be included in the further development of the design and submissions. High emphasis should be placed on materials with low maintenance characteristics and</p>	<p>1.11 Noted. Final material selection will be provided at Building Permit submission stage.</p>

**The Springs
Lot 1017: Dragon Century (Hillam Architects)
Design Reviews**

Comments from Review Panel & Project Team Response

Design Review 1

<p>materials that weather well over time.</p>	
<p>1.12. Metal Cladding as proposed for the façade should not be a standard profiled sheeting but rather a higher quality flat pan rolled edge or similar – refer to images in presentation.</p>	<p>1.12 Noted. Final material selection will be provided at Building Permit submission stage.</p>
<p>1.13. In-situ textured concrete at the ground plane is supported and encouraged. Requires considered detailing and shop front integration.</p>	<p>1.13 Noted. Final detail will be provided at Building Permit submission stage.</p>
<p>1.14. Metal perforated screens with a 'soft' pattern to complement the other materials are highly supported – refer to images in presentation. This needs careful design consideration, and should express site context and also having realistic meaning for the entire project.</p>	<p>1.14 Noted. Final detail will be provided at Building Permit submission stage.</p>
<p>1.15. No Landscape concept was presented. This is extremely important element and a highly creative landscape design including [hard and soft] is to be fully considered in conjunction with the proposed development. Design continuity is highly accentuated at the ground plane and requires appropriate execution at Design Development phase: indicating all materials, patterns, walls locations/heights, lighting and vegetation species</p>	<p>1.15 We are proposing soft landscape elements on the ground floor and the pool deck level. Final detail will be provided at Building Permit submission stage.</p>
<p>1.16. It was indicated that the existing tree was to be replaced with a new mature tree – albeit in a different location. Principle support is offered so long as the new tree is of the highest quality available.</p>	<p>1.16 We will continue to finalise the location of the new tree with the City of Belmont.</p>
<p>1.17. Although not presented or discussed, it is recommended that an artist be commissioned to assist in procuring any proposed artwork – presented images indicate a sculpture element at the south-west corner of the site.</p>	<p>1.17 Noted. We will engage an artist to incorporate some artwork to satisfy the percent for art requirement. Final detail will be provided at Building Permit submission stage.</p>

APPENDIX F

**The Springs
Lot 1017: Dragon Century (Hillam Architects)
Design Reviews**

Comments from Review Panel & Project Team Response

Design Review 1

<p>1.18. The proposed concept did not indicate lift over runs or locations of any A/C units/systems. The lift over run needs to be fully integrated within the overall design and not just a simple extension of the lift shaft.</p> <p>1.19. A/C plant or units also need careful design consideration. They should be fully screened in material consistent with the general building facades for ALL true elevations.</p> <p>1.20.</p>	<p>1.18 Noted. It will be demonstrated in the DA plans.</p> <p>1.19 We are proposing to locate the A/C plants on the roof and podium levels. The A/C plants will be screened or setback far enough from the building edge to minimise visual impact.</p>
<p>Conclusion</p> <p>1.9. The development & design fundamentals of the scheme are supported and the presented scheme is accepted as highly suitable outcome at The Springs.</p> <p>1.10. LandCorp seek a response to this design review report in respect of the areas mentioned. Such a response should include comments against the items within the report and a copy of the development application for review and approval prior to lodging with the City of Belmont as per the contract of sale conditions. We do support the design presented and believe the issues can be further refined during detailed design and support an application being finalised and submitted to the City.</p>	<p>1.9 Noted. No response required from HA.</p> <p>1.10 We will incorporate the comments above and submit a copy of the DA to Landcorp for review prior to the lodgement to the City of Belmont.</p>

ATTAC MENT 1G – Development Plans (1 October 2014)(Superseded)

Lot 1017 (3) aw sburn Road Rivervale

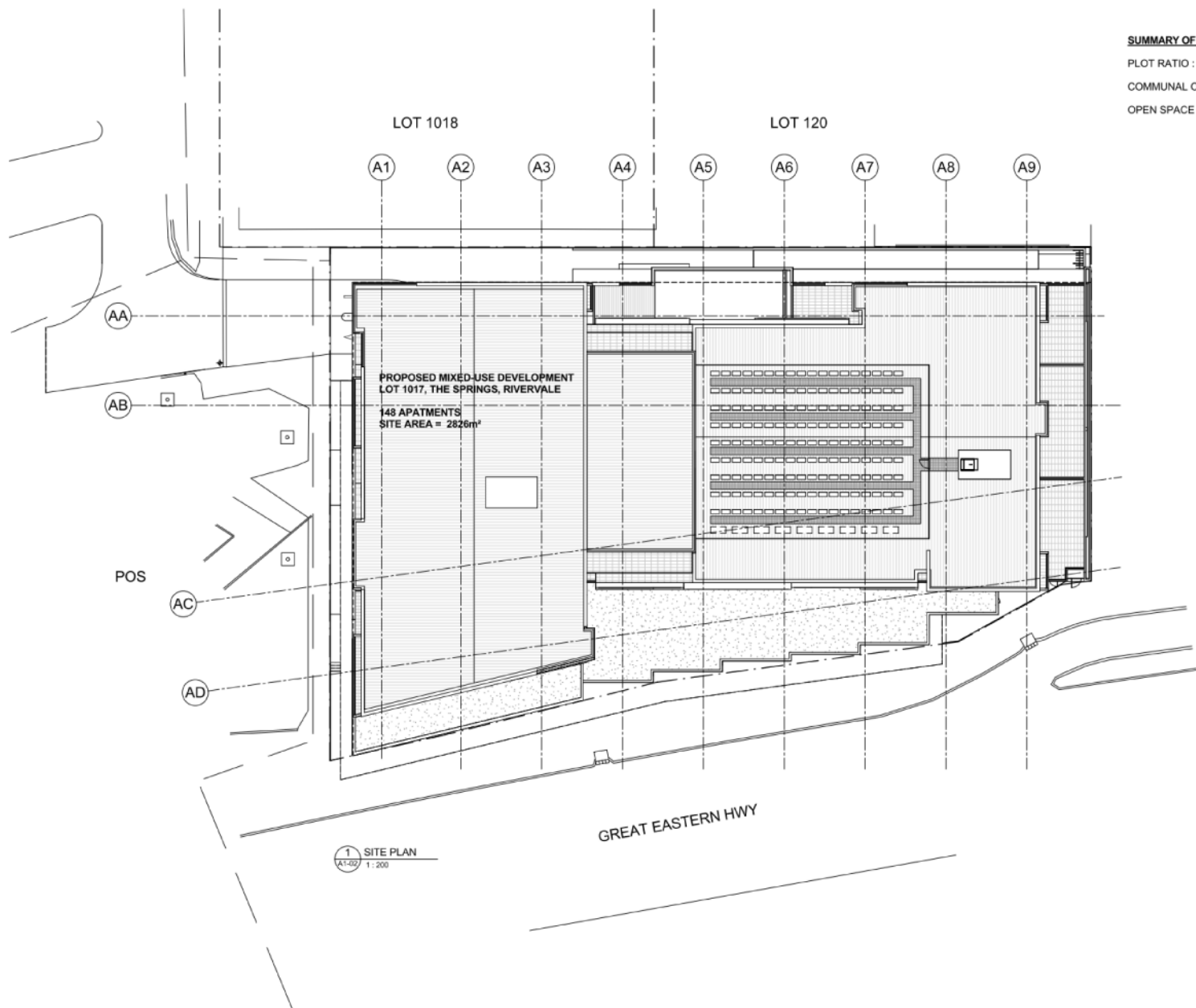
LG Reference: 648/2014

DAP Reference: DAP/14/00637

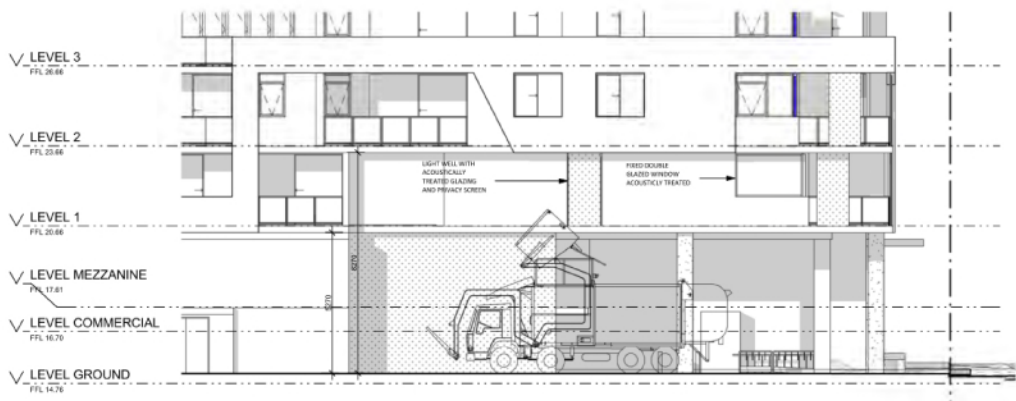
APPENDIX G

ARCHITECTURAL DRAWINGS

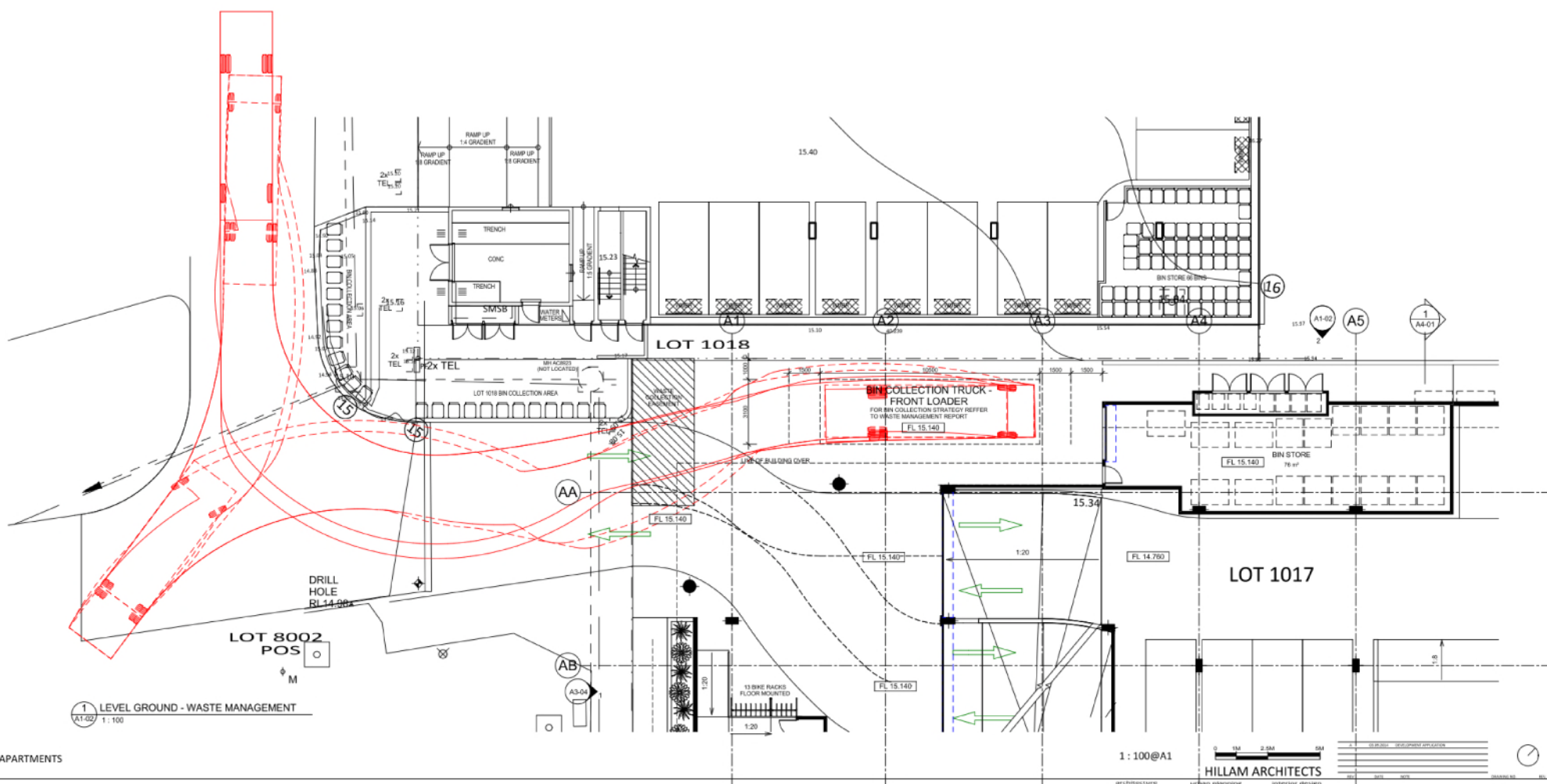
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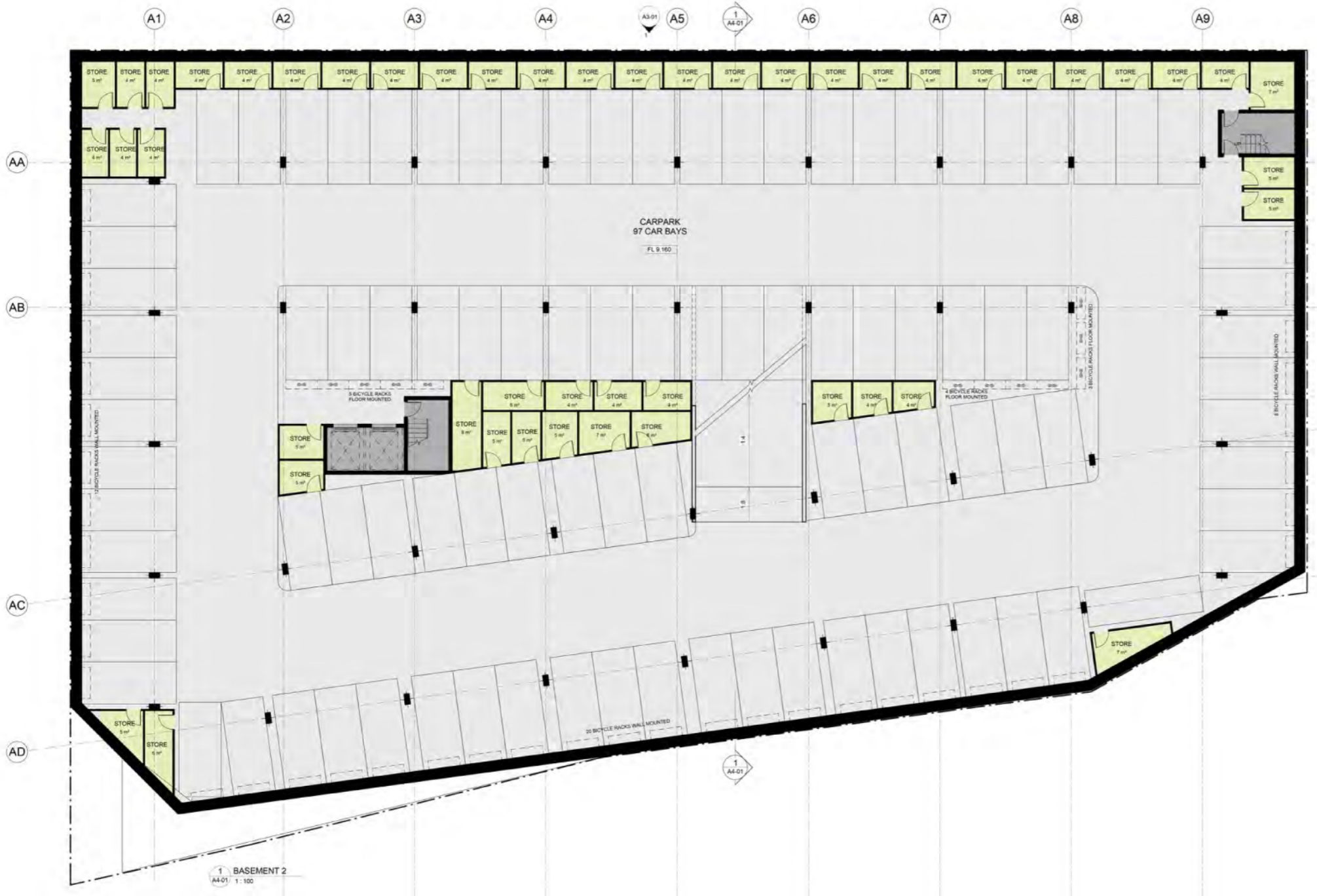
SUMMARY OF AREA CALCULATION
 PLOT RATIO : 10,361m² (3.66 : 1)
 COMMUNAL OPEN SPACE : 378m²
 OPEN SPACE : 3554m²



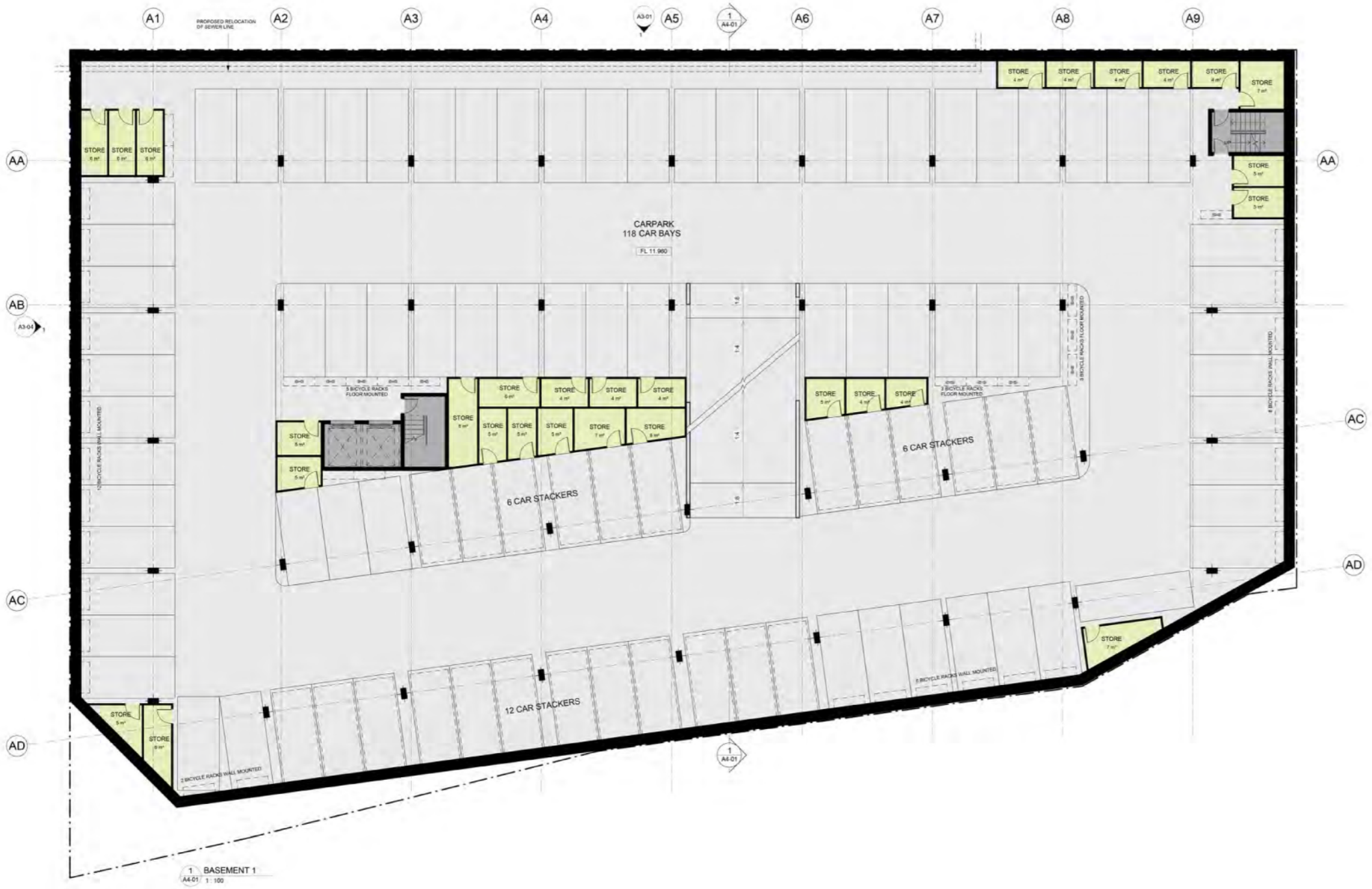
2 North - Waste Management
AT-02 1:100



1 LEVEL GROUND - WASTE MANAGEMENT
AT-02 1:100

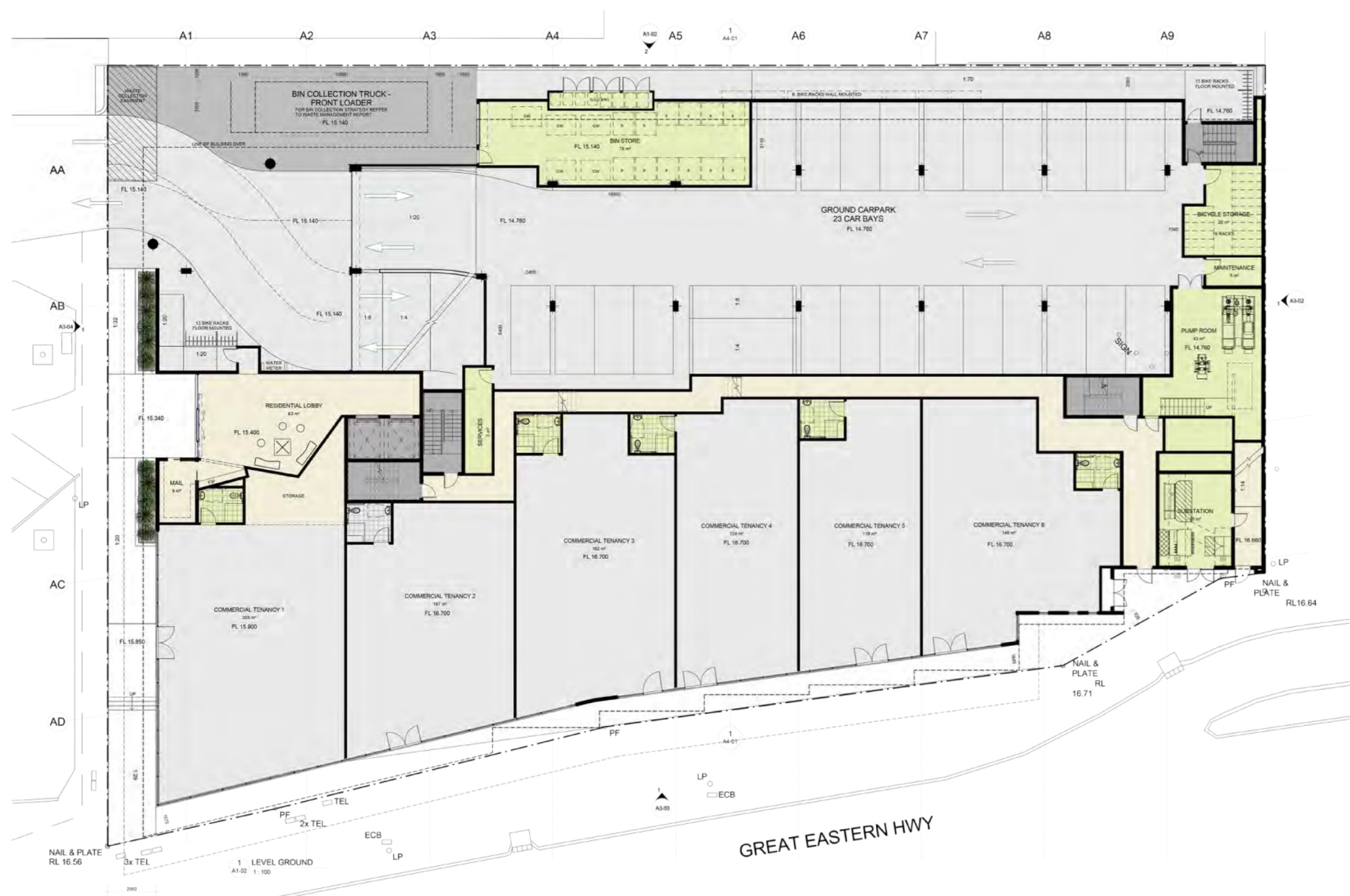


1 BASEMENT 2
A4-01 1:100



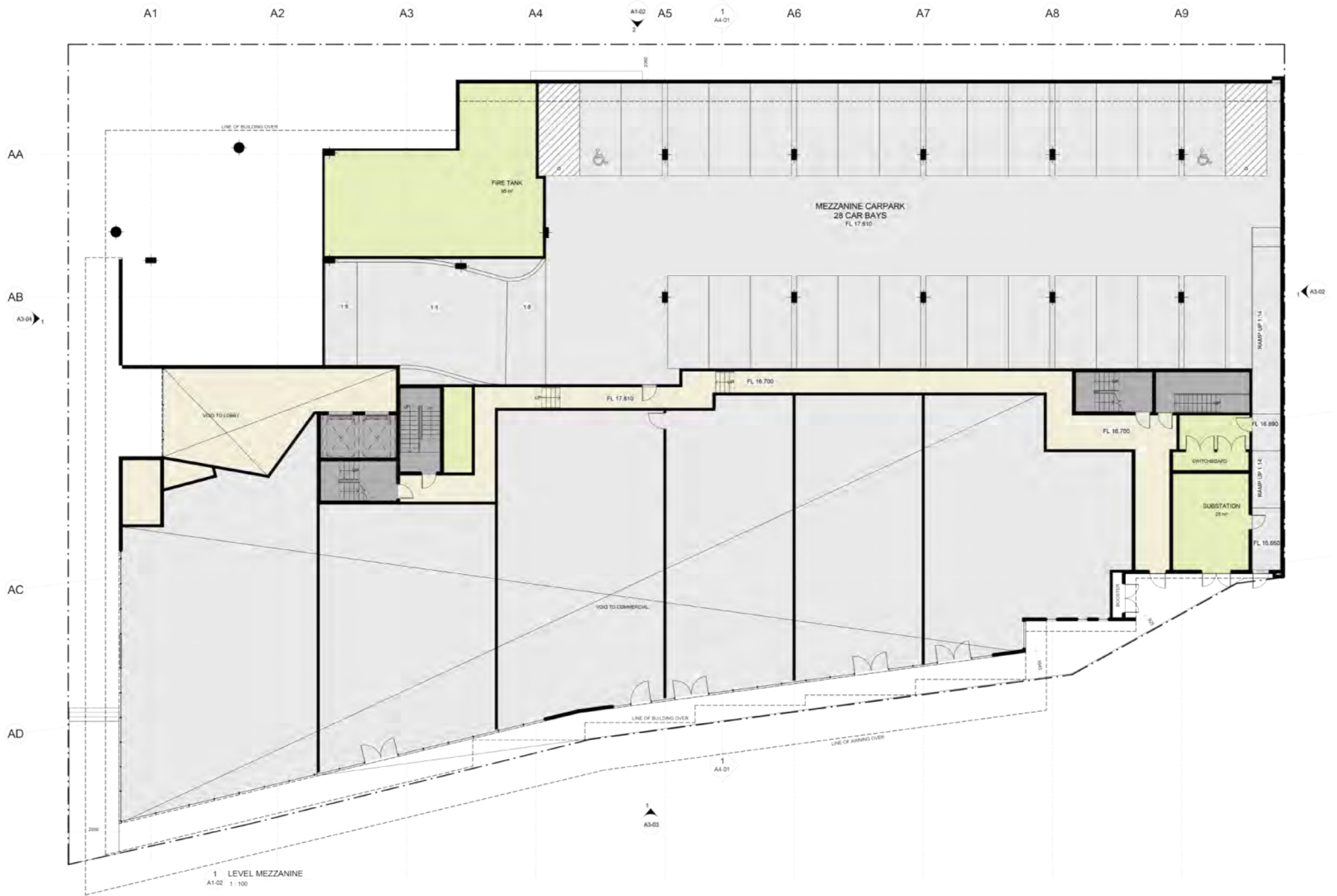
1 BASEMENT 1
A4.01 1:100

LEVEL BASEMENT 1
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY



LEVEL GROUND
 402 PROPOSED NEW RESIDENTIAL APARTMENTS
 1017 SPRINGS RIVERVALE

1 : 100@A1
 HILLAM ARCHITECTS
 ARCHITECTURE urban planning interior design
 0 1M 2.5M 5M
 A2-03 A



LEVEL MEZZANINE
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

1:100@A1
 HILLAM ARCHITECTS
 ARCHITECTURE urban planning interior design
 0 1M 2.5M 5M
 A2-04 A



1 LEVEL 1
A1-02 1:100

LEVEL 1
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

1:100@A1

HILLAM ARCHITECTS
architects urban planning interior design





1 LEVEL 2
A3-01 1:100

LEVEL 2
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

1:100@A1
HILLAM ARCHITECTS
urban planning | interior design
A2-06 A



1 LEVEL 3
A3-01 1:100

LEVEL 3
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

1:100@A1
HILLAM ARCHITECTS
urban planning interior design
A2-07 A



LEVEL 4-7
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

1:100@A1
 HILLAM ARCHITECTS
 architecture urban planning interior design
 A2-08 A



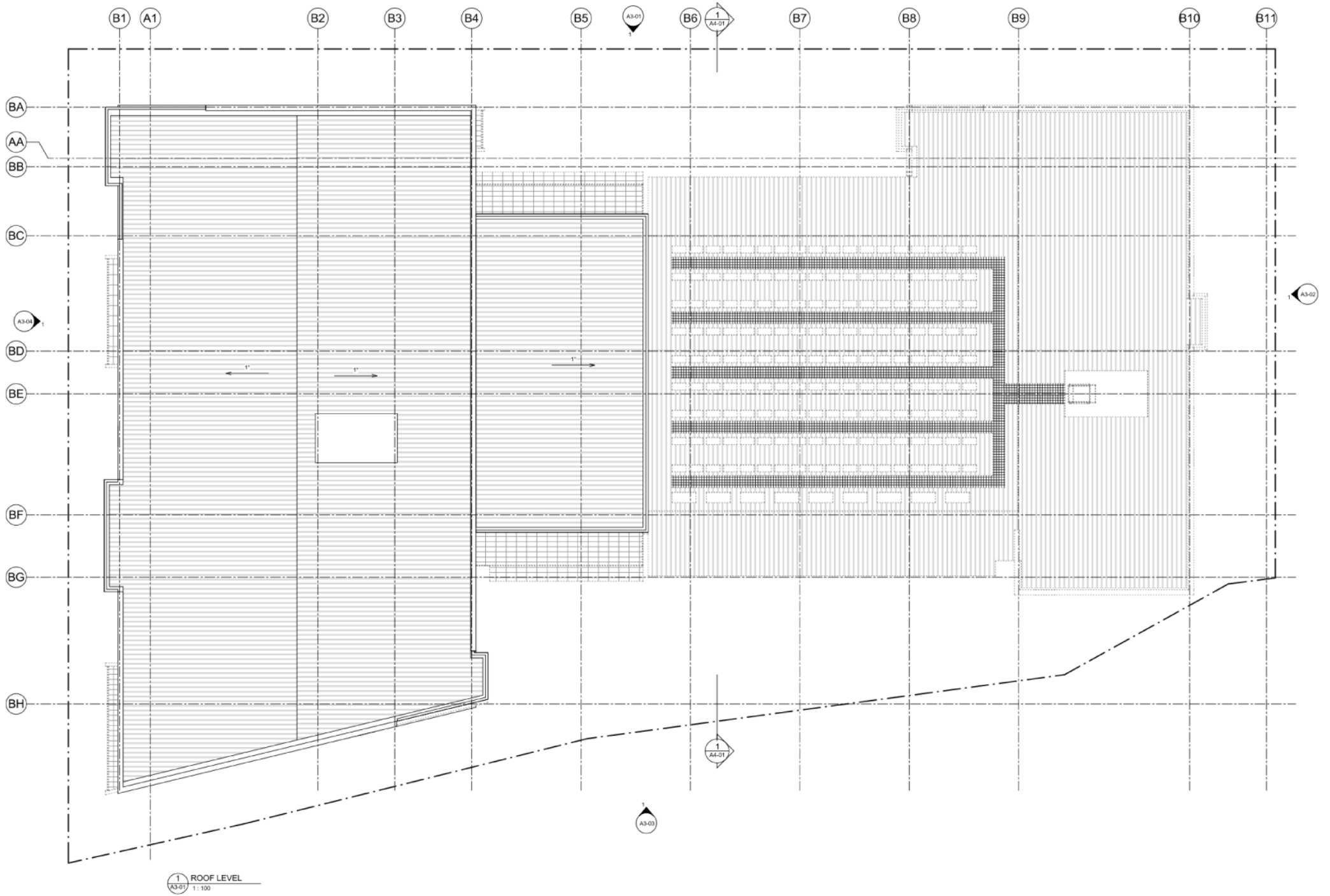
1 LEVEL 8
A3-01 1:100

LEVEL 8
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

1:100@A1

HILLAM ARCHITECTS
architects urban planning interior design

NO.	DATE	DESCRIPTION



1 ROOF LEVEL
A3-01 1:100

LEVEL ROOF
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

1:100@A1
HILLAM ARCHITECTS
urban planning interior design



1 North
A1-02 1:100

ELEVATION NORTH
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

1:100@A1

0 1M 2.5M 5M

HILLAM ARCHITECTS

architects urban planning interior design

DATE: 2024.08.01

SCALE: 1:100

PROJECT: 1402 PROPOSED NEW RESIDENTIAL APARTMENTS

LOT 1017 SPRINGS RIVERVALE

DRAGON CENTURY

A3-01 A



1 East
1:100

ELEVATION EAST
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

1:100@A1

0 1M 2M 3M

HILLAM ARCHITECTS

architecture urban planning interior design

NO.	DATE	NOTE

A3-02 A



FACIA COMPOSITE ALUMINUM | POWDERCOATED ALUMINUM FRAMED GLASS WINDOW | MASONRY BALUSTRADE RENDER WITH PAINT FINISH | LONGLINE BE OR SIMILAR VERTICAL METAL CLADDING | LEFT SMFT RENDER WITH PAINT FINISH | MASONRY BALUSTRADE RENDER WITH PAINT FINISH | FACIA COMPOSITE ALUMINUM | POWDERCOATED ALUMINUM FRAMED GLASS BALUSTRADE | POWDERCOATED PERFORATED SCREEN | MASONRY BALUSTRADE RENDER WITH PAINT FINISH | RIGHT SCREEN TO PLANT PLATFORM | POWDERCOATED ALUMINUM FRAMED PROTECTED GLASS SCREENING | MASONRY FRAME RENDER WITH PAINT FINISH | LONGLINE BE OR SIMILAR VERTICAL METAL CLADDING | MASONRY BALUSTRADE RENDER WITH PAINT FINISH | POWDERCOATED ALUMINUM FRAMED GLASS BUILDING DOOR | POWDERCOATED ALUMINUM FRAMED PROTECTED GLASS SCREENING

ROOF LEVEL
 PFL 44.98
 LEVEL 8
 PFL 41.98
 LEVEL 7
 PFL 38.98
 LEVEL 6
 PFL 35.98
 LEVEL 5
 PFL 32.98
 LEVEL 4
 PFL 29.98
 LEVEL 3
 PFL 26.98
 LEVEL 2
 PFL 23.98
 LEVEL 1
 PFL 20.98
 LEVEL MEZZANINE
 PFL 17.98
 LEVEL COMMERCIAL
 PFL 14.98

MASONRY WALL RENDER WITH PAINT FINISH | POWDERCOATED PERFORATED SCREEN | OFF-FORM CONCRETE | COMPOSITE ALUMINUM | GLASS SHOPFRONT | MASONRY FRAME RENDER WITH PAINT FINISH | MASONRY WALL RENDER WITH PAINT FINISH | OFF-FORM CONCRETE | POWDERCOATED PERFORATED SCREEN | MASONRY WALL RENDER WITH PAINT FINISH

1 South
 A3-03 1:100

ELEVATION SOUTH
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

1:100@A1
 HILLAM ARCHITECTS
 urban planning interior design
 DATE: 2024

A3-03 A



1 West
A1-02 1:100

ELEVATION WEST
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

1:100@A1

0 1M 2.5M 5M

HILLAM ARCHITECTS
architects llp
urban planning
interior design

DATE DATE DATE

A3-04 A







ATTACHMENT 2 – Additional Information – Office land use (4 December 2014)

Lot 1017 (3) Lawburn Road Rivervale

LG Reference: 648/2014

DAP Reference: DAP/14/00637

From: Mandy Leung [Mandy@hillam.com.au]
Sent: Thursday, 4 December 2014 7:01:15 PM
To: Wilmot Loh
Subject: RE: Springs 1017 - Response to letter dated 20 Oct 2014

Wilmot,

Further to this morning's meeting, Springs Lot 1018 approved the 8 commercial bays to be used by visitors after hours. 8 reciprocal bays is about 35% of the required 23 visitor bays.

For Springs 1017, when we revert the convenience stores back to office and push the shop front window further back, the commercial area is reduced to around 850sqm. That means 28 commercial bays is required.

Springs 1017 requires 36 visitor bays. Following the precedent case from Springs 1018, we propose to provide 23 designated visitor bays and 13 reciprocal bays to satisfy the council requirement. 13 reciprocal bays is about 36% of the required 36 visitor bays. We are happy to provide another 15 reciprocal bays for visitors after hours. A clause will be included in the commercial tenancy sales contract saying that the car bays will be available for visitor uses after business hours.

The equation is :

- 23 visitor bays
- 28 reciprocal bays for visitor after hours
- Total 51 visitor bays to be provided.


This exceeds the 36 bays required by the council and aligns with precedence approval on Springs Lot 1018.

Please provide feedback on the above and I will include in the formal response later if I have your support.

Thanks.

Regards,

Mandy Leung
Associate

 [http://hillam.com.au/signature
/img/logo.png](http://hillam.com.au/signature/img/logo.png)

mandy@hillam.com.au 2/31 Hood St, Subiaco WA 6008
0411 389 190 +61 8 6380 1877

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From: Wilmot Loh [mailto:Wilmot.Loh@belmont.wa.gov.au]
Sent: Tuesday, 2 December 2014 9:14 AM
To: Mandy Leung
Subject: RE: Springs 1017 - Response to letter dated 20 Oct 2014

Hi Mandy,

Just Juliette and myself will attend Thursday's meeting.

Regards,

Wilmot Loh
Senior Planning Officer



City of Belmont, 215 Wright Street, Cloverdale, WA 6105
Postal address: Locked Bag 379, Cloverdale WA 6985

Phone - 9477 7274 **Fax** - 9478 1473
Email – wilmot.loh@belmont.wa.gov.au
Web – www.belmont.wa.gov.au

From: Mandy Leung [<mailto:Mandy@hillam.com.au>]
Sent: Monday, 1 December 2014 6:52 PM
To: Wilmot Loh
Cc: David Hillam
Subject: RE: Springs 1017 - Response to letter dated 20 Oct 2014

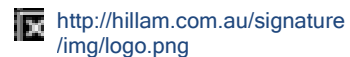
Wilmot,

Sorry, I was at training and meeting the whole day.
Thanks for the feedback.
I believe many of your feedback can be easily addressed.
I am keen to meet you on Thursday and discuss further.

Can I ask if the Thursday meeting involve a large group or just a small group discussion between you and Hillam Architects.

Regards,

Mandy Leung
Associate



mandy@hillam.com.au 2/31 Hood St, Subiaco WA 6008
0411 389 190 +61 8 6380 1877

hillam.com.au

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From: Wilmot Loh [<mailto:Wilmot.Loh@belmont.wa.gov.au>]
Sent: Monday, 1 December 2014 5:23 PM
To: Mandy Leung
Subject: RE: Springs 1017 - Response to letter dated 20 Oct 2014

Hi Mandy,

I have sent you a meeting request for Thursday 4th December to discuss this application. The City has a number of concerns and is unable to support the development as proposed. I have outlined the matters below for your attention, we can further discuss what is required during our meeting on Thursday.

1. Is there a reason why two convenience store tenancies are proposed?
2. Are there intended operators for the convenience store(s)?
3. The development plans do not make provision for service/deliveries/loading to support the convenience store(s).
4. The encroachment of the awning over the Great Eastern Highway Primary Regional Road Reserve is unacceptable.
5. Pedestrian access to the entry/exit door at the eastern corner of the building (Ground Floor Plan) is reliant on the Great Eastern Highway Primary Regional Road Reserve – this is not acceptable.
6. The acceptability of the location of the disabled parking bays on the Mezzanine level is questionable, as with Point no. 5 above, it is inappropriate to exit/enter from the Primary Regional Road reserve.
7. Universal/disabled access to the convenience store and office tenancies is not provided along Hawksburn Road.
8. Details on the treatment for pedestrian access to the convenience store and office tenancies within the private property boundary, and the relationship with the footpath and landscaping on the Great Eastern Highway reserve is required.
9. The development plans do not reflect acceptable pedestrian access/egress to/from the Ground Floor car park or the Mezzanine Floor car park.
10. The proposed reciprocal arrangement for the convenience store and office appear arbitrary and unsubstantiated; in particular, it infers that the convenience store will not operate after 6.00pm or before 7.30am – this is questionable. Input from a qualified consultant may be appropriate.
11. It appears that the bottom car in the car stacker must be moved in order to access the top car – the acceptability of this is questionable.
12. The location of the bicycle parking on the ground floor is not ideal as it is not conveniently located.
13. No end-of-trip shower/locker and change rooms have been provided for the office component of the development.
14. Public artwork other than screens and wall treatment is encouraged – notwithstanding this, artwork is subject to approval by the City's Public Art Advisory Panel.

Regards,

Wilmot Loh
Senior Planning Officer

 CoBSml

City of Belmont, 215 Wright Street, Cloverdale, WA 6105
 Postal address: Locked Bag 379, Cloverdale WA 6985

Phone - 9477 7274 **Fax** - 9478 1473
Email – wilmot.loh@belmont.wa.gov.au
Web – www.belmont.wa.gov.au

From: Mandy Leung [<mailto:Mandy@hillam.com.au>]
Sent: Monday, 3 November 2014 2:27 PM

To: Wilmot Loh
Subject: Springs 1017 - Response to letter dated 20 Oct 2014

Wilmot,


Further to your letter dated 20 Oct 2014, please refer to the attached for our response to your comments I have also attached the revised ground floor plan and the car stacker data sheet for your information.

Please let me know if you have any query.

Thanks.

Regards,

Mandy Leung
Associate

 [http://hillam.com.au/signature
/img/logo.png](http://hillam.com.au/signature/img/logo.png)

mandy@hillam.com.au 2/31 Hood St, Subiaco WA 6008
0411 389 190 +61 8 6380 1877

hillam.com.au

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Please note that Hillam Architects will shut down for Christmas on Friday 19th December, and re-open on Monday 5th January 2015.

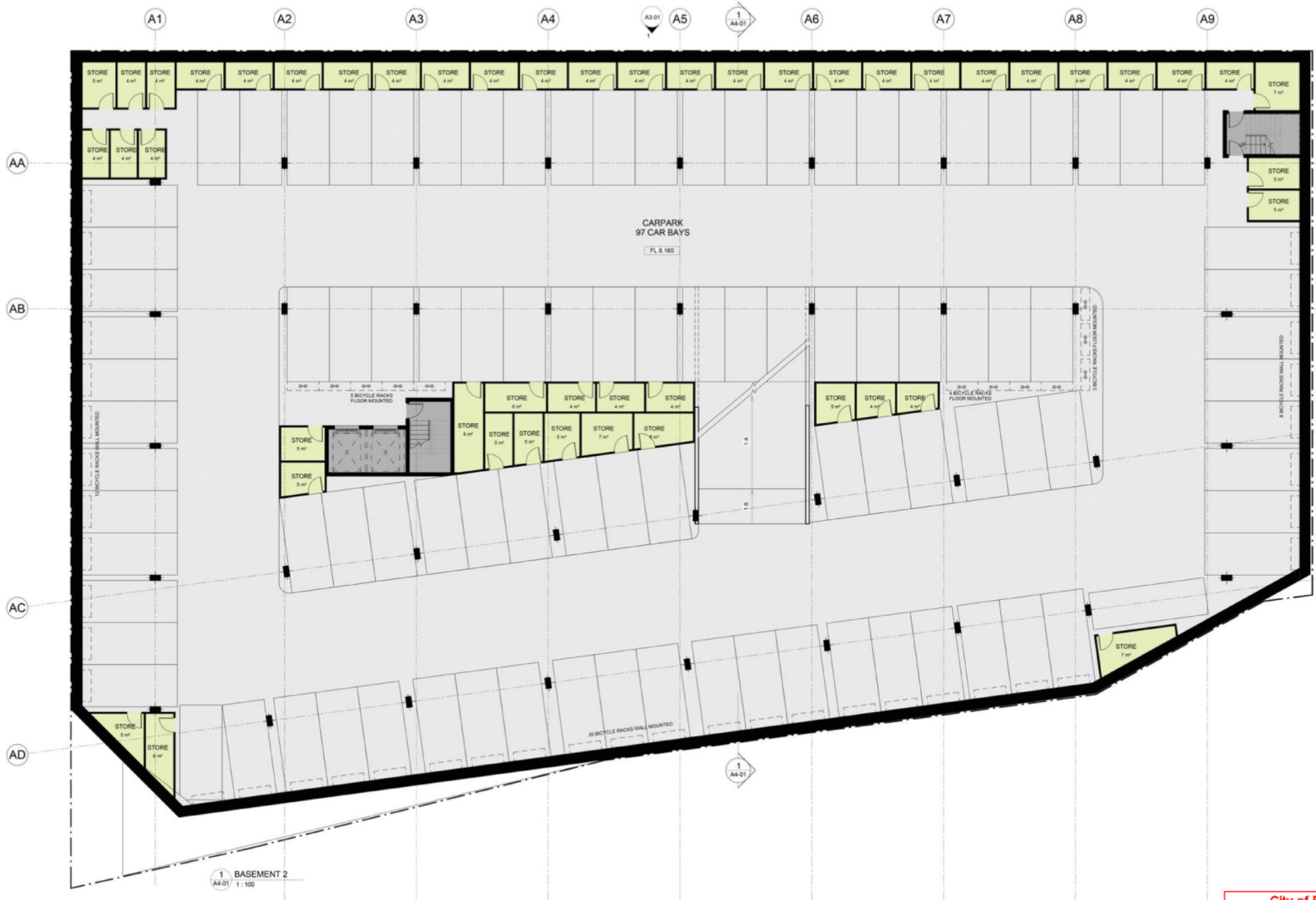
Please note that Hillam Architects will shut down for Christmas on Friday 19th December, and re-open on Monday 5th January 2015.

ATTAC MENT 2A – Revised Plans (11 December 2014)(Superseded)

Lot 1017 (3) aw sburn Road Rivervale

LG Reference: 648/2014

DAP Reference: DAP/14/00637



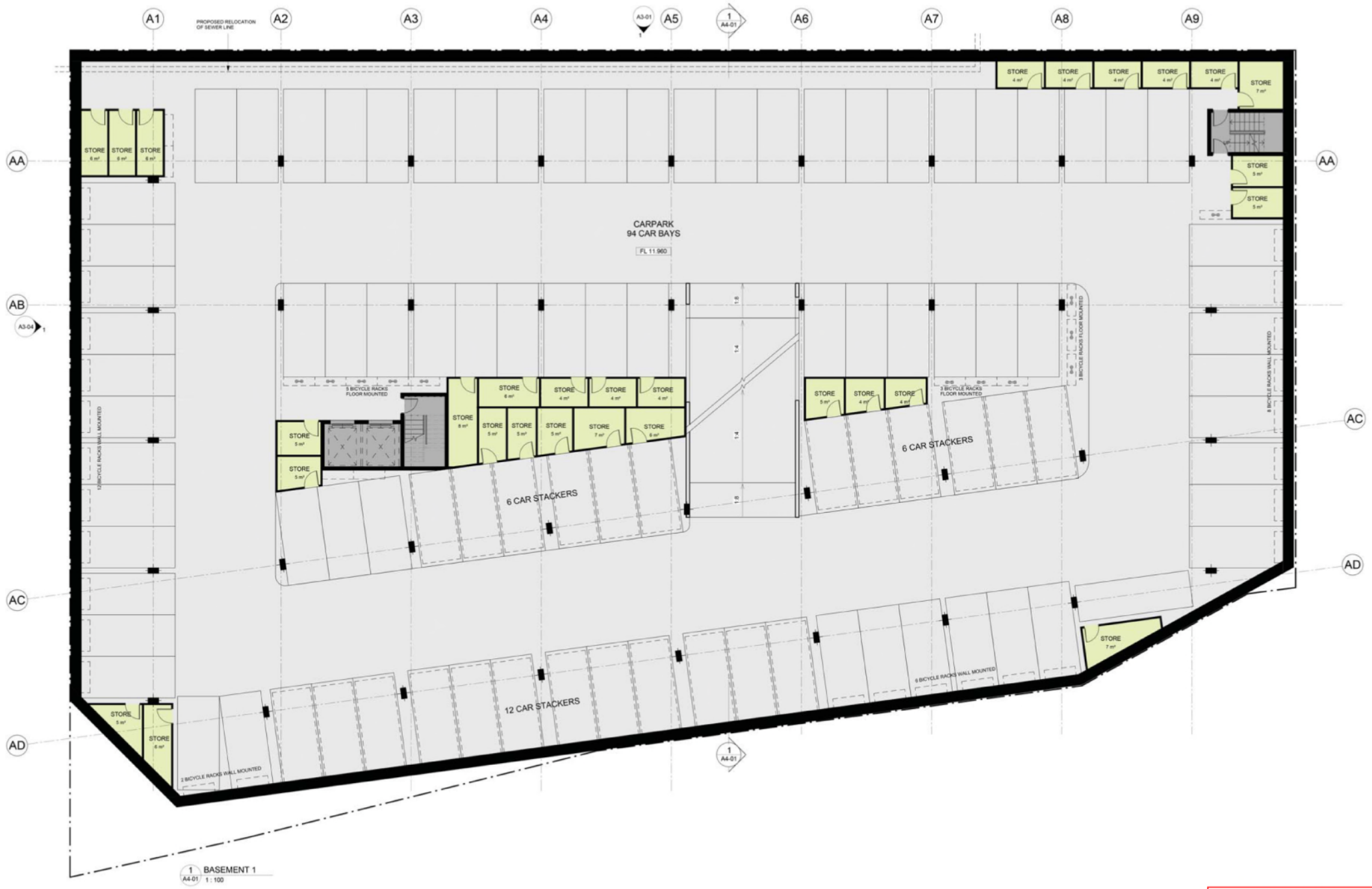
City of Belmont
 AMENDED PLANS
 RECEIVED 11/12/2014
 Application No: 648/2014/DAP

LEVEL BASEMENT 2
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

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HILLAM ARCHITECTS

A2-01 A

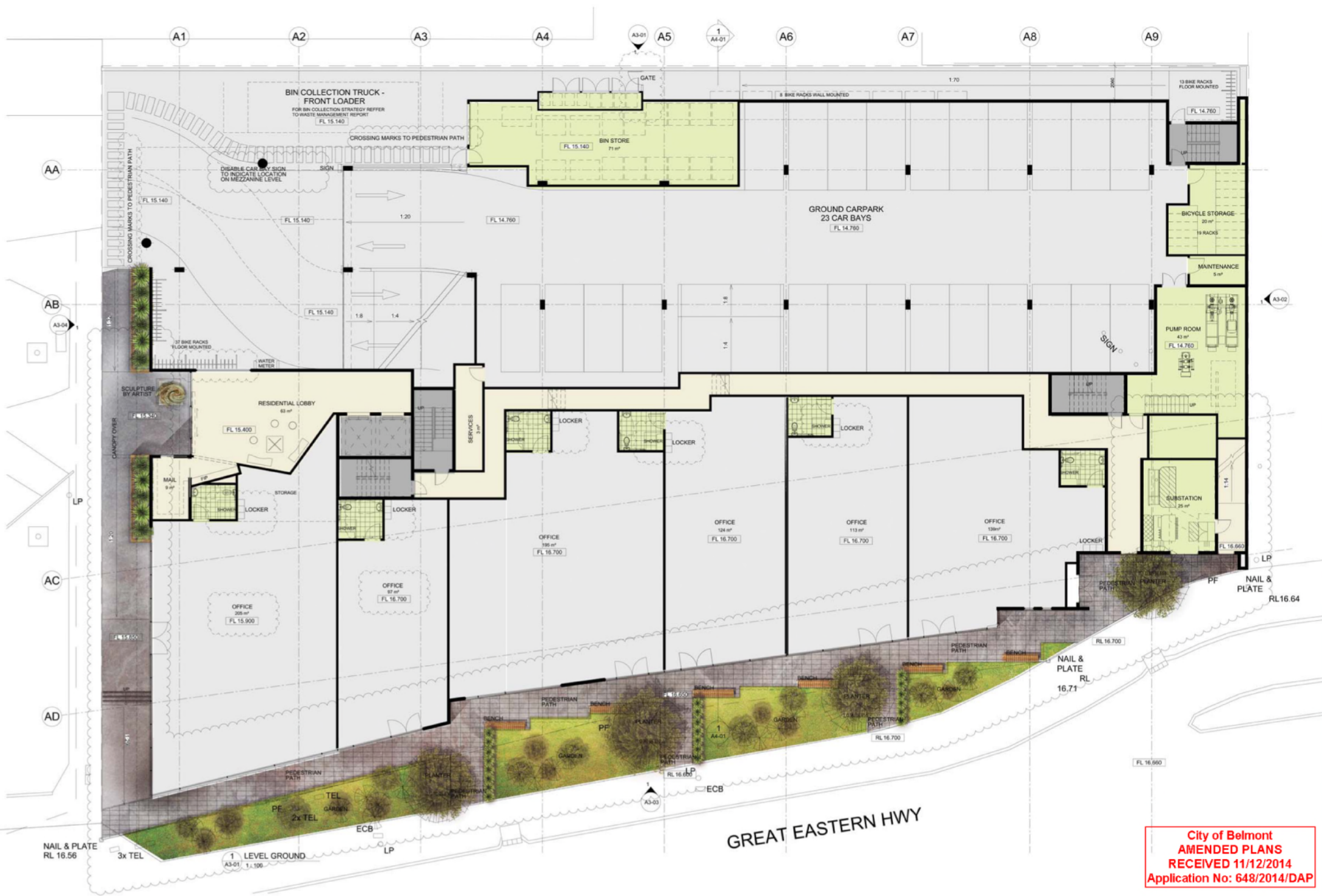


1 BASEMENT 1
A4-01 1:100

City of Belmont
AMENDED PLANS
RECEIVED 11/12/2014
Application No: 648/2014/DAP

LEVEL BASEMENT 1
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LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

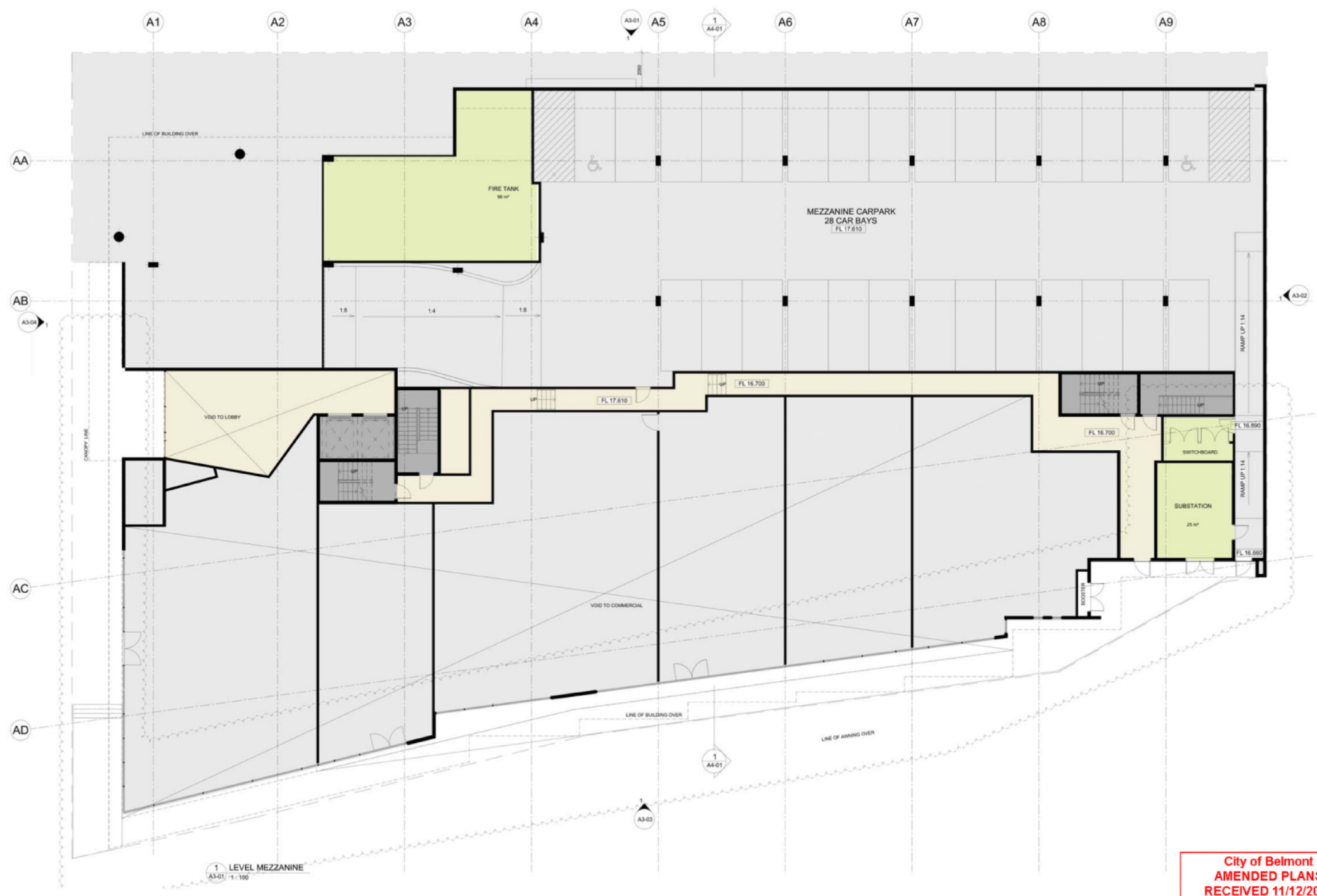
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A2-02 A



City of Belmont
 AMENDED PLANS
 RECEIVED 11/12/2014
 Application No: 648/2014/DAP

LEVEL GROUND
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

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 HILLAM ARCHITECTS
 ARCHITECTURE urban planning interior design
 A2-03 C



City of Belmont
 AMENDED PLANS
 RECEIVED 11/12/2014
 Application No: 648/2014/DAP

LEVEL MEZZANINE
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

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 HILLAM ARCHITECTS
 ARCHITECTURE
 LANDSCAPE ARCHITECTURE
 INTERIOR DESIGN
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 PREPARED BY: []
 CHECKED BY: []
 DATE: []
 SCALE: []
 PROJECT NO: []
 SHEET NO: []
 A2-04 B



1 LEVEL 1
A1-02 1:100

City of Belmont
SUPERSEDED PLAN 20 January 2015
Application No: 648/2014

City of Belmont
AMENDED PLANS
RECEIVED 11/12/2014
Application No: 648/2014/DAP



1 LEVEL 2
A3-01 1:100

City of Belmont
SUPERSEDED PLAN 20 January 2015
Application No: 648/2014

City of Belmont
AMENDED PLANS
RECEIVED 11/12/2014
Application No: 648/2014/DAP

LEVEL 2
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

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HILLAM ARCHITECTS
A2-06 A



1 LEVEL 3
A3-01 1:100

City of Belmont
SUPERSEDED PLAN 20 January 2015
Application No: 648/2014

City of Belmont
AMENDED PLANS
RECEIVED 11/12/2014
Application No: 648/2014/DAP

LEVEL 3
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

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HILLAM ARCHITECTS
architects urban planning interior design
A2-07 A



1 LEVEL 4
A3-01 1: 100

City of Belmont
 AMENDED PLANS
 RECEIVED 11/12/2014
 Application No: 648/2014/DAP

LEVEL 4-7
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

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 HILLAM ARCHITECTS
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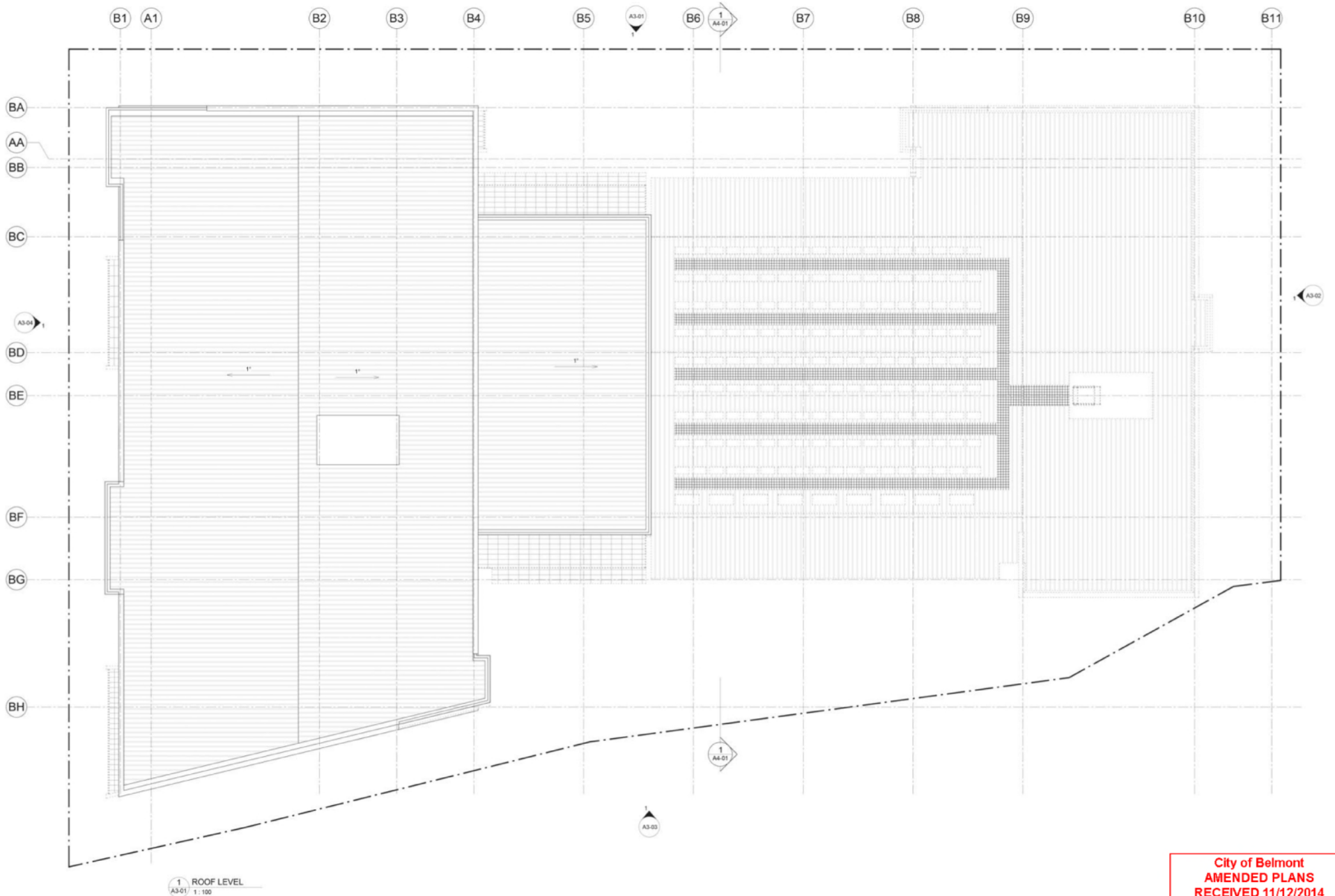


1 LEVEL 8
A3-01 1:100

City of Belmont
AMENDED PLANS
 RECEIVED 11/12/2014
 Application No: 648/2014/DAP

LEVEL 8
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

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 HILLAM ARCHITECTS
 architects urban planning interior design
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1 ROOF LEVEL
A3-01 1:100

City of Belmont
 AMENDED PLANS
 RECEIVED 11/12/2014
 Application No: 648/2014/DAP

LEVEL ROOF
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

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 HILLAM ARCHITECTS
 architecture urban planning interior design
 11/12/2014
 A2-10 A



ROOF LEVEL
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 LEVEL 7
 FFL 38.00
 LEVEL 6
 FFL 35.00
 LEVEL 5
 FFL 32.00
 LEVEL 4
 FFL 29.00
 LEVEL 3
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 LEVEL 2
 FFL 23.00
 LEVEL 1
 FFL 20.00
 LEVEL MEZZANINE
 FFL 17.00
 LEVEL COMMERCIAL
 FFL 14.75
 LEVEL GROUND
 FFL 14.75

POWDERCOATED ALUMINUM FRAMED GLASS WINDOW
 FACIA COMPOSITE ALUMINUM
 MASONRY BALUSTRADE RENDER WITH PAINT FINISH
 LONGLINE SIMILAR VERTICAL METAL CLADDING
 MASONRY BALUSTRADE RENDER WITH PAINT FINISH
 POWDERCOATED PERFORATED SCREEN
 HEAVY SCREEN TO PLANT PLATFORM
 FACIA COMPOSITE ALUMINUM
 MASONRY FRAME RENDER WITH PAINT FINISH
 POWDERCOATED ALUMINUM FRAMED GLASS BALUSTRADE
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 POWDERCOATED ALUMINUM FRAMED GLASS SLIDING DOOR
 LIFT SHUTT RENDER WITH PAINT FINISH
 LONGLINE SIMILAR VERTICAL METAL CLADDING
 MASONRY BALUSTRADE RENDER WITH PAINT FINISH

MASONRY WALL RENDER WITH PAINT FINISH
 MASONRY WALL RENDER WITH PAINT FINISH
 MASONRY WALL RENDER WITH PAINT FINISH
 OFF-FORM CONCRETE
 MASONRY WALL RENDER WITH PAINT FINISH
 POWDERCOATED PERFORATED SCREEN
 POWDERCOATED PERFORATED SCREEN
 COMPOSITE ALUMINUM

1 North
 A1-02 1:100

City of Belmont
 AMENDED PLANS
 RECEIVED 11/12/2014
 Application No: 648/2014/DAP

ELEVATION NORTH
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

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 HILLAM ARCHITECTS
 landscape planning interior design

A3-01 A



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City of Belmont
 AMENDED PLANS
 RECEIVED 11/12/2014
 Application No: 648/2014/DAP

ELEVATION EAST
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

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 HILLAM ARCHITECTS
 ARCHITECTURE urban planning interior design



FASCIA COMPOSITE ALUMINUM POWDERCOATED ALUMINUM FRAMED GLASS WINDOW MASONRY BALUSTRADE RENDER WITH PAINT FINISH LONGHOLE SIP OR SIMILAR VERTICAL METAL CLADDING LEFT DWMT RENDER WITH PAINT FINISH MASONRY BALUSTRADE RENDER WITH PAINT FINISH FASCIA COMPOSITE ALUMINUM POWDERCOATED ALUMINUM FRAMED GLASS BALUSTRADE POWDERCOATED POWDERCOATED MASONRY BALUSTRADE RENDER WITH PAINT FINISH NIGHT SCREEN TO PLANT PLATFORM POWDERCOATED ALUMINUM FRAMED PROTECTED GLASS SCREENING MASONRY FRAME RENDER WITH PAINT FINISH LONGHOLE SIP OR SIMILAR VERTICAL METAL CLADDING MASONRY BALUSTRADE RENDER WITH PAINT FINISH POWDERCOATED ALUMINUM FRAMED GLASS BLENDING DOOR POWDERCOATED ALUMINUM FRAMED PROTECTED GLASS SCREENING

MASONRY WALL RENDER WITH PAINT FINISH GOLD POWDERCOATED PERFORATED SCREEN OFF-FORM CONCRETE GLASS SHOPFRONT MASONRY FRAME RENDER WITH PAINT FINISH MASONRY WALL RENDER WITH PAINT FINISH OFF-FORM CONCRETE POWDERCOATED PERFORATED SCREEN MASONRY WALL RENDER WITH PAINT FINISH

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City of Belmont
AMENDED PLANS
RECEIVED 11/12/2014
Application No: 648/2014/DAP

ELEVATION SOUTH
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

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HILLAM ARCHITECTS
ARCHITECTURE urban planning interior design
A3-03 B



1 West
A1-52 1:100

City of Belmont
AMENDED PLANS
RECEIVED 11/12/2014
Application No: 648/2014/DAP

ELEVATION WEST
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

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HILLAM ARCHITECTS
architects
urban planning
interior design



City of Belmont
AMENDED PLANS
RECEIVED 11/12/2014
Application No: 648/2014/DAP



City of Belmont
AMENDED PLANS
RECEIVED 11/12/2014
Application No: 648/2014/DAP

ATTACHMENT 3 – Additional Information – Revisions to Dwelling (19 January 2015)

Lot 1017 (3) Dawson Road Rivervale

LG Reference: 648/2014

DAP Reference: DAP/14/00637

Wilmot Loh
Planning Department
City of Belmont
215 Wright Street
Cloverdale WA

19th January 2015

To Wilmot,

RE: Lot 1017 (3) Hawksburn Road Rivervale DA application – Amendment to Apartment Mix

Further to our conversation on Friday 16 January 2015, we are proposing to make amendment to the current DA application for the property above.

Apartment Mix changes

Due to the current market condition, there is an increased demand on entry level 2 bedroom units. We are proposing to convert 24 one bedroom units to two bedroom units. The proposed two bedrooms units are located between Grid B4 to B8, facing north from Level 1 to Level 7.

Below is the revised apartment mix table.

Units	NO.	Percentage
Studio	24	16%
1x1 bed	39	27%
2x1 bed	5	3%
2x2 bed	72	49%
3x2 bed	7	5%
Total	147	100%

Please refer to the following revised drawings for detail.

Drawings attached:

- Site Plan A1-01 Rev B
- Level 1 Floor Plan A2-05 Rev B
- Level 2 Floor Plan A2-06 Rev B
- Level 3 Floor Plan A2-07 Rev B
- Level 4-7 Floor Plan A2-08 Rev B

Plot Ratio changes

The proposed change increases the plot ratio area by 347sqm to 10,654sqm. The plot ratio is equivalent to 3.77.

Revised Plot Ratio Table

Type	Plot Ratio Area (sqm)	Ground	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	TOTAL MIP	PILOT RATIO AREA (sqm)	
COMMERCIAL													
Tenancy 1		203									1		
Tenancy 2		97									1		
Tenancy 3		212									1		
Tenancy 4		124									1		
Tenancy 5		119									1		
Tenancy 6		149									1		
												904	
1x1 Bed	A1	55	4	4							8	440	
1x1 Bed	A1b	58	1	1							2	116	
1x1 Bed	A2	51			5	5	5	5	5		25	1275	
1x1 Bed	A3	56	2	2							4	224	
2x1 Bed	B1	67				1	1	1	1		4	268	
2x1 Bed	B1a	72			1						1	72	
2x2 Bed	C2	77	2	2	2	2	2	2	2	2	16	1232	
2x2 Bed	C3	80	1	1	1	1	1	1	1	1	8	640	
2x2 Bed	C3a	84			1	1	1	1	1		5	420	
2x2 Bed	C4	83		1	1	1	1	1	1	1	7	581	
2x2 Bed	C4a	78								1	1	78	
2x2 Bed	C5	81				1	1	1	1		4	324	
2x2 Bed	C6	83	1	1							2	166	
2x2 Bed	C7	82			1						1	82	
2x2 Bed	C8	81								2	2	162	
2x2 Bed	C9	78	1								1	78	
2x2 Bed	C10	101	1								1	101	
2x2 Bed	C11	68		1		1	1	1	1		5	340	
2x2 Bed	C12	66	2	1		1	1	1	1		7	462	
2x2 Bed	C13	68	2	1	1	2	2	2	2		12	816	
3x2 Bed	D1	102		1	1	1	1	1	1	1	7	714	
Studio	E1	53			1	1	1	1	1		5	265	
Studio	E1a	46	1	1	1	1	1	1	1		7	322	
Studio	E1b	46	1	1							2	92	
Studio	E1c	50	1	1							2	100	
Studio	E1d	45	1								1	45	
Studio	E1e	52			1	1	1	1	1		5	260	
Studio	E1f	60	1	1							2	120	
Total per floor			22	20	17	20	20	20	20	8	147		
												Total Plot Ratio Area (sqm)	10654
												Site Area (sqm)	2826
												Proposed Plot Ratio	3.77

The proposed change does not affect the overall building footprint area, elevation design, setback and car parking number. The waste strategy is not affected as well as the council waste policy is based on the total number of units, rather than the unit mix.

We look forward to the council's support on the proposed change.

Should you have any other queries, please do not hesitate to contact me on 6380 1877 or via email. My email is mandy@hillam.com.au.

Yours Sincerely,

Mandy Leung
Hillam Architects

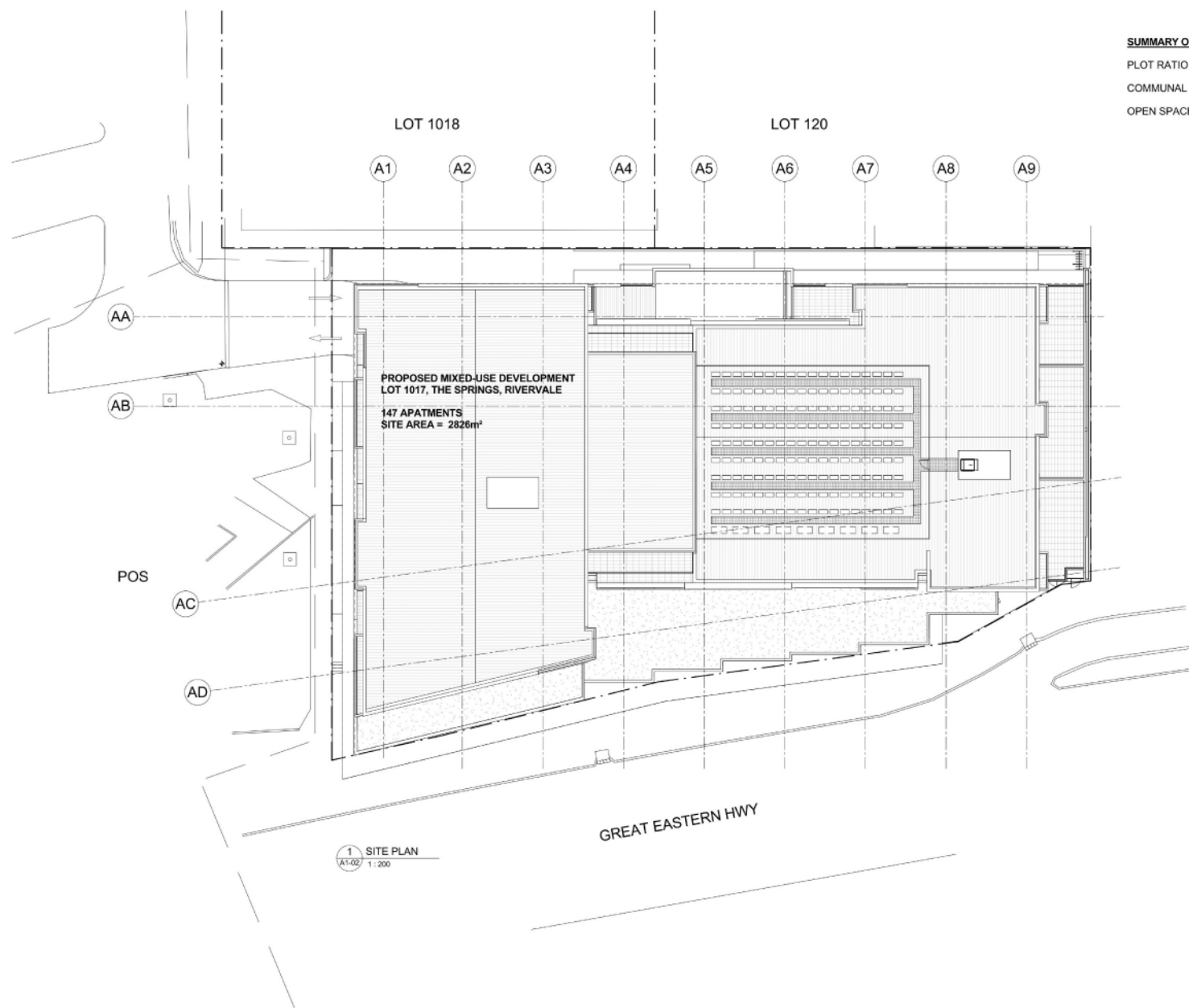
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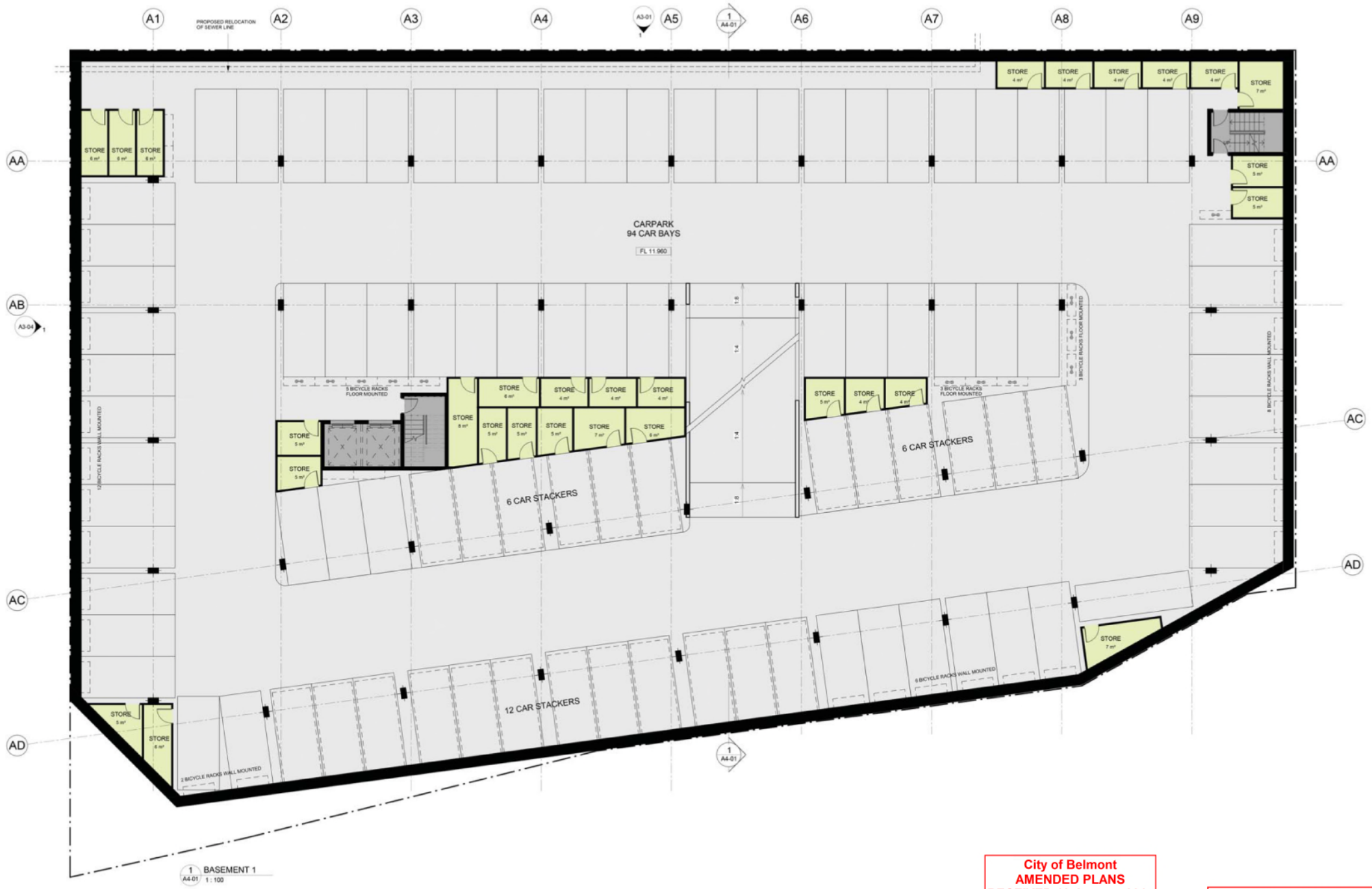
ATTACHMENT 3A – Revised Plans (19 January 2015)

Lot 1017 (3) Lawburn Road Rivervale

LG Reference: 648/2014

DAP Reference: DAP/14/00637





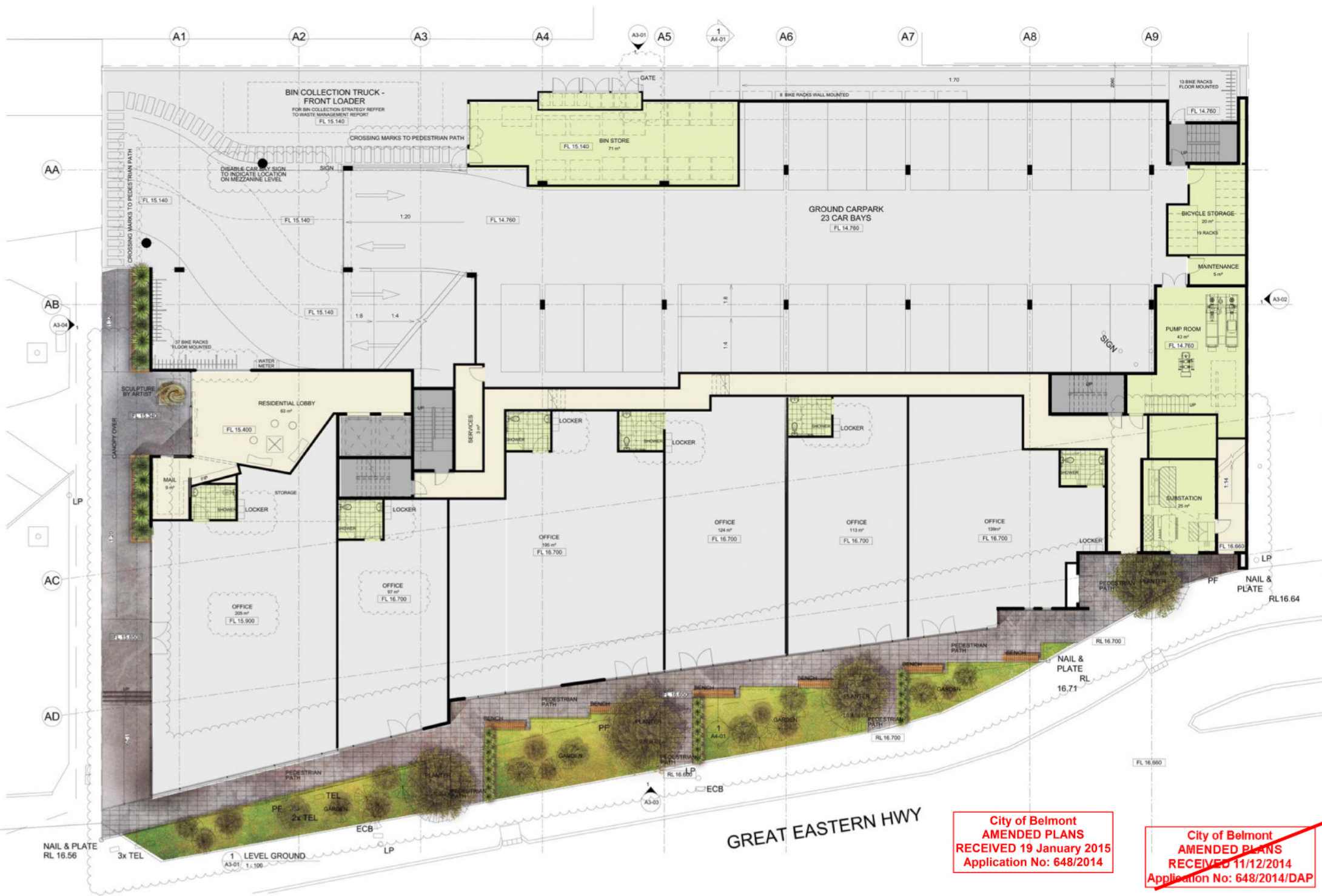
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City of Belmont
AMENDED PLANS
RECEIVED 19 January 2015
Application No: 648/2014

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AMENDED PLANS
RECEIVED 11/12/2014
Application No: 648/2014/DAP~~

LEVEL BASEMENT 1
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

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HILLAM ARCHITECTS
A2-02 A

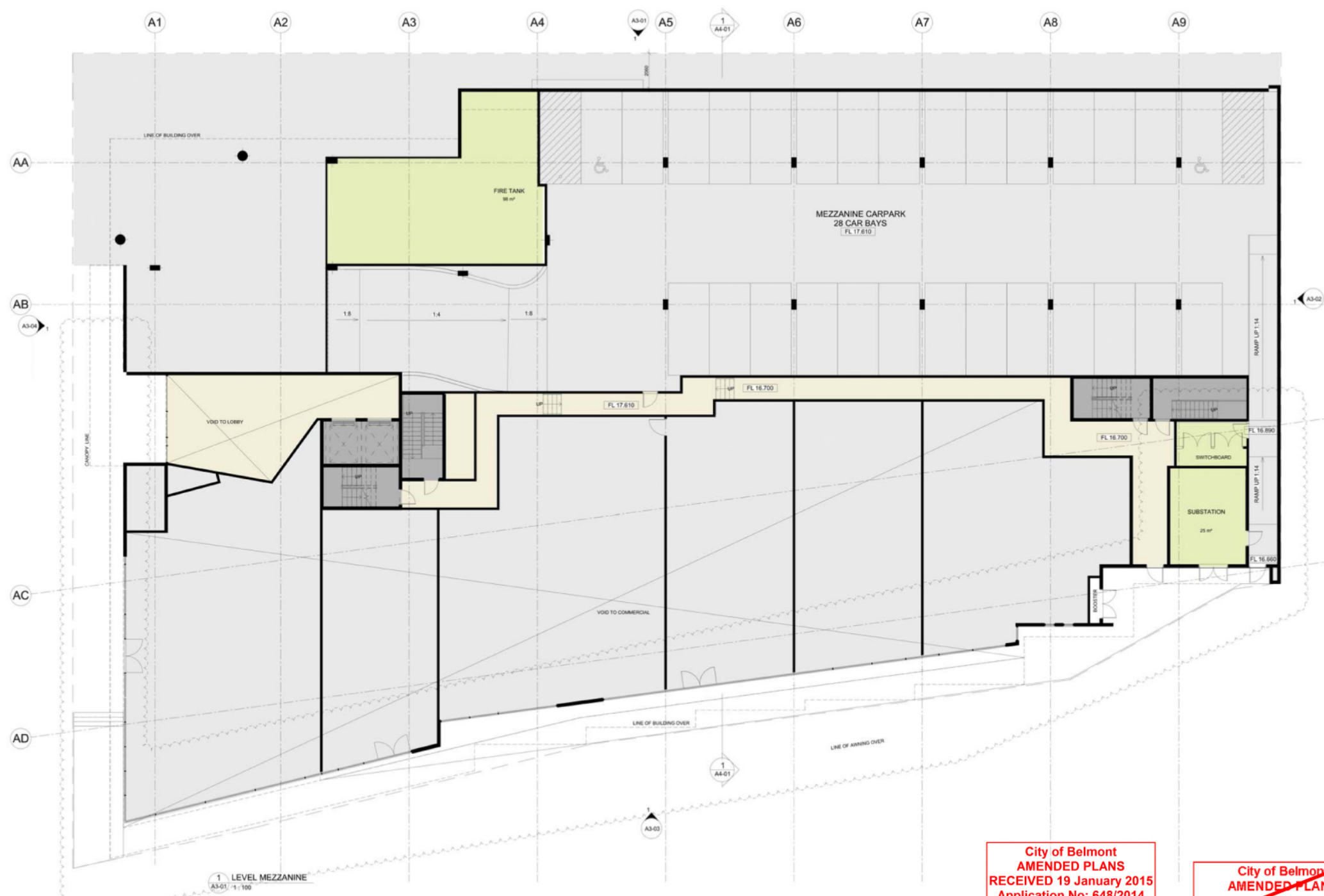


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 Application No: 648/2014

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 AMENDED PLANS
 RECEIVED 11/12/2014
 Application No: 648/2014/DAP~~

LEVEL GROUND
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

1:100@A1
 HILLAM ARCHITECTS
 ARCHITECTURE urban planning interior design
 A2-03 C



LEVEL MEZZANINE
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

City of Belmont
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 HILLAM ARCHITECTS
 ARCHITECTURE INTERIOR DESIGN



LEVEL 1
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

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 HILLAM ARCHITECTS
 City of Belmont
 AMENDED PLANS
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 Application No. 518/2014



1 LEVEL 2
A1-02 1:100

LEVEL 2
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

1:100@A1

HILLAM ARCHITECTS

City of Belmont
AMENDED PLANS
RECEIVED 19 January 2014
Application No. 518/2014



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A1-02 1:100

LEVEL 3
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

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HILLAM ARCHITECTS

City of Belmont
RECEIVED PLANS
RECEIVED 19 January 2015
Application No: 648/2014



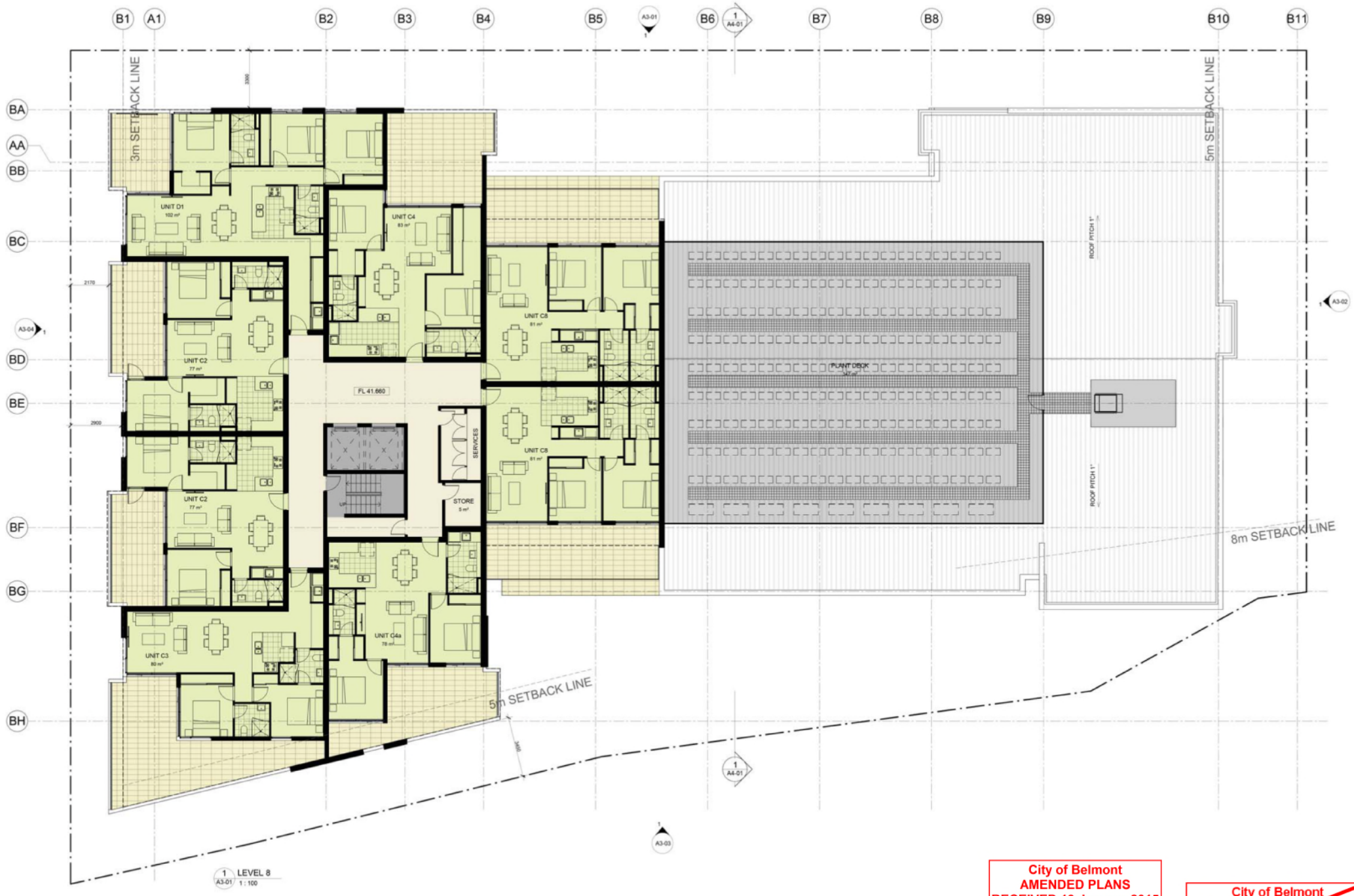
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City of Belmont
AMENDED PLANS
RECEIVED 19 January 2015
Application No: 648/2014

~~City of Belmont
AMENDED PLANS
RECEIVED 11/12/2014
Application No: 648/2014/DAP~~

LEVEL 4-7
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

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HILLAM ARCHITECTS
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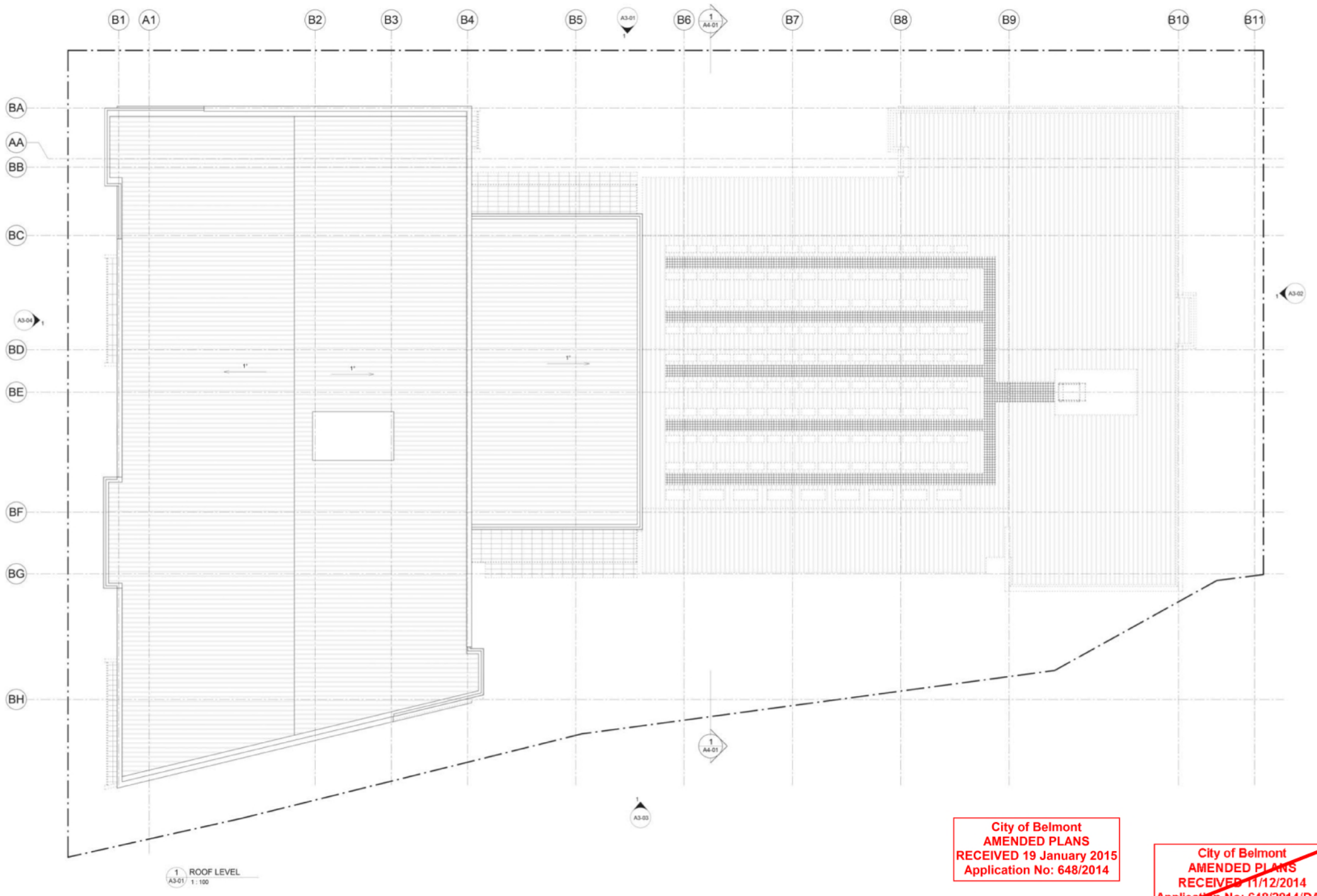
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City of Belmont
AMENDED PLANS
 RECEIVED 19 January 2015
 Application No: 648/2014

~~City of Belmont
AMENDED PLANS
 RECEIVED 11/12/2014
 Application No: 648/2014/DAP~~

LEVEL 8
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

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 HILLAM ARCHITECTS
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City of Belmont
AMENDED PLANS
RECEIVED 19 January 2015
Application No: 648/2014

City of Belmont
AMENDED PLANS
RECEIVED 11/12/2014
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LEVEL ROOF
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

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HILLAM ARCHITECTS
architects urban planning interior design
A2-10 A



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 LEVEL 1
 FFL 20.50
 LEVEL MEZZANINE
 FFL 17.50
 LEVEL COMMERCIAL
 FFL 14.70
 LEVEL GROUND
 FFL 14.70

POWDERCOATED ALUMINUM FRAMED GLASS WINDOW
 FACIA COMPOSITE ALUMINUM
 MASONRY BALUSTRADE RENDER WITH PAINT FINISH
 LONGLINE SIMILAR VERTICAL METAL CLADDING
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 POWDERCOATED ALUMINUM FRAMED GLASS SLIDING DOOR
 LIFT SHaft RENDER WITH PAINT FINISH
 LONGLINE SIMILAR VERTICAL METAL CLADDING
 MASONRY BALUSTRADE RENDER WITH PAINT FINISH

MASONRY WALL RENDER WITH PAINT FINISH
 MASONRY WALL RENDER WITH PAINT FINISH
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 POWDERCOATED PERFORATED SCREEN
 POWDERCOATED PERFORATED SCREEN
 COMPOSITE ALUMINUM

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City of Belmont
 AMENDED PLANS
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 Application No: 648/2014

City of Belmont
 AMENDED PLANS
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ELEVATION NORTH
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

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City of Belmont
AMENDED PLANS
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Application No: 648/2014

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Application No: 648/2014/DAP~~

ELEVATION EAST
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

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HILLAM ARCHITECTS
ARCHITECTURE urban planning interior design
DATE DATE DATE
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City of Belmont
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City of Belmont
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ELEVATION SOUTH
 1402 PROPOSED NEW RESIDENTIAL APARTMENTS
 LOT 1017 SPRINGS RIVERVALE
 DRAGON CENTURY

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 architecture urban planning interior design
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City of Belmont
AMENDED PLANS
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Application No: 648/2014

City of Belmont
AMENDED PLANS
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Application No: 648/2014/DAP

ELEVATION WEST
1402 PROPOSED NEW RESIDENTIAL APARTMENTS
LOT 1017 SPRINGS RIVERVALE
DRAGON CENTURY

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Application No: 648/2014/DAP~~

ATTACHMENT 4 – Main Roads referral response (16 January 2015)

Lot 1017 (3) Dawson Road Rivervale

LG Reference: 648/2014

DAP Reference: DAP/14/00637



ABN: 50 860 676 021

Enquiries: Petar Oreb on (08) 9323 4550
Our Ref: 04/11556-11 (D15#25128)
Your Ref: 648/2014

16 January 2015

Mr W Loh
Senior Planning Officer
City Of Belmont
LMB 379
CLOVERDALE WA 6105

**REQUEST COMMENT ON AMENDED DEVELOPMENT APPLICATION 648/2014 -
147 MULTIPLE DWELLINGS & 6 COMMERCIAL OFFICES - LOT 1017 (NO 3)
HAWKSBURN ROAD RIVERVALE**

Thank you for your letter and amended development application dated 16 December 2015 for the above address.

Main Roads WA has reviewed the amended plans with the awning removed along the Great Eastern Highway (Ref No. A2-04B), and finds the development acceptable subject to the following conditions being imposed:

1. No earthworks shall encroach onto the Great Eastern Highway reserve.
2. No stormwater drainage shall be discharged onto the Great eastern Highway reserve.
3. No vehicle access shall be permitted onto the Great Eastern Highway reserve.
4. The applicant shall make good any damage to the existing verge vegetation within the Great Eastern Highway reserve.
5. The applicant must obtain approval from Main roads WA before all works are undertaken within the Great Eastern Highway reserve. The applicant seeking access to the Main Roads WA network will be required to submit an application as outlined in the "Application Kit and Guidelines" for State Roads.

Application Kits can be found on the Main Roads WA website, >"Our Roads">"Conducting Works on Roads">"Application to Undertake Works on State Roads">"Application Kit and Guidelines".

Advice to Council.

1. As there will be no direct access from this site onto the Great eastern Highway, it is not anticipated that this development will have a major impact other than added traffic on the existing network.

RECEIVED

21 JAN 2015

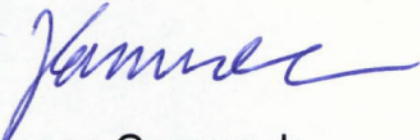
2. The assessment of the Preliminary Building Acoustics Design Report, (Ref Vipac 60W-14-0050-DRP-531454-0), has been found to be adequate on this proposed multi storey development in Rivervale, in terms of State Planning Policy SPP 5.4.

In Regards to outdoor living areas, SPP 5.4 noise levels apply to "within at least one outdoor living area on each residential lot", but this appears not to relate very well to high rise unit developments. The report does not include noise impact assessment and achievement of SPP 5.4 noise levels on balconies, but it suggests application of absorptive material on the ceilings of balconies facing Great Eastern Highway. This report indicates that balconies facing Great Eastern Highway will experience high levels of noise, so even with some absorptive treatment as mentioned there is likely to be a poor level of acoustic amenity on these balconies.

Main Roads WA suggests that it be recommended to the proponent that consideration should be given to how reasonable acoustic amenity could be practically provided to balconies facing Great Eastern Highway.

If you require any further information please contact Petar Oreb on (08) 9323 4550. In reply, please quote reference number 04/11556-11 (D15#25128). Thank you.

Yours faithfully



Joanne Cammack
PLANNING INFORMATION MANAGER/Acting

ATTACHMENT 5 – Protected Tree Valuation

Lot 1017 (3) Lawburn Road Rivervale

LG Reference: 648/2014

DAP Reference: DAP/14/00637

Wilmot Loh

From: Vic Bijl
Sent: Wednesday, 28 May 2014 9:55 AM
To: Jill Percival
Subject: (DWS Doc No 3015608) Arboriculture Report - Lot 1017 Hawksburn Rd, Rivervale
Attachments: 3 HAWKSBURN AVE-LOT 1017, RIVERVALE - Street Tree - Monetary & Retention Cat. Value - 27.5.'14 .pdf

Jill – use this one (previous report had Lot no 1012, instead of 1017)

VIC BIJL
ARBORIST

accepts no liability for any direct or indirect damage or loss resulting from the use of any attachments to this e-mail.

From: Vic Bijl
Sent: Wednesday, 28 May 2014 9:48 AM
To: Jill Percival
Subject: RE: Arboriculture Report - Lot 1017 Hawksburn Rd, Rivervale

Hello Jill

Specific to your questions:

Firstly, do you agree with the assessment as it clearly does not look like the tree is going to withstand development.

- a) I agree that the tree is not retainable under the proposed development because – at just 2m from the tree – it is much too close.
- b) I do not agree with the report's conclusion of a severely structurally compromised tree. Yes, it is moderately compromised in the stem bifurcation, but this can be easily remedied, and with that the tree is easily retainable.

The tree is of good vitality, and shows good compartmentalisation and adaptive growth at the old stem wounds. Moonah is a hardy species, and the spreading form with stems or branches at wide angles is typical for the species.

Retention would require a strictly controlled TPZ of 6–8m. If this is not feasible, then replacement is necessary.

Secondly if the tree cannot be retained then we need to negotiate some sort of compensation for its removal and replacement or determine whether there is sufficient space for newly planted trees to be installed on Lot 1017 with or without tree cell technology.

I've prepared an appraisal, including a retention category rating. The retention category is based on the predevelopment scenario, in which the building plans have yet been finalised.

Use this as your guideline in achieving an adequate compensation for new landscaping elsewhere in the Springs.

Thank you,

Vic.

VIC BIJL
ARBORIST



City of Belmont Operation Centre, 180 Planet Street, Carlisle, WA 6101

Phone – (08) 9477 7102 **Fax** – (08) 93554150 **Mobile** – 0488909125

Email - vic.bijl@belmont.wa.gov.au

Web – www.belmont.wa.gov.au

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From: Jill Percival
Sent: Tuesday, 20 May 2014 12:00 PM
To: Vic Bijl
Subject: RE: Arboriculture Report - Lot 1017 Hawksburn Rd, Rivervale

Hi Vic,

Have you had a chance to read the report and have a quick look at the tree on site? The developer is wishing to meet with the City in early June?

Regards,

Jill Percival
PARKS TECHNICAL OFFICER



City of Belmont, 215 Wright Street, Cloverdale, WA 6105

Phone – (08) 94777 287 **Fax** – (08) 9478 1473 **Mobile** – 0419 101 071

Email - jill.percival@belmont.wa.gov.au

Web – www.belmont.wa.gov.au

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From: Jill Percival
Sent: Wednesday, 14 May 2014 11:50 AM
To: Vic Bijl
Subject: FW: Arboriculture Report - Lot 1017 Hawksburn Rd, Rivervale

Hi Vic,

Can you please undertake an assessment of the *Melaleuca lanceolta* located at Lot 1017 (#3) Hawksburn Road, Rivervale. The existing tree is listed to be retained under The Springs Structural Guidelines however the developer wishes to remove the tree to construct a basement car park. The Building plans are registered in ECM. The architect

has contracted Paperbark Technologies to write an arboricultural inspection with regards to the structural health and tree retention. Paperbark Technologies have identified that the tree is currently not in good form and should be removed and replaced with a 500L specimen in an alternative location (refer to the attached report). Arobor Logic assessed this tree (tree number 16) back in February 2006. The tree was identified to be in good health with an acceptable structural form but did identify that there had been some damage to the root zone that had resulted due to site clearing. Since then it appears that the tree has declined.

Firstly, do you agree with the assessment as it clearly does not look like the tree is going to withstand development. Secondly if the tree cannot be retained then we need to negotiate some sort of compensation for its removal and replacement or determine whether there is sufficient space for newly planted trees to be installed on Lot 1017 with or without tree cell technology.

The developer is seeking to meet with the City in early June 2014 and has requested me to set up a meeting. I think we need to discuss what the City's position is regarding the retained tree and what we are willing to condition through the DA with regards to any new tree installations within the Lot (if this is even possible).

Regards,

Jill Percival
PARKS TECHNICAL OFFICER



City of Belmont, 215 Wright Street, Cloverdale, WA 6105

Phone – (08) 94777 287 **Fax** – (08) 9478 1473 **Mobile** – 0419 101 071

Email - jill.percival@belmont.wa.gov.au

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From: Sharon Faraj [<mailto:Sharon@hillam.com.au>]

Sent: Monday, 12 May 2014 11:00 AM

To: Jill Percival

Cc: Mandy Leung; Jonathan Ng

Subject: Arboriculture Report - Lot 1017 Hawksburn Rd, Rivervale

Good morning Jill,

As discussed on the phone, please find attached the Arboriculture Report compiled by our consultant. We would like to arrange for a meeting with the City of Belmont to discuss the removal of the tree and to propose a new location for a replacement mature tree.

Looking forward to hearing from you.

Kind regards,

Sharon Faraj | Graduate Architect | **Hillam Architects**

2/31 Hood Street, Subiaco WA 6008

T +61 8 6380 1877 | F +61 8 6380 2807 | M +61 (0) 423 867 797

sharon@hillam.com.au | www.hillam.com.au



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1. Street Tree Appraisal 2. Tree Retention & Value Category

Location: 3 Hawksburn Ave – Lot 1017, Rivervale 6103

Species: 1 x Moonah (*Melaleuca lanceolata*)

Date: 27 May 2014

ASSESSMENT

1. Tree Monetary Value: \$19,792
2. Tree Retention Category: B1, 3

Methodology

1. Appraisal: page 2
2. Retention Value Category: Appendix, pages 5–6



THE BURNLEY METHOD OF TREE VALUATION

SUBJECT: Moonah Street Tree (*Melaleuca lanceolata*) @ 3 Hawksburn Avenue, Rivervale

Date: 27 May 2014 – **VALUATION** = \$19,792

VALUE (\$) = BASE VALUE x (V) x (E) x (FV) x (L)

<p>TABLE 1: TREE VOLUME (cone) – $1/3\pi r^2 h$ VOLUME (m³) OF TREE (V) Tree Height = 9.9 m Crown Spread N—S = 11.9 m; E—W = 13.6 m Mean Ø 12.75 m Mean r = 6.4 m 0.33 x 3.14 x 6.4 m x 6.4 m x 9.9 m Volume = 420 m³</p>	<p>TABLE 2: VALUES FOR THE LIFE EXPECTANCY (E) MODIFIER USEFUL LIFE MODIFIER VALUE EXPECTANCY RANGES (E)</p> <table border="0"> <tr><td>50 Years.....</td><td>1.0</td></tr> <tr><td>40 - 49 Years.....</td><td>0.9</td></tr> <tr><td>30 - 39 Years.....</td><td>0.8</td></tr> <tr><td>20 - 29 Years.....</td><td>0.7</td></tr> <tr><td>10 - 19 Years.....</td><td>0.6</td></tr> <tr><td>< 10 Years.....</td><td>0.5</td></tr> </table>	50 Years.....	1.0	40 - 49 Years.....	0.9	30 - 39 Years.....	0.8	20 - 29 Years.....	0.7	10 - 19 Years.....	0.6	< 10 Years.....	0.5
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40 - 49 Years.....	0.9												
30 - 39 Years.....	0.8												
20 - 29 Years.....	0.7												
10 - 19 Years.....	0.6												
< 10 Years.....	0.5												

<p>TABLE 3: VALUES AND DESCRIPTORS FOR THE FORM AND VIGOUR MODIFIER FORM AND VIGOUR DESCRIPTORS MODIFIERS (FV)</p> <table border="0"> <tr><td>Perfect form and excellent vigour.....</td><td>1.00</td></tr> <tr><td>Slight imperfections in form.....</td><td>0.90</td></tr> <tr><td>Slightly reduced vigour.....</td><td>0.90</td></tr> <tr><td>Slight imperfections & slightly reduced vigour....</td><td>0.80</td></tr> <tr><td>Good form with good vigour.....</td><td>0.75</td></tr> <tr><td>Good form with average vigour.....</td><td>0.70</td></tr> <tr><td>Good vigour with average form.....</td><td>0.70</td></tr> <tr><td>Good form with poor vigour.....</td><td>0.65</td></tr> <tr><td>Good vigour with poor form.....</td><td>0.65</td></tr> <tr><td>Bifurcation of trunk & excellent vigour.....</td><td>0.60</td></tr> <tr><td>Bifurcation of trunk & good vigour.....</td><td>0.55</td></tr> <tr><td>Bifurcation of trunk & average vigour.....</td><td>0.50</td></tr> <tr><td>Bifurcation of trunk & poor vigour.....</td><td>0.40</td></tr> <tr><td>Poor form with average vigour.....</td><td>0.30</td></tr> <tr><td>Poor vigour with average form.....</td><td>0.30</td></tr> <tr><td>Poor form and poor vigour.....</td><td>0.20</td></tr> <tr><td>Excessive deadwood, cavities & poor form.....</td><td>0.10</td></tr> <tr><td>Dead.....</td><td>0.00</td></tr> </table>	Perfect form and excellent vigour.....	1.00	Slight imperfections in form.....	0.90	Slightly reduced vigour.....	0.90	Slight imperfections & slightly reduced vigour....	0.80	Good form with good vigour.....	0.75	Good form with average vigour.....	0.70	Good vigour with average form.....	0.70	Good form with poor vigour.....	0.65	Good vigour with poor form.....	0.65	Bifurcation of trunk & excellent vigour.....	0.60	Bifurcation of trunk & good vigour.....	0.55	Bifurcation of trunk & average vigour.....	0.50	Bifurcation of trunk & poor vigour.....	0.40	Poor form with average vigour.....	0.30	Poor vigour with average form.....	0.30	Poor form and poor vigour.....	0.20	Excessive deadwood, cavities & poor form.....	0.10	Dead.....	0.00	<p>TABLE 4: VALUES AND DESCRIPTORS FOR THE LOCATION (L) MODIFIER LOCATION DESCRIPTORS MODIFIERS (L)</p> <table border="0"> <tr><td>Perfect suitability.....</td><td>1.0</td></tr> <tr><td>Could be better located but no problems.....</td><td>0.9</td></tr> <tr><td>Minor problems, e.g. lifting paving.....</td><td>0.8</td></tr> <tr><td>Species unsuited or causes problems.....</td><td>0.7</td></tr> <tr><td>Species unsuited and causes problems.....</td><td>0.6</td></tr> <tr><td>Species unsuited & causes major problems.....</td><td>0.5</td></tr> <tr><td>Species unsuitable.....</td><td>0.4</td></tr> </table> <hr/> <p>BASE VALUE: COST \$ 187 per 100L bag TREE VOLUME (cylinder) – $\pi r^2 h$</p> <hr/> <p>3.14 x 0.5 m x 0.5 m x 2 m 1.57 m³ = \$ 187</p> <hr/> <p>Base Value - \$119.10 / 1m³</p>	Perfect suitability.....	1.0	Could be better located but no problems.....	0.9	Minor problems, e.g. lifting paving.....	0.8	Species unsuited or causes problems.....	0.7	Species unsuited and causes problems.....	0.6	Species unsuited & causes major problems.....	0.5	Species unsuitable.....	0.4
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BASE VALUE \$119 x **V** 420 m³ x **E** 0.8 x **FV** 0.55 x **L** 0.9 = **VALUE** \$19,792

APPENDIX

GUIDANCE NOTE RETENTION VALUES

&

TABLE FOR TREE CATEGORIZATION METHOD

Guidance Note – Assessment of Retention Values – Tree Categorization Method

Trees are categorized in accordance with the cascade chart in Table 1. The key components are summarized below.

Retention Value Categories

Each surveyed tree or group of trees is valued and placed into one of the following categories (A, B, C or U).

(A) Trees of high quality with an estimated remaining life expectancy of at least 40 years

- Retention wholly appropriate to the proposed situation and without significant conflict

(B) Trees of moderate quality with an estimated remaining life expectancy of at least 20 years

- Retention appropriate to the proposed situation but not of highest value and/or having only minor conflicts

(C) Trees of low quality with an estimated remaining life expectancy of at least 10 years

- Will usually not be retained where they would impose a significant constraint on development

(U) Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years

Subcategories

Trees in categories A to C qualify under one or more of three subcategories (1, 2, 3) that reflect arboricultural and landscape qualities, and cultural values respectively.

Each subcategory has equal weight such that, for example, an A1 tree has the same retention priority as an A2 tree.

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Notes)				
<p>Category U</p> <p>Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years</p>	<ul style="list-style-type: none"> Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve, see 4.5.7.</i></p>			DARK RED
	1. Mainly arboricultural qualities	2. Mainly landscape qualities	3. Mainly cultural values, including conservation	
Trees to be considered for retention				
<p>Category A</p> <p>Trees of high quality with an estimated remaining life expectancy of at least 40 years</p>	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
<p>Category B</p> <p>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years</p>	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	MID BLUE
<p>Category C</p> <p>Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm</p>	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	GREY