ATTACHMENTS

Special Council Meeting

20 April 2016

City of South Perth

ATTACHMENTS TO AGENDA ITEMS

Special Council Meeting - 20 April 2016

Contents

7.3.1 PROPOSED MIXED USE DEVELOPMENT WITHIN A 44 STOREY BUILDING - LOTS 2-20 NO. 74 MILL POINT ROAD, SOUTH PERTH.

Government of **Western Australia**
Development Assessment Panels

UPDATED
Saturday 16 April 2016, 12:05pm

Form 1 - Responsible Authority Report
(Regulation 17)

Property Location:	Lots 2-20 (No. 74) Mill Point Road, South Perth
Application Details:	Proposed Mixed Development within a 44 Storey Building, plus 3 basement levels
DAP Name:	Metro Central JDAP
Applicant:	Hillam Architects
Owner:	Edge Holdings Pty
LG Reference:	MI3/74 – 11.2016.2
Responsible Authority:	City of South Perth
Reporting Officer:	Erik Dybdahl, Planning Officer, City of South Perth
Authorising Officer:	Vicki Lummer, Director Development and Community Services, City of South Perth
Department of Planning File No:	DAP/16/00974
Report Date:	11 April 2016
Application Receipt Date:	30 December 2015
Application Process Days:	106 Days
Attachment(s):	1. Amended Development Application Report (Latest Revision 23rd March 2016). 2. Amended Development Floor Plans: A2-01 through A2-17 (Latest Revisions 16th March 2016). 3. Amended Development Elevation Plans: A3-01 through A3-04 (Latest Revisions 16th March 2016). 4. Perspective Drawing. 5. Plot Ratio and Car Parking Summary. 6. Summary of Submissions. 7. Amended Traffic Impact Assessment (Latest Revision 23rd March 2016). 8. Amended Waste Management Plan (Latest Revision March 2016). 9. Serviced Apartment Management Plan (Received 31st March 2016). 10. Overshadowing Diagram 11. City's Environmental Health Section Advice and Commentary (Dated 6th April 2016). 12. City's Infrastructure Services Advice and Commentary. 13. Cardno peer review of Traffic Impact

	Assessment. 14. Department of Parks and Wildlife Advice and Commentary (Dated 17th March 2016). 15. CADDS Energy Statement and ESD Strategy. 16. History of Site Inclusion in SCA1 and Special Design Area.

Recommendation:

That the Metro Central JDAP resolves to:

Refuse DAP Application reference DAP/16/00974 and associated development floor plans, A2-01 through A2-17 (latest revisions 16th March 2016) and elevation plans, A3-01 through A3-04 (latest revisions 16th March 2016), in accordance with Clause 7.9 of the City of South Perth Town Planning Scheme No. 6 and Schedule 2 Part 9 of the Planning and Development (Local Planning Schemes) Regulations 2015, for the following reasons:

Reasons for Refusal:

1. The submitted comprehensive Traffic Impact Assessment does not meet all the requirements of the WAPC *'checklist for transport assessment of a development'* and the City's *South Perth Station Precinct Traffic Impact Assessment Criteria*. Therefore Town Planning Scheme No.6 , Schedule 9, Table B performance criteria is not satisfied.

2. Due to the high proportion of serviced apartments in this application, the proposed mix of non-residential land uses is not considered to meet the guidance statement which requires the land uses to make a significant contribution towards consolidation of the precinct as an employment destination.

3. It is considered that the proposed height of the development at approximately 143 metres, if approved would significantly impair the effective achievement of the approach to height (proposed height limit of 25 metres) that is contained within proposed Town Planning Scheme amendment No.46.

4. It is considered that the proposed zero street setback, if approved would significantly impair the effective achievement of the approach to street setbacks for Mill Point Road that is contained within proposed Town Planning Scheme amendment No.46

Important Notes

1. If you are aggrieved by aspects of this decision where discretion has been exercised, you may lodge an appeal with the State Administrative Tribunal within 28 days of the Determination Date recorded on this Notice.

   There are no rights of appeal in relation to aspects of the decision where the discretion cannot be exercised.

An alternative recommendation has been prepared following the conclusion of this report should the DAP choose to approve the development.

Background:

Property Address:		Lots 2-20 (No. 74) Mill Point Road, South Perth
Zoning	MRS:	Urban
	TPS:	Special Control Area 1 – South Perth Station Precinct
Use Class:		Multiple Dwellings, Café/Restaurant, Serviced Apartments and Community Meeting Room
Strategy Policy:		N/A
Development Scheme:		City of South Perth Town Planning Scheme No. 6
Lot Size:		1,804m^2
Existing Land Use:		Vacant Site (grouped dwellings previously)
Value of Development:		$90 Million

On the 25th May of 2015, the Metro Central JDAP resolved to conditionally approve a proposed 29 storey mixed use development, on Lots 7-20 (No. 74) Mill Point Road, South Perth. Furthermore, a minor amendment application (Form 2) was conditionally approved on the 1st of December 2015 which provided an additional basement level and modification of the basement levels to accommodate the root ball of the existing street trees. However, this approval was subsequently *set aside* in a recent Supreme Court of Western Australia ruling *Nairn -V- Metro-Central Joint Development Assessment Panel [2016] WASC 56* dated 26 February 2016 which concluded that "in order to vary the requirements of Element 3 in relation to plot ratio and building height, it must be demonstrated to the satisfaction of the council.....that the development consists of predominantly non-residential uses before the discretion in development requirement 13.1 is enlivened."

Following this ruling, significant amendments were made to the plot ratio and land use mix of the current proposal for the site and the subject of this report, the Mixed Use Development within a 44 Storey Building (See latest revisions **Attachments 2, 3 and 5** dated 16th March 2016). While the overall design of the building is for the most part unaltered, the amendments seek primarily to address the supreme court ruling and raise the non-residential plot ratio mix to be in excess of the residential plot ratio. A summary of this latest development proposal is provided as follows:

- A 44 storey (~143 metre building height) mixed use development with 3 basement levels, located at 74 Mill Point Road, South Perth, contained on a site 1,804 metres squared in area and with a 40.1m frontage to Mill Point Road.
- The development contains 1 Café/Restaurant, 85 residential apartments, 147 serviced apartments, associated amenities/communal areas and a community meeting room.
- Three levels of basement providing residential stores and residential parking bay allocations.

- The ground floor consists of a proposed Café/Restaurant, commercial (serviced apartments) and residential lobbies, bicycle storage, residence mail room, Telstra communication room, fire pump room, fire tanks, bin store and Western Power Sub Station.
- Levels 01 - 02 have 4 serviced apartments units facing the street with residential and non-residential car parking allocations configured behind.
- Level 3 has 14 serviced apartments across the entire floor.
- Level 4 has 3 serviced apartments, a community meeting room and amenities for the serviced apartments which includes a lounge, kitchen and dining areas, a games room and an outdoor pool.
- Levels 05 - 21 have 119 serviced apartments varying between 34 - 106 square metres.
- Level 22 has 6 serviced apartments and the pool plant and service area.
- Level 23 has communal amenities for the building's residents. A large gym, sauna and steam room, pool and sun deck. Further, the applicant is willing to open paid gym membership to the general public. There is also a resident's lounge and theatre room. The dining area has BBQ and cooking facilities both inside and out. These amenities are coupled with hard and soft landscaping to offer a break in the building form and help articulate the elevation.
- There are 15 dwelling types across the development, the areas of which vary as shown in the summary of apartment mix contained in **Attachment 1,** page 6.
- A detailed summary of the Plot Ratio and Car Parking provisions can be found as part of **Attachment 5** of this report

The proposal is also discussed further in the applicants supporting report, **Attachment 1** of this report. Consultation, assessment and discussion of all significant elements of the proposed development in relation the appropriateness of the proposal in accordance with provisions of Schedule 9 of the City's Town Planning Scheme No. 6, city objectives and other relevant legislation/policy are discussed in detail in the following sections of this report.

Legislation & policy:

Legislation
Planning and Development Act 2005.
Planning and Development (Local Planning Schemes) Regulations 2015, specifically Schedule 2. [Regulations]
City of South Perth Town Planning Scheme No. 6, specifically Parts VII and IX, Schedules 1 and 9 and proposed Schedule 9A^. [TPS6]

^ *Proposed Schedule 9A (Amendment 46) was adopted by Council for public advertising on 27 October 2015 and closed on 5 February 2016. The report on submissions will be considered by Council on 26 April 2016.*

State Government Policies
State Planning Policy 2.10 'Swan-Canning River System' (2006).

State Planning Policy 3.1 'Residential Design Codes' (2013), specifically Part 6 and Appendix 1. [R-Codes]

Local Policies

The following local planning policies are relevant to this application:
Council Policy P316 'Developer Contribution for Public Art'
Council Policy P350.01 'Environmentally Sustainable Building Design'
Council Policy P350.03 'Car Parking Access, Siting, and Design'
Council Policy P350.09 'Significant Views'
Council Policy P312 'Serviced Apartments'
South Perth Station Precinct Plan (WAPC, January 2011)

Further comment on compliance with policy requirements is provided in the Planning assessment section.

Consultation:

Public Consultation:

Public consultation has been undertaken for this proposal to the extent and in the manner required by City Policy P301 'Consultation for Planning Proposals'. Under the "Area 1" consultation method, strata bodies as well as individual property owners and occupiers were invited to inspect the plans and to submit comments during a minimum 21-day period. Following the significant amendments to the plans, the revised plans and documentation were placed on the City's web site and previous submitters were notified by email that the submission period was extended until the 12th of April 2016.

A total of 555 consultation notices were sent out and following the consultation period a total of 177 formal submissions were received (including online, see below). Given the extent of submissions a separate document has been prepared, summarising the submission and providing subsequent applicant response and City comment on the submissions, see **Attachment 6** to this report.

In addition to hard copy letters issued, the City created a special webpage via the *Your Say* section of the City's website which contained background information, documentation and plans of the proposed development available to the public for download. The webpage was online for a period of 89 days also allowing users to make a submission on the development online, if desired. Over the course, the webpage had a total of 1,480 visitors of which 88 made formal submissions via the site which are included in the 177 total submissions received and summarised within **Attachment 6**.

All submissions were considered in the recommendations for this proposal and many of the elements are discussed in greater detail in the assessment section of this report.

Consultation with other Agencies or Consultants

Department of Parks and Wildlife – River and Estuary Division:

In accordance with the WAPC Notice of Delegation, this application was referred to the Department of Parks and Wildlife – River and Estuary Division to provide

commentary on the proposal, primarily in relation to the management of ground and stormwater during excavation, construction and the lifetime of the development.

The complete response is found as part of **Attachment 14** to this report. All recommended conditions and advice notes have been upheld in full and form part of the alternative recommendation should the DAP choose to approve this application.

Internal

Infrastructure Services:

Infrastructure Services were asked to provide comment on aspects such as stormwater design, dewatering management, waste management, parking layout, construction management, the traffic impact assessment and crossover. The full comments can be found as part of **Attachment 12** to this report. Where relevant, all requirements stipulated by Infrastructure Services form part of the recommended conditions or advice notes on the alternative recommendation. It has been identified by Infrastructure Services as well as peer review by Cardno (**Attachment 13**) that the Traffic Impact Assessment (or TIA, **Attachment 7**) for the development is inadequate and lacks information in line with the requirements of the WAPC *'checklist for transport assessment of a development' and* the *South Perth Station Precinct Traffic Impact Assessment Criteria*. As this is necessary to satisfy the relevant Schedule 9 Table B criterion, this forms one of the reasons for refusal of the development.

Environmental Health Services:

Environmental Health provided comment in relation to a number of aspects of the development, the full comments can be found as part of **Attachment 11** of this report. All comments requiring the applicant to provide additional information form part of the recommended conditions and advice notes in the alternative recommendation (see advice note 3). The Waste Management Plan is deemed to be accepted and will be implemented as per the plan, see **Attachment 8** (latest revision March 2016).

City Environment Services:

City Environment provided comment in relation to the trees within the City's verge and any associated landscaping on the site. Given the expansion of the development site frontage in this proposal, an additional bond for the additional tree within the verge has been imposed as part of the recommended conditions in the alternative recommendation (see condition 7). Furthermore the establishment of a Tree Protection Zone (TPZ) is also required in Condition 8 of the alternative recommendation should the development be approved.

Design Advisory Consultants

The proposal was considered as a development application by the City's DAC at their meeting held in February 2016. It was noted that the overall design of the building, in relation to the preceding proposals for the site, had not altered significantly, but increased in height. The DAC members provided the following comment in relation to the revised proposal for the site:

- *The building design eclipses other approved buildings within the South Perth Station Precinct.*
- *The new design is improved relative to the previous approval e.g. improved sightlines around the building due to smaller footprint of the tower.*
- *It was observed that the proposed building is designed like the Vancouver and Seattle ideology of development – small footprints and large thinner towers.*
- *The design quality criteria listed in TPS6 has been met in the DAC's opinion.*

Planning Assessment:

The proposed development is considered to be generally compliant with the provisions of Town Planning Scheme No. 6 (TPS6), the Residential Design Codes (R-Codes) and Council policies where applicable. The following planning aspects have been assessed, and were found to be compliant with the relevant provisions:

- Podium Height: TPS6 Schedule 9 Table A 4.
- Essential Facilities: TPS6 Schedule 9 Table A 3.6 and R-Codes cl. 6.4.6.
- Side Setbacks: TPS6 Schedule 9 Table A 7.1 and R-Codes Table 5
- Canopies: TPS6 Schedule 9 Table A 9.1.
- Dimensions of Car Parking Bays and Accessways: TPS6 cl. 6.3(8) and Schedule 5.
- Vehicular Crossovers: TPS6 Schedule 9 Table A 10, R-Codes cl. 6.2.3 and Policy P350.07.
- Land Use and Ground Floor Uses: TPS6 Schedule 9 Table A 1-2
- Parking: TPS6 Schedule 9 Table A 8.
- Driveway Gradient: TPS6 cl. 6.10(2).
- Minimum Floor Levels: TPS6 cl. 6.9(2) and (3).
- Landscape and Outdoor Living Areas: TPS6 Schedule 9 Table A 11 and R-Codes cl. 6.3.1.
- Heritage: TPS6 Schedule 9 Table A 12
- Designing Out Crime: TPS6 Schedule 9 Table A 14.
- Road and Rail Transport Noise: TPS6 Schedule 9 Table A 15
- Stormwater Management: TPS6 cl. 6.8(2).
- Maximum Ground and Floor Levels: TPS6 cl. 6.10(1) and (3).
- Developer Contribution for Public Art: Policy P316.
- Sustainable Design: Policy P350.01.
- Dwelling Size: TPS6 Schedule 9 Table B 3.5

The following matters, which require the exercise of discretion, are considered acceptable subject to the recommended conditions and are discussed further below:

- Plot Ratio and Land Use Proportions: TPS6 Schedule 9 Table A 3.1-3.4, 13 and Table B.
- Rear Setback: TPS6 Schedule 9 Table A 7.1 and R-Codes Table 5
- Relationship to the Street: (Amendment 46) TPS6 Schedule 9 Table A 7.3.
- 'Serviced Apartments' Council Policy P312

The following matters, which require the exercise of discretion, are considered unacceptable and are discussed further below:

- Building Height: (AMD 46)TPS6 Schedule 9 Table A 5.1 and cl. 6.1A
- Traffic Impact Assessment TPS6 Schedule 9 Table B Design Consideration 5.

- Non-Residential Land Use Proportion (Serviced Apartments) TPS6 Schedule 9 Guidance Statement 3(a)

Applicable Scheme Provisions within Special Control Area 1:

TPS6 Schedule 9 was gazetted on 18 January 2013, applicable to any comprehensive new developments within Special Control Area 1, including the development site. Schedule 2 clause 67(b) of the Regulations requires the local government and DAP to have due regard to any proposed local planning scheme or amendment that has been advertised under the Regulations or any other proposed planning instrument that the local government is seriously considering adopting or approving.

Amendment No. 46 (AMD 46) to TPS6 proposed to rectify anomalies and ambiguities in Schedule 9 by replacing the current provisions with proposed Schedule 9A. Amendment No. 46 was first endorsed by Council for public advertising on 28 October 2014, with advertising undertaken in early 2015. In response to submissions and recent planning approvals, Council sought to further modify proposed Schedule 9A.

The modified Amendment No. 46 (AMD 46) included major changes and so was endorsed by Council for further public advertising on 27 October 2015, with the amendment advertised and the public submission period commencing on 4 November 2015 and concluded on 5 February 2016.

The City has to have due regard to the 27 October 2015 version of Amendment No. 46 (AMD 46) that has been advertised and concluded. The City has obtained legal advice in relation to having due regard to proposed Amendment No. 46. In summary, this advice provided the following guidance:

(i) The officers must consider the extent to which the application is consistent with the planning objective or planning approach embodied or reflected in Amendment 46. In particular, it is necessary to consider whether the approval of the application is likely to impair the effective achievement of the planning objective or planning approach embodied or reflected in Amendment 46 or is likely to render more difficult the ultimate decision as to whether Amendment 46 should be made or its ultimate form.

(ii) The officers must consider the weight to be accorded to the consistency or otherwise between the application and Amendment 46.

(iii) The officers must weigh their conclusions in relation to the foregoing matters in the balance along with all other relevant considerations relating to the application, and determine whether, in light of all relevant considerations, it is appropriate to recommend that approval to the application be granted or refused.

In considering whether the application is consistent with the planning objective or approach of Amendment 46, the officers will have regard to the following:

a) Where there is inconsistency between a development application and one or more aspects of Amendment 46 the officers will consider how significant the inconsistencies are in relation to the Amendment 46 provisions. If the inconsistencies are significant, they will be "likely to impair the effective

achievement of the planning objective or planning approach embodied or reflected in Amendment 46 and will be likely to render more difficult the ultimate decision as to whether the Amendment should be made or its ultimate form". If inconsistencies have this result, they are unlikely to be supported by officers, and may be recommended as a ground for refusal.

b) If the inconsistencies are thought to be minor and approval can be granted under the current Scheme without impairing the achievement of the planning objectives or approach of Amendment 46 the development is more likely to be supported notwithstanding the minor inconsistencies with Amendment 46.

While the officers express their professional opinion on these matters it is ultimately a matter for the relevant decision maker (Council, JDAP or SAT) to consider and reach a view about these matters in determining each development application.

The following assessment tables demonstrate the proposed development's compliance or variance from the provisions of Schedule 9 of the TPS6. Where development controls are to be potentially varied via Amendment 46, these elements are shown in italics and all elements of significance will be discussed in the following sections of the report.

Table 1: Proposed Development Compliance with Schedule 9 Table A.

TABLE A		
Development Requirement	**Proposal**	**Comment**
Land use		
Preferred land uses in the Mends sub-precinct include: Café/Restaurant, Cinema/Theatre, Convenience Store, Hotel, Local Shop, Mixed Development, Office, Tourist Accommodation, Specialty Retail, Multiple Dwelling, Single Bedroom Dwelling, Residential Building	A Mixed Development including Café/Restaurant, Single Bedroom Dwelling, Tourist Accommodation (Serviced Apartments) and Multiple Dwelling Land Uses	Development incorporates preferred land uses for sub-precinct
Ground Floor Uses		
Preferred Ground Floor Uses in the Mends sub-precinct include: Café/Restaurant, Office, Convenience Store, Hotel, Local Shop Specialty Retail and Tourist Accommodation	Café/Restaurant	Development incorporates preferred ground floor land use for the Mends sub-precinct.
Plot Ratio and Land Use Proportions		
There is no maximum plot ratio within the precinct.	Total plot ratio of approx. 11.7	Complies

All comprehensive new development to have a non-residential component with a minimum plot ratio of 1.0. (*AMD 46 requires minimum non-res plot ratio of 1.5)*	Non – residential plot ratio 5.96 (10,752m^2) as per latest revisions	Complies (*Complies with potential AMD46 provisions of min 1.5 plot ratio non-res component)*
Where the total plot ratio exceeds 3.0, the residential plot ratio is not to exceed 1.5 unless the Council approves a higher plot ratio under Table B of this Schedule.	Residential plot ratio 5.74 (10,358m^2) as per latest revisions	**Applicant is seeking residential plot ratio variation under Table B of Schedule 9. This will be discussed in greater detail below**
The provisions of the Codes relating to dwelling size in activity centres shall apply.	Comprises a range of dwellings sizes including 13% (11) 1 bed, 50.5% (43) 2 bed, 36.5% (31) 3+ Bed. (Total 85 Res Units)	Min. dwelling size complies Min. 40% 2 bed dwelling complies Min. 20% 1 bed dwellings does not comply – **seek variation via Dwelling Density and Type section of Table B below due to overall dwelling density, >100 dwellings per hectare at 471 dwellings per hectare**
For comprehensive new development that includes residential dwellings, the provisions of the Codes relating to essential facilities in activity centres shall apply.	Each dwelling is provided with the minimum size storage unit and outdoor living area. A waste management plan has been provided and laundry facilities are considered acceptable. See plot ratio summary in **Attachment 5.**	Complies **Proposal provides greater (predominantly) non-residential plot ratio than residential, partially satisfying guidance statement 3(a).** **See further discussion of plot ratio in following sections of report.**

Podium Height		
The podium height shall be 9 metres minimum and 13.5 metres maximum.	The podium height is 13.5 metres	Complies
Building Height		
Building heights shall be limited to the heights shown on Plan 3 Building Heights contained in this Schedule unless the Council approves a variation as provided for elsewhere in this Schedule. The height limit for sites within the Special Design Area may be varied subject to all of the relevant performance criteria in Table B of this Schedule being met.	The building height is measured to be 143 metres in height in lieu of the prescribed 25 metre height limit as per Plan 3 of Schedule 9 – however, subject site within special design area and therefore eligible for variations via Table B	The applicant is seeking additional building height for the tower under Table B of Schedule 9, see following Table. **See also discussion for building height in following section.** *Potential implications to consider if AMD46 is adopted would mean this site is removed from the Special Design Area so the 25m building height would apply and that a maximum permissible building height of 55m would apply if the site was to remain in the Special Design Area and 9 of the revised Table B performance criteria were met, this development exceeds the maximum permissible height potentially specified by AMD46 by 88 metres. See further discussion below.*
Relationship to the street		
All development shall incorporate a podium with a nil setback to the street.	Nil podium setback proposed along Mill Point frontage;	Complies *AMD 46 Clause 7.3 suggests that properties with frontage to certain streets incorporate a 4 metre front setback from the street to the podium, including the eastern side of Mill Point Road between Harper Terrace and Fraser Lane. This is discussed in the following sections of the report*
The street setback to the podium shall be zero for a minimum of 60% of the	Nil podium setback for 100% of frontage	Complies.

street frontage unless otherwise approved by the Council, where the development meets the intent of the guidance statement.		
For storeys above the podium, the minimum street setback shall be 4.0 metres.	All street setbacks above podium achieve minimum 4m setback with a minimum 5.5m street setback of the tower from the Mill Point Road frontage.	Complies
Ground floor street facades shall comprise at least one pedestrian entrance and a minimum of 60% clear glass with a maximum sill height of 450mm above the floor level, and no obscure screening is permitted higher than 1.2 metres above the ground floor level.	Proposal contains two pedestrian entrances (commercial and residential) predominantly glass, only 1 blank wall to the substation all areas heavily landscaped with design and public features. Ground floor facades are predominantly made up of clear glass (>60%).	Complies
Ground level walls with no openings and adjacent to the street must not exceed 5 metres in length, unless otherwise approved by the Council, where the development is consistent with the guidance statements.	Blank wall to substation / mail room 5.6m yet heavily landscaped; visually permeable glass facades to remaining	Complies with guidance statements
Side and Rear Setback		
Nil setback at podium level	Nil side and rear setbacks provided.	Complies
Side and rear setback above podium 3.0 metres for non-residential. Residential setback above podium shall be 4.0 metres as per Table 5 of the R-Codes	All side setbacks achieve minimum 4.0m with the maximum northern setback 11.5m and the maximum southern setback 4.7m. There is incursion into the 4.0m rear setback to a minimum of 2.2m	Complies, all setbacks in excess of required with exception of rear setback incursion, **variation supported and is discussed in the setback section below.**

Parking		
The minimum provision of on-site car parking shall be: a) 0.75 bays per dwelling for Single Bedroom Dwellings; b) 1 occupier bay per dwelling; c) 1 bay per 50 square metres of gross floor area for non-residential land uses; d) 0.5 bays per tourist accommodation; e) 1 visitor bay per 6 dwellings; f) for non-residential land uses, 2 bays for visitors or 10% of the required occupiers' bays, whichever is the greater, marked for the exclusive use of visitors; g) 1 bicycle bay per 3 dwellings in addition to the required car parking bays; h) 1 bicycle bay per 200 square metres of gross floor area of non-residential plot ratio area, together with end-of-trip lockers and showers.	a) Required: 8 (11 Single Bed) Provided: 11 b) Required: 74 (74 x 2+Bed) Provided: 104 c) Required: 8 (364sqm /50) Proposed:8 d) Required: 74 (147 Appts.) Provided: 74 e) Required: 14 Provided: 14 f) Required:9 Provided: 9 g) Required: 29 Provided: 42 h) Required:54 Provided:66 **See car parking summary in Attachment 5.**	Complies Proposal provides 115 residential bays in lieu of the 82 required. 33 excess residential bays provided to 3+ bedroom dwellings. *AMD 46 provides Maximum permissible on-site parking bays for res uses to be 1 bay per 1 and 2 bed dwellings (54) and 2 bays per 3+ bed dwellings (31 x 2= 62) meaning that the maximum permissible bays is 116, proposal compliant with maximum res bay provision stipulated in AMD46 Table B* **Revised plans** are required as per condition 10 to provide end-of-trip facilities for café staff and the community meeting room users. End-of-Trip facilities are not required for the serviced apartments as each accommodation has such facilities, however toilet facilities should also be provided to the Level 4 communal area for the serviced apartments. Supplementary scooter parking provided at ground floor, commended.
Canopies		
Where a building abuts the street boundary, a canopy with a minimum projection depth of 2.5 metres shall be provided over the street	Development provides canopy, modified where necessary to avoid impact on street trees as suggested by arborist	As pedestrian entries are setback from street alignment development provides canopies in excess of 2.5m, canopy

footpath.	report for previous similar proposal for site.	over footpath modified (as per arborist recommendation) to accommodate street trees which is supported to ensure street trees are not affected by the development - Complies
Vehicle Crossovers		
Only one vehicle crossover per lot per street is permitted. Two-way crossovers to a maximum width of 6 metres are permitted for parking areas containing 30 car bays and parking areas predominantly providing for short-term parking. For comprehensive new development that includes residential dwellings, the provisions of the Codes relating to sight lines at vehicle access points and street corners in activity centres shall apply.	Single crossover and vehicle entry proposed from Mill Point Road The proposed crossover is 5.0 metres wide. Upgrade to existing ROW proposed Truncation provided via area made for Waste Truck deliveries, >1.5m	Complies Complies Complies
Landscape and Outdoor Living Areas		
Any landscaping works proposed for the development requires a landscape plan to be submitted as part of the application for comprehensive new development. Any proposed landscaping works shall be consistent with the guidance statement. For comprehensive new development that includes residential dwellings, the provisions of the Codes relating to outdoor living areas in activity centres shall apply.	Indicative landscaping has been provided as per the floor plans. Each dwelling is provided with an outdoor living area of $10m^2$ or greater and minimum dimensions of at least 2.4m	As per recommended conditions of approval (5 & 6) on the alternative recommendation, detailed landscaping plans will be required for approval by the City's landscape architect prior to endorsement and established prior to occupation of the development. The proposed development provides balconies and stores of at least the minimum size to each dwelling - Complies

Special Design Area		
For sites within the Special Design Area comprising lots depicted on Plan 2 Special Design Area, the requirements of Element 3. 'Plot Ratio and Land Use Proportions' and Element 5 'Building Height' of this Table A may be varied where it can be demonstrated to the satisfaction of the Council that the development: a) is consistent with the Guidance Statements applicable to those Elements; and b) Specifically meets all of the relevant Performance Criteria in Table B of this Schedule.		**See following table and further discussion below.**
Designing Out Crime		
Primary pedestrian access points shall be visible from buildings and the street.	Two pedestrian entries (commercial and Residential lobbies) are visually prominent from the street façade – see element 6.6 of the applicants supporting report, **Attachment 1,** relating to designing out crime.	Complies
Comprehensive new developments shall, when relevant, incorporate illumination in accordance with the following Australian Standards: (a) AS 1680 regarding safe movement; (b) AS 1158 regarding lighting of roads and public spaces; and (c) AS 4282 Control of obtrusive effects of outdoor lighting.	Pedestrian entries and lobbies will be illuminated to ensure safe pedestrian movement.	Complies - Condition of Approval to be applied

Storage areas shall be sited in a location that will not facilitate access to upper level windows and balconies.	All proposed stores are located internally and are fully enclosed	Complies
Public and Private areas shall be differentiated by the use of differing materials.	No private areas are proposed fronting the street.	Complies
Security grilles and other security devices that have potential to adversely affect the streetscape are not permitted unless the Council is satisfied that the device meets the intent of the guidance statement.	No security measures are to impact the streetscape	Complies See also element 6.6 of the applicants supporting report, **Attachment 2,** relating to designing out crime.
Road and Rail Transport Noise		
Development in proximity to the Kwinana Freeway should be designed having regard to noise mitigation measures.	N/A	N/A - Property well removed from Kwinana Freeway

As the development seeks variations to the *Building Height* and *Plot Ratio and Land Use Proportions* elements above, the proposal is required to satisfy TPS6 Schedule 9 Table B performance criteria *as* assessed in the below table. Where AMD46 seeks to modify or expand criteria this will be described in the relevant following discussion sections of the report.

Table B: Performance Criteria for Special Design Area Assessment

Special Design Area (TPS6 Schedule 9 Table B)	
Design Consideration/ Performance Criteria	**Comments**
Minimum lot area and frontage – The development site is to have a minimum area of 1700m^2 and a minimum lot frontage of 25 metres unless otherwise approved by the Council as a minor variation.	The development site has an area of 1,804m^2 and a 40.1m frontage to Mill Point Road. ***Criterion Satisfied***
Design Quality – The proposed development is of an exceptional architectural design quality as determined	The Design Advisory Consultants consider that the proposed development meets this requirement, as conveyed in the consultation section above.

by Council.	*Proposed Amendment No. 46 expands this criterion, listing points to consider in arriving at an opinion. The City notes the following:* *(a) The podium façade is seen to provide a high quality presentation, dominated by a Café/Restaurant tenancy open during daytime and night time hours.* *(b) The visual presentation of the tower is seen to pose a positive contribution to the locality.* *(c) The materials and finishes identified on the submitted drawings are seen to make a beneficial contribution to the overall design quality.* *The design of the proposed tower is considered to meet this criterion with the exception of the overall height of the building, to be discussed further below.* ***Criterion Satisfied***
Overshadowing – The proposed development has been designed with regard for solar access for neighbouring properties taking into account ground floor outdoor living areas, major openings to habitable rooms, solar collectors and balconies.	The applicant has supplied an overshadowing diagram, based upon 12 noon on 21 June (winter solstice). At this time, the shadow is cast over parts of nearby residential and commercial buildings on Mill Point Road. The most impacted site is that immediately adjoining the development site at 76-78 Mill Point Road. The City is currently considering an application for approval at 76-78 Mill Point Road of a similar proposal to the subject site. (See **Attachment 10** overshadowing diagrams) *The equivalent provision in Proposed Amendment No. 46 restricts the portion of the building above the Building Height Limit, to overshadowing an adjoining property by up to 80 per cent of its site area. The current proposal is compliant with this proposed provision, as the additional height does not result in the additional shadow cast causing more than 80% overshadowing overall.* *None of the affected properties are overshadowed by 80% by the forecast shadow at 12:00PM on June 21st (**Attachment 10**)* ***Criterion Satisfied***
Dwelling Density and Type – Residential development must have a minimum residential	Only 13% 1 bedroom dwellings provided (11 Units) however;

density of 100 dwellings per gross hectare **OR** provide a minimum of 20% single bedroom dwellings (rounded up to the next whole number of dwellings).	Over 100 dwellings per hectare proposed (471 per hectare proposed). ***Criterion Satisfied***
Vehicle Management – The applicant shall submit a traffic engineer's impact assessment report confirming that additional traffic and on-street parking demand resulting from the additional floor space produced by the variation of Elements 3 and 5 does not cause an unacceptable impact on the surrounding street network.	The City's Engineering Infrastructure commented that the amended Traffic Assessment Report continues to maintain an erroneous base and has not addressed the impact on the northern portion of Mill Point Road intersection. There is no modelling completed to date on the combined impact all of the developments will have on the efficiency of the intersections. Additionally, Infrastructure Services and the peer review of the TIA performed by Cardno identified many inadequacies and lacking information further to meeting the WAPC *'checklist for transport assessment of a development' and* the *South Perth Station Precinct Traffic Impact Assessment Criteria.* A revised TIA is required from the applicant which is to be prepared for review and to the satisfaction of Infrastructure Services in order to assess this criterion. ***Criterion Not Satisfied***
Car Parking – (a) The development site shall not have car parking bays at the ground level within 10 metres of a road frontage, unless allowed by Council. (b) At least 60% of the primary street frontage is to be an active street frontage.	(a) The development does not propose any car bays at ground level within 10m of the Mill Point frontage nor are any car parking areas to be visible from the public realm. (b) The mill point road frontage is composed of both non-residential and residential entry lobbies, a large café and hard and soft landscaping, which is seen to provide at least a 60% active frontage. *AMD46 provides the following criteria with regard to car parking:* *The maximum permissible number of on-site parking bays for residential uses is as follows:* *(a) 1 car bay per dwelling for occupiers of 1 and 2 bedroom dwellings;* *(b) 2 car bays per dwelling for occupiers of*

	dwellings containing 3 or more bedrooms. *The development proposes 54 1 and 2 bedroom dwellings and 31 3 or more bedroom dwellings meaning the maximum permissible residential bays is 116 and only 115 are provided satisfying the requirement.* ***Criterion Satisfied***
Additional Community Benefits – The proposed development provides a community benefit above and beyond a development complying with the requirements of Table A, by meeting at least 3 of the following 7 criteria: (a) High quality active street frontages, street art, furniture and landscape features. (b) Landscaped spaces and/or other facilities accessible to the public such as gym equipment and public art. (c) A range of dwelling sizes and costs. (d) Improvements to pedestrian networks and public security. (e) Provision of view corridors and/or mid-winter sunlight to adjacent land/buildings. (f) Community, communal and/or commercial meeting facilities. (g) Car parks for public use beyond the users of the building.	The applicant is of the opinion that the minimum 3 criteria required to be met has been achieved, specifically criteria (a), (b), (c), (d), (e) and (f) described as follows (section 3.8 of **Attachment 1**): (a) "The façade at ground floor level along Mill Point Road has been designed to fully activate the footpath, encouraging both residents and the public to interact with the development in a pedestrian friendly environment. Serviced apartments at the podium levels also contribute to the activation of the Mill Point Streetscape through the use of balconies and glazing. Refer to Section 4.1 of this report (**Attachment 1)** that addresses Ground Floor Uses and Streetscape. Also to refer to Section 4.3 Public Art" *The city agrees that this criterion is satisfied; additionally a condition is recommended which requires a $900,000.00 public art contribution as per City Policy* (b) "Landscaped spaces and/or other facilities accessible to the public such as gym equipment and public art. Extensive hard and soft landscaping and public art pieces will benefit the wider community. Refer to Section 4.1 of this report that addresses Ground Floor Uses and Streetscape. Also to refer to Section 4.3 Public Art". *The city agrees that this criterion is satisfied; additionally a condition is*

	recommended which requires a $900,000.00 public art contribution as per City Policy. (c) "The proposed development has an apartment mix of one, two, three and four bedroom units that vary greatly in size, cost and amenity. Refer section 1.3 Project Summary (of **Attachment 1**). *The City agrees this criterion has been met, the development provides a range of dwellings from single bedroom dwellings through to 3+ bedroom penthouses, 14 different dwelling types/sizes are provided.* (d) "The activated street frontage, widening of the right-of way for vehicle access and the passive surveillance from the residential and commercial components all contribute to an improved pedestrian network and public security. Refer to Section 4.1 Ground Floor Uses and Streetscape" (of **Attachment 1).** *The City agrees this criterion has been met, the proposal includes an upgrade of the pedestrian network, with public art and furniture provisions at the frontage to 74 Mill Point as well as widening and upgrade of the ROW and vehicle access – satisfies criterion.* (e) "Provision of view corridors and/or mid-winter sunlight to adjacent buildings. The tower has been deliberately designed to allow for improved views from neighbouring Lots. Refer to Section 4.4 Views and Vistas" (of **Attachment 1).** *The City agrees this criterion has been met, the DAC are supportive of the additional height as the building envelope is thinner allowing greater view corridors around the building and sunlight as opposed to a shorter, wider building envelope.* (f) "The development will provide a community meeting room incorporated into level 4 that can be hired to the public". *The City consider this criterion to be*

	satisfied, Community Meeting Room provided on level 4 (g) No public car parking provided *No public parking provided, therefore criterion not satisfied* *As above the City consider 6 of the 7 criterion to be satisfied therefore achieving the minimum 3 required.* ***Criterion Satisfied*** *AMD 46 seeks to expand these criteria and Element 6 of Table A of AMD46 identifies the minimum number of Design Consideration 8 Performance Criteria which must be met according to the extent of building height variation sought by an applicant. The Current proposal exceeds the maximum height variation; this will be discussed in the Building Height discussion below.*
Resource Efficiency – The proposed development exceeds the requirements of the Building Code of Australia with respect to optimizing solar access to the proposed development and adjoining sites; maximizing energy efficiency; use of passive cooling techniques and cross-ventilation opportunities; and conserving water.	Section 7.0 of the applicants DA report, **Attachment 1**, outlines the energy efficiency measures the building is to incorporate to achieve environmental outcomes well above the building code requirements. As per **Attachment 15** CADDS Energy have provided a letter statement of intent and ESD strategy which provides: *"As an industry benchmark the intent of the building is to achieve a 4 Star Green Star Rating. Additionally it will target a Seven Star Average NatHERS Rating (thermal comfort) for all residential apartments".* A condition of approval on the alternative recommendation will ensure the strategy is implemented and will be required to demonstrate how the building achieves the 4 Star Green Star Rating prior to granting any building permit. ***Criterion satisfied***

City Policy P312 'Serviced Apartments'

One of the issues raised in the submissions is that the serviced apartments (tourist accommodation) once approved will be converted and sold as residential dwellings. City Policy P312 provides the following provisions with regards to addressing this concern and ensuring the proposed tourist accommodation is used as approved:

(a) In accordance with the TPS6 definition of 'serviced apartments', accommodation of this kind may only be occupied on a temporary basis. 'Temporary occupancy', as defined in this policy is a period of 6 months or less. A serviced apartment is not permitted to be occupied by the same temporary tenant for more than 6 months within any 12 month period.

(b) Any planning approval granted for serviced apartments will be conditional upon the applicant registering on the Certificate of Title for the lot, a notification informing prospective purchasers that serviced apartments are not permitted to be occupied by the same temporary tenant for more than 6 months within any 12 month period.

(c) The City will not issue a building licence for proposed serviced apartments until such time as the applicants, at their cost, have registered the required notification on the Certificate of Title relating to the occupancy restriction.

(d) When the owner of a serviced apartment no longer intends to provide any laundry or cleaning services for temporary tenants; and wishes to extend the period of occupancy beyond the limit referred to in paragraph (b), it is the owner's responsibility to obtain planning approval from the City for a change of use of the premises.

The above forms a condition of approval on the alternative recommendation (condition 29) to ensure any approved serviced apartments are not used and sold as residential dwellings once approved.

City Policy P312 also requires the proponent of Serviced Apartments to submit a management plan which is prepared and implemented by the manager/operator of the serviced apartments. The applicant has submitted an *indicative* management plan as per **Attachment 9** of this report. The management plan is only indicative at this stage as the applicant argues a revised and comprehensive management plan will be prepared once the operator of the serviced apartments has been determined which would not occur until the serviced apartments have formal approval. While the City acknowledges it would be difficult to appoint an operator while the development is yet to be approved, condition 30 on the alternative recommendation, requires a revised and comprehensive management plan to be prepared for endorsement by the City once an operator is secured and be distributed to nearby landowners prior to any use commencing.

Relationship to the Street: (Amendment 46) TPS6 Schedule 9 Table A 7.3.

The proposed development includes a zero setback to Mill Point Road, in accordance with element 7 of table A. The design of the basement and recommended conditions of approval adequately protect the street trees and the previous proposal for the site of similar design in April of 2015, received the following comments from the Office of the Government Architect:

'The overall massing of the proposal follows the tower-on-podium model, which is intended to mediate between the tower form and the lower-rise adjacent development, and provide a human-scaled environment at street level. The significant setback of the tower form is supported, as it reduces the perceived mass of this prominent element from street level and allows for a distinct expression of the podium form below'.

The tower on podium model of design is employed to provide the perception at the pedestrian or human level that the apparent development height is perceived to be only the 3 to 4 stories (the podium) where the tower has an increased setback from the podium façade. By setting the podium further back from the street lot boundary as AMD 46 requires, this perception is diminished as the tower becomes more visible at the pedestrian level and less distinction between the tower and podium elements is observed as the setback of the tower to the podium is reduced.

In relation to having due regard to Amendment No. 46, the City notes the following:

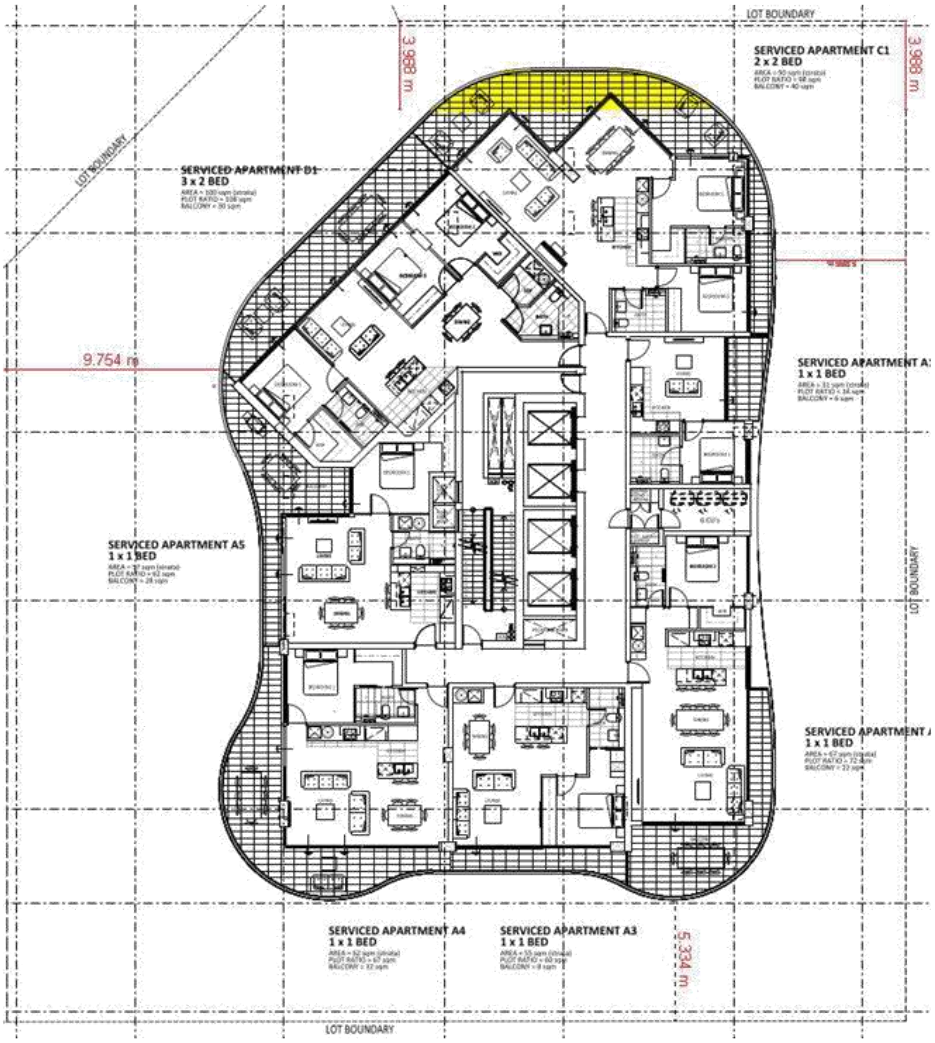
(i) The nil podium street setback is seen to be inconsistent with proposed Schedule 9A Element 7 Development Requirements. Should this application be approved, it could impair podium setbacks being required Mill Point Road.
(ii) The proposed change to the permitted podium street setback impacts this application. Whether this element of the Amendment is seen to be consistent with sound town planning principles is unclear, as in responding to streetscape and visual impact concerns, the Amendment could be seen to conflict with the pedestrian amenity and active street frontage objectives for the precinct. The relevant Guidance Statement in the Amendment lists the potential reasons for the increased street setback being related to the larger street setbacks of existing buildings (approved prior to the creation of the Special Control Area) in the same street, a narrow street and/or significant street trees. As discussed above, the street trees are considered to be adequately protected. The gazettal of a change to the required podium street setback is uncertain, as the Council has not yet considered submissions at the time of RAR preparation and the WAPC recommendation and Minister's final decision is unknown. The gazettal of Amendment No. 46 is not imminent, as its final approval is months away.
(iii) The ability to implement the 4.0 metre podium street setback provision in Amendment No. 46 is restricted in the instance; as such a variation to the gazetted provisions is seen to be inconsistent with the intent of the existing Guidance Statements. Hence, the City is not in a position to support a proposed building designed with a minimum 4.0 metres street setback on this site.
(iv) The application's inconsistency with Amendment No. 46 is significant, as the determination of the required podium street setback for this development is likely to pose implications for future developments in Mill Point Road. Should Council elect to proceed with proposing a street setback requirement, an approval of a nil setback on this site could impair the effective achievement of the desired streetscape.
(v) The approval of a podium with nil setback to Mill Point Road can be granted under the current Scheme. The proposed podium is generally consistent with the overall objectives of Special Control Area 1 listed in Amendment No. 46.

On balance, the provision of a nil podium setback for the full width of the lot frontage is not seen to have due regard to the proposed street setback provisions contained in Amendment No.46 and is not supported.

Rear Building Setback

As seen highlighted yellow in the diagram below, small portions of the serviced apartment and residential balconies project into the 4m setback area as depicted in the level floor plans as part of **Attachment 2**. This setback variation is seen to have no impact upon the streetscape given the variation is at the rear of development with the street setback of the tower in excess of what is required. The completely open nature of the proposed residential balconies, with glass and perforated metal

balconies is considered to provide ample articulation to reduce any perceived bulk impacts.



The adjoining rear building (multiple dwellings at 53 South Perth Esplanade) is not expected to be adversely impacted by the proposed setback variation as any dwelling with view or outlook to the proposed development is setback in excess of 25 metres from the proposed tower and separated by an internal, open parking area to the site. Furthermore, the building bulk impacts are reduced by the open balconies as described above and the setback variation is not considered to adversely contribute to overshadowing as the variation is toward the northern side of the development.

Plot Ratio and Land Use Proportions

As mentioned in the background section of this report, the supreme court decision (*Nairn -V- Metro-Central Joint Development Assessment Panel [2016] WASC 56* dated 26 February 2016) set aside the previous approval for the site in concluding that "in order to vary the requirements of Element 3 in relation to plot ratio and building height, it must be demonstrated to the satisfaction of the council.....that the development consists of predominantly non-residential uses before the discretion in

development requirement 13.1 is enlivened". In response to this ruling, the applicant prepared significant amendments to the current proposal for the site in terms of plot ratio. The latest amendments, dated 16th March 2016 (**Attachment 2**), address this notion by providing a large increase in the Serviced Apartment land use, raising the non-residential plot ratio to 5.96 (10,752 sqm.) compared to the residential plot ratio of 5.74 (10,358 sqm.). The AMD 46 provisions require that all comprehensive new development within the Mends sub-precinct shall provide a non-residential plot ratio of 1.5, which the proposed development exceeds, and also modifies the associated guidance statement 3(a) to remove the requirement for predominantly non-residential development, reading as follows:

'The provisions relating to land use proportions are designed to ensure that any comprehensive new development in the Scott-Richardson and Mends Sub-Precincts will make a ***significant contribution*** *towards consolidation of the South Perth Station Precinct as an* ***employment destination****'.*

While the proposed development is now seen to be predominantly non-residential in accordance with the current scheme provisions, the City needs to ensure that any development consolidates the South Perth Station Precinct as an *employment destination.* Despite the *Serviced Apartment* land use being identified as a preferred land use within the Mends sub-precinct and defined as non-residential, the employment generation by serviced apartments is considered to be particularly low compared to the other preferred non-residential land uses. Serviced apartment staff consists of a small number of managerial and administrative staff as well cleaning and maintenance staff for upkeep of the apartments.

While the City supports the provision of serviced apartments as a preferred land use, the number of proposed serviced apartments and the resultant non-residential plot ratio contribution is not considered to satisfy the employment objectives of the precinct. The addition of other preferred non-residential land uses (such as *Office*) and reduction of serviced apartments as a percentage of the non-residential plot ratio would be more satisfactory in regards to employment generation, and hence also guidance statement 3(a) of Table A.

Building Height

The assigned building height limit for the site, as per Plan 3 of Schedule 9, is 25m measured to the finished floor level of the uppermost storey. However, the site is also identified within Plan 2 of Schedule 9, the Special Design Area, which affords variations to Elements 3 'Plot Ratio and Land Use Proportions' and 5 'Building Height' of Schedule 9 where it is demonstrated the proposal achieves all 8 of the Table B: Performance Criteria for Special Design Area.

In the assessment section above, the proposal is seen to satisfy the current criteria with the exception of providing a comprehensive Traffic Impact Assessment to the standard required by the City's Infrastructure Services. This form one of the reasons for refusal.

Had a satisfactory TIA been prepared and endorsed by the City, the current Schedule 9 provisions do not place an absolute limit on any varied building height provided the Table B criteria are satisfied. If approved, this building would be the tallest building approved within the precinct special design area, standing at approximately 143 metres above ground level. The design advisory consultants supported the additional height on the basis the building envelope was reduced in

width allowing greater view corridors, ventilation and solar access to adjoining developments.

The potential Amendment 46 provisions would have significant implications for the permissible building height for this development and site. Under AMD 46, development sites north of Ferry Street along Mill Point Road would be removed from the *Special Design Area* and therefore not be afforded the plot ratio and height bonuses that are currently proposed, limiting the building height to 25 metres measured to the finished floor level of the upper most storey. As part of the previous application for the site, the City was required to conduct an extensive review as to the reasoning for the sites inclusion in the South Perth Station Precinct and Special Design Area as can be viewed in full as part of **Attachment 16,** which was upheld supported in the previous application.

However, AMD 46 also proposes defined maximum permissible building heights for Special Design Area sites which are to be determined based on a site's specified Plan 3 building height limit and the proposals satisfaction of the revised Table B performance criteria (the more being satisfied, the greater the permissible height). In the case of the proposed development the specified building height limit is 25 metres measured to the finished floor level of the upper most storey; therefore, under AMD 46 a maximum permissible building height of 55 metres would apply and only where all 9 revised performance criteria are satisfied. In this case, if these AMD 46 provisions were gazetted, the proposed building would exceed the maximum permissible building height by 88 metres, therefore being vastly out of context with the existing or future adjoining developments.

While it is acknowledged that the provisions of AMD 46 are not at this stage considered *certain* nor *imminent*, due regard must be given to the provisions which may set maximum permissible building heights for adjoining development sites significantly lower than the proposed building height.

It is considered that approval of a building that significantly exceeds the maximum height limit prescribed in Amendment 46 is likely to impair the effective achievement of the planning objective or planning approach embodied or reflected in the amendment. The application is recommended for refusal for this reason.

Conclusion:

While many aspects of the proposed development are considered compliant in terms of the current Town Planning Scheme and AMD 46 schedule 9A provisions, the development does not satisfy the development criteria relating to the TIA as well as ensure sub-precinct objectives in relation to employment are satisfied. It is acknowledged that AMD 46 provisions are not certain nor imminent at this stage, however the proposed building height is a significant variation from the potential maximum permissible building heights in AMD 46 and would therefore be out of scale for this part of the precinct. For these and other reasons, the City recommends refusal of the proposal. Should the DAP choose to approve the development, an alternative recommendation and set of recommended conditions and advice has been prepared in the following section.

See Alternative Recommendation on Following Page

Alternative Recommendation

Form 1 - Responsible Authority Report
(Regulation 17)

Property Location:	Lots 2-20 (No. 74) Mill Point Road, South Perth
Application Details:	Proposed Mixed Development within a 44 Storey Building, plus 3 basement levels
DAP Name:	Metro Central JDAP
Applicant:	Hillam Architects
Owner:	Edge Holdings Pty
LG Reference:	MI3/74 – 11.2016.2
Responsible Authority:	City of South Perth
Reporting Officer:	Erik Dybdahl, Planning Officer, City of South Perth
Authorising Officer:	Vicki Lummer, Director Development and Community Services, City of South Perth
Department of Planning File No:	DAP/16/00974
Report Date:	11 April 2016
Application Receipt Date:	30 December 2015
Application Process Days:	106 Days
Attachment(s):	1. Amended Development Application Report (Latest Revision 23rd March 2016). 2. Amended Development Floor Plans: A2-01 through A2-17 (Latest Revisions 16th March 2016). 3. Amended Development Elevation Plans: A3-01 through A3-04 (Latest Revisions 16th March 2016). 4. Perspective Drawing. 5. Plot Ratio and Car Parking Summary. 6. Summary of Submissions. 7. Amended Traffic Impact Assessment (Latest Revision 23rd March 2016). 8. Amended Waste Management Plan (Latest Revision March 2016). 9. Serviced Apartment Management Plan (Received 31st March 2016). 10. Overshadowing Diagram 11. City's Environmental Health Section Advice and Commentary (Dated 6th April 2016). 12. City's Infrastructure Services Advice

	and Commentary. 13. Cardno peer review of Traffic Impact Assessment. 14. Department of Parks and Wildlife Advice and Commentary (Dated 17th March 2016). 15. CADDS Energy Statement and ESD Strategy. 16. History of Site Inclusion in SCA1 and Special Design Area.

Alternative Recommendation:

That the Metro Central JDAP resolves to:

Approve DAP Application reference DAP/16/00974 and associated development floor plans, A2-01 through A2-17 (latest revisions 16th March 2016) and elevation plans, A3-01 through A3-04 (latest revisions 16th March 2016), in accordance with Clause 7.9 of the City of South Perth Town Planning Scheme No. 6 and Schedule 2 Part 9 of the Planning and Development (Local Planning Schemes) Regulations 2015, subject to the following conditions and advice notes as follows:

Conditions:

(1) Provision shall be made in the design of the floor and walls of the building for adequate protection against subsoil water seepage, and **prior to the lodging of building permit**, the applicant shall:
   (i) provide the City with certification from a consulting engineer that adequate water-proofing has been achieved; and
   (ii) satisfy the City that the proposed levels are acceptable, having regard to the 100 year flood levels applicable to the lot;
   as required by Clause 6.9(3) of Town Planning Scheme No. 6. (refer also, Advice Note 2)

(2) The applicant is to provide a detailed **car parking management plan** addressing all general parking considerations. This plan is to be submitted for approval prior to the lodgement of a building permit.

(3) A **Construction Management Plan** shall be submitted and approved by the City prior to submission of Building Permit. The management plan shall include but not limited to dilapidation survey report of adjoining buildings, protection of public & adjoining buildings and traffic management, noise & vibration from demolition and construction activities, dust from demolition & construction works, stormwater runoff, removal of hazardous materials, waste water and construction traffic.

(4) The applicant is to prepare a **revised Traffic Impact Assessment** in accordance with the requirements of the WAPC *'checklist for transport assessment of a development' and* the *South Perth Station Precinct Traffic Impact Assessment Criteria* to the satisfaction of the City of South Perth Infrastructure Services.

(5) In accordance with the requirements of clause 6.14 of Town Planning Scheme No. 6, no person shall occupy or use the land or any building the subject of this approval for the purpose for which this approval is given unless and until:

(i) City Environment department have approved a landscaping plan; and
(ii) The landscaping has been completed in accordance with the plan approved by the City Environment Department.

The landscaping shall be maintained in good order and condition in perpetuity. (Refer Advice Note 6)

(6) City Environment Services require a **detailed landscaping plan** to be prepared for the Ground floor as well as the 4th & 23rd level amenity areas.

(7) No street trees shall be removed, pruned or disturbed in any way without prior approval from City Environment Services. Furthermore, City Environment Services require a Significant Tree Protection Bond for each of the following tree ID numbers: 9939 ($164,229.12), 10027 ($172,440.58) and 10025 ($114,960.38) **totalling a combined bond of $451,630.08 for the City assets**. (Refer Advice Note 12)

(8) To protect the significant trees of the street, a Tree Protection Zone (TPZ) needs to be ascertained. An assessment by a qualified Arborist, agreed to by the City, is required to be undertaken by the applicant in order to record current tree details and health and to determine the required TPZ and tree management plan, and to provide advice regarding the canopy, prior to lodging a building permit application. (Refer Advice Note 6)

(9) **Revised Plans** are required to provide end of trip facilities for cyclists for the use of cafe staff and the community meeting room. The design and location of those facilities shall be to the satisfaction of the City and the facilities shall be provided at the following ratios:

(i) Minimum Number of secure clothes lockers – 10: and
(ii) Minimum Number of showers - 1 male shower required and 1 female shower in separate change rooms,

In accordance with the requirements of clause 6.4 (5) of Town Planning Scheme No. 6.

Furthermore, the level 4 communal amenity areas for the serviced apartments shall be provided toilet facilities for guests, **Revised Plans** required.

(10) Prior to the occupation of the approved development, a public art concept for the subject development with a minimum value of $900,000, 1% of the cost of construction shall be submitted to the City for approval. The approved public art concept shall be implemented to the satisfaction of the City prior to the occupation of the building (Refer Advice Note 5).

(11) In accordance with written correspondence from the Department of Parks and Wildlife (DPAW), dated 17th March 2016, the following conditions are to be satisfied by the applicant:

(i) At least thirty (30) days prior to submitting the application for a building permit, the applicant shall provide details of the engineering/construction methods which will be used to the reduce the volumes of dewatering effluent, and reduce groundwater draw down

impact zone radius, the satisfaction of the City of South Perth on the advice of DPAW;

(ii) At least thirty (30) days prior to submitting the application for a building permit, the applicant shall prepare a dewatering management plans to the satisfaction of the City of South Perth on the advice of DPAW, and implement (see also Advice Note 6);

(iii) At least thirty (30) days prior to submitting the application for a building permit, the applicant shall prepare plans showing how groundwater will be managed post-development to the satisfaction of the City of South Perth on the advice of the DPAW, and implement (see also Advice Note 8); and

(iv) At least thirty (30) days prior to submitting for a building permit, the applicant shall prepare a stormwater management plan to the satisfaction of the City of South Perth on the advice of DPAW, and implement (see also Advice Note 9).

(12) The comprehensive new development shall incorporate illumination in accordance with the following Australian Standards:

(a) AS 1680 regarding safe movement;

(b) AS 1158 regarding lighting of roads and public spaces; and

(c) AS 4282 Control of obtrusive effects of outdoor lighting.

(13) Waste management shall occur in accordance with the Waste Management Plan prepared by Talis for the development (latest revision March 2016) and endorsed by the City.

(14) To meet the intent of Clause 6.4.6 of the R-Codes, external fixtures such as air conditioning infrastructure, shall be integrated into the design of the building to not be visually obtrusive when viewed from the street and to protect the visual amenity of residents in neighbouring properties.

(15) The applicant shall construct a crossover between the road and the property boundary. The crossover shall be constructed in accordance with the approved drawings, associated conditions and the requirements contained within Management Practice M353, which is available at the City's website. The existing verge levels at the front property boundary shall not be altered. (Refer also to Important Note 4)

(16) The car parking bays shall be marked on site as indicated on the approved site plan, in order to comply with the requirements of clause 6.3(10)(c) of Town Planning Scheme No. 6 and such marking shall be subsequently maintained so that the delineation of parking bays remains clearly visible at all times.

(17) Hard standing areas approved for the purpose of car parking or vehicle access shall be maintained in good condition at all times, free of potholes and dust and shall be adequately drained in accordance with the requirements of Clause 6.3 (10) of *Town Planning Scheme No. 6*.

(18) The surface of the boundary wall(s) visible from the street shall be finished to be compatible with the external walls of the building to a high quality standard on the development site. Details in this respect are to be included on the plans submitted with a building permit application.

(19) The surface of the boundary wall(s) not visible from the street, on the eastern side of the lot, the applicant is to obtain the adjoining owner's agreement as to the surface finish of the wall. If the adjoining owner's agreement is not obtained, the surface finish is to be compatible with the external walls of the neighbour's dwelling to the satisfaction of the City. Details in this respect are to be included on the plans submitted with a building permit application

(20) Any required filling or excavation of the site shall be retained by embankments or walls, details of which are to be incorporated in the working drawings submitted in support of a building permit application.

(21) Any required retaining walls along lot boundaries shall be constructed immediately after excavation or filling has been carried out.

(22) External clothes drying facilities shall be screened from view from the street or any other public place.

(23) In accordance with the provisions of Clause 6.8(2) of *Town Planning Scheme No. 6*, all subsoil water and stormwater from the property shall be discharged into soak wells or sumps located on the site unless special arrangements can be made to the satisfaction of the City for discharge into the street drainage system. (Refer Advice Note 2)

(24) All plumbing fittings on external walls shall be concealed from external view as required by Clause 7.5(k) of Town Planning Scheme No. 6.

(25) Having regard to City Policy P350.01 'Environmentally sustainable building design', prior to the issue of a building permit, the owner is to submit to the Council a copy of documentation from the Green Building Council of Australia certifying that the development achieves a Green Star rating of at least 4 Stars or the equivalent, to the satisfaction of the City.

(26) The applicant/developer and the owners are to comply with the requirements set out in Council Policy P352 "Final Clearance Requirements for Completed Buildings". As detailed in the policy, the applicant is to engage a licensed land surveyor to undertake survey measurements and to submit progress reports and the final report to the City for approval. The City will only issue the final clearance letter when all relevant requirements have been met.

(27) The property shall not be used for the approval hereby granted until an inspection has been carried out by a Council Officer and the City is satisfied that the conditions of planning approval have been complied with.

(28) Prior to the application of a Building Permit suitable arrangements with the City of South Perth being made to ensure the legal rights granted by the easement on the titles to the subject land are either maintained or varied as appropriate to give effect to these rights.

(29) Any planning approval granted for serviced apartments will be conditional upon the applicant registering on the Certificate of Title for the lot, a notification informing prospective purchasers that serviced apartments are not permitted to be occupied by the same temporary tenant for more than 6 months within any 12 month period.

The City will not issue a building permit for proposed serviced apartments until such time as the applicants, at their cost, have registered the required notification on the Certificate of Title relating to the occupancy restriction.

If the owner wishes to extend the period of occupancy it is it the owner's responsibility to obtain approval from the City for a change of use of the premises.

(30) Once a formal Serviced Apartment operator has been appointed for the development, a revised and comprehensive Serviced Apartment management plan will be required to be developed and provided to the City for approval and be distributed to nearby landowners and occupiers for information purposes.

(31) The validity of this approval shall cease if construction is not substantially commenced within 24 months of the date of planning approval.

Advice Notes

(1) Prior to the issuing of a building permit, the applicant is required to satisfactorily address the outstanding planning matters identified in Condition Nos 1, 2, 3, 4, 5, 11 & 12. Therefore, to avoid delay in obtaining a building permit, it is important for the Applicant to commence the related processes at the earliest.

(2) The applicant is advised of the need to liaise comply with any relevant requirements of the City's Engineering Infrastructure section. The applicant is also required to liaise closely with the City's Engineering Infrastructure Services in relation to the water discharge for the dewatering and waterproofing process.

(3) The applicant is advised of the need to address and comply with any relevant requirements of the City's Environmental Health Services, as detailed in the memorandum, dated 13th January 2016, attached to this approval.

(4) Planning Approval or the subsequent issuing of a Building Permit by the City is not consent for the construction of a crossing. As described in Management Practice M353 a 'Crossing Application' form must be formally submitted to Infrastructure Services for approval prior to any works being undertaken within the road reserve.

(5) In relation to Condition 8, the City will be required to give final consent for the proposed public art, including any cash-in-lieu arrangement. The public art contribution must be in line with the guidelines as indicated in the City's Developer's Toolkit. Once the developer has sourced an artist, determined the design and artwork they are to lodge an 'Artwork Concept Application' form and supporting material to the City for assessment.

(6) The applicant is advised that the DPAW preferred method of construction to reduce the volume of dewatering effluent is the "bathtub method" i.e. secant piles or similar to create impervious walls and floor prior to excavation of the site.

(7) If site-specific investigations reveal that appropriate and technically feasible dewatering options are limited, consideration may need to be given to modifying the building design and the extent of the below-ground levels/infrastructure.

(8) The applicant is advised that DPAW is unlikely to support the connection of subsoil drains, if required, to the local government stormwater system and the river without the treatment prior to discharge.

(9) The stormwater management system should be designed in a manner that will enhance the environmental quality of the river through the use of water sensitive urban design. Stormwater runoff from constructed impervious surfaces generated by up to a 15mm rainfall depth for all rainfall events should be retained and/or detained on the lot.

(10) This planning approval does not permit the display of any signage on the building or on the site. A new application for planning approval will be required if signage is proposed to be displayed.

(11) Notification of commencement of works and required management plans can be emailed to rivers.planning@dpaw.wa.go.au.

(12) The applicant is advised of the need to liaise and comply with any relevant requirements of the City of South Perth City Environment Services.

(13) Where minor variations are sought at the building permit stage from an approved set of plans, a formal request for a variation to the planning approval is to be sought by the applicant, in accordance with Council policy P689.

If supported, the variations may be granted subject to all the previous terms and conditions, or possibly with new terms and conditions. If not supported, either the building plans must be amended for a building permit to be issued, or a new application for planning approval must be lodged for consideration by Council.

(14) If you are aggrieved by aspects of the decision **where discretion has been exercised,** you may investigate the ability to lodge an appeal with the State Administrative Tribunal within 28 days of the determination date recorded on this notice.

(15) Any dewatering at the site will require approval from the Department of Water through a water abstraction permit.

Disclaimer:
This Alternative Motion does not represent a change of the Officer recommendation in the Responsible Authority Report dated 11 April 2016.

This Alternative Motion has been prepared on the basis that the DAP considers:

1. The requirement for a revised TIA endorsed by the City can form a recommended condition;

2. The plot ratio and land use mix is appropriate in considering the employment objectives of the sub-precinct; and

3. The building height is appropriate in light of potential maximum building height limits proposed by AMD 46.

HILLAM ARCHITECTS

DEVELOPMENT APPLICATION

74 MILL POINT RD, SOUTH PERTH
REVISION A - MARCH 2016

CONTENTS

1.0 INTRODUCTION

1.0 DEVELOPMENT APPLICATION

This report forms the Development Application in support of the proposed commercial and residential forty four (44) storey mixed use development on Lot 74 Mill Point Road, South Perth within the Mends Sub-Precinct.

The proposed development compromises of a large ground floor café and 147 serviced apartments, 85 apartments together with shared resident's pool terrace and an amenity area featuring lounge, cabana, gymnasium and pool.

This report accompanies the design drawings and details the proposed development addressing relevant planning issues in relation to City of South Perth Town Planning Scheme No.6 with particular reference to Schedule 9: Special Control Area SCA1- South Perth Station Precinct.

Hillam Architects have met with planning staff so as to understand council's aspirations for the precinct. Edge visionary Living and Hillam Architects are adept to deliver an excellent project which we believe will become a benchmark for future developments in the precinct. Further to meetings with council, we have met with traffic and waste consultants to ensure these important functions are well handled with minimum impact on the streetscape.

1.1 SITE INFORMATION & PLANNING DATA

Address	74 (recently changed to 72) Mill Point Road
Developer	Edge Holdings Number 6 (Edge Visionary Living Pty Ltd)
Architect	Hillam Architects
Local Council	City of South Perth
Site Area	1804m2
Zoning	Mixed-Use
R-Coding	R100
Plot Ratio	No Max
Boundary Setback	As per Schedule 9 of City of Perth Town planning Scheme No. 6
Building Height	Refer to Element 5.2 of Table A, Schedule 9 of City of Perth Town Planning Scheme No. 6.
Finished Floor Levels	Various; refer Architects Drawings in Appendix
Access & Service	Refer to Planning Requirements Section

1.0 INTRODUCTION

1.2 DESIGN SUMMARY

Hillam Architects is a progressive design practice dedicated to achieving excellence in architecture.

In the design of the commercial spaces and apartments for Lot 74 Mill Point Road we believe the project will enhance the public domain and streetscape, whilst providing a range of dwelling sizes and costs in a desired location that is close to the river, city and major transport infrastructure.

In keeping with the requirements of the South Perth Special Control Area 1, the proposed design is intended to embody the objectives set out in the South Perth Station Precinct Scheme Amendment 25.

We note the key objectives of Amendment 25 are:

a) Commercial land use to support the increased residential population, provide greater employment self-sufficiency in the City and patronage for a "destination" rail station.

b) New development to create a destination that offers commercial office space, cafes, restaurants, hotels and tourist accommodation.

c) Increased commercial and retail opportunities within pre-determined sub precincts.

d) Promotion of quality urban development with zero front setback and awnings to create a liveable and accessible environment for visitors and residents.

e) Increased building height limits throughout the precinct to allow taller and larger buildings to maximise river and city views while maintaining view corridors.

f) Further increased height in selected areas if certain criteria are met including exceptional quality architecture sustainable design, community benefits such as public art among other criteria.

The project consists of some 85 one, two, three and four bedroom apartments of varying designs and sizes. In addition to the residential component some 147 serviced apartments will provide for the commercial plot ratio in line with the requirements of the City's Town Planning Scheme.

The proposed development is also provided with 220 parking bay allocations including one disabled bay which is in excess of the 187 parking bays required.

1.2 DESIGN SUMMARY (CONT'D)

Significant points of interest are:

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.

Compliance

Section 3 of Schedule 9 outlines that there is no maximum plot ratio within the precinct offering more flexibility in terms of car parking, open space, building setbacks and height than those prescribed by the R Codes. The proposed development therefore reflects the development controls and performance criteria outlined in Schedule 9.

We believe the podium and tower arrangement responds well and fits with the City's vision for a higher residential population with taller buildings providing community benefits. The design proposes minor variations to the rear setback and overshadowing requirements 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 minimised.

Diverse Housing

The provision of 85 residential apartments and 147 serviced apartments in this location is an excellent outcome given the dwelling targets set out in the State Government's 2031 Policy. There are five typical residential floor plate designs with varying mixes of apartments types incorporated into the design with an additional penthouse level. The inclusion of compact one and two bedroom apartments provides a diverse range of affordable housing options. The development also contains 25 three bed apartments of varying sizes that further expands the diversity and cost range of the unit mix. There are 6 four bed penthouses at the highest levels that include private lifts and an upper mezzanine floor to cater for the top end buyer.

It should be noted that the development complies with the Performance Criteria outlined under Table B: Dwelling Density and Type; the residential density equates to 472 units per gross hectare.

Sustainability

Hillam Architects have an excellent track record in providing highly sustainable apartment buildings. Hillam designed Verde Apartments in East Perth to set a new benchmark in sustainable design and have maintained a strong focus on sustainability and energy efficiency on all projects ever since. Various progressive systems are proposed to ensure appropriate and practical sustainable outcomes are provided for this proposed development and it is the intention of the applicant to achieve 4 Green Star rating as outlined in the letter of intent and sustainability strategy provided by CADDS Group (Appendix G)

1.3 PROJECT SUMMARY

The application seeks approval for a forty four (44) storey mixed used development comprising 85 apartments configured over forty four levels with parking provided on three levels of basement, ground, first and second levels. The proposed design provides good mix of apartment types with a primary focus on providing a diverse range of housing that is also affordable. In addition to the residential component there are also 147 serviced apartments and a large café at ground floor.

Careful attention has been given to comply with the Performance Criteria outlined under Table B of Schedule 9 in order to achieve additional height and plot ratio. The proposed development has an overall height and plot ratio greater than that outlined under the City's Table A: Development Controls, however we ask these variations are supported by council considering the high degree of compliance with Table B.

In summary the proposed design consists of:

- Three levels of basement providing residential stores and residential parking bay allocations.

- Ground floor consists of a proposed café, commercial (serviced apartments) and residential lobbies, bicycle storage, residence mail room, Telstra communication room, fire pump room, fire tanks, bin store, and Western Power Sub Station.

- Levels 01 - 02 has 4 serviced apartments units facing the street with residential and non-residential car parking allocations configured behind.

- Level 3 has 14 serviced apartments across the entire floor.

- Level 4 has 3 serviced apartments, a community meeting room and amenities for the serviced apartments which includes a lounge, kitchen and dining areas, a games room and an outdoor pool.

- Levels 05 - 21 comprises of 119 serviced apartments varying between 34 - 106 sqm.

- Level 22 comprises of 6 serviced apartments and the pool plant and service area.

- Level 23 comprises of communal amenities for the building's residents. A large gym, sauna and steam room, pool and sun deck promote exercise and healthy living. Further, the applicant is willing to open paid gym membership to general public in response to the Government Architect's recommendation. There is also a generously sized resident's lounge and theatre room. The dining area has BBQ and cooking facilities both inside and out. These amenities are coupled with carefully designed hard and soft landscaping to offer a break in the building form and help articulate the elevation.

- There are 15 unit types across the development, refer to the summary of apartment mix table below for a breakdown of type. The areas of these apartments vary significantly providing for both entry level and high end apartment buyers with many options which are both affordable and also of higher amenity.

MIX	APARTMENT NUMBERS	PERCENTAGE
1 Bed / 1 Bath (i.e >/= 45 sqm)	11	13%
2 Bed / 2 Bath (i.e </= 100 sqm)	28	33%
2 Bed / 2 Bath (i.e >/= 100 sqm)	15	18%
3 Bed / 2 Bath (all)	25	29%
4 Bed / 4 Bath (all)	6	7%
Total	**85**	**100%**

LEVEL	COMMERCIAL TENANCY	SERVICED APARTMENT	TOTAL AREA sqm
Ground Floor	1		295 sqm
Level 1 - 2		2 per floor	354 sqm
Level 3		14	1117 sqm
Level 4	1	4	370 sqm
Level 5 - 21		7 per floor	8245 sqm
Level 22		6	371 sqm
Total	**2**	**147**	**10752 sqm**

Table 1.2 Summary of Commercial and Serviced Apartments.

2.0 SITE PLANNING

2.1 SITE CONTEXT AND PLAN ANALYSIS

Figure 2.1 Site Context Plan

The proposed development is situated within the northern boundary of the Special Control Area SCA1- South Perth Station Precinct. The site is directly accessed off Mill Point Road and a rear adjoining access way that connects through to Frasers Lane. The site has a land area of 1804m² with a significant street frontage to Mill Point Road. There were seven double storey brick townhouses on the site that don't contribute to The City's aspirations of lively street frontages and a 'thriving inner-city precinct.'

Refer also to the attached Appendix E for copies of the Certificate of Titles.

The site is ideally situated one block back from the South Perth peninsula foreshore. Only two kilometres across the Swan River from the Perth CBD it is well serviced by an excellent transport network including the freeway, bus and ferry links. The site also has the potential to benefit from planned future railway station at Richardson Street.

Adjoining properties are medium density residential and mixed use tenancies but projects like the Finbar Civic Triangle and other significant mixed used projects, there is a strong demand for well-designed residential and mixed use developments that meet the objectives of Scheme Amendment 25.

Figure 2.2 Location Plan

LOT	VOLUME / FOLIO	AREA	LAND OWNER
2, 3	1549 / 135	354 sqm	Gary Glen Carlton & Geraldine Alice Carlton
4, 5, 6	1515 / 593	247 sqm	Gary Glen Carlton & Geraldine Alice Carlton
7, 8, 9	1581 / 910	218 sqm	Promam Pty Ltd (Michael Mckee)
10, 11, 12	1549 / 133	254 sqm	Peter John Blunt
13, 14, 15	1581 / 909	272 sqm	Paola Adrian Ferroni
16, 17, 18	1548 / 700	272 sqm	Lee Francis Burgin & Linda Anne Burgin
19, 20	1581 / 907	411 sqm	Wayne Kitchener Binbey
TOTAL		2028 sqm	

Table 2.1 Lot Owners

2.0 SITE PLANNING

Image 2.1 Mill Point Road frontage viewed from the South-West corner of the subject site.

Image 2.2 View south down right-of-way at east of subject site.

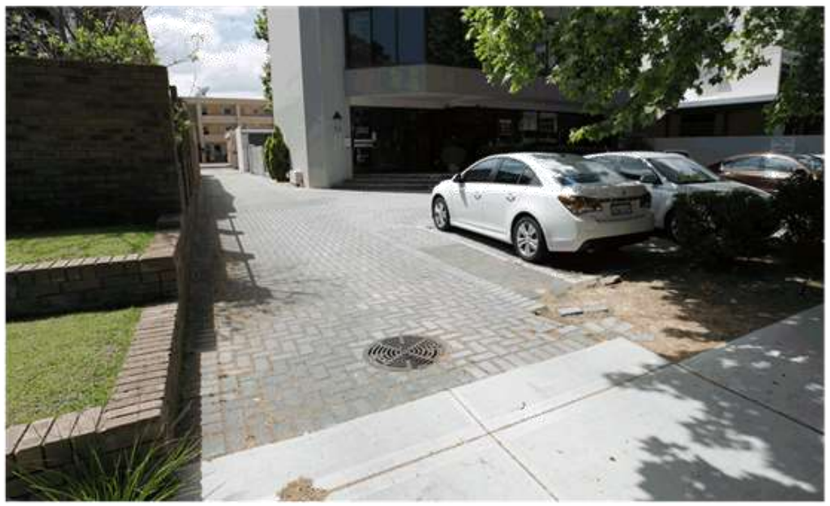


Image 2.3 Existing vehicle crossover and adjacent property to the south of the subject site.

Image 2.4 Existing adjacent property to the East of subject site.

2.0 SITE PLANNING

2.2 DESIGN RESPONSE

Our design responds to the proposed identity for the precinct with a forty four storey commercial (serviced apartments) and residential tower that is setback above a four storey podium which contains the residential and commercial entries, ground level commercial tenancy, access to on grade parking and two levels of upper parking.

Surrounding development is generally medium density commercial and residential in nature and of varied architectural merit. The desire and intent for the South Perth Station Precinct is to bring about its redevelopment for mixed office and residential uses to cater for the increased residential population and providing greater employment self-sufficiency in the City. The proposed design represents an excellent opportunity to set a benchmark for a very high standard of design within the Precinct; that would also serve as a catalyst for future redevelopment elsewhere.

Streets and right-of-ways adjacent to all boundaries, mean the building has good access to natural light and ventilation. Further, the design of building with the bulk of the residential units being set back and placed above the podium create generous distances from existing and potential developments to enhance privacy and retain views. The height and position of the majority of the apartments will allow views to the Swan River and CBD with a wide northern aspect.

Access to the development's car and bicycle parking is from the southern corner of the site, directly off Mill Point Road. This allows for the maximum activation of street frontage along the Mill Point Road side with residential and commercial lobbies along with the café commercial tenancy.

The design acknowledges the existing footpath along Mill Point Road and it is intended that existing concrete crossovers are made good and incorporated into the adjacent concrete footpath. The café fronting Mill Point Road has been articulated to give an expansive al fresco area with associated landscaping to benefit the community and is set back to encourage public use.

The existing block paved driveway to the south of the site is currently 3m wide and provides vehicle access through to Frasers Lane. The proposal will improve this vehicle access way by widening the road to 7 meters, allowing a free flow of traffic into and around the development.

3.0 PERFORMANCE CRITERIA - RESPONDING TO TABLE B

The proposed development pays close attention to Table B: Performance Criteria of Schedule 9 in the City's Town Planning Scheme. Particular care has been made to comply with each outlined design consideration and there are many references back to this performance criteria within the body of this report however a detailed summary is listed below:

3.1 MINIMUM LOT AREA & FRONTAGE

"The development site is to have a minimum area of 1700m2 and a minimum lot frontage of 25 metres unless otherwise approved by the Council as a minor variation.

The client, Edge Holdings No. 7 has recently acquired 2 adjacent lots (Lots 2 & 5, 74 Mill Pont Road) to the north of the existing site. This offers a unique opportunity for the applicant to amalgamate the lots and increase the overall site area to 1804sqm and increase the frontage to 40.1m, compared to the previous DAP approved development on the 25th May 2015 which had a site area of 1427sqm and street frontage of 33.1m. The applicants intent to increase the lot area along the northern boundary is to allow the current design to be shifted approximately 2 meters, clear of any services easements.

This frontage exceeds the requirements outlined in Table B which allows for both commercial and residential entries along with extensive landscaping to the front of the development. This wider frontage has enabled the design of integrated hard and soft landscaping, public art, a water feature, both lobby entries and a generous café. All of the above have contributed to significant street activation in what is currently an overlooked pedestrian way. We believe activating the Mill Point Road frontage is not only critical to the success of the project but will also be value the South Perth community for years to come.

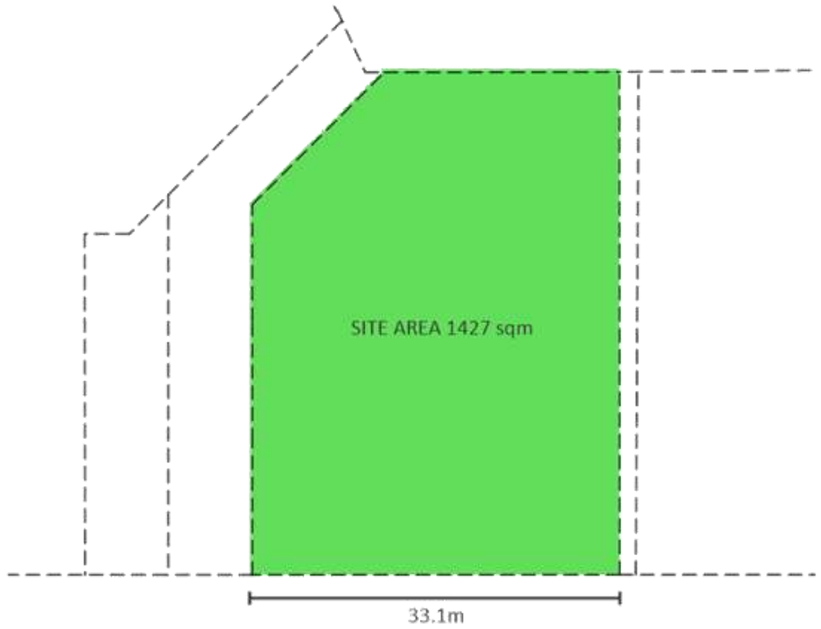


Diagram 3.1 Previous DAP approved development 25th May 2015.

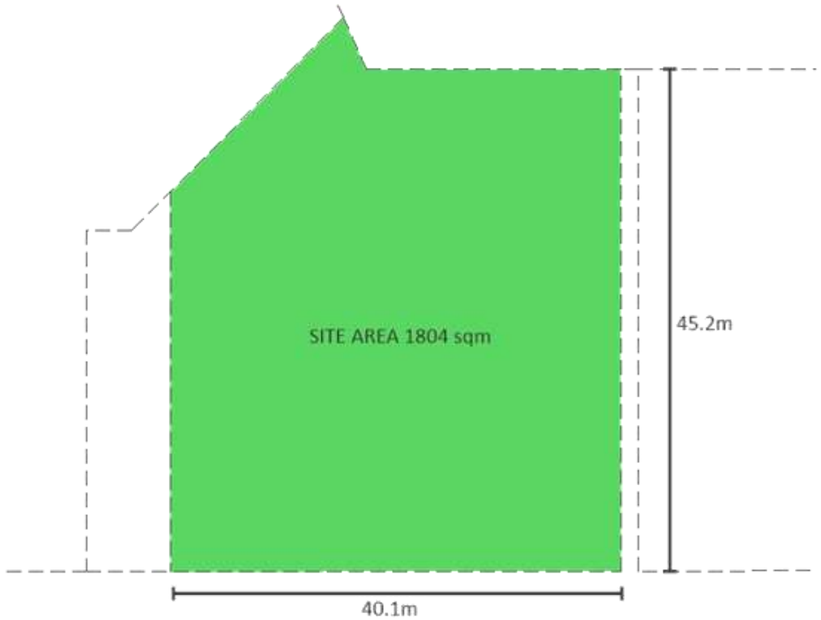


Diagram 3.2 Proposed site showing 25m minimum lot frontage requirement.

3.0 PERFORMANCE CRITERIA - RESPONDING TO TABLE B

3.2 DESIGN QUALITY

The proposed development is of an exceptional architectural design quality as determined by Council and the Design Advisory Committee.

The building has been conceived in a classic podium base and tower arrangement with all levels highly articulated to the benefit both the pedestrian experience and the views of the development in its greater context. A fluid design provides unique visual interest and complimentary architectural languages between the podium and tower. The innovative organic form and its dynamic façade have been developed to reduce bulk while creating a new benchmark for progressive design in the precinct.

Activation of the Mill Point Road frontage is integral to the design of the podium through articulation of canopies, entries and landscaping. Nine new serviced apartment units have been provided across the podiums West elevation facing Mill Point Road in lieu of architectural screening and car parking. These boutique 'tree top' apartments further activate the street frontage through the use of large balconies and glazing.

At the top of the podium extensive balconies will provide a platform for soft landscaping as well as an amenities area for the serviced apartments. The urban location and density of the development has reduced the areas available for natural landscaping, however the use of extensive planter boxes and an outdoor pool and seating areas at level 4 will create a dynamic natural component to the design. It is intentional that this planting will soften the view for residents looking down from balconies above. A Landscape architect will be engaged to provide further direction on tree and planting selections.

Both Podium and Tower use a consistent organic architectural language that will deliver a striking façade to Perth's built environment. A mix of refined edges, an undulating perforated skin, semi frame-less balustrades and extensive glazing break down the mass of the apartment levels. Elegant curves in the building's planning merge the boundaries between one elevation and the next further softening the overall bulk and scale.

The design also uses curves to express the elevations with a sweeping balustrade that alternates between glass and perforated screens around the perimeter of the tower. This homogeneous organic language extends the full height of the tower creating dynamic façades with movement and integrity.

Shading is achieved through deep balcony slab extensions so that apartments receive maximum daylight during the day in winter, while blocking the heat in summer. The revised design continues this reveal around the Southern facade improving consistency with the tower's overall envelope and feature balustrades. Interior floor materials will be selected to increase reflection of sunlight, decreasing the use of artificial light.

The vision for the project is to deliver premium quality apartments well suited to the vision of the overall precinct. The amenity within the project is at the top end of apartment projects in Perth. The highly articulated building form coupled with a diverse range of materials will be a positive addition to the streetscape and views from adjacent areas. This refined architectural form and rich material articulation will encourage a diverse range of residents and users who will contribute to the local community.

3.0 PERFORMANCE CRITERIA - RESPONDING TO TABLE B

3.3 OVERSHADOWING

The proposed development has been designed with regard for solar access for neighbouring properties taking into account ground floor outdoor living areas, major openings to habitable rooms, solar collectors and balconies.

The diagrams on the following page indicate the impact of the allowable building envelope in comparison to the previous DAP approved development on the 25th of May 2015 and the current proposed design.

It should also be noted that the current proposed development overshadows the site at 76 Mill Point Road 4% less than the previous DAP approved scheme due to the entire podium and tower being moved approximately 2m to the north.

We have also included photos of the northern elevation of existing mixed use building on Lot 76 Mill Point Road. The proposed development will predominately be casting its shadow across this buildings northern elevation which is devoid of any major openings, windows or amenity space. All residential units on Lot 76 are oriented on an east-west axis with balconies facing east and west respectively. These balconies configured as deep recesses only receiving direct sunlight in the morning and evening when the impact of any additional overshadowing from the proposed development on Lot 74 will be negligible.

3.0 PERFORMANCE CRITERIA - RESPONDING TO TABLE B

3.3 OVERSHADOWING

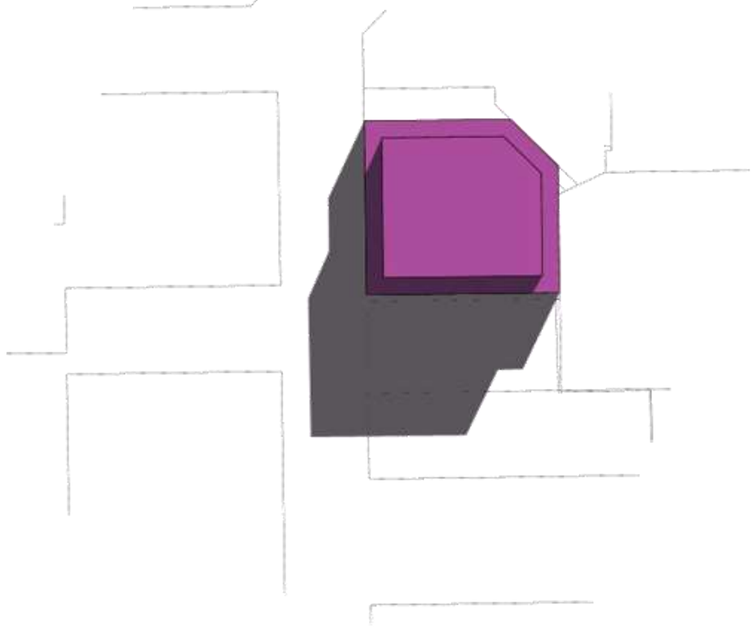


Diagram 3.3
Tower and podium based on City's Town Planning Scheme
Overshadowing at 12pm June 21st.

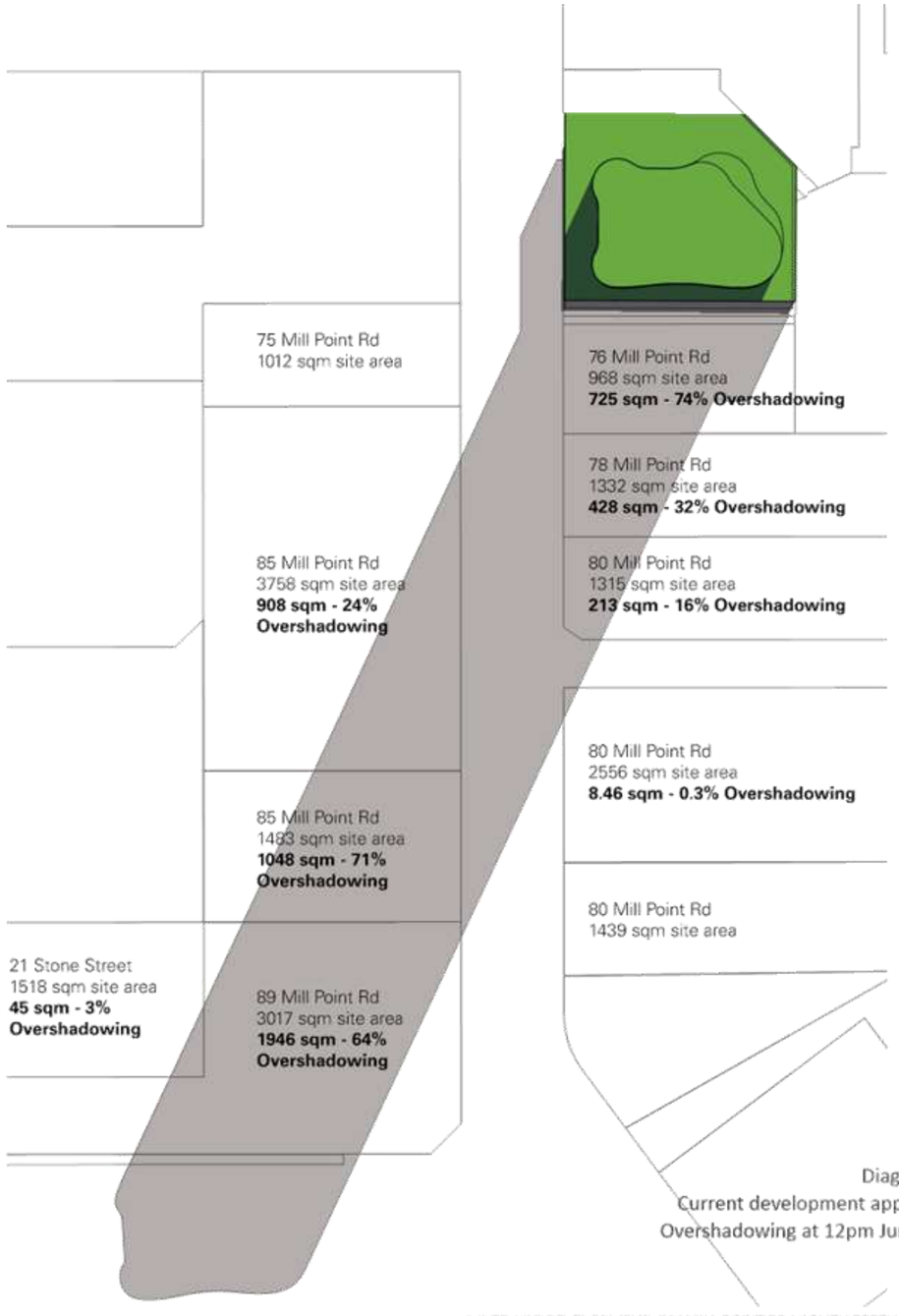


Diagram 3.4
Current development application
Overshadowing at 12pm June 21st.

3.0 PERFORMANCE CRITERIA - RESPONDING TO TABLE B

3.3 OVERSHADOWING

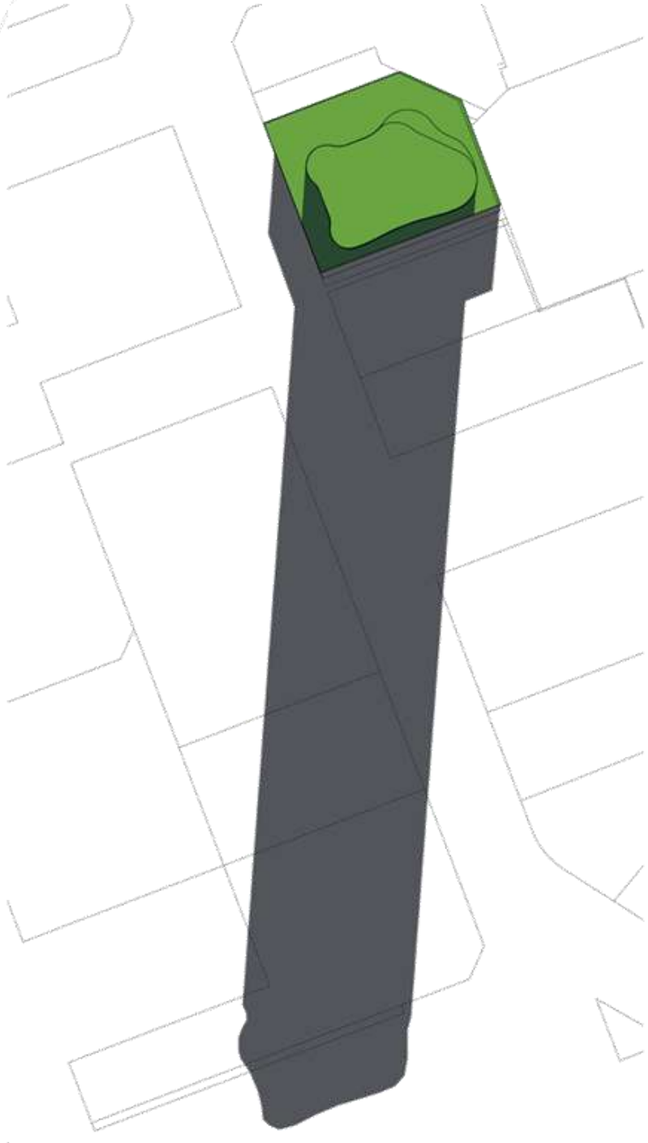


Diagram 3.5 Proposed Tower.

Overshadowing at 12pm June 21st.

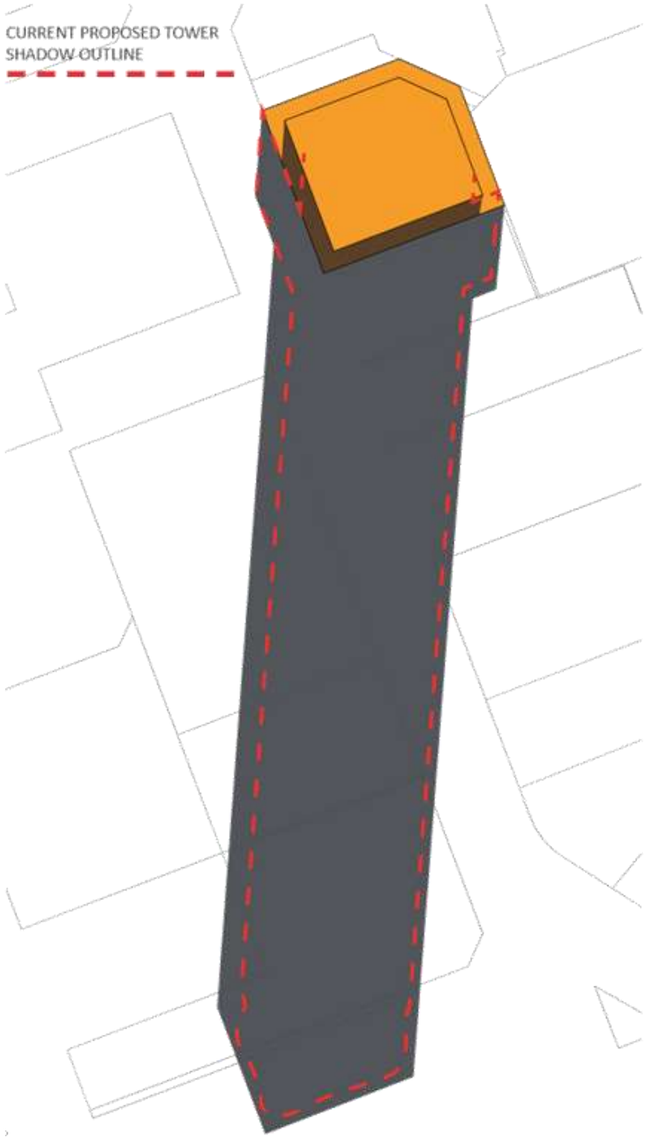


Diagram 3.6 Max podium and tower envelope.

Overshadowing at 12pm June 21st.

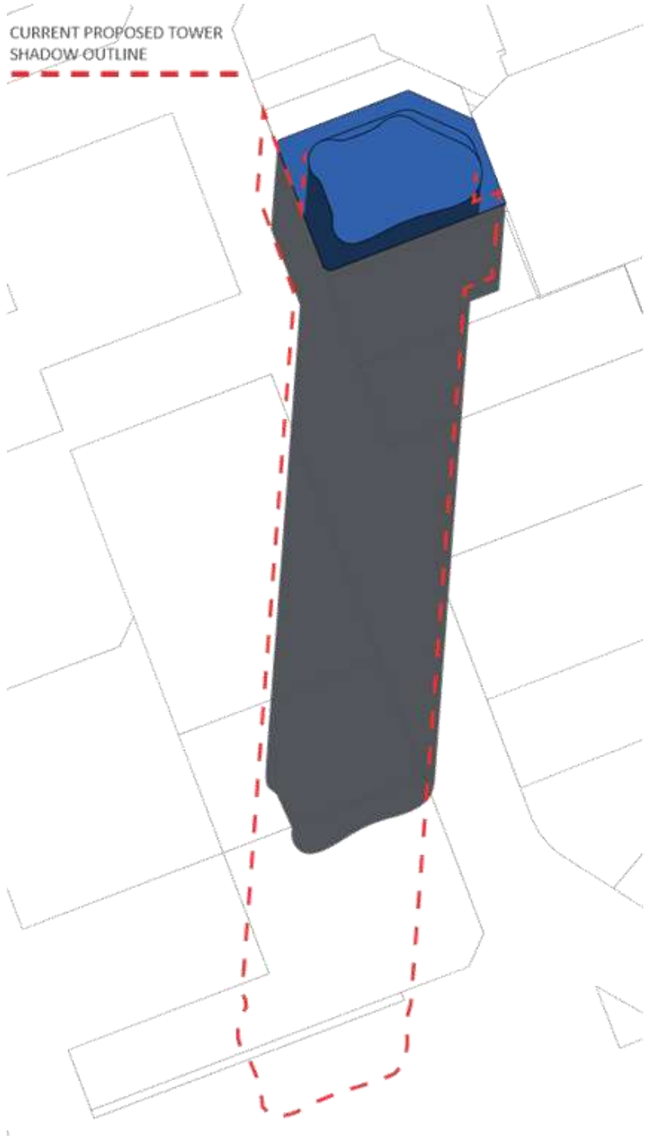


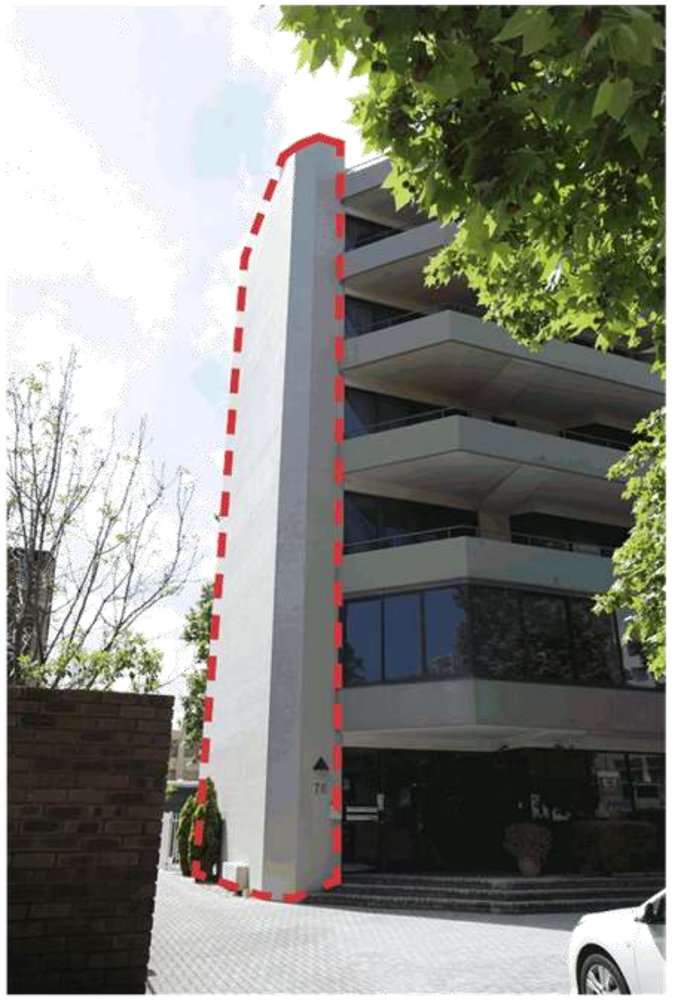
Diagram 3.7 Previous JDAP approved development 25th May 2015.

Overshadowing at 12pm June 21st.

3.0 PERFORMANCE CRITERIA - RESPONDING TO TABLE B

3.3 OVERSHADOWING (CONT'D)

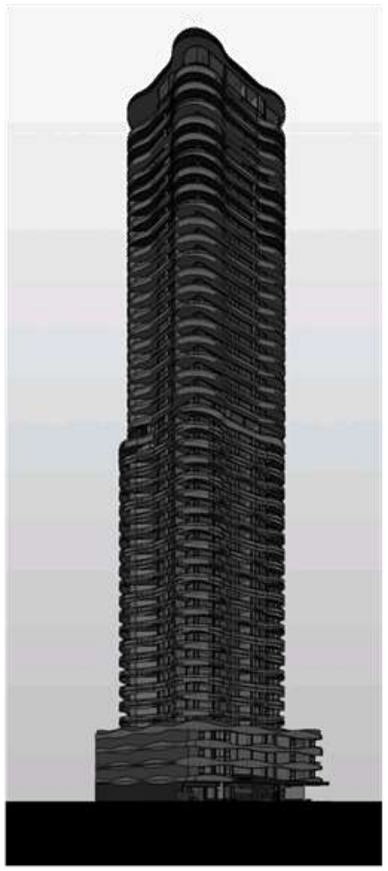
View of adjacent building's north-facing wall.



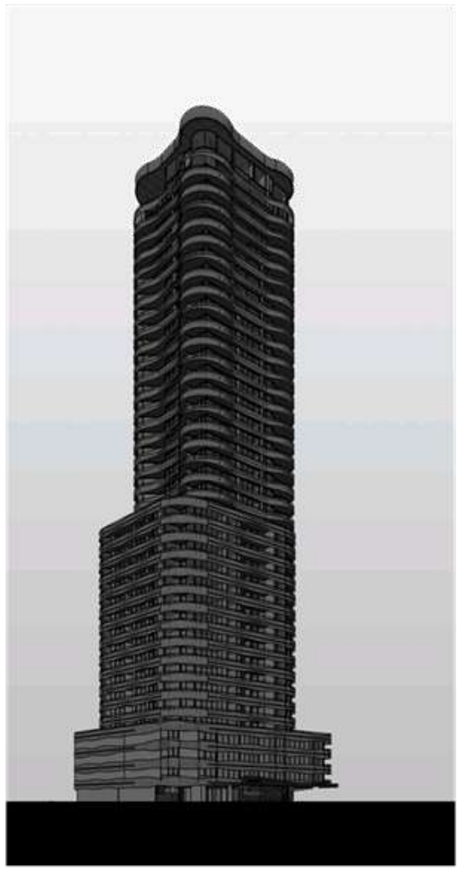
View of adjacent building's north-facing wall.

3.0 PERFORMANCE CRITERIA - RESPONDING TO TABLE B

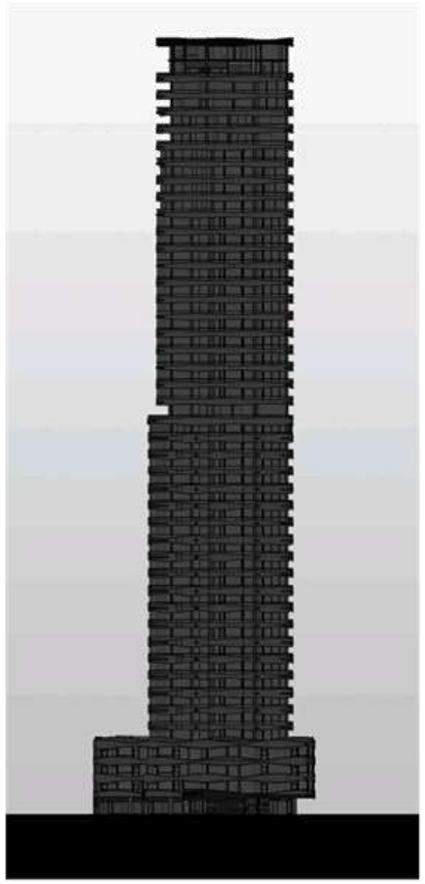
3.4 COMPARATIVE DESIGN STUDIES



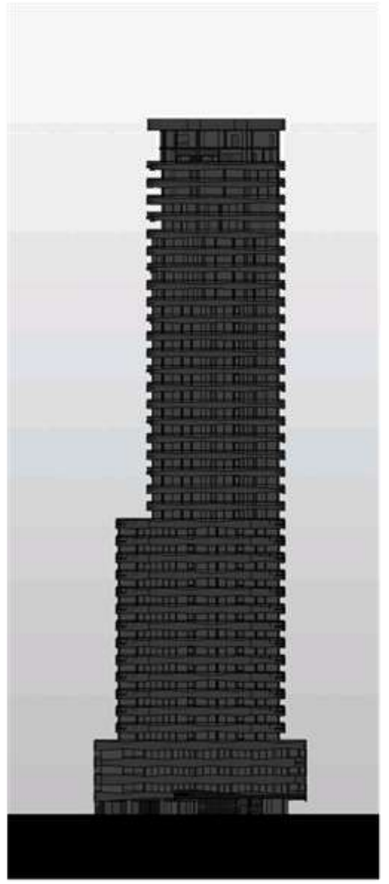
Current development application.
44 levels
Plot ratio 9.83



Design study.
39 levels
Plot ratio 9.83



Current development application.
44 levels
Plot ratio 9.83



Design study.
39 levels
Plot ratio 9.83

3.0 PERFORMANCE CRITERIA - RESPONDING TO TABLE B

3.5 DWELLING DENSITY & TYPE

Residential development must have a minimum residential density of 100 dwellings per gross hectare or provide a minimum of 20% single bedroom dwellings (rounded up to the next whole number of dwelling).

The proposed development has an extensive apartment mix of floor and balcony areas along with number of bedrooms. Please refer to Table 1.1 of this report for a detailed breakdown of the apartment mix. It should be noted that the development includes 11 single bedroom dwellings.

It should also be noted that there is a dwelling density of 472 dwellings per gross hectare within the proposed development.

3.6 VEHICLE MANAGEMENT

The applicant shall submit a traffic engineer's impact assessment report confirming that additional traffic and on-street parking demand resulting from the additional floor space produced by the variation of Elements 3 and 5 does not cause an unacceptable impact on the surrounding street network.

The site enjoys excellent access to the public transport network with high frequency bus services within close walking distance to the site. The existing public transport services within the immediate area surrounding the development are considered to be sufficient to cope with the public transport demand to the site.

Based upon the results of the Transport Impact and Car Parking Assessment, no issues have been identified with regard to traffic operations of the proposed development with no road improvements or modifications to the proposed on-site car parking supply required.

Please refer to Appendix D- Traffic Management Report by Shawmac Consulting for a comprehensive assessment of forecasted traffic conditions created by the proposed development.

3.7 CAR PARKING

a) The development site shall not have car parking bays at the ground level within 10 metres of a road frontage, unless allowed by Council.

b) At least 60% of the primary street is to be an active street frontage.

The design provides parking allocations for 220 vehicles including 18 tandem bays. Parking at ground floor is set back sufficiently from Mill Point Road ensuring the design complies with requirements outlined under Item 6.0 of Table B. It should be noted that the parking at ground floor level has no adverse effect on the Mill Point Road street frontage being set back 25m along the right of way.

The remaining parking is across two levels of podium, masked by the serviced apartments fronting Mill Point Road, and below ground within three basement levels. Access to all parking is provided off Mill Point Road with secure automatic garage doors leading to upper and basement levels.

For further information on parking allocations please refer to Section 5.5 of this report.

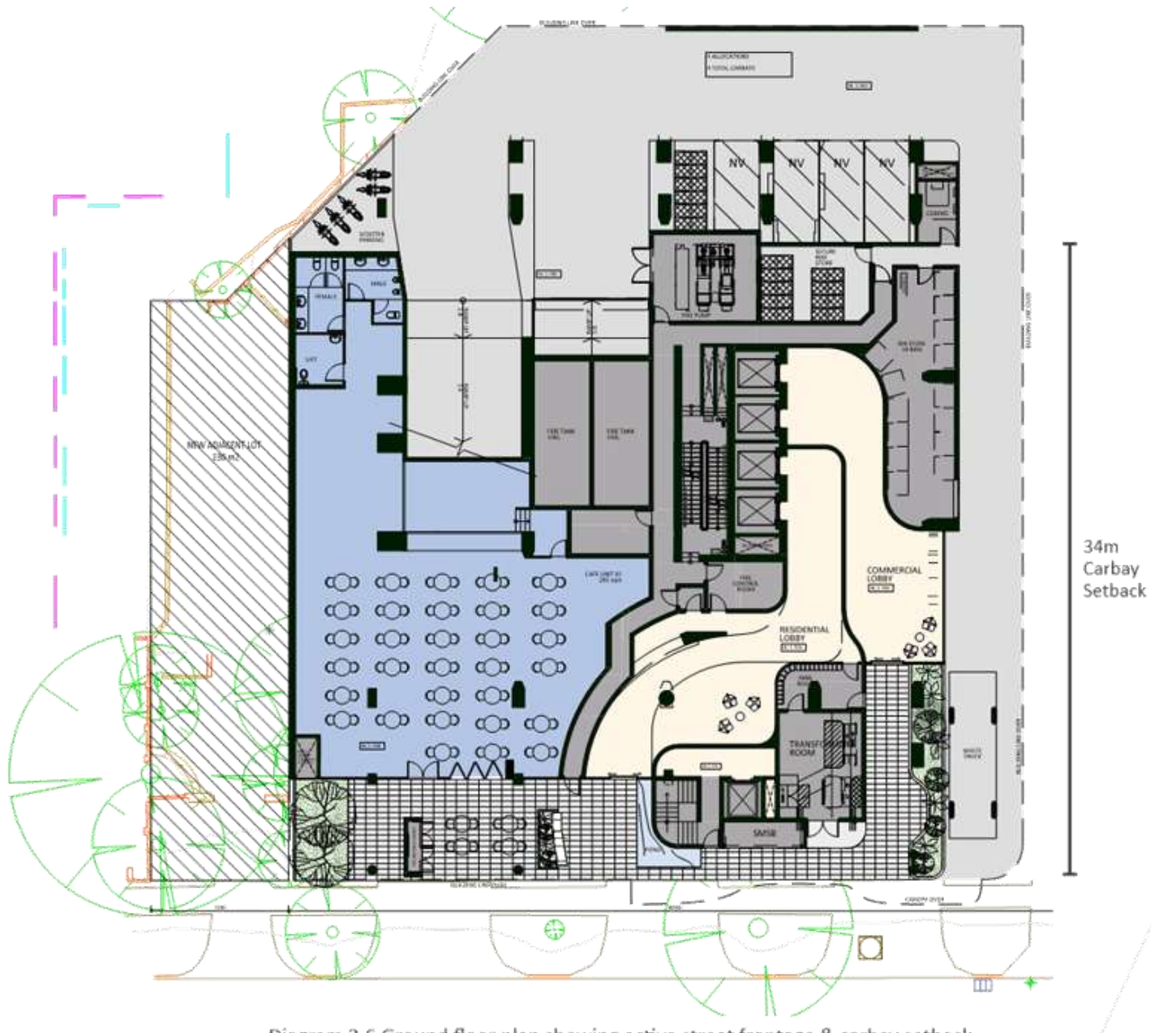


Diagram 3.6 Ground floor plan showing active street frontage & carbay setback.

3.0 PERFORMANCE CRITERIA - RESPONDING TO TABLE B

3.8 ADDITIONAL COMMUNITY BENEFITS

The proposed development addresses 6 of the possible 7 criteria listed in Element 7 of Table B: Performance Criteria. These community benefits are summarized below and expanded on in various sections of this DA report:

i) Table B: 7(a). High quality active street frontages, street art, furniture and landscape features

The façade at ground floor level along Mill Point Road has been designed to fully activate the footpath, encouraging both residents and the public to interact with the development in a pedestrian friendly environment. Serviced apartments at the podium levels also contribute to the activation of the Mill Point Streetscape through the use of balconies and glazing.

Refer to Section 4.1 of this report that addresses Ground Floor Uses and Streetscape.

Also to refer to Section 4.3 Public Art

ii) Table B: 7(b). Landscaped spaces and/or other facilities accessible to the public such as gym equipment and public art.

Extensive hard and soft landscaping and public art pieces will benefit the wider community.

Refer to Section 4.1 of this report that addresses Ground Floor Uses and Streetscape. Also to refer to Section 4.3 Public Art

iii) Table B: 7(c). A range of dwellings sizes and costs.

The proposed development has an apartment mix of one, two, three and four bedroom units that vary greatly in size, cost and amenity.

Refer to Section 1.3 Project Summary

iv) Table B: 7(d) Improvements to pedestrian networks and public security.

The activated street frontage, widening of the right-of way for vehicle access and the passive surveillance from the residential and commercial components all contribute to an improved pedestrian network and public security.

Refer to Section 4.1 Ground Floor Uses and Streetscape.

v) Table B: 7 (e) Provision of view corridors and/or mid-winter sunlight to adjacent buildings.

The tower has been deliberately designed to allow for improved views from neighbouring Lots.

Refer to Section 4.4 Views and Vistas

vi) Table B: 7 (f) Community, communal and/ or commercial meeting facilities.

The development will provide a community meeting room incorporated into level 4 that can be hired to the public.

Refer to Section 1.3 Project Summary

3.9 RESOURCE EFFICIENCY

The proposed development exceeds the requirements of the Building Code of Australia with respect to optimizing solar access to the proposed development and adjoining sites; maximizing energy efficiency; use of passive cooling techniques and cross-ventilation opportunities; conserving water.

Please refer to Section 6.0 of this report Resource Efficiency & Sustainability for a comprehensive outline of the principles and provision that the proposed development will adopt in exceeding the requirements of the BCA and meeting the required Green Star Rating. This is further discussed in Appendix G, CADDS Letter of Intent & Sustainability Strategy.

4.0 URBAN DESIGN

4.1 GROUND FLOOR USES & STREETSCAPE

The architectural design provides a striking tower element that will be visible from the CBD with the podium element addressing Mill Point Road and the vehicular access way. The building is highly articulated in a contemporary manner with a mix of solid, perforated and transparent materials composed in a cohesive manner.

Various cantilevered elements are formed to create highly attractive building façades. Careful and varied detailing between various floors provides an additional layer of articulation.

The façade at ground floor level along Mill Point Road has been designed to activate the footpath, encouraging both residents, office workers and public to interact with the development in a pedestrian friendly environment.

A highly articulated canopy wraps around the perimeter of the Mill Point Road elevation. This canopy exceeds the City's requirements with a depth of 2.5m providing an excellent degree of shelter and shade to pedestrians. The canopy folds up to heights of 6m to distinguish the entrances to both residential and commercial lobbies. The high soffits and ceilings at ground floor with large expanses of floor to ceiling glass further open the building to the street and public. It should be noted that the deeper recesses that form entrances to both commercial and residential lobbies will be well lit with movement sensors 24 hours a day.

The entrance to the residential lobby has been deliberately set back and located on the southern corner of the site to allow pedestrians to walk under and through an attractively landscaped area. Soft landscaping will be developed with a reputable Landscape Architect to create an urban oasis at the entrance to both entry lobbies. Sophisticated street furniture and cycle racks will further benefit the community at street level. The café has deliberately been set back inside the building envelope to provide sufficient cover for 60m² of alfresco dining. This will become a new meeting place for patrons on the way to the river from the Central Station Precinct.

The activation of the street frontage contributes to the greater improved pedestrian network and public security in the area as listed in Table B, item 7(d).

A commissioned sculpture by a local artist is also proposed adjacent to the commercial lobby. Consistent with the architectural intent, this sculpture is another gesture to the broader community.

The design has been carefully developed to conform to the requirements of Table A: 2. Ground Floor Uses and 6. Relationship to the Street.

Image 4.1 View of cafe and green corridor.

4.2 PODIUM & TOWER TYPOLOGY

The proposal adopts a classic podium and tower typology. Both elements are articulated in an appropriate manner providing either horizontal or vertical emphasis. The high level of architectural expression includes the use of varied materials and form to articulate the building. 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 along Mill Point Road.

The podium is characterised by an organic undulating facade that creates a dialogue with the architectural treatment of the tower. The apartment balustrades create sweeping curves that run the length of the facade and wrap around both corners facing Mill Point Road.

Solid balustrades at podium levels create a subtle contrast to the perforated lightweight balustrades of the tower above and are more harmonious with the existing streetscape.

It should be noted that the podium height is compliant with the Element 4.1 of Table A.

Diagram 4.1 Elevation showing podium height.

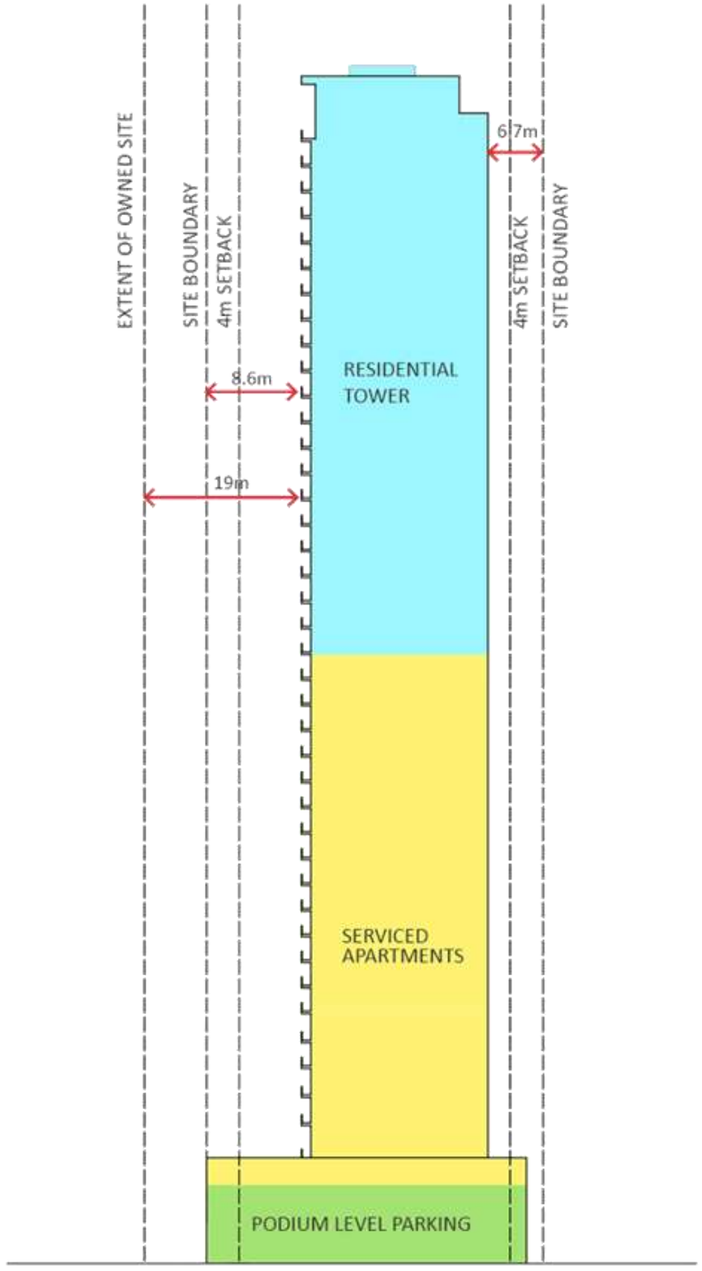


Diagram 4.2 Elevation showing 4m setback above podium.

4.0 URBAN DESIGN

4.3 PUBLIC ART

In accordance with City of South Perth's Town Planning Scheme, Schedule 9 we support the vision for the inclusion of public art within the Central Core Precinct should be strongly encouraged.

In previous apartment projects including The Foundry Apartments Subiaco and Verde Apartments in Wittenoom Street, East Perth we have successfully worked with nationally acclaimed local artist Stuart Green who has created excellent artworks integrated into the publicly visible elements of these projects.

Collaboration with artists Rick Vermey at The Collective Apartments, Rivervale and John Terry at Fusion Apartments, Burswood have created unique responses that are reflective of each site.

In keeping with this approach we will work with an artist whose work fits with the design philosophy and who has demonstrated an appropriate understanding for the facade treatments.

It is currently envisaged that the proposed perforated screens to the ground floor transformer room provide an opportunity for a collaborative process to be established with a local artist and diminish the often overlooked substation facing onto the street.

The screens will provide an opportunity to potentially reflect a theme which is relevant to the precinct, embracing the location's heritage and history. It is envisaged that this will enrich the pedestrian experience offering occupants, visitors and passers-by an insight into local heritage. It is also anticipated that key parts of these screens will be back lit to create an alternative impact and interest at night.

In addition to the screens there will be a sculpture located at the residential lobby entry. This will also be designed and fabricated by a local artist that is incorporated into the landscape design of the street front. Our intention is that the sculpture responds to the contemporary aesthetic of the architecture but also has a concept that connects with the broader community.

There are no specific 'percentage for art' requirements outlined under Schedule 9 of the City's Town Planning Scheme. It should be noted that the extensive artwork to be commissioned is in addition to the statutory developer contributions outlined under Schedule 10. The proposed development encompasses artwork to engage with the community up close and in its wider context.

As a further contribution to public art, the applicant proposed that the solid concrete balustrades at podium level have an integrated pattern. This patterning is also to be developed with an artist, intending to create a de-bossed effect with recessed form-work. Even though subtle, this will provide further interest at street level.

Image 4.2 - Verde Apartments, East Perth - Hillam Architects & Stuart Green.

Diagram 4.3 Location of screens and sculpture by selected artist.

Image 4.3 - Roydhouse Apartments, Subiaco - Hillam Architects & Stuart Green.

Image 4.3 - Haven Apartments - Hillam Architects & Stuart Green.

4.3 PUBLIC ART (CONT'D)

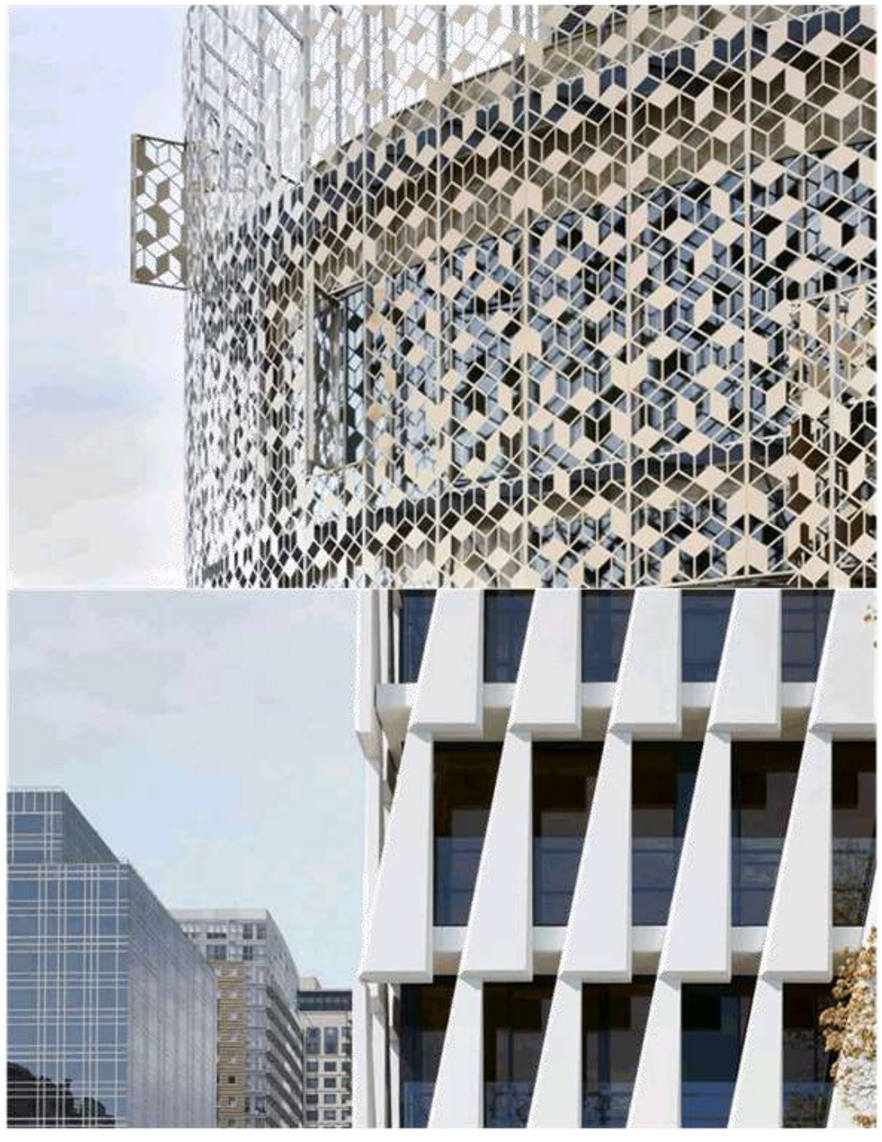


Image 4.5 Examples of architectural screening elements.

4.0 URBAN DESIGN

4.4 VIEWS & VISTAS

The proposed development has been designed with respect to the view corridors of neighbouring buildings and future developments. Diagram 4.4 illustrates the increased tower setbacks across both northeast, northwest and southwest elevations. The tower has been deliberately planned to reduce overall bulk with a narrower form than what is permissible under Schedule 9.

Deep balconies, floor to ceiling glazing and extensive glass balustrades also contribute to a more transparent elevation. This allows for view corridors to be maintained through parts of the building envelope.

The proposed development also looks to maximise the view opportunities towards the CBD and Swan River while responding to Mill Point Road. The curved organic plan of the tower together with continuous perimeter balconies ensures the development maintains an expansive outlook in virtually all directions.

In accordance with the objectives of Scheme Amendment 25 we believe there is an opportunity to create an identity and sense of place by connecting the proposed development with the available views and vistas.

Noting the proposed development will become one of the highest buildings within the South Perth Station Precinct, there are opportunities to maximise the views and vistas:

- City views to the northeast.
- Expansive panoramic river views to the north, east & west.
- Views over Kings Park to the west.
- Potential ocean views from the highest levels.

The proposed development has also been designed with respect to the view corridors of neighbouring buildings and future developments. Diagram 4.4 illustrates the increased tower setbacks across both northeast, northwest and southwest elevations. The tower has been deliberately planned to reduce overall bulk and have a more slender form than what has been allowed for under Schedule 9.

Deep balconies, floor to ceiling glazing and extensive glass balustrades also contribute to a more transparent elevation. This allows for view corridors to be maintained through parts of the building envelope.

Image 4.6 Aerial view looking north at proposed site, Perth CBD and Kings Park.

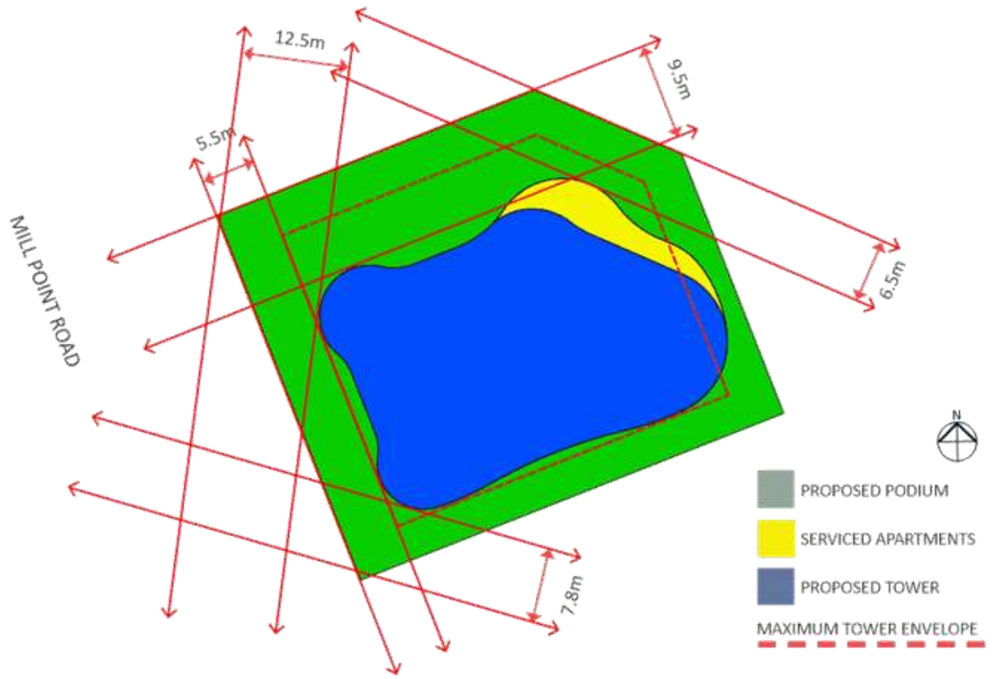


Diagram 4.4 View corridors between setback and proposed building.

Diagram 4.5 View direction diagram of surrounding landmarks.

5.0 ARCHITECTURAL DESIGN

5.1 BALCONIES

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

The balconies that face the street encourage passive surveillance as well as express the sophistication of the facade by their integration into the building envelope. The cantilevered and curved balconies have been used to articulate the façade creating drama and interest.

Each residential unit in the development has a balcony depth of at least 2.5m however many units have up to 4m. This allows many units to have both dining and lounge areas on balconies, encouraging outdoor living and passive surveillance of the area. Obscurely glazed fins separate each balcony from neighbouring units to provide visual and acoustic privacy while maintaining the lightweight aesthetic of the building's façade.

5.2 MATERIALS & FINISHES

A varied pallet of materials and finishes articulates the development. A combination of light and dark renders, stone, tile, perforated metal (also incorporating artwork) and glass 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 solid, porous and transparent.

Rich and refined materials signpost the residential areas while the perforated metal and artwork around the podium provides a vibrancy to the elevations at street level. Examples of the proposed materials are shown throughout this document and the coloured elevations provided in the appendix have the proposed external materials noted.

Image 5.1 Design and material references.

5.3 POOL TERRACE

The proposed infinity pool projects out to the north of level 23 and rivals the quality reserved for five-star resorts. The Pool Deck will have dedicated leisure activities additional to the infinity pool including relaxation zones, fully equipped fitness centre, sauna and steam room, outdoor yoga, private dining room, catering kitchen, lounge areas and meeting facilities.

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 directly overlook the space providing good amenity and passive surveillance, yet privacy is maintained by appropriate soft landscaping in planter boxes.

The Pool Deck Lounge incorporates river views into this exclusive space for quiet contemplation or entertaining guests whilst the Gymnasium allows you to maintain well-being and fitness, day or night, overlooking the foreshore. A generous theatre room can also be booked by residents for movie watching. 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.

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

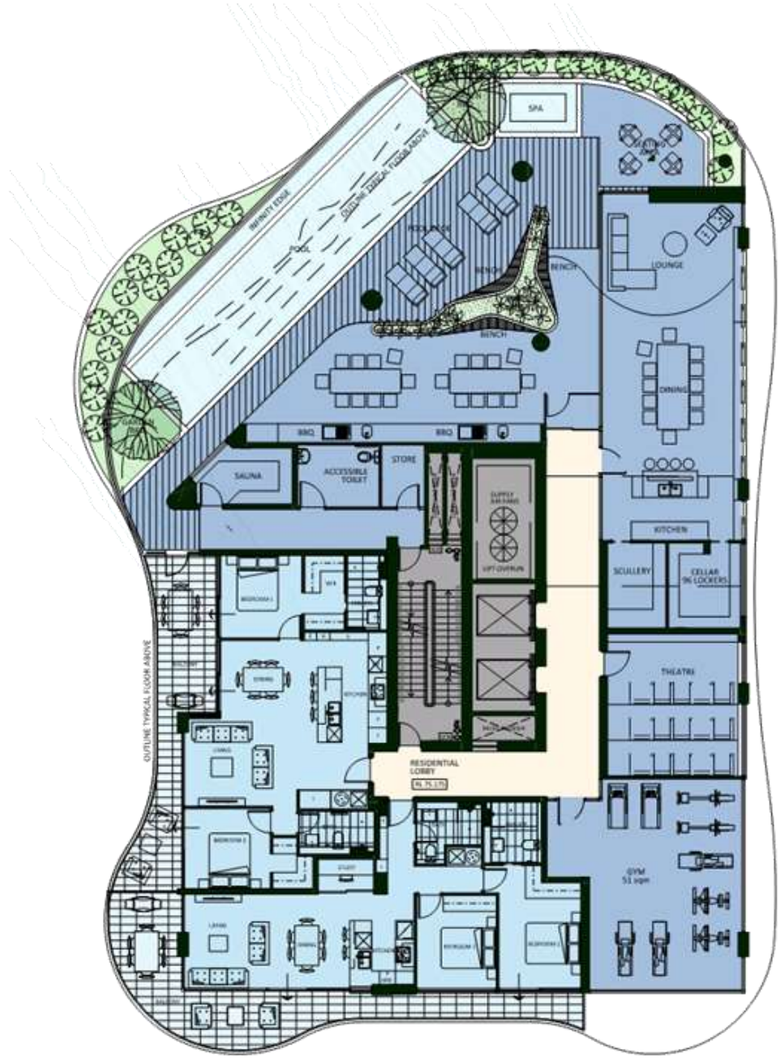


Image 5.2 Coloured plan of Residential Amenities Level

6.0 DEVELOPMENT REQUIREMENTS

6.1 PLOT RATIO

Lot 74 Mill Point Roads falls under the Special Control Area SCA1 where there is no maximum plot ratio as per Element 3.1 of Schedule 9 of City of South Perth Town Planning Scheme No. 6.

In accordance with the schedule, the development provides sufficient commercial plot ratio, diversity in dwellings including single bedroom dwellings and provision has been made for amenity facilities for residential dwellings.

6.2 PODIUM HEIGHT

The proposed development has a podium level set at 4 storeys or 13.5m and all of the podium building elements of the proposed development sit between the requirements outlined in Schedule 9.

6.3 BUILDING HEIGHT

With reference to item 5.2 of Schedule 9 'height limit for sites within the Special Design Area may be varies subject to all of the relevant performance criteria in Table B being met' we ask council to support the variation to the height limits outlined on plan 3 of schedule 9 considering the degree of compliance with Table B of the schedule.

The proposed 145m development strives to meet the objectives set out in Scheme Amendment 25 which allows for further increases in height with the inclusion of sustainable design, community benefits and exceptional quality architecture; all of which are outlined in this report.

6.4 SETBACKS

In response to Scheme 9 the proposed development incorporates NIL side and rear set back to the podium levels. Also in response to Element 6.6.1 the proposed development has a NIL street set back to podium levels across the extent of its frontage.

For storeys above the podium the minimum street setback outlined at Element 6 6.2 of Schedule 9 is 4m; the street setback to the tower portion of the proposed development (above podium level) is 5.5m.

Careful attention has been given the City's Town Planning Scheme ensuring that the side setbacks for the tower are a minimum of 4m. At the rear of the proposed development we are proposing a minimum setback of 2.2m. It should be noted that only a small portion of the unit balconies project through the setback requirement. These balconies will be completely open with glass and perforated metal balustrades with a curved plan contributing to the organic form of the overall design. Deep, spacious balconies have also been intended to provide sufficient shade and amenity their respective units.

It should also be acknowledged that the tower portion of the proposed development is consistently inside of setback requirements across both north and east elevations.

The applicant has revised the design to increase the tower setback along the southern elevation by up to 730mm to enhance the facades articulation and depth. Refer to the Appendix F - Responses to the Government Architects Commentary later in this report for more information.

In respect to the above we ask that council support this minor variation to the requirements outlined in Scheme 9.

Diagram 6.1 Plan Setback Diagram

6.5 PARKING

The six levels of car parking are designed for efficient use and provided with adequate lighting, visibility and subsequent safety for users, drivers, cyclists and pedestrians alike. All designated visitor and commercial bays will be appropriately signposted as such with all bays located internally of the building envelope on the upper and basement levels.

The car parking is further divided into the following provisions:

- 115 Residential bays
- 14 Residential visitor bays
- 74 Serviced apartment bays (incl. 1 Disabled)
- 8 Serviced apartment visitor bays
- 8 Bays for the café and community meeting room.
- 1 Commercial visitor bays.

The design proposes a minor variance to the number of visitor parking allocations. In accordance with our approach to promote sustainable methods of transportation and Element 8.1 of Schedule 9, 87 secure bicycle bays are located at both ground, basement and podium levels. It should be noted that the amount of bicycle bays exceeds that required and that these facilities have been annotated on the attached development plans. Also to note are the 5 scooter bays provided on ground floor to suit demand and reflect the development's urban locality.

74 Mill Point Road - Amended Development Application - Dec 2015						Rev C - 16.03.2016
Apartment Type	Required No. of Bays per Apartment / Area	Number of Apartments	Required Carbays	Single Carbays	Tandems	Carbays Including Tandem, Longbays, reciprocal
1 Bed / 1 Bath	0.75	11	8	11		11
2 Bed / 2 Bath	1	43	43	43		43
3 Bed / 2 Bath	1	25	25	25	6	37
Subs & Pents	1	6	6	8	8	24
Residential Apartments		85				
Serviced Apartments	0.5 carbays per serviced apt	147	74	74		74
Non Residential Land Use - Not Serviced Apartments	1 per 50sqm	364 sqm	8		4	8
Residential Visitors	1 per 6 dwellings		14	14		14
Serviced Apt Visitors	0.1 per number of bays required		8	8		8
Commercial Visitors	0.1 per number of bays required		1	1		1
Total			187	184	18	220

Table 6.1 Carbay breakdown.

Car parking provided with the proposal is designed in accordance with Australian Standards. A traffic impact statement is attached as an appendix to this document.

The following points are made with regard to the assessment of the proposed development by the City and the minor variance:

a) Type, number and size of dwellings

The development comprises a mix of one, two, three and four bedroom units with floor spaces ranging between 64m² and 400m². It is proposed to provide all penthouse and sub-penthouse units and selected three bedroom units will be allocated 2 car bays.

It should be noted that there is no shortfall of parking allocations to meet the City's requirements of 0.75 bays per single bedroom dwelling. The units that have not been provided with an allocation becomes insignificant when offset against the total number of bays provided including tandems & long bays across the development.

b) Public transport

Given the access to public transport within the immediate vicinity there is a focus on promoting pedestrian and cycle transport within the proposed design.

The sites proximity to high frequency public transport including bus and a ferry link to the CBD, the provision of end of trip facilities and on street parking all contribute to a varied parking demand during a typical day.

In accordance with our approach to sustainability, end of trip facilitates to promote sustainable methods of transportation have been included. Specifically, this includes a unisex toilet and restroom facility for commercial tenancies, with a total of 65 bike bays located at both ground and basement levels.

d) Tandem and Long bays

The proposed development includes a number of both compliant tandem and long bays. Every dwelling in the development that has been assigned a parking allocation. The majority of long bays will comfortably fit two standard car lengths and are perfectly suited for visitor parking behind the residential allocation.

Further to these points relating to parking, a full traffic impact statement is attached in the appendix of this document.

6.0 DEVELOPMENT REQUIREMENTS

6.5 PARKING (CONT'D)

8.5m Length Car Bay	Length (mm)	2,690	3,500	3,750	4,250	4,427	4,570	4,620	4,894	4,930
		Smart Car	Micro Car (Suzuki Alto)	Light Car (Volkswagen Polo)	Small Hatchback (Volkswagen Golf)	Compact SUV (Volkswagen Tiguan)	Medium SUV (Toyota RAV4)	Small Sedan (Toyota Corolla)	Large Sedan (Holden Commodore)	Large 4x4 (Toyota Prado)
Smart Car	2,690									
Micro Car (Suzuki Alto)	3,500									
Light Car (Volkswagen Polo)	3,750									
Small Hatchback (Volkswagen Golf)	4,250									
Compact SUV (Volkswagen Tiguan)	4,427									
Medium SUV (Toyota RAV4)	4,570									
Small Sedan (Toyota Corolla)	4,620									
Large Sedan (Holden Commodore)	4,894									
Large 4x4 (Toyota Prado)	4,930									

Table 6.2 Car Length Comparison Matrix.

6.6 SAFETY & SECURITY: DESIGNING OUT CRIME

The ground level contains a cafe adjacent to the commercial lobby which provides for an appropriate level of surveillance to the south face of the building. The ground floor is generally open creating safe public spaces with clear sight-lines. The frontage is well protected from adverse weather with a continuous canopy while the transparent nature of the commercial tenancy and residential lobby enhance surveillance.

The proposed development contains high quality articulated elevations to both primary and secondary street frontages. The inclusion of major openings, balconies, varied materials and colours and detailed features in design afford activity and surveillance around the entire site and create an attractive and interesting development.

Habitable rooms and balconies address all sides of the development providing a continuous passive surveillance of the area. This passive security is further enhanced by the street-facing apartments at podium level in the revised design.

The right of way is activated with the car park entry and visitors parking. In these areas light levels will be boosted by artificial lighting activated by light level sensors. At night additional lighting will be activated by movement sensor.

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.

Providing a sense of place that is responsive to CPTED (Crime Prevention Through Environmental Design) principles is critical to the design of the project.

Principles adopted are:

- 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 behaviour, 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.

7.0 RESOURCE EFFICIENCY & SUSTAINABILITY

Hillam Architects have an excellent track record in providing sustainable apartment buildings in Perth.

A highly successful example of this is Verde Apartments in East Perth provides various passive and active sustainable systems delivering positive environmental outcomes.

This project offers an excellent opportunity to showcase how a large mixed use building can utilise design features, materials and good quality finishes and selections to achieve a sustainable outcome. By focussing on the solar passive principles and incorporating sustainable features and systems, a strong environmental outcome will be achieved that occupants and surrounding residence will embrace.

It is the intent of the applicant to achieve a 4 Green Star rating to set the benchmark for future developments in the area and, further to the following summary, appendix G contains CADDS Group's letter of intent and sustainability strategy that outline how these best practices will be implemented.

7.1 ENERGY EFFICIENCY

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

- Centralised hot water system using heat pump technology.

- The building has been designed to maximise solar access, facilitate cross ventilation and reduce energy consumption.

- 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.

- Natural light and ventilation to common corridors.

- Highly insulated structure including if necessary roof, walls and slabs.

- Sensor controlled lighting to car parking and common corridors.

- Car park ventilation system controlled by CO2 sensors.

- Electrical sub-metering provided for substantial energy uses (eg major plant) to allow for the monitoring and management of significant consumption patterns.

- 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.

- Maximisation of natural ventilation to ground floor car park and car park ventilation systems minimised through natural ventilation and controlled by CO2 sensors.

- Deep set external facing balconies provide significant shading to glazing to living areas in apartments.

- Provision of water-wise fixtures and fittings that comply with BCA requirements for WELS star ratings.

- Implementation of low energy hot water heating services.

- High level metering strategy

- High performance glazing

- Provision of energy efficient appliances and light fittings to apartment and commercial units.

- 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.

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

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

7.2 PASSIVE SOLAR DESIGN / SOLAR ACCESS & SHADING

The apartment layout minimises west facing apartments and prioritises the north 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.

7.3 CROSS VENTILATION PRINCIPLES

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. A large south facing window will provide internal circulation corridors on upper levels with great views and natural ventilation.

7.0 RESOURCE EFFICIENCY & SUSTAINABILITY

7.4 WATER MANAGEMENT

Each apartment will also be installed with water-wise fixtures and fittings complying with BCA requirements for WELS star ratings along with reduced waste piping runs where possible.

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

Grey water recycling will be employed in the irrigation of communal landscaped areas.

7.5 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 there 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 & OUTDOOR SPACE

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

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. The proposed soft landscaping at ground floor level has been designed as a buffer that enhances and softens the contemporary building form.

The podium terrace offers a modern twist on the urban paradise. 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. Fragrant and floral planting along with frangipani trees will enhance the rooftop and offer a unique space for the residents to relax.

It is proposed a minimum of 60% local native fauna will be introduced with a specific use of plants indigenous to the immediate area.

The design and incorporation of any irrigation and rainwater management will be in line with the Water Corporations Water Wise Development criteria.

7.7 TRANSPORT

This project offer high levels of parking along with cyclist facilities and scooter bays, well above the minimum requirements as set by the planning policy. The surrounding areas include abundant amenities that enable the occupants to utilise alternative transport methods such as public transport, walking or cycling along with offering a variety of social spaces including cafés, restaurants, parks and shops.

This location achieves a Walk Score of 63 and a Transit Score of 51. This denotes that numerous errands can be accomplished on foot and has good transportation options.

Outlined below are some of the copious facilities located nearby:

- South Perth Ferry Terminal;
- Perth Zoo;
- IGA Shopping centre
- Richardson Park;
- Windsor Park;
- Windsor Hotel;
- Post office; and
- Multiple bus routes.

7.8 MATERIALS

Due to the large volume of built form within this project, a detailed review of the materials, layouts and construction shall be undertaken. All materials, where applicable, shall have environmental certifications and manufacturing quality certification, shall have low VOC and formaldehyde content, shall seek to have recycled or eco preferred content and product stewardship.

By imposing these criteria to the materials of this project will vastly reduce the environmental impact this building has.

- Environmental materials selections
- Reused or recycled content
- Minimal airborne toxins

8.0 PRIVACY

8.1 VISUAL PRIVACY

Appropriate screening will be introduced between apartment balconies to ensure privacy without adversely impacting the architectural façade. Lightweight obscurely glazed 'fins' will be installed that provide visual and acoustic separation without adding bulk to the elevation. The details of the screening will be provided with the Building License application, with schematic planning for the screening indicated on the attached development plans.

8.2 ACOUSTIC SEPARATION

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' will be adhered to prior to building license.

9.0 SITE FACILITIES

9.1 STORAGE FOR DWELLINGS

All dwellings are provided with lockable storage rooms. These spaces are located on a designated storage and services level along with parking levels throughout the development. Each apartment is provided with a functional, lockable and accessible storage satisfying the minimum 4m² requirement.

9.2 STORM WATER

Storm water will be designed to meet Australian Standards, NCC and The City of South Perth requirements.

9.3 BUILDING SERVICES

Air Conditioning and Plant

All services are positioned to ensure they provide no adverse visual impact on the overall aesthetic of the development and streetscape. On this basis air-conditioning units have been located on a services level set back within screening elements to ensure they are unobtrusive from adjacent residential developments and the public view. The screening has been intentionally articulated as a continuation of the façade pattern from the commercial tenancies below to become integrated within the overall development.

Remaining condenser units are located on a screened services deck that have been incorporated into the design of the southern elevation.

Waste Collection

Waste minimisation strategies have been developed including the provision of a large bin store located off the southern access way. The residential bin store is located at ground level that is concealed with a bin layout area that is contained within the property. 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 Private Waste Contractor 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 Appendix C and the Waste Management Plan prepared by the Consultant Talis Consultants attached.

Traffic management strategies have been developed following an assessment of the impacts associated with parking and traffic generation resulting from the proposed development.

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".

Car parking is proposed to be located on the basement, ground, first and second floor levels with at grade access proposed off Mill Point Road. Based on Schedule 9 of the City's Town Planning Scheme the car parking provisions for the proposed development are in excess of the requirements.

Vehicle access at the south western corner of the site has been widened to 6m to ensure adequate space for the waste collection vehicle can park without causing conflict with vehicles entering or exiting the site. Given the low frequency of movements by rubbish collection vehicles together with the low speed and number of movements to and from the site will result in a low likelihood of conflict.

Refer also to Appendix D and the Traffic Management Plan prepared by Shawmac attached.

9.0 SITE FACILITIES

9.3 BUILDING SERVICES (CONT'D)

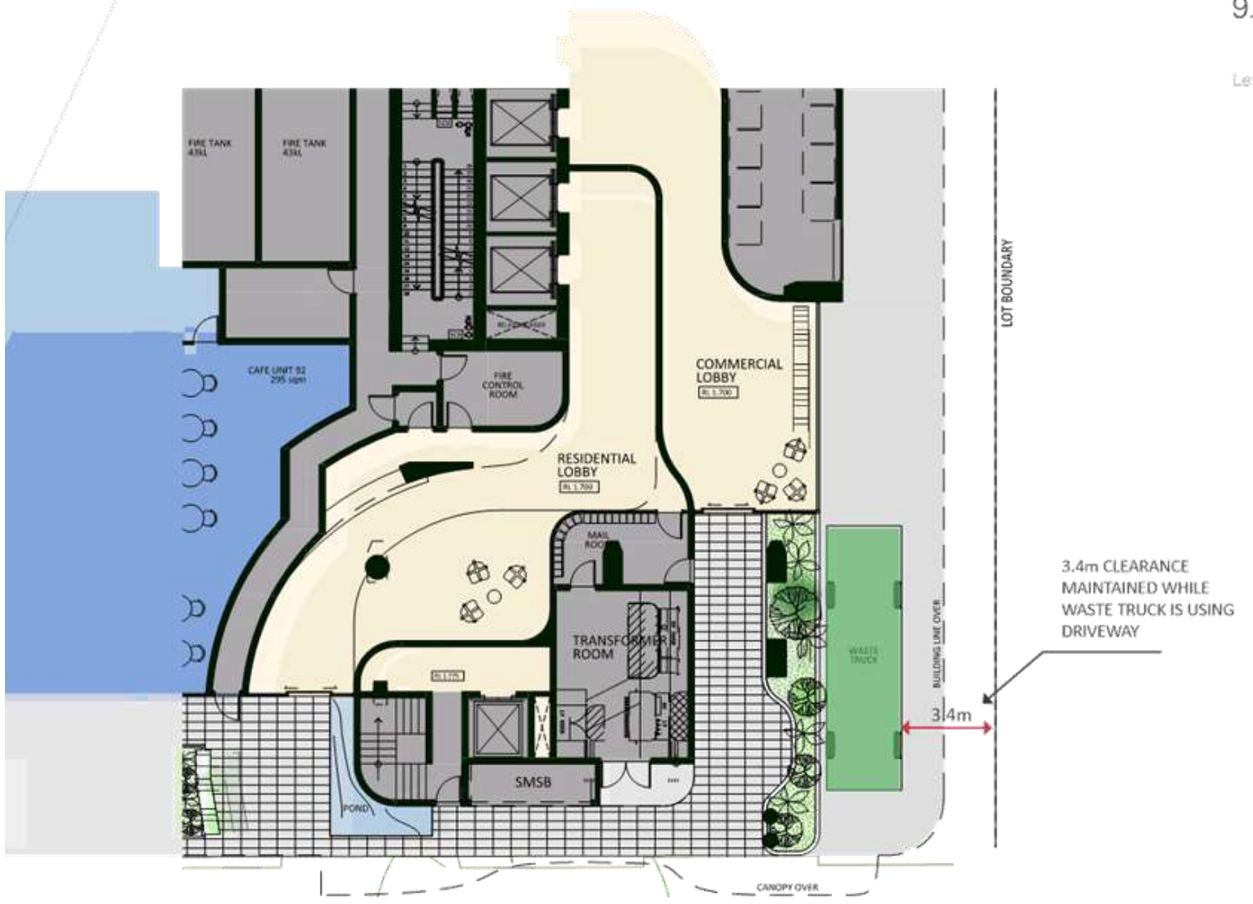


Diagram 9.1 Proposed waste truck parking for bin collection.

9.4 LETTERBOXES

Letter boxes are conveniently provided at the residential lobby entrance off Mill Point Road.

APPENDIX

A. Architectural Drawings

B. Perspectives

C. Waste Management Report

D. Traffic Management Report

E. Land Title

A. ARCHITECTURAL DRAWINGS

B. PERSPECTIVES

Exterior view looking south.

View of lobby.

Exterior view looking north.

Balcony view looking north.

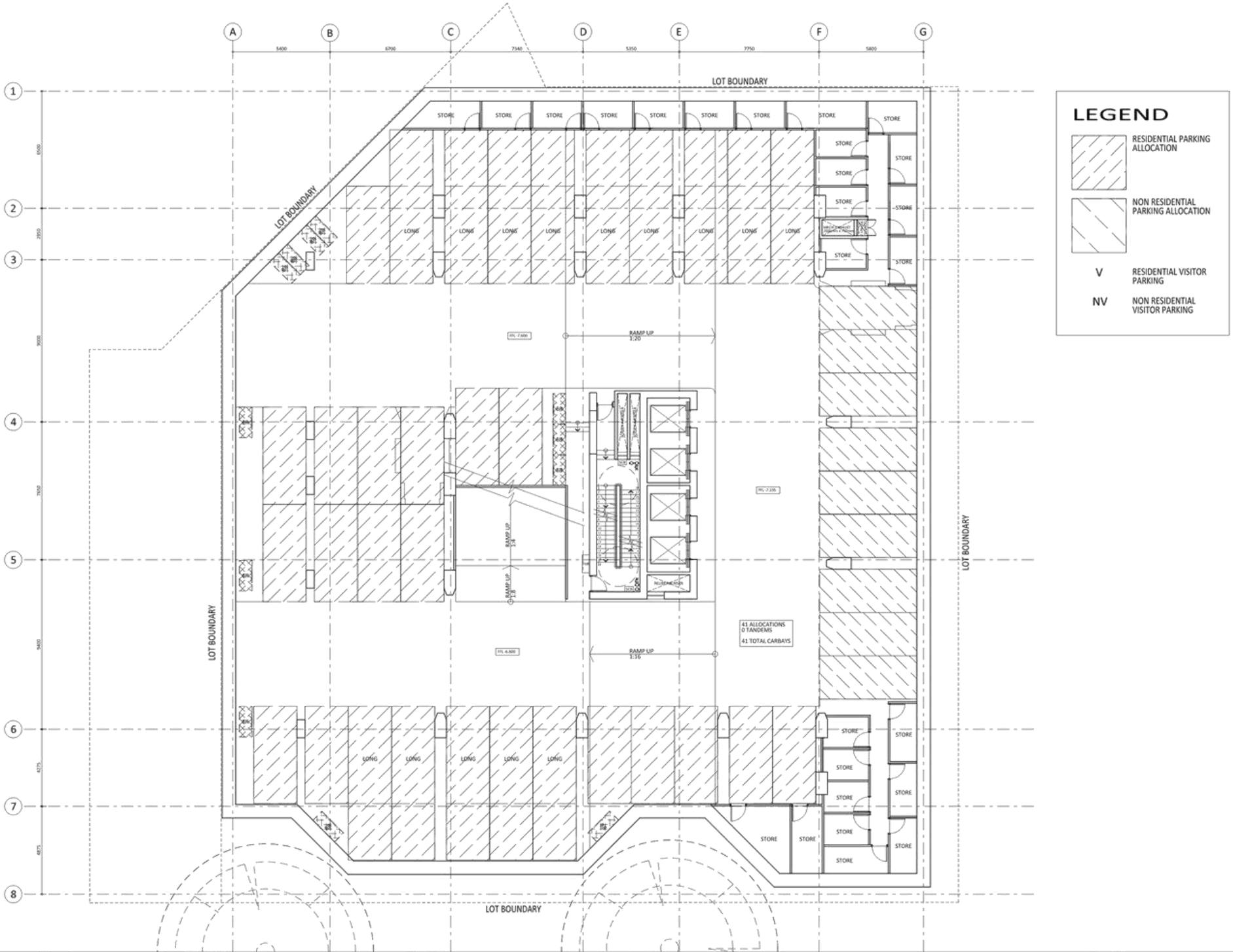
View of cafe.

View of pool deck

C. WASTE MANAGEMENT REPORT

D. TRAFFIC MANAGEMENT REPORT

E. LAND TITLES



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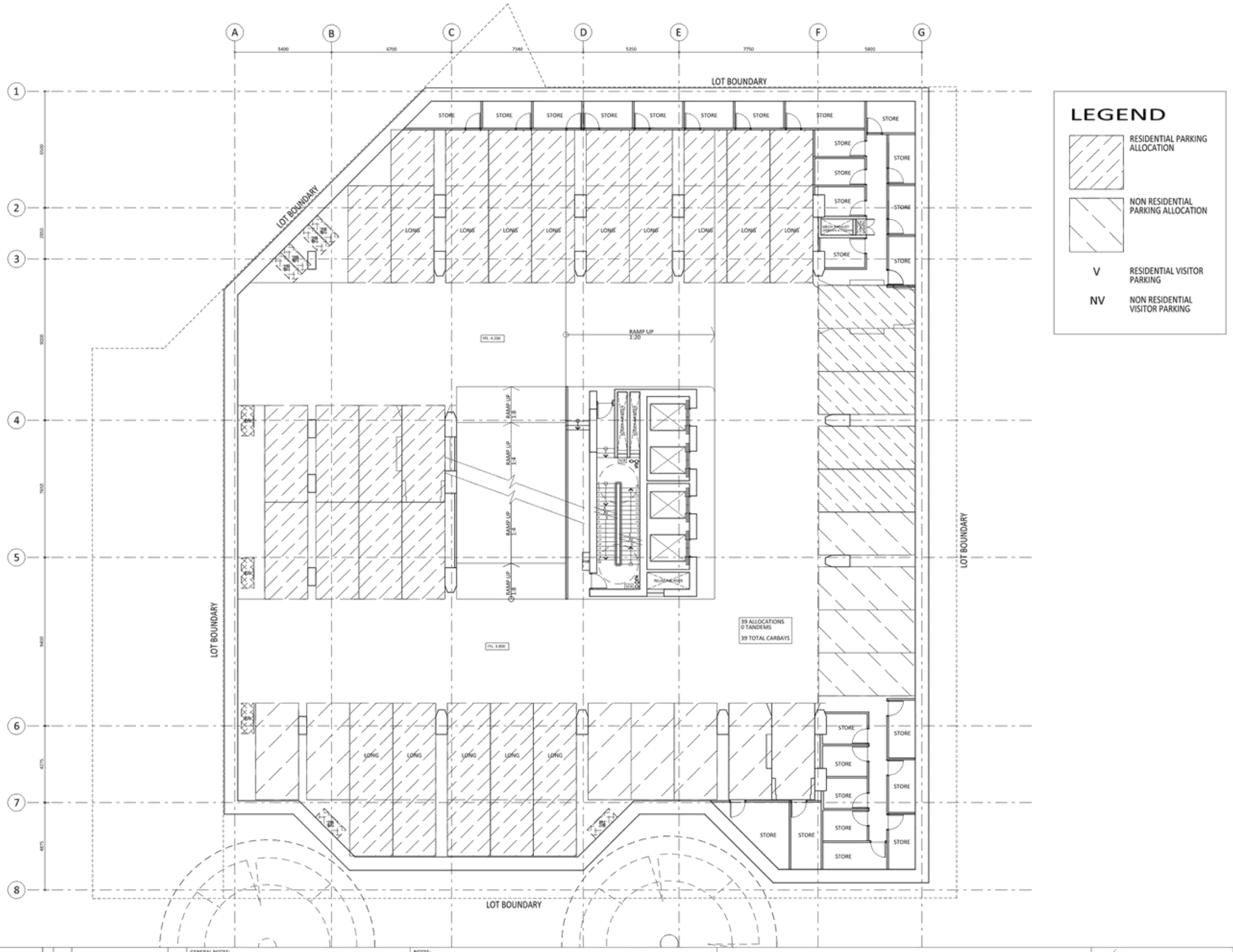

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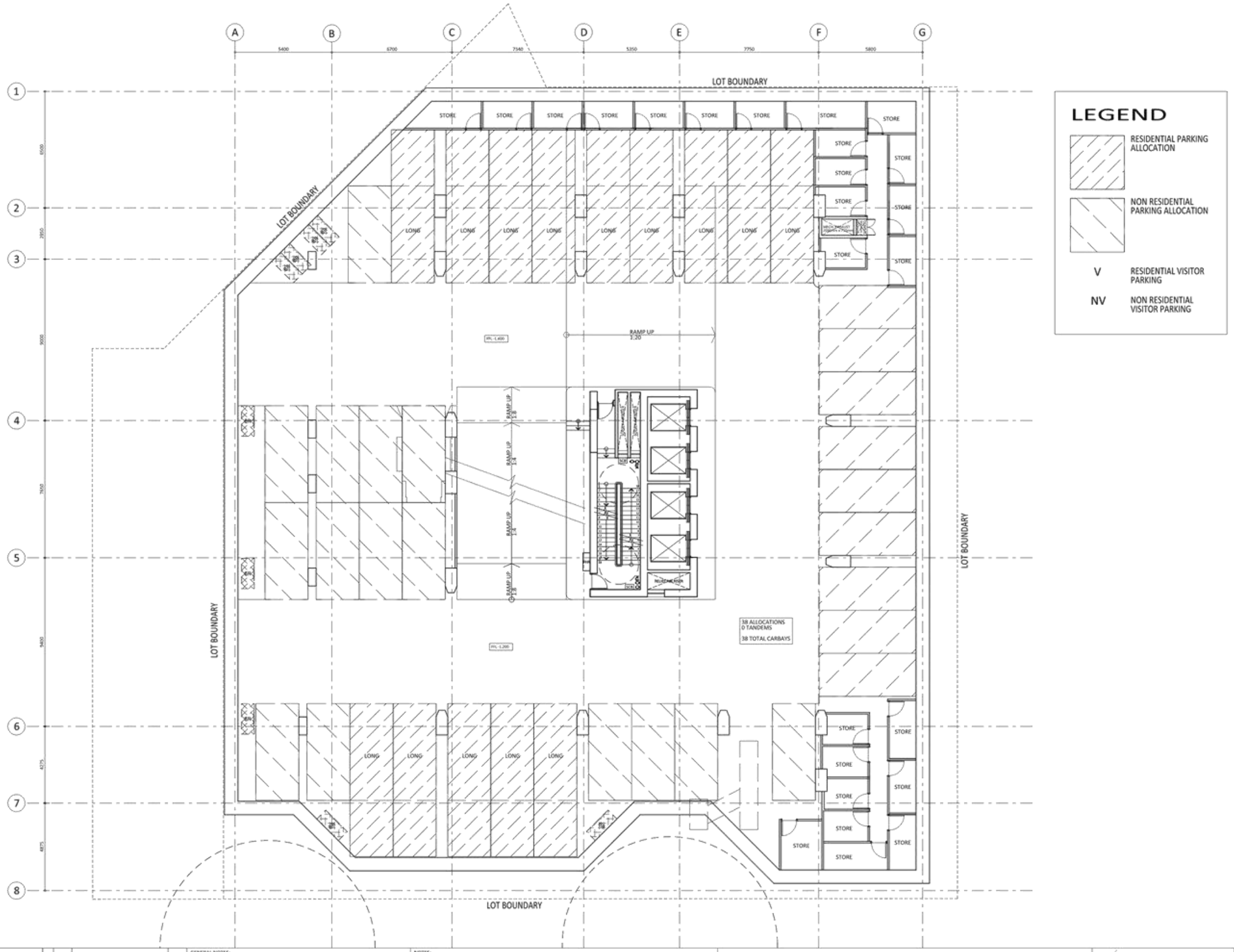

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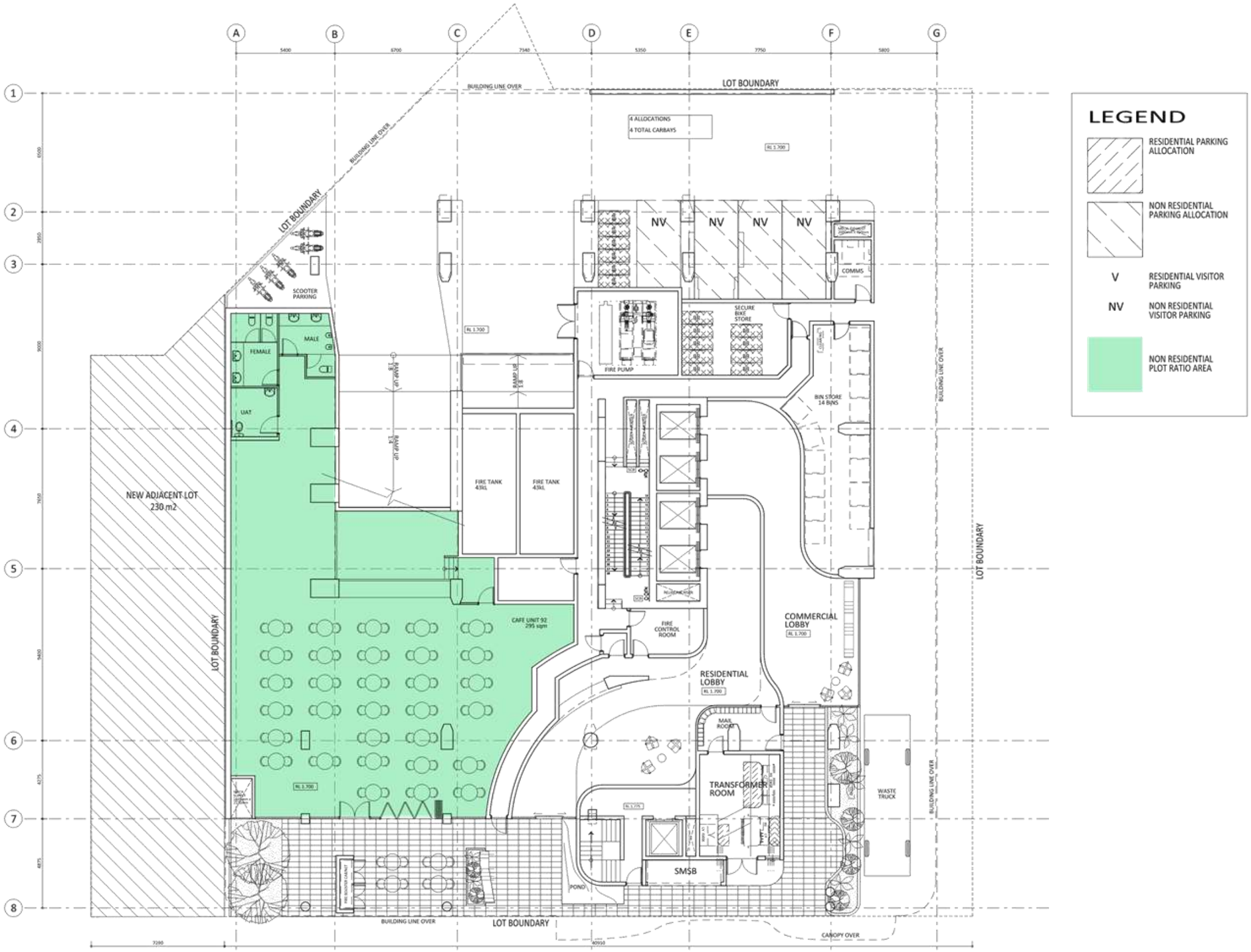

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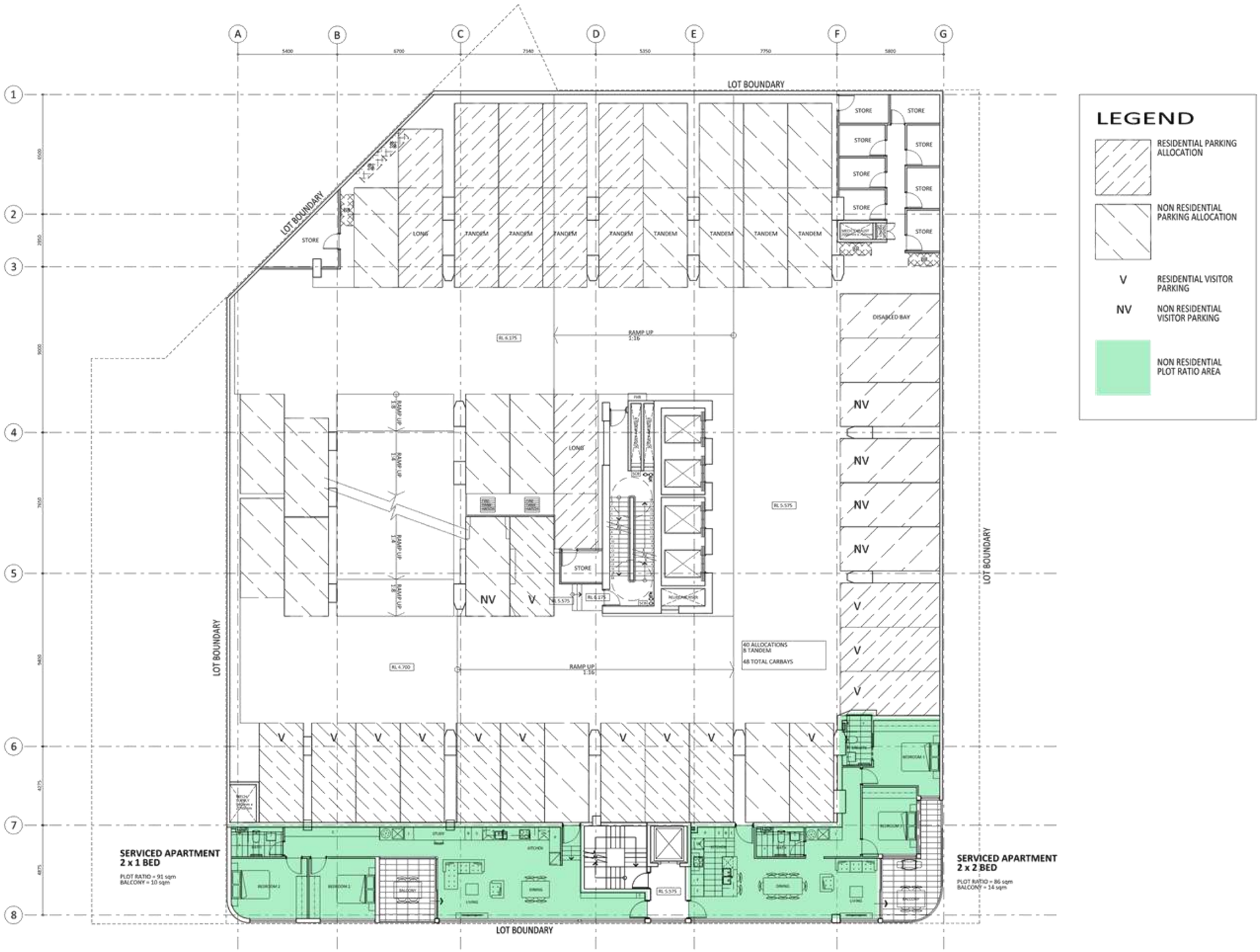

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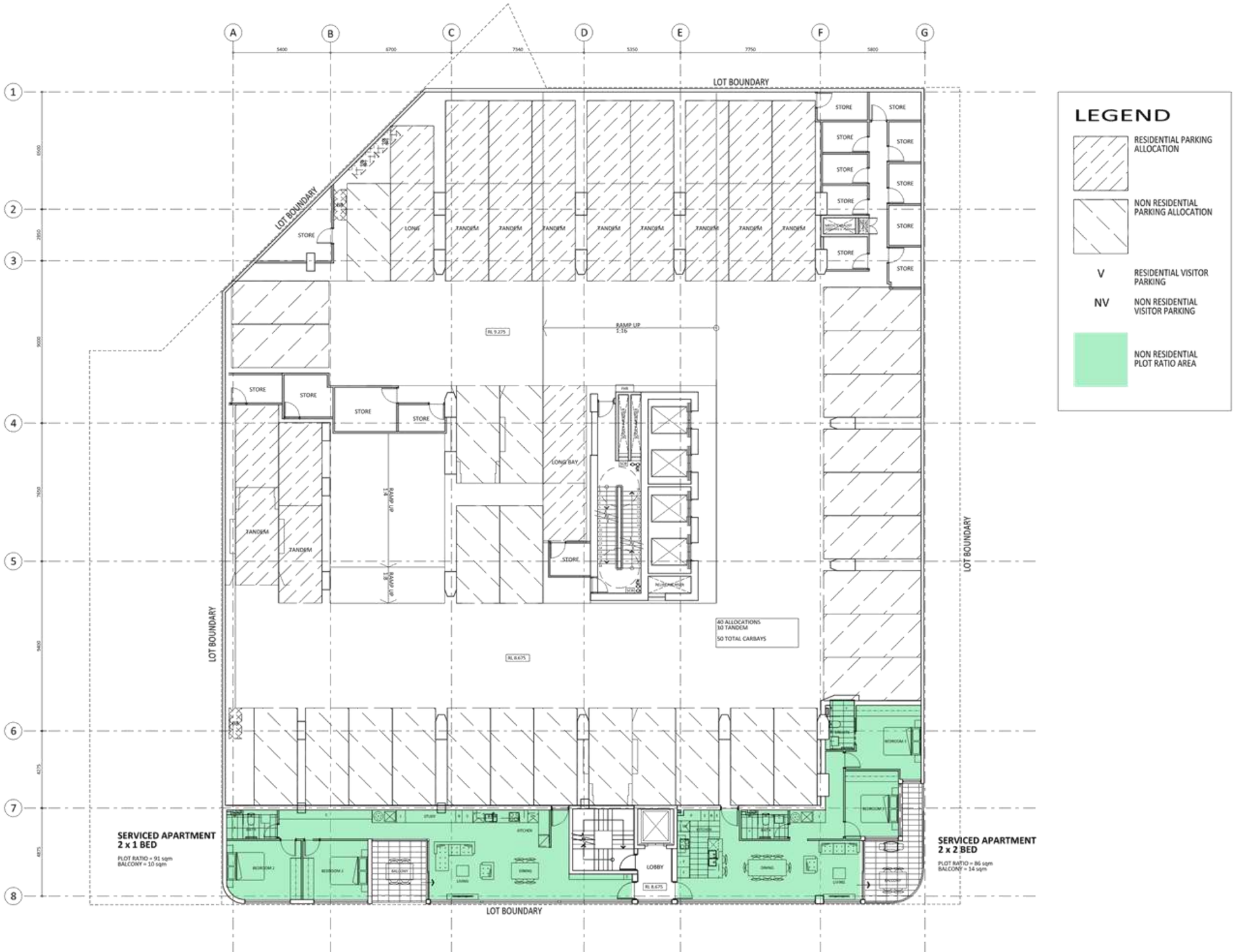

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4. THE MAIN CONTRACTOR IS TO ENSURE THAT THIS DRAWING IS READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL, HYDRAULIC, MECHANICAL & ELECTRICAL DOCUMENTATION TO ENSURE FULL CO-ORDINATION BETWEEN TRADES. PRIOR TO WORK COMMENCEMENT. ANY DISCREPANCIES ARE IMMEDIATELY TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION.
5. THE BUILDER IS RESPONSIBLE FOR MARKING "SUPERVISED" ON ALL DRAWINGS FOR WHICH A REVISION HAS BEEN ISSUED.
6. THIS DRAWING IS COPYRIGHT (C) AND REMAINS THE PROPERTY OF HILLAM ARCHITECTS. IT MUST NOT BE RETAINED, COPIED OR USED WITHOUT THE AUTHORITY OF HILLAM ARCHITECTS.

NOTES:
1. CONFIRM LOCATION OF INSPECTION/CLEANOUT POINTS TO ALL SOIL STACKS WITH ARCHITECT PRIOR TO INSTALLATION.
2. FIRE ISOLATED PASSAGEWAYS SHALL BE CLEAR OF ANY SERVICE PENETRATIONS OTHER THAN ESSENTIAL SUPPLIES FOR EMERGENCY EQUIPMENT.
3. ALL GRATES, WASTE PIPES, SOIL STACKS AND RAINWATER PIPES SHALL BE ACOUSTICALLY LAGGED.
4. FALL ALL BALCONY DRAINAGE, DRAINS TO FLOOR WASTES AS INDICATED (REFER HYDR. DWG'S.)
5. LOCATE ALL FLOOR WASTES IN POSITIONS INDICATED ON FLOOR PLANS (REFER HYDR. DWG'S.)
6. WATERPROOF MEMBRANE TO ALL BATHS, BALCONIES PLANTERS & TERRACED AREAS - REFER SPECIFICATION & WORKS SECTION: TANKING
7. ALLOW FOR SKIRTING TILES & SILL TILES TO ALL BALCONIES
8. REFER INTERIOR DOOR SCHEDULE FOR ALL DOOR SIZES & HARDWARES
9. ALL STAIR TREADS SHALL BE FITTED WITH NON-SLIP NOSINGS
10. GLASS SETTOOKING TO MEET AREAS SHALL BE IN ACCORDANCE WITH STRUCTURAL ENGINEER'S DRAWINGS.
11. SUPPLY AND INSTALLATION OF ALL HYDRAULIC AND ELECTRICAL WORK. ALL SERVICES PASSING PENETRATIONS THROUGH FLOORS WHICH REQUIRE FIRE RATING SHALL BE PROTECTED BY AN APPROPRIATELY FIRE RATED COLLAR
12. CAR BAY DIMENSIONS, AISLE WIDTHS AND CIRCULATION AREAS SHALL COMPLY WITH AS 2890.1/2004
13. ALL TACTILE INDICATORS SHALL COMPLY WITH AS1428.4
14. ALL HANDRAILS SHALL COMPLY WITH BCA SECTION D3.3 AND AUSTRALIAN STANDARD AS1428.1
15. ALL BALUSTRADES SHALL COMPLY WITH BCA SECTION D2.16 AND BE ALLOWED FOR BY THE BUILDER

HILLAM ARCHITECTS
2/55 HOOD ST SUBIACO WA
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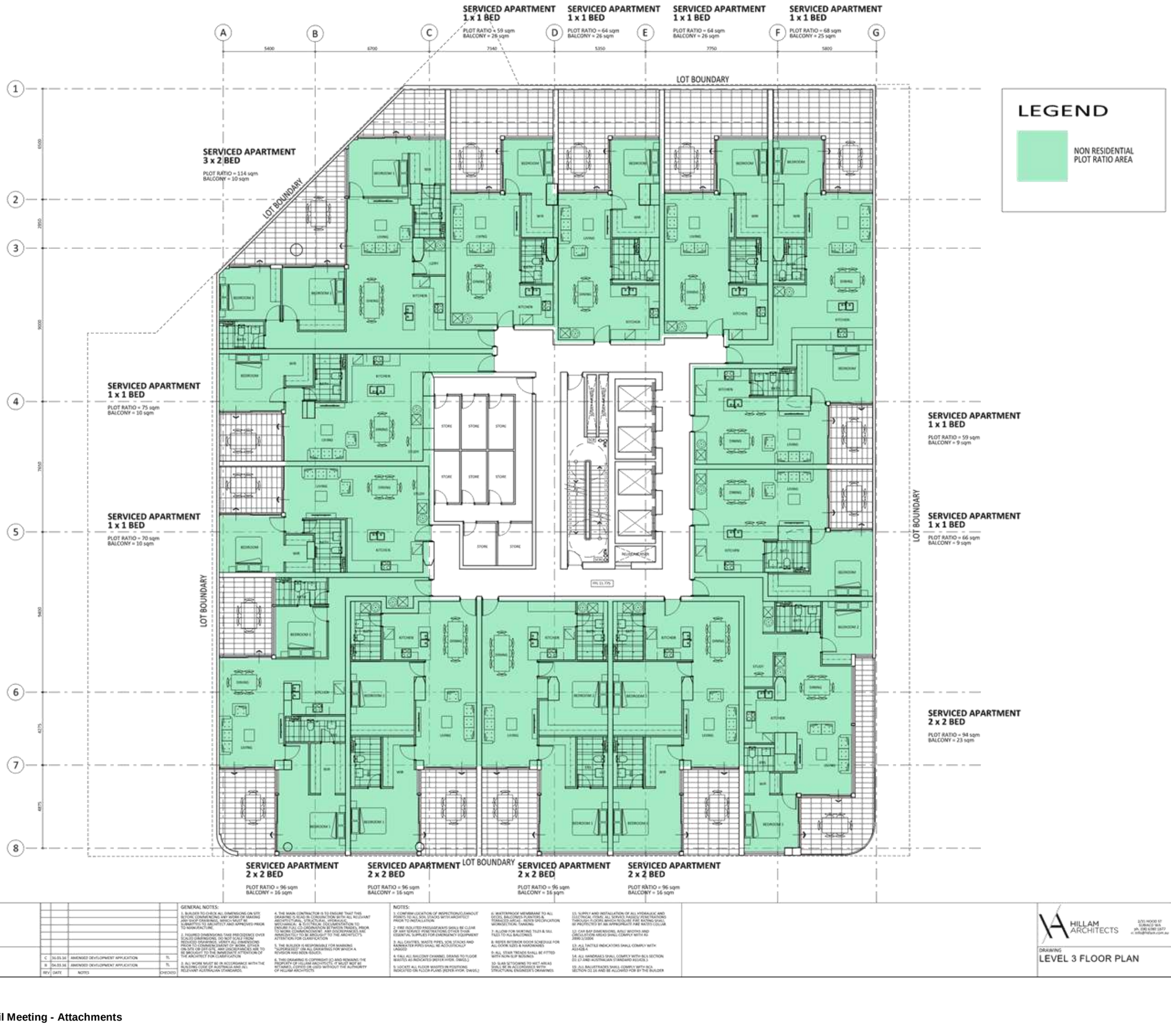
DRAWING
LEVEL 2 FLOOR PLAN

DRAWN	SH
DATE	16.03.2016
CHECKED	TL
PROJ. No	1405
SCALE	1:100
DWG No.	A2-05
REV.	C

STATUS
DEVELOPMENT APPROVAL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PLOT RATIO = 59 sqm
BALCONY = 26 sqm
SERVICED APARTMENT
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PLOT RATIO = 64 sqm
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SERVICED APARTMENT
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PLOT RATIO = 64 sqm
BALCONY = 26 sqm
SERVICED APARTMENT
1 x 1 BED
PLOT RATIO = 68 sqm
BALCONY = 25 sqm
LOT BOUNDARY
SERVICED APARTMENT
3 x 2 BED
PLOT RATIO = 114 sqm
BALCONY = 10 sqm
LOT BOUNDARY
SERVICED APARTMENT
1 x 1 BED
PLOT RATIO = 75 sqm
BALCONY = 10 sqm
SERVICED APARTMENT
1 x 1 BED
PLOT RATIO = 70 sqm
BALCONY = 10 sqm
LOT BOUNDARY
SERVICED APARTMENT
1 x 1 BED
PLOT RATIO = 59 sqm
BALCONY = 9 sqm
SERVICED APARTMENT
1 x 1 BED
PLOT RATIO = 66 sqm
BALCONY = 9 sqm
SERVICED APARTMENT
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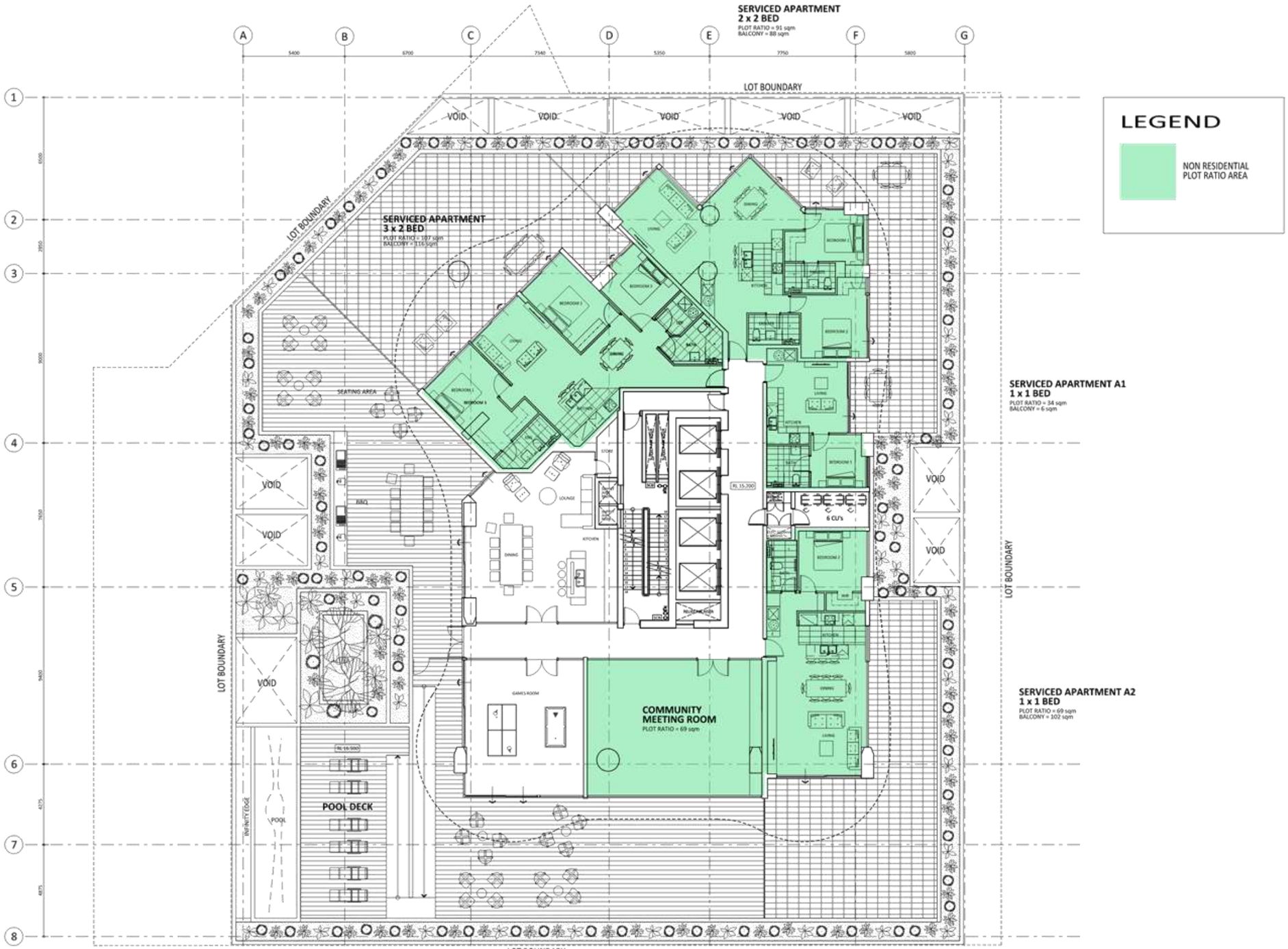
SERVICED APARTMENT
2 x 2 BED
PLOT RATIO = 96 sqm
BALCONY = 16 sqm
LOT BOUNDARY
SERVICED APARTMENT
2 x 2 BED
PLOT RATIO = 96 sqm
BALCONY = 16 sqm
SERVICED APARTMENT
2 x 2 BED
PLOT RATIO = 96 sqm
BALCONY = 16 sqm
LEGEND
NON RESIDENTIAL
PLOT RATIO AREA
PROJECT
LUMIERE
74 MILL POINT ROAD, SOUTH PERTH
CLIENT
EDGE HOLDINGS NO.6
C 16.03.16 AMENDED DEVELOPMENT APPLICATION TL
B 04.03.16 AMENDED DEVELOPMENT APPLICATION TL
REV DATE NOTES CHECKED
GENERAL NOTES:
NOTES:
HILLAM ARCHITECTS
DRAWING
LEVEL 3 FLOOR PLAN
DRAWN SH
DATE 16.03.2016
CHECKED TL
PROJ. NO 1405
SCALE 1:100
DWG No. A2-06
REV. C
STATUS
DEVELOPMENT APPROVAL



PROJECT
LUMIERE
74 MILL POINT ROAD, SOUTH PERTH

CLIENT
EDGE HOLDINGS NO.6

REV	DATE	NOTES	CHECKED
C	16.03.16	AMENDED DEVELOPMENT APPLICATION	TL
B	04.03.16	AMENDED DEVELOPMENT APPLICATION	TL

GENERAL NOTES:

1. BUILDER TO CHECK ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS, WHICH MUST BE SUBMITTED TO ARCHITECT AND APPROVED PRIOR TO MANUFACTURE.

2. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE FROM DRAWINGS. ANY DISCREPANCIES ARE TO BE NOTED PRIOR TO COMMENCEMENT. ANY WORK EITHER ON-SITE OR OFF-SITE, ANY DISCREPANCIES ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT FOR CLARIFICATION

3. ALL WORK MUST BE IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA AND ALL RELEVANT AUSTRALIAN STANDARDS.

4. THE MAIN CONTRACTOR IS TO ENSURE THAT THIS DRAWING IS READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL, HYDRAULIC, MECHANICAL & ELECTRICAL DOCUMENTATION TO ENSURE FULL CO-ORDINATION BETWEEN TRADES, PRIOR TO WORK COMMENCEMENT. ANY DISCREPANCIES ARE IMMEDIATELY TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION

5. THE BUILDER IS RESPONSIBLE FOR MARKING "SURVEYED" ON ALL DRAWINGS FOR WHICH A REVISION HAS BEEN ISSUED.

6. THIS DRAWING IS COPYRIGHT (C) AND REMAINS THE PROPERTY OF HILLAM ARCHITECTS. IT MUST NOT BE RETAINED, COPIED OR USED WITHOUT THE AUTHORITY OF HILLAM ARCHITECTS

NOTES:

1. CONFIRM LOCATION OF INSPECTION/CLEANOUT POINTS TO ALL SOIL STACKS WITH ARCHITECT PRIOR TO INSTALLATION.

2. FIRE ISOLATED PASSAGEWAYS SHALL BE CLEAR OF ANY SERVICE PENETRATIONS OTHER THAN ESSENTIAL SUPPLIES FOR EMERGENCY EQUIPMENT

3. ALL CAVITIES, WASTE PIPES, SOIL STACKS AND RAINWATER PIPES SHALL BE ACOUSTICALLY LAGGED

4. FALL ALL BALCONY CHANNEL DRAINS TO FLOOR WASTES AS INDICATED (REFER HYDR. DWGS.)

5. LOCATE ALL FLOOR WASTES IN POSITIONS INDICATED ON FLOOR PLANS (REFER HYDR. DWGS.)

6. WATERPROOF MEMBRANE TO ALL DECKS, BALCONIES, PLANTERS & TERRACED AREAS - REFER SPECIFICATION WORKSECTION & DRAWING

7. ALLOW FOR SHORTING TILES & SILL TILES TO ALL BALCONIES

8. REFER INTERIOR DOOR SCHEDULE FOR ALL DOOR SIZES & HARDWARES

9. ALL STAIR TREADS SHALL BE FITTED WITH NON-SLIP NOSINGS

10. GLASS SETTOOKINGS TO MEET AREAS SHALL BE IN ACCORDANCE WITH STRUCTURAL ENGINEER'S DRAWINGS

11. SUPPLY AND INSTALLATION OF ALL HYDRAULIC AND ELECTRICAL ITEMS, ALL SERVICE PASSES/ PENETRATIONS THROUGH FIRE RATED WALLS/FLOORS SHALL BE PROTECTED BY AN APPROPRIATE FIRE RATED COLLAR

12. CAR BAY DIMENSIONS, AISLE WIDTHS AND CIRCULATION AREAS SHALL COMPLY WITH AS 2890.1/2004

13. ALL TACTILE INDICATORS SHALL COMPLY WITH AS1428.4

14. ALL HANDRAILS SHALL COMPLY WITH BCA SECTION D3.17 AND AUSTRALIAN STANDARD AS1428.1

15. ALL BALUSTRADES SHALL COMPLY WITH BCA SECTION D2.16 AND BE ALLOWED FOR BY THE BUILDER

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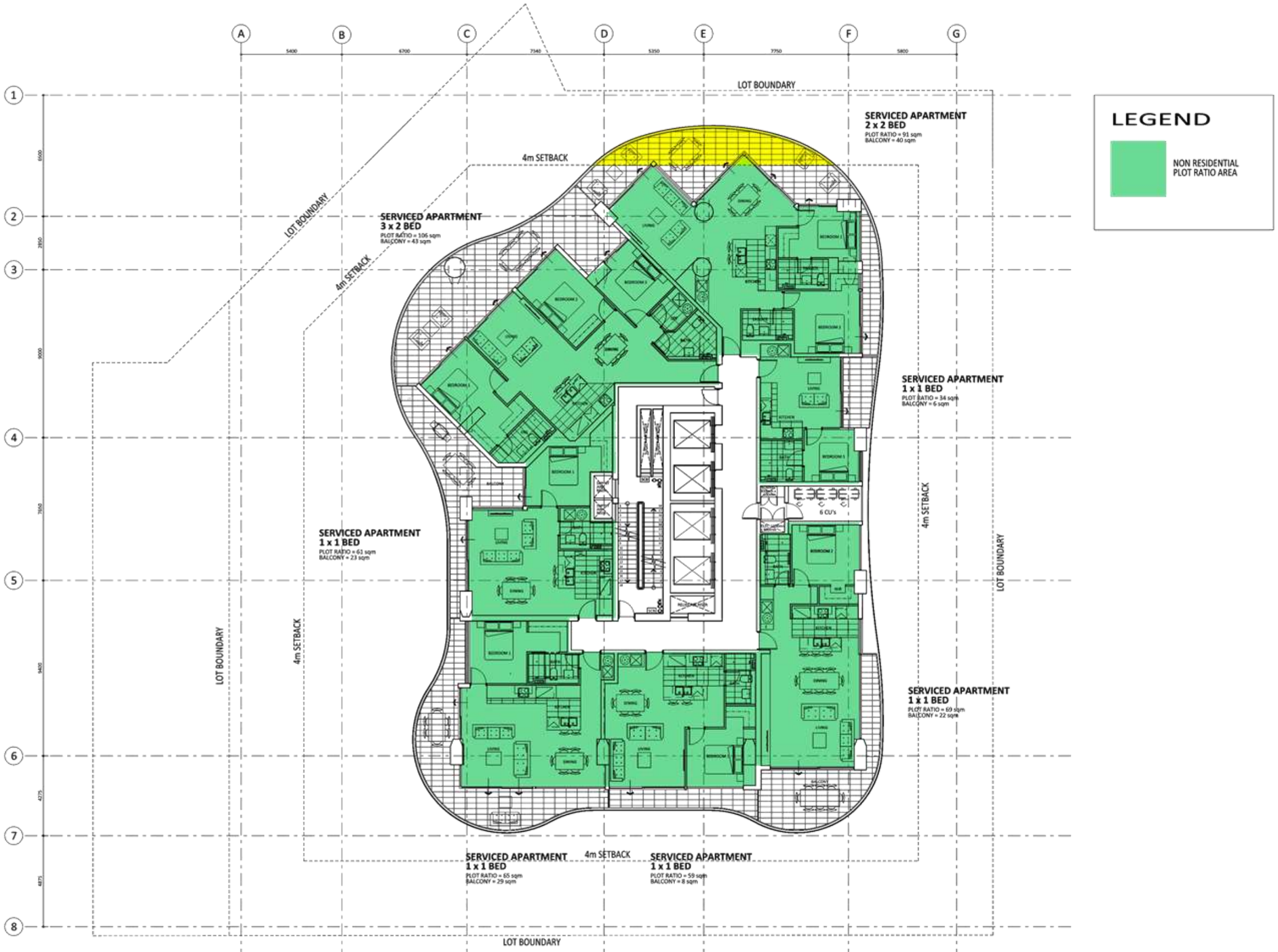
DRAWING
LEVEL 4 FLOOR PLAN

DRAWN	SH
DATE	16.03.2016
CHECKED	TL
PROJ. No.	1405
SCALE	1:100
DWG No.	A2-07
REV.	C

STATUS
DEVELOPMENT APPROVAL



PROJECT
LUMIERE
74 MILL POINT ROAD, SOUTH PERTH

CLIENT
EDGE HOLDINGS NO.6

REV	DATE	NOTES	CHECKED
C	16.03.16	AMENDED DEVELOPMENT APPLICATION	TL
B	04.03.16	AMENDED DEVELOPMENT APPLICATION	TL

GENERAL NOTES:
1. BUILDER TO CHECK ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS. ANY DISCREPANCIES TO BE SUBMITTED TO ARCHITECT AND APPROVED PRIOR TO MANUFACTURE.
2. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE FROM REDUCED DRAWINGS. VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF WORK. EITHER ON-SITE OR OFF-SITE. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT FOR CLARIFICATION
3. ALL WORK MUST BE IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA AND ALL RELEVANT AUSTRALIAN STANDARDS.
4. THE MAIN CONTRACTOR IS TO ENSURE THAT THIS DRAWING IS CO-ORDINATED WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL, HYDRAULIC, MECHANICAL & ELECTRICAL DOCUMENTATION TO ENSURE FULL CO-ORDINATION BETWEEN TRADES, PRIOR TO WORK COMMENCEMENT. ANY DISCREPANCIES ARE IMMEDIATELY TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION
5. THE BUILDER IS RESPONSIBLE FOR MARKING 'SUPERSEDED' ON ALL DRAWINGS FOR WHICH A REVISION HAS BEEN ISSUED.
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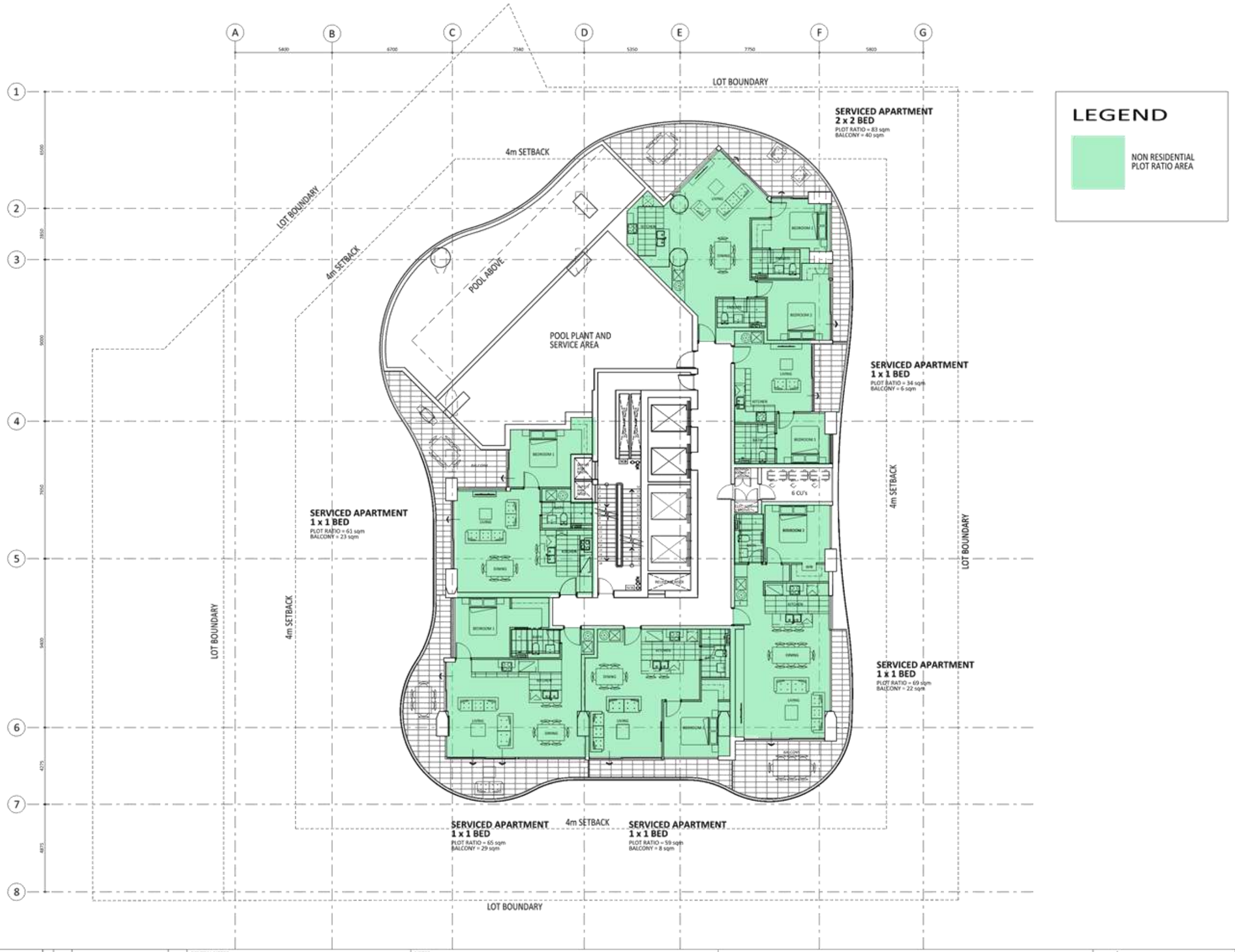
NOTES:
1. CONFIRM LOCATION OF INSPECTION/CLEANOUT POINTS TO ALL SOIL STACKS WITH ARCHITECT PRIOR TO INSTALLATION
2. FIRE ISOLATED PASSAGEWAYS SHALL BE CLEAR OF ANY SERVICE PENETRATIONS OTHER THAN ESSENTIAL SUPPLIES FOR EMERGENCY EQUIPMENT
3. ALL CAVITIES, WASTE PIPES, SOIL STACKS AND RAINWATER PIPES SHALL BE ACOUSTICALLY LAGGED
4. TAKE ALL BALCONY DRAINING DRAINS TO FLOOR WASTES AS INDICATED (REFER HYDR. DWGS.)
5. LOCATE ALL FLOOR WASTES IN POSITIONS INDICATED ON FLOOR PLANS (REFER HYDR. DWGS.)
6. WATERPROOF MEMBRANE TO ALL DECKS, BALCONIES PLANTERS & TOWNHOUSE AREAS UNDER SPECIFICATION WORKSECTION: TANKING
7. ALLOW FOR SKIRTING TILES & SILL TILES TO ALL BALCONIES
8. REFER INTERIOR DOOR SCHEDULE FOR ALL DOOR SIZES & HARDWARES
9. ALL STAIR TREADS SHALL BE FITTED WITH NON-SLIP NOSINGS
10. SLAB SLOTCHING TO NOT AREAS SHALL BE IN ACCORDANCE WITH STRUCTURAL ENGINEER'S DRAWINGS
11. SUPPLY AND INSTALLATION OF ALL HYDRAULIC AND ELECTRICAL ITEMS, ALL SERVICE PIPERS PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE FIRE RATED COLLAR
12. CAR BAY DIMENSIONS, AISLE WIDTHS AND CIRCULATION AREAS SHALL COMPLY WITH AS 2890.1/2006
13. ALL TACTILE INDICATORS SHALL COMPLY WITH AS1428.4
14. ALL HANDRAILS SHALL COMPLY WITH BCA SECTION D2.17 AND AUSTRALIAN STANDARD AS1428.1
15. ALL BALUSTRADES SHALL COMPLY WITH BCA SECTION D2.16 AND BE ALLOWED FOR BY THIS BUILDER

HILLAM ARCHITECTS
2/31 HOOD ST SUBIACO WA ph: (08) 6380 1677 e: info@hillam.com.au

DRAWING
LEVEL 5 - 21 FLOOR PLAN

DRAWN	SH
DATE	16.03.2016
CHECKED	TL
PROJ. No	1405
SCALE	1:100
DWG No.	A2-08
REV.	C

STATUS
DEVELOPMENT APPROVAL



PROJECT
LUMIERE
74 MILL POINT ROAD, SOUTH PERTH
CLIENT
EDGE HOLDINGS NO.6

REV	DATE	NOTES	CHECKED
C	16.03.16	AMENDED DEVELOPMENT APPLICATION	TL
B	03.03.16	AMENDED DEVELOPMENT APPLICATION	TL

GENERAL NOTES:
1. BUILDER TO CHECK ALL DIMENSIONS ON SITE PRIOR TO COMMENCING ANY WORK OR MAKING NEW SHOP DRAWINGS. WHERE SHOP DRAWINGS ARE SUBMITTED TO ARCHITECT AND APPROVED PRIOR TO MANUFACTURE.
2. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE FROM REDUCED DRAWINGS. VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF WORK. EITHER DIN-SITE OR OFF-SITE, ANY DISCREPANCIES ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT FOR CLARIFICATION.
3. ALL WORK MUST BE IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA AND ALL RELEVANT AUSTRALIAN STANDARDS.
4. THE MAIN CONTRACTOR IS TO ENSURE THAT THIS SET OF DRAWINGS IS READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL, HYDRAULIC, MECHANICAL & ELECTRICAL DOCUMENTATION TO ENSURE FULL CO-ORDINATION BETWEEN TRADES, PRIOR TO WORK COMMENCEMENT. ANY DISCREPANCIES ARE IMMEDIATELY TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION.
5. THE BUILDER IS RESPONSIBLE FOR MARKING "SUPERSEDED" ON ALL DRAWINGS FOR WHICH A REVISION HAS BEEN ISSUED.
6. THIS DRAWING IS COPYRIGHT (C) AND REMAINS THE PROPERTY OF HILLAM ARCHITECTS. IT MUST NOT BE RETAINED, COPIED OR USED WITHOUT THE AUTHORITY OF HILLAM ARCHITECTS.

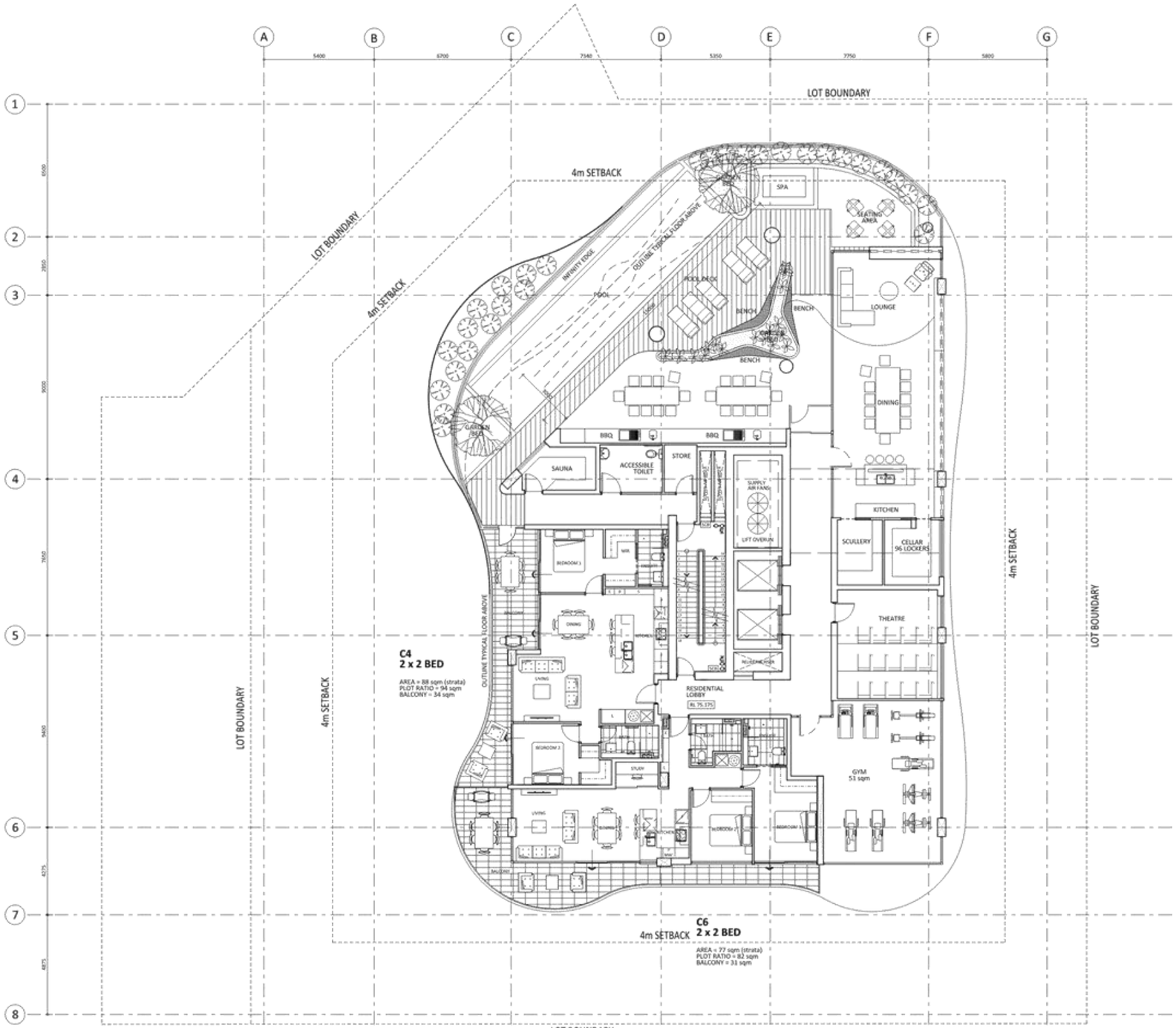
NOTES:
1. CONFIRM LOCATION OF INSPECTION/CLEANOUT POINTS TO ALL SOIL STACKS WITH ARCHITECT PRIOR TO INSTALLATION.
2. FIRE ISOLATED PASSAGEWAYS SHALL BE CLEAR OF ANY SERVICE PENETRATIONS, OTHER THAN ESSENTIAL SUPPLIES FOR EMERGENCY EQUIPMENT.
3. ALL CAVITIES, WASTE PIPES, SOIL STACKS AND RAINWATER PIPES SHALL BE ACOUSTICALLY LAGGED.
4. TAIL ALL BALCONY DRAINED, DRAINS TO FLOOR WASTES AS INDICATED (REFER HYDR. DWG'S.)
5. LOCATE ALL FLOOR WASTES IN POSITIONS INDICATED ON FLOOR PLANS (REFER HYDR. DWG'S.)
6. WATERPROOF MEMBRANE TO ALL WC/SOIL BALCONIES PLANTERS & TERRACED AREAS UNDER SPECIFICATION WORKS/ACTION: TANKING.
7. ALLOW FOR SKIRTING TILES & SILL TILES TO ALL BALCONIES.
8. REFER INTERIOR DOOR SCHEDULE FOR ALL DOOR SIZES & HARDWARES.
9. ALL STAIR TREADS SHALL BE FITTED WITH NON-SLIP NOSINGS.
10. SLAB SETDOWNS TO WET AREAS SHALL BE IN ACCORDANCE WITH STRUCTURAL ENGINEER'S DRAWINGS.
11. SUPPLY AND INSTALLATION OF ALL HYDRAULIC AND ELECTRICAL ITEMS, ALL SERVICE PENETRATIONS THROUGH FIRE & SMOKE RESISTANCE RATING SHALL BE PROTECTED BY AN APPROPRIATE FIRE RATED COLLAR.
12. CAR BAY DIMENSIONS, AISLE WIDTHS AND CIRCULATION AREAS SHALL COMPLY WITH AS 2890.1/2004.
13. ALL TACTILE INDICATORS SHALL COMPLY WITH AS1428.4.
14. ALL HANDRAILS SHALL COMPLY WITH BCA SECTION D2.17 AND AUSTRALIAN STANDARD AS1428.1.
15. ALL BALUSTRADES SHALL COMPLY WITH BCA SECTION D2.16 AND BE ALLOWED FOR BY THE BUILDER.

HILLAM ARCHITECTS
2/31 HOOD ST SUBIACO WA ph: (08) 6380 1577 e: info@hillam.com.au

DRAWING
LEVEL 22 FLOOR PLAN

DRAWN	SH
DATE	16.03.2016
CHECKED	TL
PROJ. No	1405
SCALE	1:100
DWG No.	A2-10
REV.	C

STATUS
DEVELOPMENT APPROVAL



PROJECT
LUMIERE
74 MILL POINT ROAD, SOUTH PERTH

CLIENT
EDGE HOLDINGS NO.6

REV	DATE	NOTES	CHECKED
C	16.03.16	AMENDED DEVELOPMENT APPLICATION	TL
B	04.03.16	AMENDED DEVELOPMENT APPLICATION	TL

GENERAL NOTES:
1. BUILDER TO CHECK ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS, WHICH MUST BE SUBMITTED TO ARCHITECT AND APPROVED PRIOR TO MANUFACTURE.
2. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE FROM REDUCED DRAWINGS. VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCEMENT OF WORK. EITHER OMISSIONS OR ANY DISCREPANCIES ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT FOR CLARIFICATION.
3. ALL WORK MUST BE IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA AND ALL RELEVANT AUSTRALIAN STANDARDS.
4. THE MAIN CONTRACTOR IS TO ENSURE THAT THIS DRAWING IS READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL, HYDRAULIC, MECHANICAL & ELECTRICAL DOCUMENTATION TO ENSURE THAT ALL DISCREPANCIES ARE RESOLVED PRIOR TO WORKS COMMENCEMENT. ANY DISCREPANCIES ARE IMMEDIATELY TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION.
5. THE BUILDER IS RESPONSIBLE FOR MARKING 'SURVEYED-OUT' ON ALL DRAWINGS FOR WHICH A REVISION HAS BEEN ISSUED.
6. THIS DRAWING IS COPYRIGHT (C) AND REMAINS THE PROPERTY OF HILLAM ARCHITECTS. IT MUST NOT BE RETAINED, COPIED OR USED WITHOUT THE AUTHORITY OF HILLAM ARCHITECTS.

NOTES:
1. CONFIRM LOCATION OF INSPECTION/CLEANOUT POINTS TO ALL SOIL STACKS WITH ARCHITECT PRIOR TO INSTALLATION.
2. FIRE ISOLATED PASSAGEWAYS SHALL BE CLEAR OF ANY SERVICE PENETRATIONS OTHER THAN ESSENTIAL SUPPLIES FOR EMERGENCY EQUIPMENT
3. ALL CAVITIES, WASTE PIPES, SOIL STACKS AND RAINWATER PIPES SHALL BE ACOUSTICALLY LAGGED
4. TRAY ALL BALCONY CHANNEL DRAINS TO FLOOR WASTES AS INDICATED (REFER HYDR. DWGS.)
5. SOCKET ALL FLOOR WASTES IN POSITIONS INDICATED ON FLOOR PLANS (REFER HYDR. DWGS.)
6) WATERPROOF MEMBRANE TO ALL DECKS, BALCONIES, PLANTERS & TOILET/SHOWER AREAS - REFER SPECIFICATION W/SPECIFICAL TANKING.
7) ALLOW FOR SKIRTING TILES & SILL TILES TO ALL BALCONIES.
8) REFER INTERIOR DOOR SCHEDULE FOR ALL DOOR SIZES & HARDWARES
9) ALL STAIR TREADS SHALL BE FITTED WITH NON-SLIP NOSINGS.
10) SLAB SETDOWNS TO WET AREAS SHALL BE IN ACCORDANCE WITH STRUCTURAL ENGINEER'S DRAWINGS
15) SUPPLY AND INSTALLATION OF ALL HYDRAULIC AND ELECTRICAL ITEMS, ALL SERVICE PASSES/ PENETRATIONS THROUGH FLOORS, WHICH REQUIRE FIRE RATING SHALL BE PROTECTED BY AN APPROPRIATE FIRE RATED COLLAR
12) CAR BAY DIMENSIONS, AISLE WIDTHS AND CIRCULATION AREAS SHALL COMPLY WITH AS 2890.1/2004
13) ALL TACTILE INDICATORS SHALL COMPLY WITH AS1428.4
14) ALL HANDRAILS SHALL COMPLY WITH BCA SECTION D3.3 AND AUSTRALIAN STANDARD AS1428.1
15) ALL BALUSTRADES SHALL COMPLY WITH BCA SECTION D2.16 AND BE ALLOWED FOR BY THE BUILDER

HILLAM ARCHITECTS
2/31 HOOD ST SUBIACO WA
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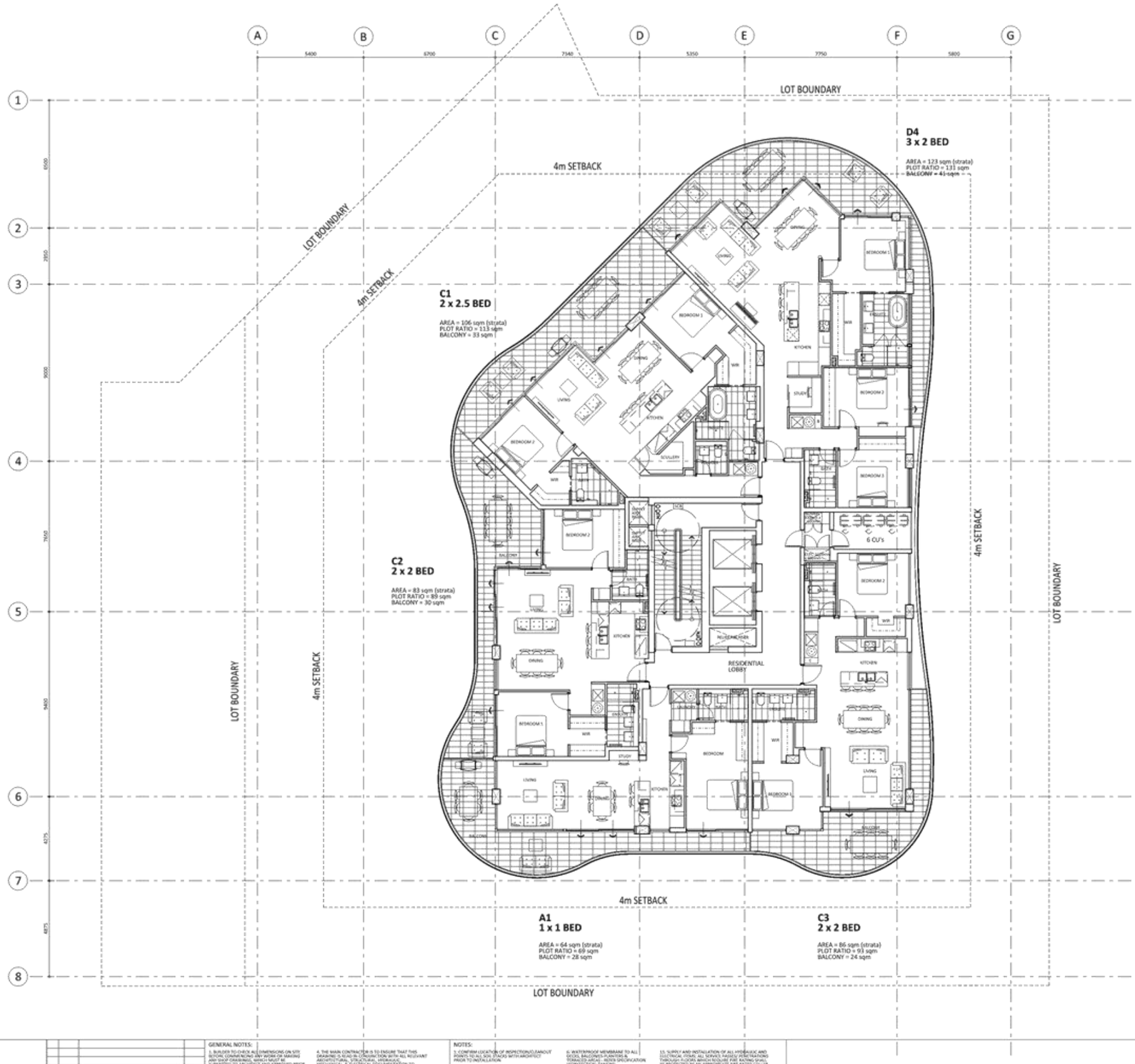
e. info@hillam.com.au

DRAWING
LEVEL 23 FLOOR PLAN

DRAWN SH
DATE 16.03.2016
CHECKED TL
PROJ. No 1405
SCALE 1:100
DWG No. A2-11
REV. C

STATUS
DEVELOPMENT APPROVAL



PROJECT
LUMIERE
74 MILL POINT ROAD, SOUTH PERTH
CLIENT
EDGE HOLDINGS NO.6

REV	DATE	NOTES	CHECKED
C	16.03.16	AMENDED DEVELOPMENT APPLICATION	TL
B	04.03.16	AMENDED DEVELOPMENT APPLICATION	TL

GENERAL NOTES:
1. BUILDER TO CHECK ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS. WORK MUST BE SUBMITTED TO ARCHITECT AND APPROVED PRIOR TO MANUFACTURE.
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NOTES:
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2. FIRE ISOLATED PASSAGEWAYS SHALL BE CLEAR OF ANY SERVICE PENETRATIONS OTHER THAN ESSENTIAL SUPPLIES FOR EMERGENCY EQUIPMENT
3. ALL CAVITIES, WASTE PIPES, SOIL STACKS AND RAINWATER PIPES SHALL BE ACOUSTICALLY LAGGED
4. FALL ALL BALCONY CHANNEL DRAINS TO FLOOR WASTES AS INDICATED (REFER HYDR. DWGS.)
5. SOCKET ALL FLOOR WASTES IN POSITIONS INDICATED ON FLOOR PLANS (REFER HYDR. DWGS.)
6. WATERPROOF MEMBRANE TO ALL DECKS, BALCONIES, PLANTERS & TERRACED AREAS - REFER SPECIFICATION WORKSECTION: TANKING
7. ALLOW FOR MORTINE TILES & SILL TILES TO ALL BALCONIES
8. REFER INTERIOR DOOR SCHEDULE FOR ALL DOOR SIZES & HARDWARES
9. ALL STAIR TREADS SHALL BE FITTED WITH NON-SLIP NOSINGS
10. SLAB SETTDOWNS TO WET AREAS SHALL BE IN ACCORDANCE WITH STRUCTURAL ENGINEER'S DRAWINGS
15. SUPPLY AND INSTALLATION OF ALL HYDRAULIC AND ELECTRICAL ITEMS, ALL SERVICE PASSES/ PENETRATIONS THROUGH FIRE RATED WALLS/FLOORS TO BE PROTECTED BY AN APPROPRIATE FIRE RATED COLLAR
12. CAR BAY DIMENSIONS, AISLE WIDTHS AND CIRCULATION AREAS SHALL COMPLY WITH AS 2890.1/2004
13. ALL TACTILE INDICATORS SHALL COMPLY WITH AS1428.4
14. ALL HANDRAILS SHALL COMPLY WITH BCA SECTION D3.3 AND AUSTRALIAN STANDARD AS1428.1
15. ALL BALUSTRADES SHALL COMPLY WITH BCA SECTION D2.16 AND BE ALLOWED FOR BY THE BUILDER

HILLAM ARCHITECTS
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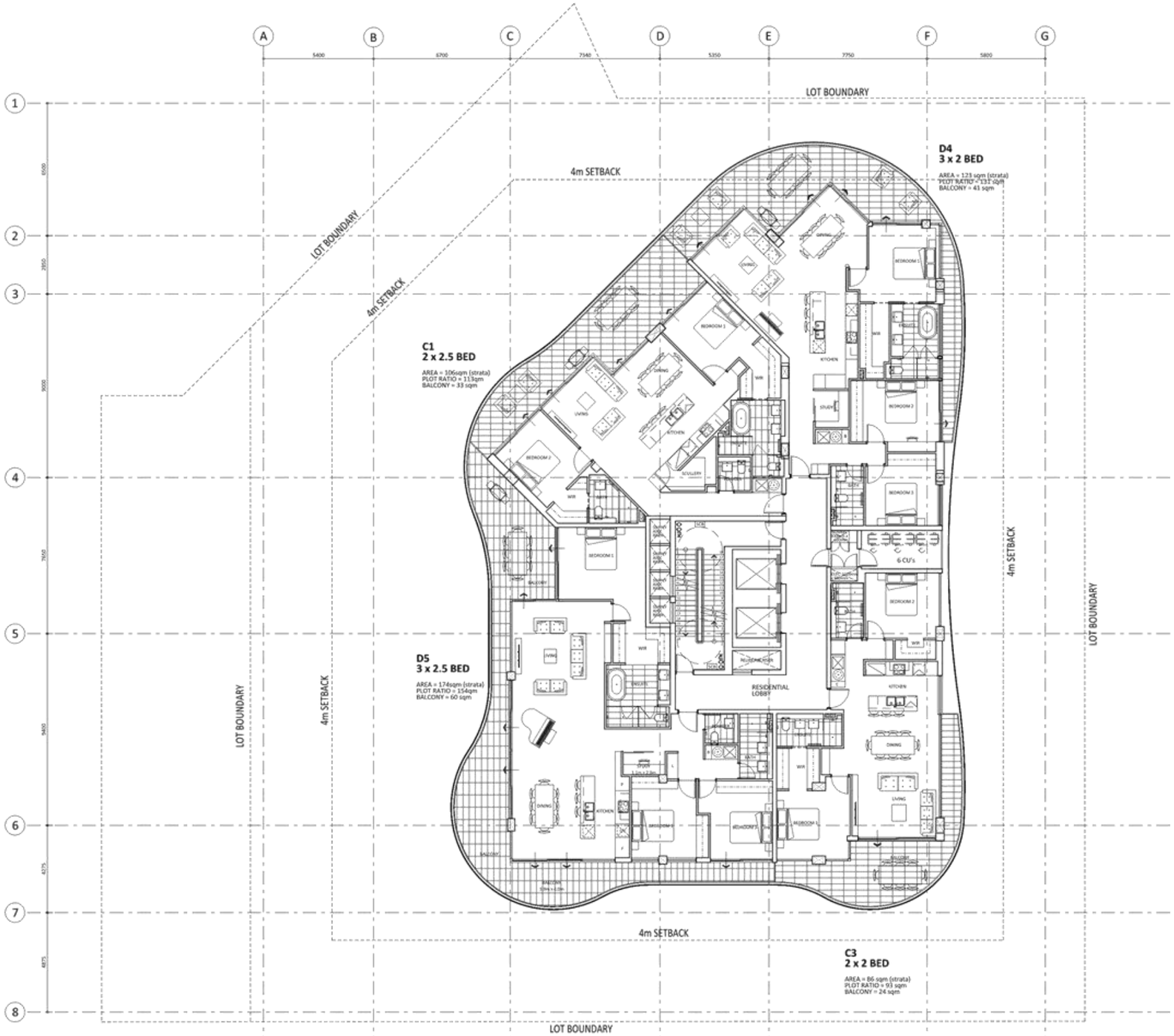
DRAWING
LEVEL 24 - 34 FLOOR PLAN

DRAWN: SH
DATE: 16.03.2016
CHECKED: TL
PROJ. No: 1405
SCALE: 1:100
DWG No.: A2-12
REV.: C

STATUS
DEVELOPMENT APPROVAL



PROJECT
LUMIERE
74 MILL POINT ROAD, SOUTH PERTH
CLIENT
EDGE HOLDINGS NO.6

REV	DATE	NOTES	CHECKED
C	16.03.16	AMENDED DEVELOPMENT APPLICATION	TL
B	04.03.16	AMENDED DEVELOPMENT APPLICATION	TL

GENERAL NOTES:
1. BUILDER TO CHECK ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS, WHICH MUST BE SUBMITTED TO ARCHITECT AND APPROVED PRIOR TO MANUFACTURE.
2. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE FROM REDUCED DRAWINGS. VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF WORK. EITHER DIMS/SITE OR DIST/SITE. ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION.
3. ALL WORK MUST BE IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA AND ALL RELEVANT AUSTRALIAN STANDARDS.
4. THE MAIN CONTRACTOR IS TO ENSURE THAT THIS DRAWING IS READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL, HYDRAULIC, MECHANICAL & ELECTRICAL DOCUMENTATION TO ENSURE CO-ORDINATION BETWEEN TRADES. PRIOR TO WORKS COMMENCING, ANY DISCREPANCIES ARE IMMEDIATELY TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION.
5. THE BUILDER IS RESPONSIBLE FOR MARKING "SUPERSEDED" ON ALL DRAWINGS FOR WHICH A REVISION HAS BEEN ISSUED.
6. THIS DRAWING IS COPYRIGHT (C) AND REMAINS THE PROPERTY OF HILLAM ARCHITECTS. IT MUST NOT BE RETAINED, COPIED OR USED WITHOUT THE AUTHORITY OF HILLAM ARCHITECTS

NOTES:
1. CONFIRM LOCATION OF INSPECTION/CLEANOUT POINTS TO ALL SOIL STACKS WITH ARCHITECT PRIOR TO INSTALLATION.
2. FIRE ISOLATED PASSAGEWAYS SHALL BE CLEAR OF ANY SERVICES PENETRATIONS OTHER THAN ESSENTIAL SUPPLIES FOR EMERGENCY EQUIPMENT.
3. ALL CAVITIES, WASTE PIPES, SOIL STACKS AND RAINWATER PIPES SHALL BE ACOUSTICALLY LAGGED.
4. TRAY ALL BALCONY DRAINING, DRAINS TO FLOOR WASTES AS INDICATED (REFER HYDR. DWGS.)
5. SOCKET ALL FLOOR WASTES IN POSITIONS INDICATED ON FLOOR PLANS (REFER HYDR. DWGS.)
6) WATERPROOF MEMBRANE TO ALL DECKS, BALCONIES, PLANTERS & TERRACED AREAS - REFER SPECIFICATION WORKSECTION: TANKING.
7. ALLOW FOR MORTINE TILES & SILL TILES TO ALL BALCONIES.
8. REFER INTERIOR DOOR SCHEDULE FOR ALL DOOR SIZES & HARDWARES.
9) ALL STAIR TREADS SHALL BE FITTED WITH NON-SLIP NOSINGS.
10. SLAB SETDOWNS TO WET AREAS SHALL BE IN ACCORDANCE WITH STRUCTURAL ENGINEER'S DRAWINGS.
11. SUPPLY AND INSTALLATION OF ALL HYDRAULIC AND ELECTRICAL ITEMS, ALL SERVICE PASSES/ PENETRATIONS THROUGH FLOORS, WHICH REQUIRE FIRE RATING SHALL BE PROTECTED BY AN APPROPRIATE FIRE RATED COLLAR.
12. CAR BAY DIMENSIONS, AISLE WIDTHS AND CIRCULATION AREAS SHALL COMPLY WITH AS 2890.1/2004.
13. ALL TACTILE INDICATORS SHALL COMPLY WITH AS1428.4.
14. ALL HANDRAILS SHALL COMPLY WITH BCA SECTION D1.12 AND AUSTRALIAN STANDARD AS1428.1.
15. ALL BALUSTRADES SHALL COMPLY WITH BCA SECTION D2.16 AND BE ALLOWED FOR BY THE BUILDER.

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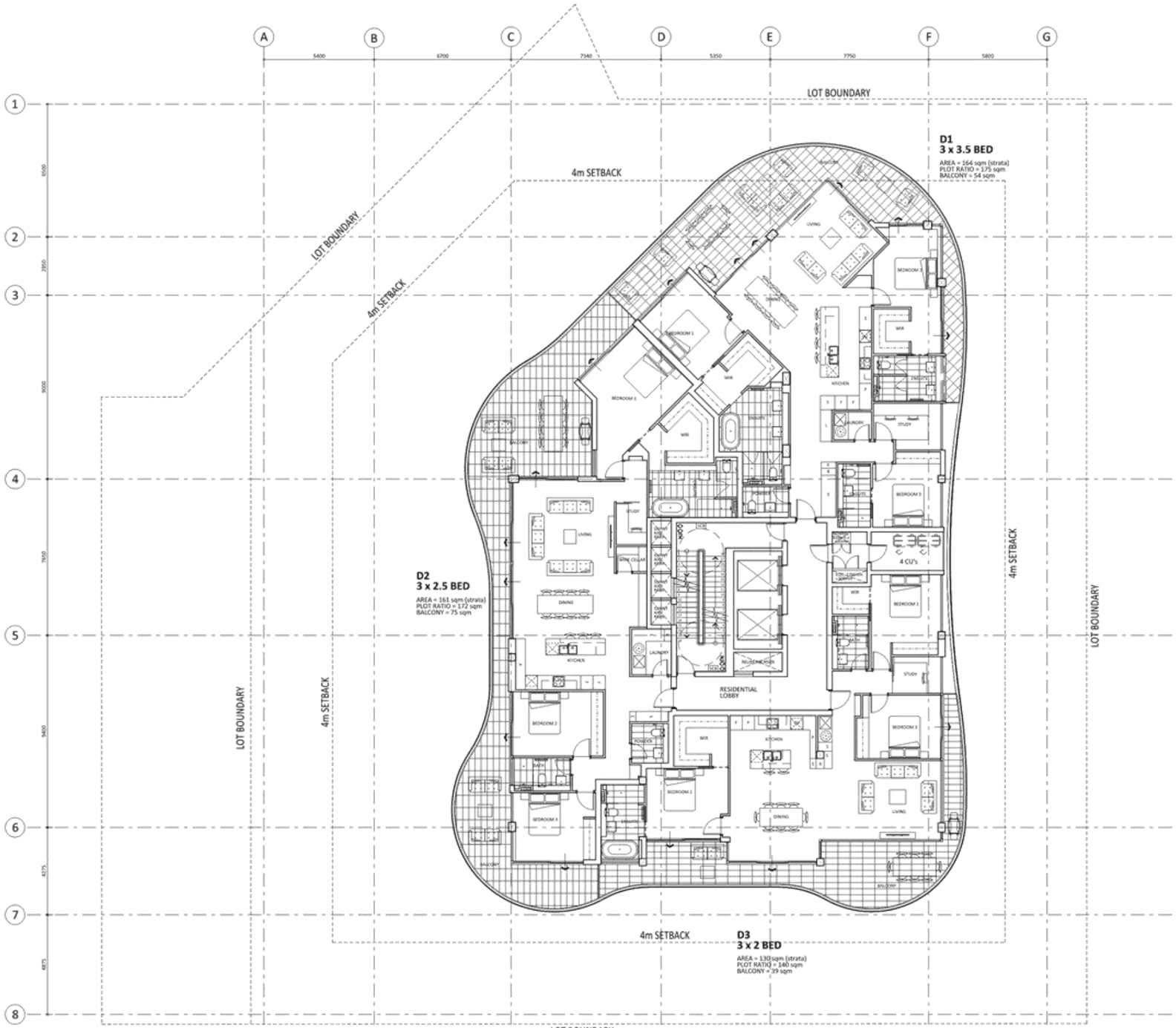
DRAWING
LEVEL 35 - 38 FLOOR PLAN

DRAWN SH
DATE 16.03.2016
CHECKED TL
PROJ. No. 1405
SCALE 1:100
DWG No. A2-13
REV. C

STATUS
DEVELOPMENT APPROVAL



PROJECT
LUMIERE
74 MILL POINT ROAD, SOUTH PERTH

CLIENT
EDGE HOLDINGS NO.6

REV	DATE	NOTES	CHECKED
C	16.03.16	AMENDED DEVELOPMENT APPLICATION	TL
B	04.03.16	AMENDED DEVELOPMENT APPLICATION	TL

GENERAL NOTES:
1. BUILDER TO CHECK ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT. ANY WORK OR MAKING ANY SHOP DRAWINGS, WHICH MUST BE SUBMITTED TO ARCHITECT AND APPROVED PRIOR TO MANUFACTURE.
2. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS, DO NOT SCALE FROM REDUCED DRAWINGS. VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF WORK. EITHER ON-SITE OR OFF-SITE. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT FOR CLARIFICATION.
3. ALL WORK MUST BE IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA AND ALL RELEVANT AUSTRALIAN STANDARDS.
4. THE MAIN CONTRACTOR IS TO ENSURE THAT THIS DRAWING IS KEPT ON CONSTRUCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL, HYDRAULIC, MECHANICAL & ELECTRICAL DOCUMENTATION TO ENSURE FULL CO-ORDINATION BETWEEN TRADES, PRIOR TO WORK COMMENCEMENT. ANY DISCREPANCIES ARE IMMEDIATELY TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION.
5. THE BUILDER IS RESPONSIBLE FOR MARKING "SUPERSEDED" ON ALL DRAWINGS FOR WHICH A REVISION HAS BEEN ISSUED.
6. THIS DRAWING IS COPYRIGHT (C) AND REMAINS THE PROPERTY OF HILLAM ARCHITECTS. IT MUST NOT BE RETAINED, COPIED OR USED WITHOUT THE AUTHORITY OF HILLAM ARCHITECTS.

NOTES:
1. CONFIRM LOCATION OF INSPECTION/CLEANOUT POINTS TO ALL SOIL STACKS WITH ARCHITECT PRIOR TO INSTALLATION.
2. FIRE ISOLATED PASSAGEWAYS SHALL BE CLEAR OF ANY SERVICE PENETRATIONS, OTHER THAN ESSENTIAL SUPPLIES FOR EMERGENCY EQUIPMENT.
3. ALL CAVITIES, WASTE PIPES, SOIL STACKS AND RAINWATER PIPES SHALL BE ACOUSTICALLY LAGGED.
4. STACK ALL BALCONY DRAINING, DRAINS TO FLOOR WASTES AS INDICATED (REFER HYDR. DWGS.)
5. LOCATE ALL FLOOR WASTES IN POSITIONS INDICATED ON FLOOR PLANS (REFER HYDR. DWGS.)
6. WATERPROOF MEMBRANE TO ALL DECKS, BALCONIES, PLANTERS & TERRACED AREAS - REFER SPECIFICATION WORKSECTION: TANKING
7. ALLOW FOR MORTINE TILES & SILL TILES TO ALL BALCONIES.
8. REFER INTERIOR DOOR SCHEDULE FOR ALL DOOR SIZES & HARDWARES
9. ALL STAIR TREADS SHALL BE FITTED WITH NON-SLIP NOSINGS
10. SLAB SETDOWNS TO WET AREAS SHALL BE IN ACCORDANCE WITH STRUCTURAL ENGINEER'S DRAWINGS
11. SUPPLY AND INSTALLATION OF ALL HYDRAULIC AND ELECTRICAL ITEMS, ALL SERVICES PASSING PENETRATIONS THROUGH FLOORS WHICH INCLUDE FIRE RATING SHALL BE PROTECTED BY AN APPROPRIATE FIRE RATED COLLAR
12. CAR BAY DIMENSIONS, AISLE WIDTHS AND CIRCULATION AREAS SHALL COMPLY WITH AS 2890.1/2004
13. ALL TACTILE INDICATORS SHALL COMPLY WITH AS1428.4
14. ALL HANDRAILS SHALL COMPLY WITH BCA SECTION D3.12 AND AUSTRALIAN STANDARD AS1428.1
15. ALL BALUSTRADES SHALL COMPLY WITH BCA SECTION D2.16 AND BE ALLOWED FOR BY THE BUILDER

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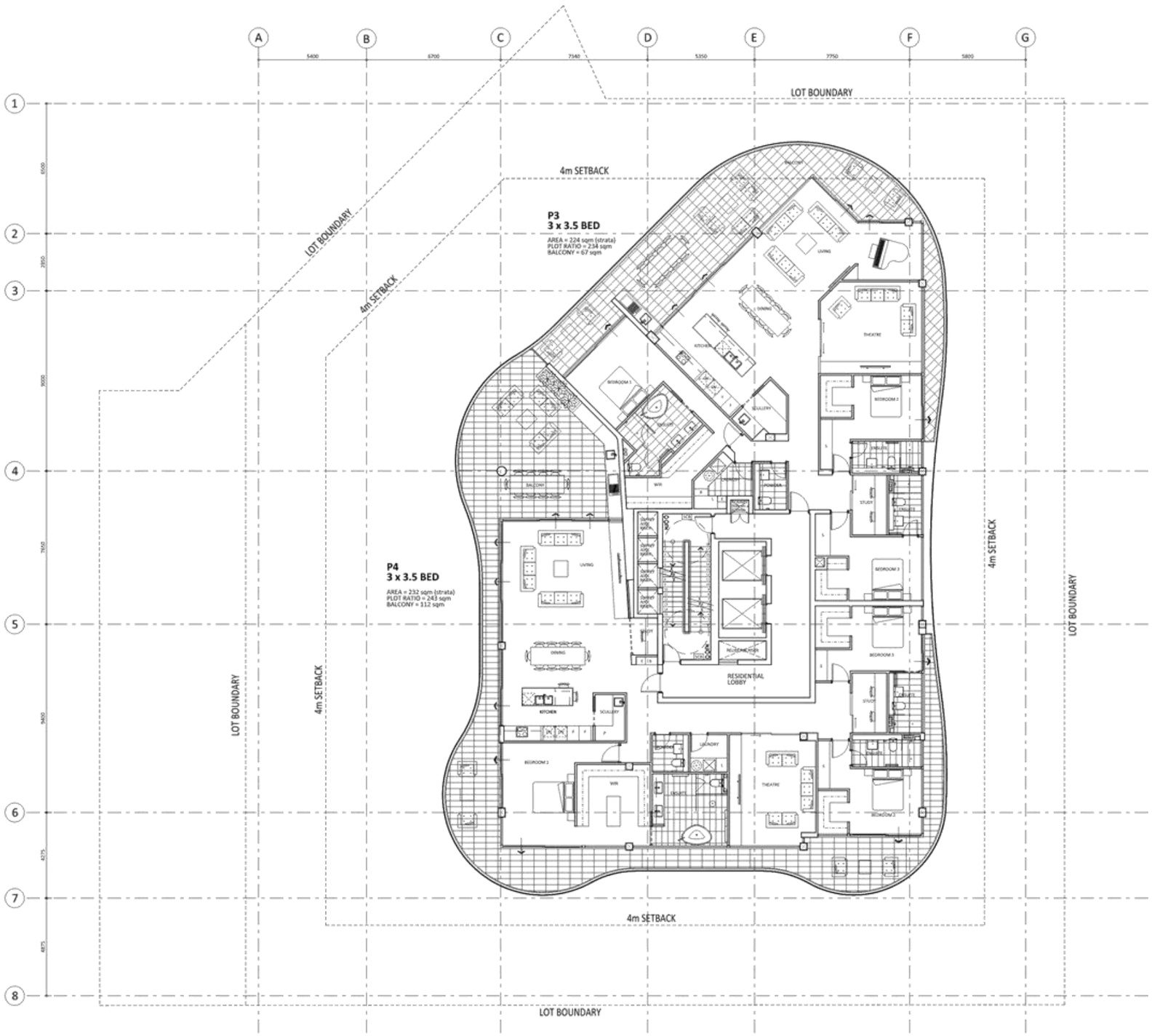
DRAWING
LEVEL 39 - 40 FLOOR PLAN

DRAWN	SH
DATE	16.03.2016
CHECKED	TL
PROJ. No.	1405
SCALE	1:100
DWG No.	A2-14
REV.	C

STATUS
DEVELOPMENT APPROVAL



PROJECT
LUMIERE
74 MILL POINT ROAD, SOUTH PERTH

CLIENT
EDGE HOLDINGS NO.6

REV	DATE	NOTES	CHECKED
C	16.03.16	AMENDED DEVELOPMENT APPLICATION	TL
B	04.03.16	AMENDED DEVELOPMENT APPLICATION	TL

GENERAL NOTES:

1. BUILDER TO CHECK ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS, WHICH MUST BE SUBMITTED TO ARCHITECT AND APPROVED PRIOR TO MANUFACTURE.

2. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE FROM REDUCED DRAWINGS. VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF WORK. EITHER ON-SITE OR OFF-SITE, ANY DISCREPANCIES ARE IMMEDIATELY TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION

3. THE BUILDER IS RESPONSIBLE FOR MARKING 'SIGNIFICANT' ON ALL DRAWINGS FOR WHICH A REVISION HAS BEEN ISSUED.

4. THE MAIN CONTRACTOR IS TO ENSURE THAT THIS DRAWING IS READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL, HYDRAULIC, MECHANICAL & ELECTRICAL DOCUMENTATION TO ENSURE FULL CO-ORDINATION BETWEEN TRADES. PRIOR TO THE COMMENCEMENT OF WORK ANY DISCREPANCIES ARE IMMEDIATELY TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION

5. THE BUILDER IS RESPONSIBLE FOR MARKING 'SIGNIFICANT' ON ALL DRAWINGS FOR WHICH A REVISION HAS BEEN ISSUED.

6. THIS DRAWING IS COPYRIGHT (C) AND REMAINS THE PROPERTY OF HILLAM ARCHITECTS. IT MUST NOT BE KEPT MADE, COPIED OR USED WITHOUT THE AUTHORITY OF HILLAM ARCHITECTS

NOTES:

1. CONFIRM LOCATION OF INSPECTION/CLEANOUT POINTS TO ALL SOIL STACKS WITH ARCHITECT PRIOR TO INSTALLATION

2. FIRE ISOLATED PASSAGEWAYS SHALL BE CLEAR OF ALL OBSTRUCTIONS AND SHALL HAVE A SLIP RESISTANCE CLASSIFICATION OF P3 OR R10

3. ALL CAVITIES, WASTE PIPES, SOIL STACKS AND RAINWATER PIPES SHALL BE ACOUSTICALLY LAGGED

4. FALL ALL BALCONY CHANNEL DRAINS TO FLOOR WASTES AS INDICATED (REFER HYDR. DWG(S).)

5. SOCKET ALL FLOOR WASTES IN POSITIONS INDICATED ON FLOOR PLANS (REFER HYDR. DWG(S).)

6. WATERPROOF MEMBRANE TO ALL WETAREAS, BALCONIES, PLANTERS & TERRACED AREAS - REFER SPECIFICATION WORK SECTION: TANKING

7. ALLOW FOR SKIRTING TILES & SILL TILES TO ALL BALCONIES.

8. REFER INTERIOR DOOR SCHEDULE FOR ALL DOOR SIZES & HARDWARES

9. ALL STAIR TREADS SHALL BE FITTED WITH NON-SLIP NOSINGS

10. SLAB SETDOWNS TO WET AREAS SHALL BE IN ACCORDANCE WITH STRUCTURAL ENGINEER'S DRAWINGS

11. SUPPLY AND INSTALLATION OF ALL HYDRAULIC AND ELECTRICAL ITEMS, ALL SERVICES PASSING PENETRATIONS THROUGH FLOORS WHICH REQUIRE FIRE RATING SHALL BE PROTECTED BY AN APPROPRIATE FIRE RATED COLLAR

12. CAR BAY DIMENSIONS, AISLE WIDTHS AND CIRCULATION AREAS SHALL COMPLY WITH AS 2890.1/2004

13. ALL TACTILE INDICATORS SHALL COMPLY WITH AS1428.4

14. ALL HANDRAILS SHALL COMPLY WITH BCA SECTION D3.3 AND AUSTRALIAN STANDARD AS1428.1

15. ALL BALUSTRADES SHALL COMPLY WITH BCA SECTION D2.16 AND BE ALLOWED FOR BY THE BUILDER

HILLAM ARCHITECTS
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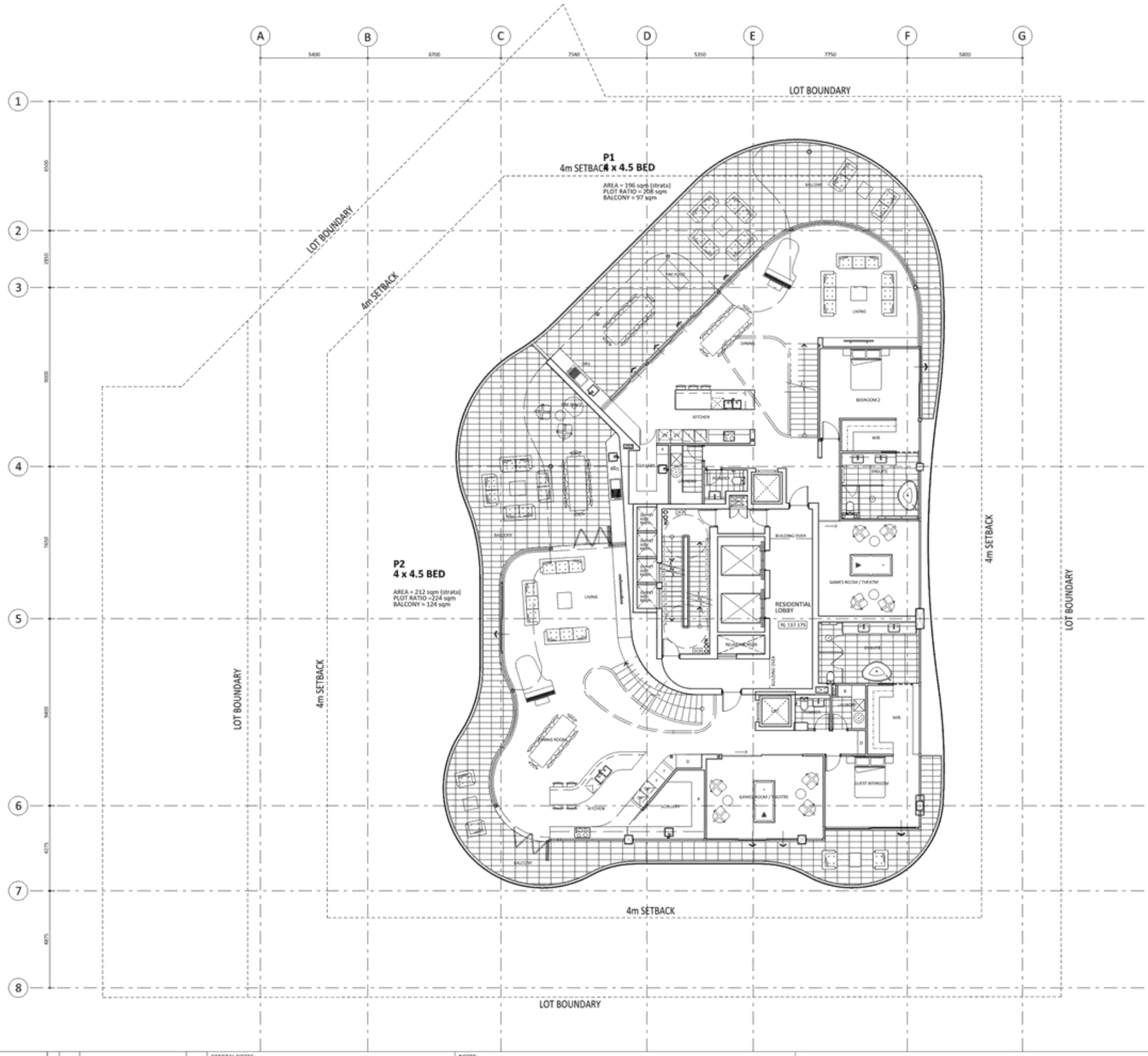
DRAWING
LEVEL 41 - 42 FLOOR PLAN

DRAWN SH
DATE 16.03.2016
CHECKED TL
PROJ. No 1405
SCALE 1:100
DWG No. A2-15
REV. C

STATUS
DEVELOPMENT APPROVAL



PROJECT
LUMIERE
74 MILL POINT ROAD, SOUTH PERTH

CLIENT
EDGE HOLDINGS NO.6

REV	DATE	NOTES	CHECKED
C	16.03.16	AMENDED DEVELOPMENT APPLICATION	TL
B	04.03.16	AMENDED DEVELOPMENT APPLICATION	TL

GENERAL NOTES:
1. BUILDER TO CHECK ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS. ANY ERRORS TO BE SUBMITTED TO ARCHITECT AND APPROVED PRIOR TO MANUFACTURE.
2. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. USE ONLY THE LATEST REVISED DRAWINGS. VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF WORK. EITHER DIMENSIONS OR LEVELS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT FOR CLARIFICATION
3. ALL WORK MUST BE IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA AND ALL RELEVANT AUSTRALIAN STANDARDS.
4. THE MAIN CONTRACTOR IS TO ENSURE THAT THIS DRAWING IS READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL, HYDRAULIC, MECHANICAL & ELECTRICAL DOCUMENTATION TO ENSURE FULL CO-ORDINATION BETWEEN TRADES, PRIOR TO WORK COMMENCEMENT. ANY DISCREPANCIES ARE IMMEDIATELY TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION
5. THE BUILDER IS RESPONSIBLE FOR MARKING "SUPERSEDED" ON ALL DRAWINGS FOR WHICH A REVISION HAS BEEN ISSUED.
6. THIS DRAWING IS COPYRIGHT (C) AND REMAINS THE PROPERTY OF HILLAM ARCHITECTS. IT MUST NOT BE RETAINED, COPIED OR USED WITHOUT THE AUTHORITY OF HILLAM ARCHITECTS.

NOTES:
1. CONFIRM LOCATION OF INSPECTION/CLEANOUT POINTS TO ALL SOIL STACKS WITH ARCHITECT PRIOR TO PIPING INSTALLATION.
2. FIRE ISOLATED PASSAGEWAYS SHALL BE CLEAR OF ANY SERVICE PENETRATIONS OTHER THAN ESSENTIAL SUPPLIES FOR EMERGENCY EQUIPMENT
3. ALL GRATES, WASTE PIPES, SOIL STACKS AND RAINWATER PIPES SHALL BE ACCESSIBLY LAGGED
4. FALL ALL BALCONY CHANNEL DRAINS TO FLOOR WASTES AS INDICATED (REFER HYDR. DWGS.)
5. LOCATE ALL FLOOR WASTES IN POSITIONS INDICATED ON FLOOR PLANS (REFER HYDR. DWGS.)
6. WATERPROOF MEMBRANE TO ALL DECKS, BALCONIES, PLANTERS & WETAREAS - REFER TO SPECIFICATION WORKSECTION: TANKING
7. ALLOW FOR SKIRTING TILES & SILL TILES TO ALL BALCONIES
8. REFER INTERIOR DOOR SCHEDULE FOR ALL DOOR SIZES & HARDWARES
9. ALL STAIR TREADS SHALL BE FITTED WITH NON-SLIP NOSINGS
10. GLASS SETTOWORK TO WET AREAS SHALL BE IN ACCORDANCE WITH STRUCTURAL ENGINEER'S DRAWINGS
11. SUPPLY AND INSTALLATION OF ALL HYDRAULIC AND ELECTRICAL ITEMS, ALL SERVICES, PENETRATIONS THROUGH FLOORS, ALL SERVICES PENETRATING FIRE RATED WALLS SHALL BE PROTECTED BY AN APPROPRIATE FIRE RATED COLLAR
12. CAR BAY DIMENSIONS, AISLE WIDTHS AND CIRCULATION AREAS SHALL COMPLY WITH AS 2890.1/2004
13. ALL TACTILE INDICATORS SHALL COMPLY WITH AS1428.4
14. ALL HANDRAILS SHALL COMPLY WITH BCA SECTION D1.12 AND AUSTRALIAN STANDARD AS1428.1
15. ALL BALUSTRADES SHALL COMPLY WITH BCA SECTION D2.16 AND BE ALLOWED FOR BY THE BUILDER

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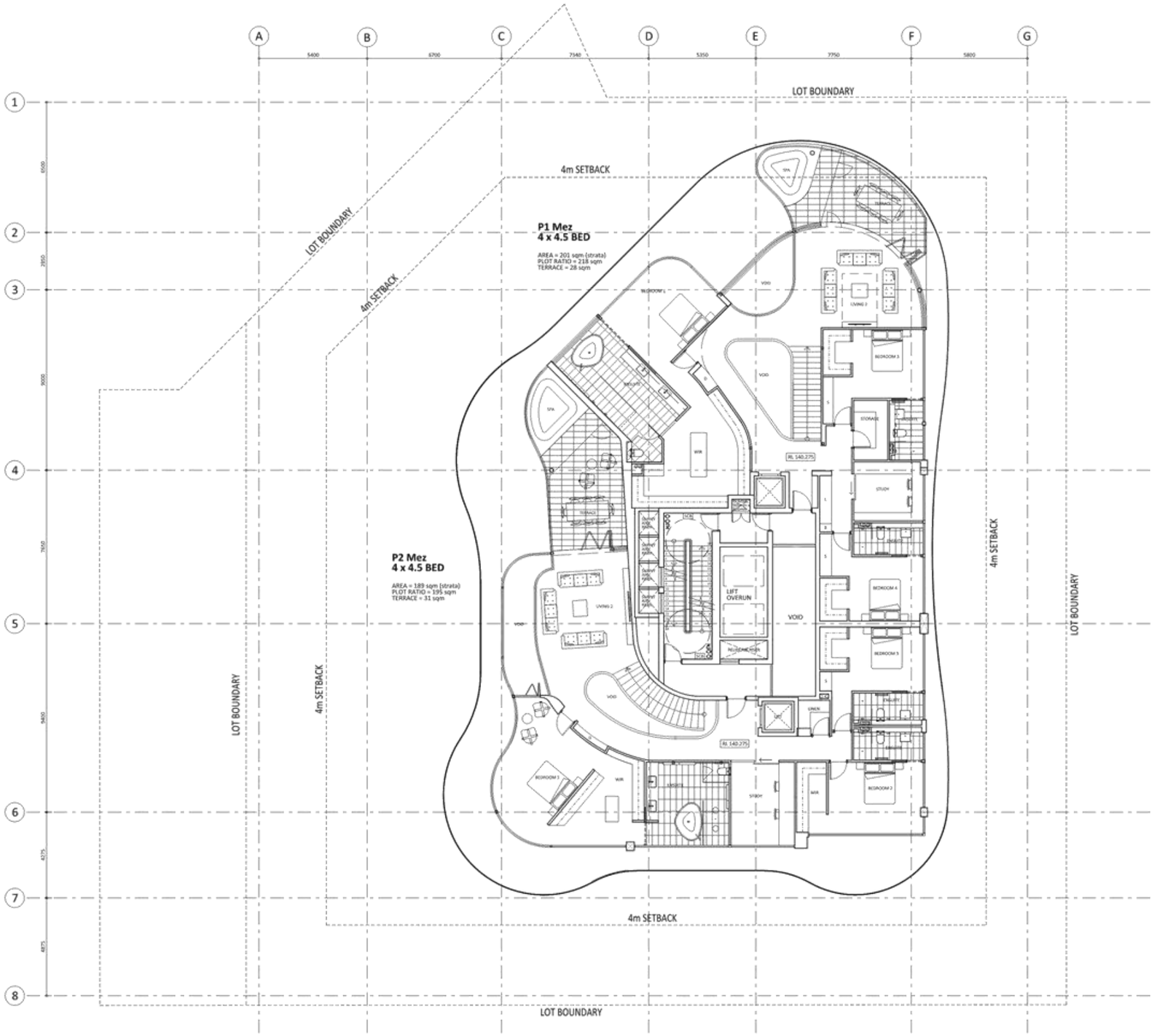
DRAWING
LEVEL 43 FLOOR PLAN

DRAWN SH
DATE 16.03.2016
CHECKED TL
PROJ. No 1405
SCALE 1:100
DWG No. A2-16
REV. C

STATUS
DEVELOPMENT APPROVAL



PROJECT
LUMIERE
74 MILL POINT ROAD, SOUTH PERTH

CLIENT
EDGE HOLDINGS NO.6

REV	DATE	NOTES	CHECKED
C	16.03.16	AMENDED DEVELOPMENT APPLICATION	TL
B	04.03.16	AMENDED DEVELOPMENT APPLICATION	TL

GENERAL NOTES:

1. BUILDER TO CHECK ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR MAKING ANY SHOP DRAWINGS, WHICH MUST BE SUBMITTED TO ARCHITECT AND APPROVED PRIOR TO MANUFACTURE.

2. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE FROM REDUCED DRAWINGS. VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT. ANY DISCREPANCIES (3% SITE OR 10% DTL) ANY DISCREPANCIES ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT FOR CLARIFICATION

3. ALL WORK MUST BE IN ACCORDANCE WITH THE BCA, RELEVANT AUSTRALIAN STANDARDS AND RELEVANT AUSTRALIAN STANDARDS.

4. THE MAIN CONTRACTOR IS TO ENSURE THAT THIS DRAWING IS READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL, HYDRAULIC, MECHANICAL, ELECTRICAL & OTHER CONSULTANTS TO ENSURE FULL CO-ORDINATION BETWEEN TRADES, PRIOR TO WORK COMMENCEMENT. ANY DISCREPANCIES ARE IMMEDIATELY TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION

5. THE BUILDER IS RESPONSIBLE FOR MARKING 'SUPERSEDED' ON ALL DRAWINGS FOR WHICH A REVISION HAS BEEN ISSUED.

6. THIS DRAWING IS COPYRIGHT (C) AND REMAINS THE PROPERTY OF HILLAM ARCHITECTS. IT MUST NOT BE COPIED OR REPRODUCED WITHOUT THE AUTHORITY OF HILLAM ARCHITECTS.

NOTES:

1. CONFIRM LOCATION OF INSPECTION/CLEANOUT POINTS TO ALL SOIL STACKS WITH ARCHITECT PRIOR TO INSTALLATION

2. FIRE ISOLATED PASSAGEWAYS SHALL BE CLEAR OF ANY SERVICE PENETRATIONS OTHER THAN ESSENTIAL SUPPLIES FOR EMERGENCY EQUIPMENT

3. ALL CAVITIES, WASTE PIPES, SOIL STACKS AND RAINWATER PIPES SHALL BE ACOUSTICALLY LAGGED

4. FALL ALL BALCONY CHANNEL DRAINS TO FLOOR WASTES AS INDICATED (REFER HYDR. DWG(S.)

5. LOCATE ALL FLOOR WASTES IN POSITIONS INDICATED ON FLOOR PLANS (REFER HYDR. DWG(S.)

6. WATERPROOF MEMBRANE TO ALL DECKS, BALCONIES PLANTERS & TERRACED AREAS - REFER SPECIFICATION FOR WORK/SECTION: TANKING

7. ALLOW FOR SKIRTING TILES & SILL TILES TO ALL BALCONIES

8. REFER INTERIOR DOOR SCHEDULE FOR ALL DOOR SIZES & HARDWARES

9. ALL STAIR TREADS SHALL BE FITTED WITH NON-SLIP NOSINGS.

10. SLAB SETDOWNS TO WET AREAS TO BE CONFIRMED WITH STRUCTURAL ENGINEER'S DRAWINGS

11. SUPPLY AND INSTALLATION OF ALL HYDRAULIC AND ELECTRICAL ITEMS, ALL SERVICE PASSING PENETRATIONS THROUGH FLOORS WHICH REQUIRE FIRE RATING SHALL BE PROTECTED BY AN APPROPRIATE FIRE RATED COLLAR

12. CAR BAY DIMENSIONS, AISLE WIDTHS AND CIRCULATION AREAS SHALL COMPLY WITH AS 2890.1/2004

13. ALL TACTILE INDICATORS SHALL COMPLY WITH AS1428.4

14. ALL HANDRAILS SHALL COMPLY WITH BCA SECTION D3.6 AND AUSTRALIAN STANDARD AS1428.1

15. ALL BALUSTRADES SHALL COMPLY WITH BCA SECTION D2.16 AND BE ALLOWED FOR BY THE BUILDER

HILLAM ARCHITECTS
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DRAWING
LEVEL 44 FLOOR PLAN

DRAWN	SH
DATE	16.03.2016
CHECKED	TL
PROJ. No	1405
SCALE	1:100
DWG No.	A2-17
REV.	C

STATUS
DEVELOPMENT APPROVAL

LUMIERE
74 MILL POINT ROAD, SOUTH PERTH
EDGE HOLDINGS NO.8

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SCALE	DATE ISSUED	DWG. NAME	DWG No.	REV
1:200 @ A1	16.03.16	North Elevation	A3-04	C

LUMIERE
74 MILL POINT ROAD, SOUTH PERTH
EDGE HOLDINGS NO 8

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SCALE	DATE ISSUED	DWG. NAME	DWG No.	REV
1:200 @ A3	16.03.16	West Elevation	A3-01	C


Two-storey Penthouses
Amenities Floor
Carparking
Compostie Aluminium Fascia
Weather proof louvre screen
Mid-grey rendered finish
All glazing suits to have aluminium framing with powdercoat finish.
Perforated facade cladding
Embossed Concrete
SITE BOUNDARY
SITE BOUNDARY
LUMIERE
74 MILL POINT ROAD, SOUTH PERTH
EDGE HOLDINGS NO.6
HILLAM ARCHITECTS
COPYRIGHT
SCALE
1:200 @ A3
DATE ISSUED
16.03.16
DWG. NAME
East Elevation
DWG No.
A3-03
REV
C


ROOF LEVEL RL 144.775
LEVEL 44 RL 140.275
LEVEL 43 RL 137.175
LEVEL 42 RL 134.075
LEVEL 41 RL 130.975
LEVEL 40 RL 127.875
LEVEL 39 RL 124.775
LEVEL 38 RL 121.675
LEVEL 37 RL 118.575
LEVEL 36 RL 115.475
LEVEL 35 RL 112.375
LEVEL 34 RL 109.275
LEVEL 33 RL 106.175
LEVEL 32 RL 103.075
LEVEL 31 RL 99.975
LEVEL 30 RL 96.875
LEVEL 29 RL 93.775
LEVEL 28 RL 90.675
LEVEL 27 RL 87.575
LEVEL 26 RL 84.475
LEVEL 25 RL 81.375
LEVEL 24 RL 78.275
LEVEL 23 RL 75.175
LEVEL 22 RL 72.075
LEVEL 21 RL 68.975
LEVEL 20 RL 65.875
LEVEL 19 RL 62.775
LEVEL 18 RL 59.675
LEVEL 17 RL 56.575
LEVEL 16 RL 53.475
LEVEL 15 RL 50.375
LEVEL 14 RL 47.275
LEVEL 13 RL 44.175
LEVEL 12 RL 41.075
LEVEL 11 RL 37.975
LEVEL 10 RL 34.875
LEVEL 9 RL 31.775
LEVEL 8 RL 28.675
LEVEL 7 RL 25.575
LEVEL 6 RL 22.175
LEVEL 5 RL 18.775
LEVEL 4
LEVEL 3
LEVEL 2
GROUND
BASEMENT RL -1.00
BASEMENT RL -4.200
BASEMENT RL -7.600
Two-storey Penthouses
Amenities Floor
Carparking & Basic Apartments
Carparking
SITE BOUNDARY
SITE BOUNDARY
Compostie Aluminium Fascia
Weather proof louvre screen
Mid-grey rendered finish
All glazing suits to have aluminium framing with powdercoat finish.
Perforated facade cladding
Embossed Concrete
Bronze metal finish or sim.
LUMIERE
74 MILL POINT ROAD, SOUTH PERTH
EDGE HOLDINGS NO 8
HILLAM ARCHITECTS
COPYRIGHT
SCALE
1:200 @ A3
DATE ISSUED
16.03.16
DWG. NAME
South Elevation
DWG No.
A3-02
REV
C

74 Mill Point Road - Amended Development Application - Dec 2015												***Rev B - 03.03.2016***
	Carbay Allocations	Tandem bays	Total Carbays	Stores	Non-Residential Plot Ratio Area	Resi - plot ratio area	1x1 bed 3	2x2 bed 8	3x2 bed 7	4x2 bed 2	Serviced Apartments	Residential Apartments
Basement 3	41	0	41	26								
Basement 2	39	0	39	26								
Basement 1	38	0	38	24								
Ground	4	0	4		295							
Level 1	40	8	48	10	149		1	1			2	
Level 2	40	10	50	16	149		1	1			2	
Level 3					1159		1	1			13	
Level 4					138		5	1	1		7	
Level 5					485		5	1	1		7	
Level 6					485		5	1	1		7	
Level 7					485		5	1	1		7	
Level 8					485		5	1	1		7	
Level 9					485		5	1	1		7	
Level 10					485		5	1	1		7	
Level 11					485		5	1	1		7	
Level 12					485		5	1	1		7	
Level 13					485		5	1	1		7	
Level 14					485		5	1	1		7	
Level 15					485		5	1	1		7	
Level 16					485		5	1	1		7	
Level 17					485		5	1	1		7	
Level 18					485		5	1	1		7	
Level 19					485		5	1	1		7	
Level 20					485		5	1	1		7	
Level 21					485		5	1	1		7	
Level 22					366		5	1			6	
Level 23						176	0	2	0	0		2
Level 24						495	1	3	1	0		5
Level 25						495	1	3	1	0		5
Level 26						495	1	3	1	0		5
Level 27						495	1	3	1	0		5
Level 28						495	1	3	1	0		5
Level 29						495	1	3	1	0		5
Level 30						495	1	3	1	0		5
Level 31						495	1	3	1	0		5
Level 32						495	1	3	1	0		5
Level 33						495	1	3	1	0		5
Level 34						495	1	3	1	0		5
Level 35						491	0	2	2	0		4
Level 36						491	0	2	2	0		4
Level 37						491	0	2	2	0		4
Level 38						491	0	2	2	0		4
Level 39						487	0	0	3	0		3
Level 40						487	0	0	3	0		3
Level 41 - Sub-Pent						477	0	0	0	2		2
Level 42 - Sub-Pent						477	0	0	0	2		2
Level 43 - Pent						432	0	0	0	2		2
Level 44 - Mezz						413						
Roof												
Sub Total	*202*	*18*	*220*	*102*	*10501*	*10358*	*11*	*43*	*25*	*6*	*149*	*85*
Total Percentage (%)							*13%*	*51%*	*29%*	*7%*		
Plot ratio					*5.82*	*5.74*						
Site area					*1804*							

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74 Mill Point Road - Amended Development Application - Dec 2015 — ***Rev B - 03.03.2016***

Apartment Type	Required No. of Bays per Apartment / Area	Number of Apartments	Required Carbays	Single Carbays	Tandems	Carbays Including Tandem, Longbays, reciprocal
1 Bed / 1 Bath	0.75	11	8	11		11
2 Bed / 2 Bath	1	43	43	43		43
3 Bed / 2 Bath	1	25	25	28	6	40
Subs & Pents	1	6	6		12	24
Residential Apartments		85				
Serviced Apartments	0.5 carbays per serviced apt	149	75	75		75
Commercial (cafe)	1 per 50sqm	295	6	6		6
Residential Visitors	1 per 6 dwellings		14	14		14
Serviced Apt Visitors	0.1 per number of bays required		7	7		7
Commercial Visitors	0.1 per number of bays required					
Total				184	18	220
Total Allocations				202		

H:\Projects_2014\1405_74 Mill Point Road South Perth\002 Drawings\03 Design Development\21_44 Storey Tower\1405_Lumiere_Carbay Summary_Council Copy

LAST EDITED: 3/03/2016

Proposed 44 Storey Mixed Use Development – Lots 2-20 (No. 74) Mill Point Road, South Perth

Summary of Neighbour Consultation Submissions

As part of the City's Consultation process, this application was advertised to nearby landowners, occupiers and strata managers to provide comment on the proposed development. A total of 555 letters were issued as part of this consultation and The City received a total of **177** submissions in relation to the proposal. Please find a summary of these submissions below, the City requires the applicant provide appropriate response to the concerns of submitters. The approximate number of submissions relating to the various elements has also been included.

Submission Summaries:

Building Height (70+ Submissions):

- The height is totally out of context with the surrounding neighbourhood – it doesn't blend, fit or merge with the existing well established residential area.
- It is inconsistent with the current draft of Amendment 46 which limits height to 25 metres an Amendment which should be seriously considered, this is a proposed 600% bonus in height which is unacceptable.
- Severe amenity impacts will stem from the over height building including shadow, visual dominance and a dwarfing of adjoining and nearby developments.
- At 142m it will be the 7th highest building in the state, what are the justifications for a building of such size outside the CBD.

Applicant Response:

The City's officers, Development Assessment Panel (DAP) and Design Advisory Committee (DAC) have consistently shown a willingness to support buildings of a greater height than the absolute height limits proposed, demonstrating that the developments that have been approved are in accordance with the desired future character for the locality as established under Amendment 25.

It should also be noted that one of the grounds of appeal against the Development Approval of the former 29 storey proposal was building height; this was then quashed by the Supreme Court Ruling in February of this year.

The additional 15 stories proposed have a negligible impact on Mill Point Road, adjoining and nearby developments. It should be noted that the height of the current proposal is only 10% higher than the approved Glasshouse development at the corner of Labouchere Road and Lyall Street.

City Comment:

The City's comments with regard to building height are discussed in detail within the Building Height element of the *Assessment* section of the Responsible Authority Report (RAR). While the consulted DAC support the additional height and it is not restricted under the current Schedule 9 provisions, amendment 46 seeks to limit height bonuses and this

proposal would significantly impair the achievement of the proposed approach to height. This is discussed further within the report.

Traffic (70+ submissions):

- The increased traffic from this one building at 74 Mill Point Rd will take the vehicles per day (vpd) on Mill Point Rd Nth to 60% over recommended levels.
- Street parking availability is limited in the area. By increasing the number of units to 193 (159 + 34) from 91 residential and 18 commercial and reducing the number of car parking bays this has the potential to further cram the streets and make it unmanageable for any visitor parking
- Since there is no chance of modifying this road there is no opportunity to accommodate more traffic – there is only the ability to limit traffic by not approving buildings that add significant vpd. Traffic congestion in this area is already acute. This road is the major flow street for much of the traffic that enters South Perth from the freeway.
- No comprehensive and cumulative traffic studies have been completed. Original studies were modelled and reported when the vision for the SPSP was forecasting 1000 new dwellings – that number has already been approved and the revitalisation of the Richardson/Lyall/Charles Sts has not even started.
- Using the same formulae adopted by GHD and Shawmac, our statisticians have calculated that buildings already approved in the Station Precinct will take the traffic to over 300% of Main Roads recommendations for a Local Distributor.
- Approving high-rise residential buildings is exacerbating the car-centric society.
- Increased traffic in this area will reduce and inhibit pedestrian and cycling activities which contradict other ideals stated by Council – counter to what Shawmac state in their report.
- This building cannot be assessed in isolation, which is how it is currently works. Something this significant must be considered in context of all other prior Station Precinct approvals.
- Main Roads say the recommended traffic for a local distributor (Mill Point Road Nth) is 6000 Vehicles Per Day (VPD)
- Shawmac provide the latest actual count of 8350 VPD which is already 40% over recommended capacity, and provide their estimate of 1688 VPD added by 74MPR, taking the traffic to 10038, or 67% over recommended capacity.
- In addition, our conservative calculations, using the Shawmac algorithms, buildings already approved in the Perth Station Precinct will see Mill Point Road North trying to operate at 307% of Main Roads recommended capacity.
- The traffic report does not consider other approvals in the area and the cumulative impact and the provided figures are in no way current.
- No variation to the required residential visitor bays should be accepted in a reciprocal arrangement, it is implausible for the visitors of 150 dwellings to be contained in 27 visitor bays.
- It is clearly a car dependent development which is why an excess of car bays are proposed.
- Visitors also include cleaners, servicemen and delivery men not simply residential visitors, how can such a little amount of visitor bays cater for all this.
- There is no appropriate street parking for excess visitors to the site which will cause sever congestion to an already congested street.
- Increased traffic in this area will reduce and inhibit pedestrian and cycling activities which contradict other ideals stated by Council – counter to what Shawmac state in their report.
- Why is there only 1 (one) disabled parking space for the entire building, including visitors?
- If this development is really about attracting tourist groups, where are the arrangements for tour bus parking, taxi pickup and set-down, and delivery vehicles, none of which can use Mill Point Road for any length of time.

- The lack of a current and comprehensive Traffic Study for this area precludes any sensible or acceptable assessment. The buildings proposed within 500mts of the PO will take Mill Point Rd significantly (greater than 300%) over capacity – that is untenable.
- The traffic report must be redone to fix many inaccurate figures and calculation, consider accumulative impacts of developments and look at a 10 year traffic modelling.

Applicant Response:

Please refer to the attached technical note from Shawmac Traffic Consultants that address both the City's and public comments on traffic.

City Comment:

The City's Engineering Infrastructure section, as well as a peer review by Cardno (**Attachment 13**), has identified that the 'Traffic Impact Assessment – Revised' (**Attachment 7** of the RAR, dated 23rd March 2016) has not provided adequate and necessary traffic information and data further to the requirements listed in the Western Australian Planning Commission (WAPC) "*Transport Assessment Guidelines for Developments, Volume 4 – Individual Development*" and to the "South Perth Station Precinct Traffic Impact Assessment Criteria" (where different to WAPC requirements). As such, it is recommended the applicant must prepare a revised Traffic Impact Assessment to include all required information for re-evaluation by the City's Infrastructure Services Officers for approval.

Compliance (Schedule 9 and Proposed AMD46) (50+ Submissions):

- It is totally inconsistent with the current draft of Amendment 46 which limits height to 25 metres with no ability to vary – this is an Amendment which is to be seriously considered.
- AMD 46 would remove this site from the special control area, meaning that any bonus to height and plot ratio would be non-existent, if approved as such this will be an isolated and out of place towering and dominant building.
- The latest application for 44 stories is quite outrageous obviously trying to get permission before any changes are made via AMD 46
- There can be no discretion to vary the prescribed height or residential plot ratio unless the development is for "predominantly commercial uses" to promote South Perth as an employment destination.
- The proposal simply does not satisfy the Table B criteria with regard to overshadowing, traffic impact assessment and community benefits, therefore no variations should be granted.

Applicant Response:

The applicant has a fundamental concern that a lack of justification has been provided as to why the Council is seeking to exclude this portion of the Precinct from the Special Design Area, which raises concerns regarding the rationale for the change being considered. The reduction in the extent of the Special Design Area is an ad hoc response that does not have sufficient regard to the extensive planning and public consultation processes that informed the current scheme provisions for the South Perth Station Precinct Special Control Area.

The City's officers, Development Assessment Panel (DAP) and Design Advisory Committee (DAC) have consistently shown a willingness to support buildings of a greater height than the absolute height limits proposed, demonstrating that the developments that have been

approved are in accordance with the desired future character for the locality as established under Amendment 25. The proposed design has been developed in respect to the ratified Amendment 25.

In reference to the City's email dated 17th November 2015: AMD 46- Provisions and Legal Advice that presented legal advice to the City on the 'weight to be given to the consistency or otherwise between the application and the amendment.'

In regard to this there are 4 criteria:

(1) The degree to which the amendment addresses the specific development application – Amendment 46 height limit would address an application for buildings over that height

(2) The degree to which the amendment is based on sound town planning principles – what was the planning justification and basis for the height limits (we are aware that Council reached the figures themselves, without any Town Planning input)

(3) The degree to which its ultimate approval could be regarded as "certain" – as the latest version of Amendment 46 has just been advertised, its approval isn't certain.

(4) The degree to which its ultimate approval could be regarded as "imminent" - as the latest version of Amendment 46 has just been advertised, it's ultimate approval may be many months away. If so, it would not be imminent.

With regard to criterion 2, the applicant has fundamental concerns with the ad hoc nature of the proposed Amendment No. 46, which has little regard to the extensive planning and public consultation processes that were undertaken in formulating the current scheme provisions for the South Perth Station Precinct Special Control Area (via Amendment No. 25 to the City of South Perth's Town Planning Scheme No. 6).

The current scheme provisions have been developed based on sound planning principles, and as a result of an exhaustive community consultation process. By comparison, Amendment 46 is considered to be ad hoc and ill conceived, with insufficient studies undertaken and/or justification provided to support the recommendations contained within.

With regard to criteria 3 and 4, there has been several iterations of proposed Amendment 46 over the last 18 months that reinforces the uncertainty of the current version. The applicant understands that there is still an extensive process that needs to be undertaken to have the proposed Amendment 46 adopted into TPS6. The applicant believes that further modifications are highly likely as a result of the 900+ submissions that were received from the advertising period. The ultimate version of Amendment 46 is uncertain therefore its final endorsement by the Minister for Planning is far from imminent.

City Comment:

City Comment in relation to Schedule 9 and Amendment 46 provisions in relation to the proposal is found throughout the body of the RAR and in particular in the discussion section of the assessment items, please refer to this section of the RAR for comment on these elements.

Land Use (50+ Submissions):

- South Perth has no need for such a huge number of serviced apartments – this goes way beyond the original Town Plan.
- The development does not satisfy the objectives of the precinct and Mends sub-precinct which clearly call for predominantly non-residential developments; this development is vastly residential and the proposed commercial use of serviced apartments does not provide employment of the scale suggested and required of the objectives.
- Serviced apartments will not provide the employment which was the objective of the commercial component. It is therefore illogical, and against the objectives of TPS6, to enable them to be classified as commercial and included in the calculation of plot ratio.
- It is a bad faith attempt to circumvent planning controls which limits the ratio of residential to commercial uses – this is just another loophole found by developers.
- Serviced apartments will simply be converted residences once construction is complete.
- Who is employed at serviced apartments and how in anyway does this contribute to employment within the SCA1, a clear objective of the precinct and sub-precinct.
- The *Serviced Apartment Management Plan* is vague and generalised; misses specific information necessary to nearby landowners.

Applicant Response:

The applicant has significantly reduced the Residential PRA to align with the development that was approved by JDAP on 25th May 2015. In light of the court ruling, the Non-Residential PRA has been increased significantly to be greater than the Residential PRA for the revised proposed development to consist of predominately non-residential uses. It should be noted that this extent of Non-Residential PRA is unprecedented for recent approvals within the Special Control Area SCA1.

With reference to Element 3 of the Schedule 9, Plot Ratio and Land Use Proportions, the Scheme allows the residential plot ratio to exceed 1.5 where the objectives of Table B are met. The current design is aligned with the previously approved proposal that meets the performance criteria of Table B. We note there is no maximum residential plot ratio once these objectives are met and therefore ask for the support of The City on this matter.

The applicant acknowledges that the employment generation of serviced apartments as 'tourist accommodation' will be lower than a commercial office of equivalent plot ratio area. The applicant however notes that there are no specific employment targets or requirements of the Scheme and while the employment ratio is lower, cleaners and maintenance staff will constantly be required to operate the tourist accommodation. Both the guidance statement and development requirements of Element 1, Schedule 9 identify 'tourist orientated development' as a preferred use for non-residential land uses.

The applicant has conducted preliminary market research that suggests a greater demand for tourist accommodation than commercial office space currently within the precinct. The applicant believes that operating serviced apartments would be more desirable for The City than vacant office space that is less likely be leased or sold within the current marketplace.

It should be noted that the sheer volume of Tourist Accommodation on the amended plans will provide much higher levels of employment within the Mends sub-precinct than was originally proposed. The applicant asks for The City's support on this matter with consideration to the significant reduction in residential PRA and predominately commercial nature of the new development.

Further to our discussion, the provision of a management plan for the serviced apartments is impractical before planning approval. The reason being that the management plan will be prepared by the actual operator of the tourist accommodation, not the applicant of this development. However the operator will not be employed before the planning approval has occurred. As such a management plan that is prepared before the operator is selected will be generic and will be subject to change due to different requirements from the operator. It is therefore considered appropriate to consider this as a condition so that a detailed management plan reflective of the intended operation be submitted and cleared by the City.

City Comment:

Please refer to the *Assessment* discussion section of the RAR for detailed comment with regard to plot ratio and land uses of the proposed development.

It is a requirement via City Policy P312 that any unit approved for *Serviced Apartment* use will have this use listed on the certificate of title, meaning it is unable to be sold or used as a residential multiple dwelling. This will also be reflected in any recommended conditions of approval.

It should also be noted *Tourist Accommodation (Serviced Apartments)* is a non-residential use under Table 1 of the City's Town Planning Scheme No. 6.

While the City accepts that the Serviced Apartment Management Plan is indicative only and not comprehensive, officers understand that the serviced apartments will not be operated by the applicant and therefore any management plan would need to be provided by the intended operator once and if approved. A condition of approval will ensure once an operator is appointed, a management plan will be prepared for approval by the City and organised to be distributed to nearby residents.

Overshadow (50+ submissions):

- The overshadowing effect will be appalling - essentially putting many residents into a solar eclipse every day, extending for 1km +
- The shadow (which incidentally has become the nickname of the building) on June21 at 10am will be over 10,800 sq meters, and at 4pm the shadow will cover 31,000 sq meters of South Perth – including the Fragrant garden! – a total of over 3 hectares.
- In summer the shadow will be over the beach at the end of Frasers Lane for about 2 hours. In autumn and spring the shadow will be across the park near the Ferry Wharf, and over the wharf at times.
- A building of this scale should consider shadow impact throughout the day, not simply mid-winter, midday sun, the effects are clearly greater than that on surrounding sites.

- Shadowing from these very large buildings will limit future solar facilities which do not promote energy efficiency and sustainable design.
- While the indicated shadow does not exceed 80% of the adjoining sites, in some cases 100% of the residences will be overshadowed which is an unacceptable amenity impact.

Applicant Response:

The diagrams that were submitted with this Development Application illustrate compliance with TPS6. The design of the proposed tower is tall and thin when compared to other recent approvals within the Special Control Area. While this creates a longer shadow, the width is reduced by having the bulk of the tower pulled in from the required setbacks. The reduction in shadow width will reduce the time neighbouring sites are overshadowed by the proposed development. A shorter, wider tower that is built to the site setbacks would cause more overshadowing of adjacent sites for a longer period of time.

The applicant also considers the amount of additional overshadowing created by the proposed development to be far less than submissions imply. What needs to be considered is the amount of existing overshadowing within the precinct from 5-9 storey existing development nearby.

City Comment:

With regard to overshadowing please refer to the assessment discussion section within the RAR prepared by the City.

Trees (40+ Submissions):

- The avenue of London Plane trees will cease to be the dominant visual feature of the street. The Precinct Plan emphasised the central importance of trees to this particular streetscape and this would be wholly undermined by this development.
- The proposed nil setback of the development will most certainly impact the London Plane trees which deliver character and history to the peninsula.

Applicant Response:

Careful attention has been given to the existing London Plane trees along Mill Point Road in the design of the podium and canopy elements. It should be noted that the design of the podium has not been amended with respect to setbacks, canopies, façade articulation and building entries from the previously approved scheme.

A significant bond has been placed on the street trees as a condition of Development Approval and the applicant is very sensitive to the community's concern for these trees. An arborist's advice has been followed with regard to the acceptable proximity of the proposed development to the trees' canopies and root systems.

City Comment:

The City has applied every precaution in the protection of street trees as their value is recognised and respected. Modification to the basement levels (following arborist recommendations) to protect the root ball of trees, the establishment of a Tree Protection

Zone and significant monetary bonds have been placed on all trees within the developments verge. All of these requirements are reflected in the recommended conditions of the RAR.

General (50+ submissions):

- It is premature for any application of this kind to be made or considered by Council when a Supreme Court case is pending as to whether the original 29 storey building is unlawful. There are four areas under judgement, and the only one being modified by this application is a larger land area. They still significantly fail on the plot ratio.
- Under TPS6, the precinct objectives and desired future character of the SCA1 precinct are for a more intensive and mixed use form for an increasingly dense commercial centre, and to consolidate its role as an employment destination.
- The current Application fails to ameliorate the critical design flaws which arose in relation to the Original Application. The proposed building is 'out of context' with the surrounding neighbourhood, inconsistent with the strategic planning framework, severely overshadows neighbouring properties, fails to promote South Perth as an employment destination, and undermines the London Plane tree streetscape.
- The building proposed has no significant innovation, has no community friendly, inclusive features, does not supplement lost greenery, nor does it add any landscaped or treed public open space. It fails to incorporate green space into either the work or living environment and so does NOT warrant any special height allowance above that nominated for the site.
- The nil setback of the podium will negatively impact the existing streetscape and threaten the London Plane trees
- There is no appreciable community benefit from this building and the negative effect on large numbers of neighbours will be extreme.
- The Planning and Development (Local Planning Schemes) Regulations 2015 make it clear that any new mixed use buildings must maintain the compatibility with the general streetscape, "in terms of scale, height, style, materials, street alignment and design of facades" and also "ensure that development is not detrimental to the amenity of adjoining owners or residential properties in the locality".
- If accepted and thus establishing a precedent, would create a far from satisfactory urban design outcome with regard to public open space, amenity, load upon existing streets, and integration with an adequate public transport network. It is clearly a car-dependent project that, if repeated by similar future projects along Mill Point Road, will create deleterious environmental and functional consequences.
- No landscaping plan has been submitted with the proposal.
- This area is outside the station catchment area, it is well serviced by buses and the ferry, so provides no support for the business case for a train station.
- The current Vehicle Carriageway Easement (VCE) and a Crown Right of Way (ROW) are currently designed to service 5 properties and a maximum of 20 vehicles. The proposal indicates approximately 1,700 vehicle movements are expected each day, the VCE and ROW are not capable of catering for the extremely large number of vehicle movements that will be created, there will be serious vehicle conflict issues, these need to be considered in the traffic assessment.

All submission noted.

Supportive (9 submissions):

- Our client supports the philosophy that it is desirable for as many residents as possible to benefit from river views. In this regard, as the current housing stock at No.74 Mill Point Road

does not allow for any views to be obtained, the proposed development will enable a greater number of residents to take advantage of the river views available from the South Perth Station Precinct.

- Our client believes that since the City of South Perth had previously approved high rise developments for other properties nearby (including Civic Heart), the opportunity to be on the same level playing field should likewise be afforded to other properties including 74 Mill Point Road. Restricting the 74 Mill Point Road proposed development would further exacerbate the significant advantages that had already been granted to the other approved developments.
- The proposal provides the desired or preferred land uses and meets the provisions the schedule 9 irrespective of the great height and plot ratio, the building is consistent with the current controls which are currently law and should be upheld as such.
- Will improve amenity for surrounding residents and visitors to the City. Will assist in creating a future train station in South Perth High quality design outcomes. Significantly increase vibrancy of South Perth
- The development is of an exceptional design standard and will add to the amenity of the Mill Point Rd precinct. I believe the height is appropriate given the proximity to the South Perth town centre and to the City. South Perth is an inner city neighbourhood and should support high density housing, which means supporting increased heights. All local governments have ambitious infill targets to achieve. I have not seen many proposals as good at this that will help contribute to that. I encourage the full CoSP council to support this development application, and encourage the JDAP to do the same
- I believe the height and scale of this tower is entirely appropriate, given the inner city location and proximity to the main city of Perth skyline. The city of South Perth has a unique opportunity at this moment in time to create a striking, new and visually interesting skyline, with a swathe of new projects at similar height and of quality design that will create a real sense of place for the city of South Perth. The new residents will provide activation for the mends street precinct and strengthen the case for a new train station and increased ferry services. The design of the building is extremely high quality and this sort of building in such proximity to the main Perth city centre would not be out of place in any other major city in the world.

All submission noted.

SHAWMAC

CONSULTING CIVIL & TRAFFIC ENGINEERS, RISK MANAGERS.

Project:	74 Mill Point Road Mixed-Use Development Traffic Impact Assessment - Revised
Client:	Hillam Architects
Author:	Angela Wetton
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Document Status

Version No.	Author	Reviewed by	Date	Document status	Signature	Date
0	A Wetton	P Nguyen	14/03/16	Draft		22/03/16
1	A Wetton	B Hartley	23/03/16	Revision		23/03/16

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TABLES

FIGURES

SHAWMAC

Consulting Civil and Traffic Engineers, Risk Managers

1. Introduction

1.1. Proponent

Shawmac Pty Ltd has been commissioned by Hillam Architects to review the proposed mixed-use development at 74 Mill Point Road, South Perth in the City of South Perth.

1.2. Site Location and Land Use

The site is located on the northern leg of Mill Point Road (north of Mill Point Road East/Labouchere Road/Kwinana Freeway signalised intersection) in a *Mixed-Use Commercial Centre*. The site location is shown in **Figure 1.**

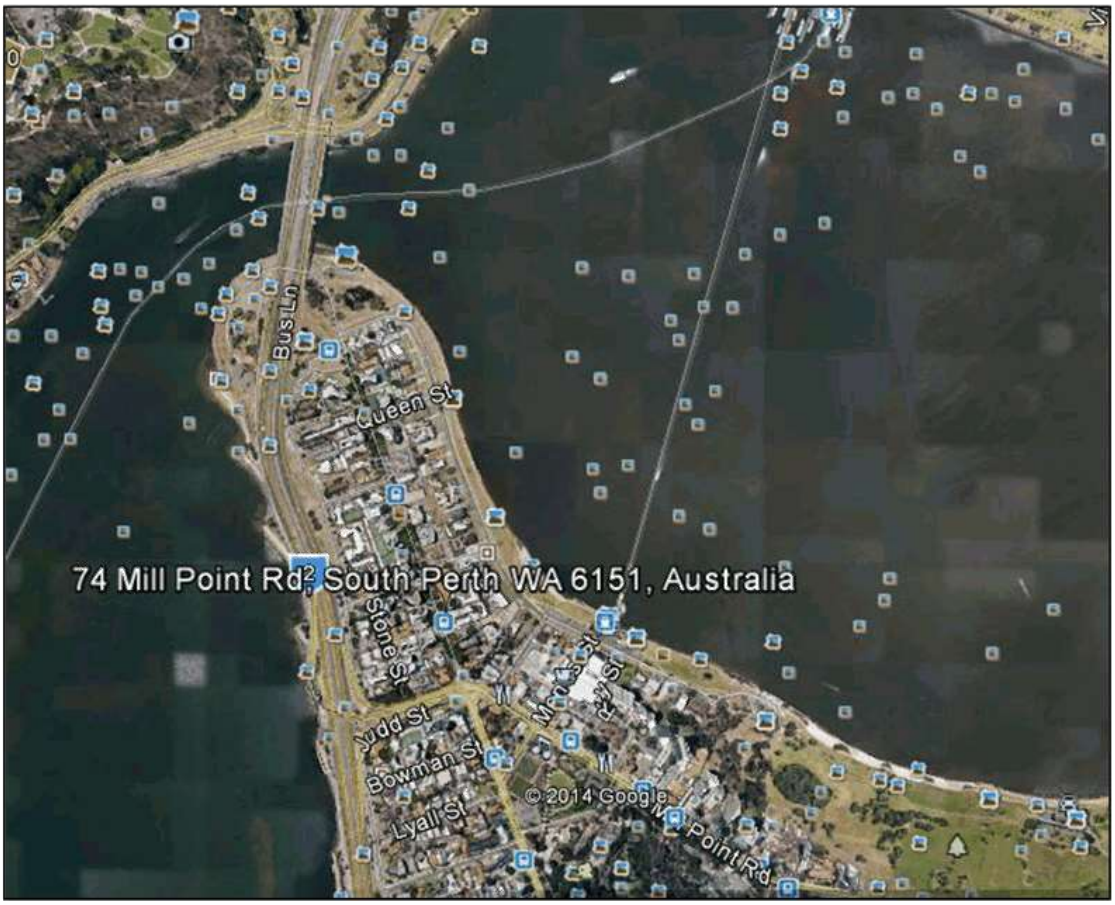


Figure 1 - Site Location

The study site was previously occupied by grouped dwellings and is currently vacant. The existing site together with the surrounding area is shown on the aerial photograph on **Figure 2.**

Figure 2 - Local Context

1.3. Reference Information

In undertaking the study, the information listed below was referenced.

MRWA Functional Hierarchy Criteria;

Livable Neighborhoods Guidelines 2009;

Austroads *Guide to Road Design, Part 4A;*

Austroads *Guide to Engineering Practice, Part 2, Roadway Capacity;*

WAPC R-Codes;

Guide to Traffic Generating Developments Version 2.2, October 2002 – Roads and Traffic Authority, New South Wales; and

City of South Perth – Town Planning Scheme No 6.

2. Site Proposal

2.1. Regional Context

The site is located within the South Perth Peninsula. **Figure 3** shows the site location in a regional context.

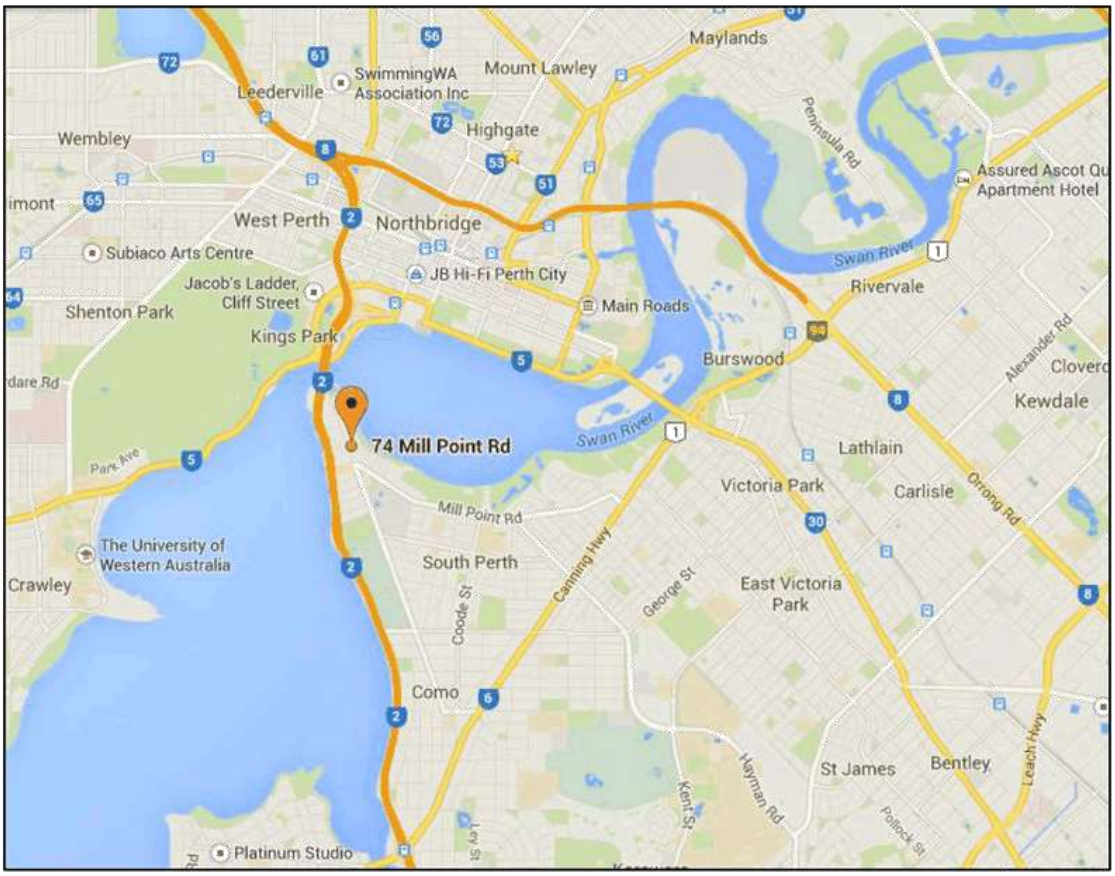


Figure 3 - Regional Context

2.2. Proposed Land Use

The application proposes redevelopment of the subject site. The subject site is within the *Mixed-Use Commercial Centre* under the City of South Perth *Town Planning Scheme 6 (TPS6)*.

The development proposal is for a 44 storey mixed use development consisting of 147 serviced apartments and associated leisure facilities, a cafe, community meeting room, 85 residential apartments and associated communal residential leisure facilities. **Table 1** outlines the land use of the proposed development.

Table 1 – Land Use

Commercial		Residential	
Land Use	Quantity	Land Use	Quantity
Serviced Apartments	147	1x1 Apartments	11
Cafe (Ground Floor)	295m²	2x2 Apartments	43
Community Meeting Room	69m²	3x2 Apartments	25
Commercial Car Parking	82 bays	Penthouse Apartments	6
Commercial Visitor Parking	9 bays	Residential Car Parking	115 bays
Scooter Parking	5 bays	Residential Visitor Parking	14 bays
Bicycle Parking	15 racks	Bicycle Parking	39 racks
Swimming Pool		Storage Rooms	
Games Room and Lounge		Swimming Pool	
		Gym	
		Resident's Lounge	

The development is zoned *Mixed Use Commercial* under the City of South Perth TPS6. See **Figure 4.**

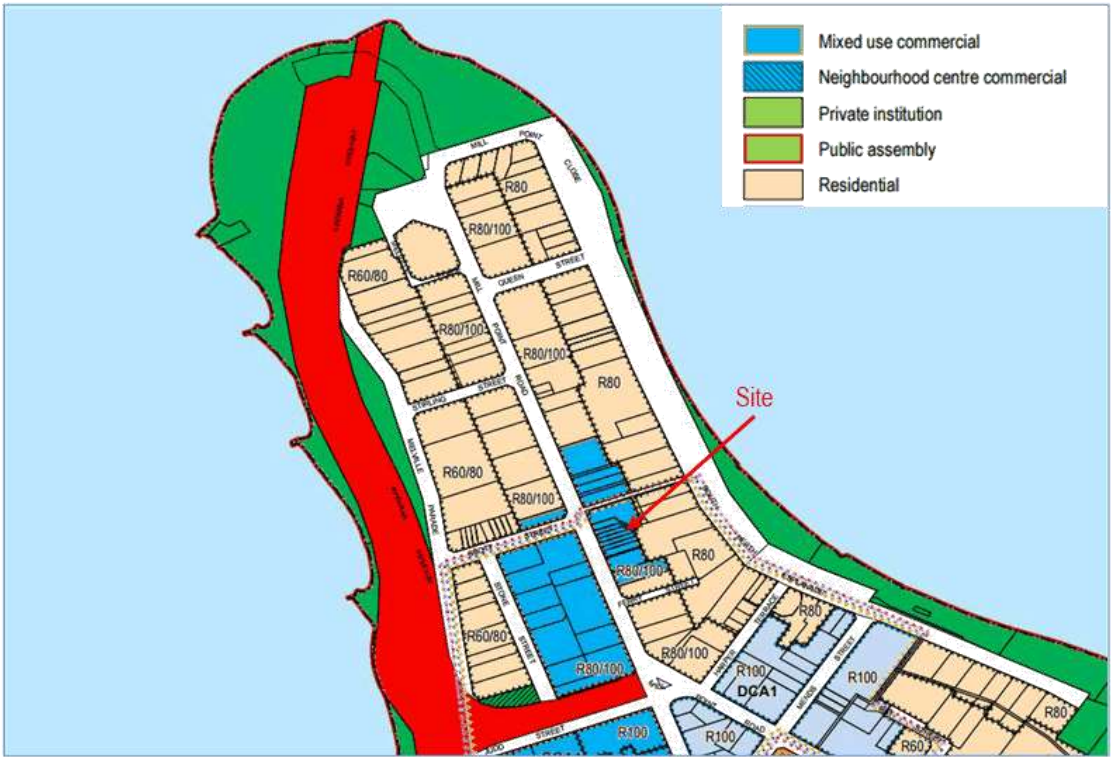


Figure 4 - Zoning

An extract of the development ground floor site layout and parking level layouts are shown in **Appendix A.**

4

2.3. Major Attractors and Generators of Traffic

The major generators in the area include the South Perth Commercial Precinct and the Mends Street Commercial Precinct in close walking distance to the site. The site is located within a *Mixed Commercial Centre* according to the City of South Perth's *Town Planning Scheme No. 6* and is within the *South Perth Station Precinct*. The proposed development on the site is expected to integrate well with the surrounding area and the existing road network. The proposed land use generally conforms to the existing and proposed land uses in the surrounding area.

The main attractors and generators expected to influence traffic flows to and from the site are shown in **Figure 5** include:

The Perth CBD and associated employment and retail centres;

The South Perth Commercial Precinct and Mend Street Commercial Precinct;

Perth Zoo;

Perth Airport;

Crown Perth;

Scarborough Beach, City Beach and Floreat;

Cottesloe Beach;

Fremantle;

Suburban residential areas;

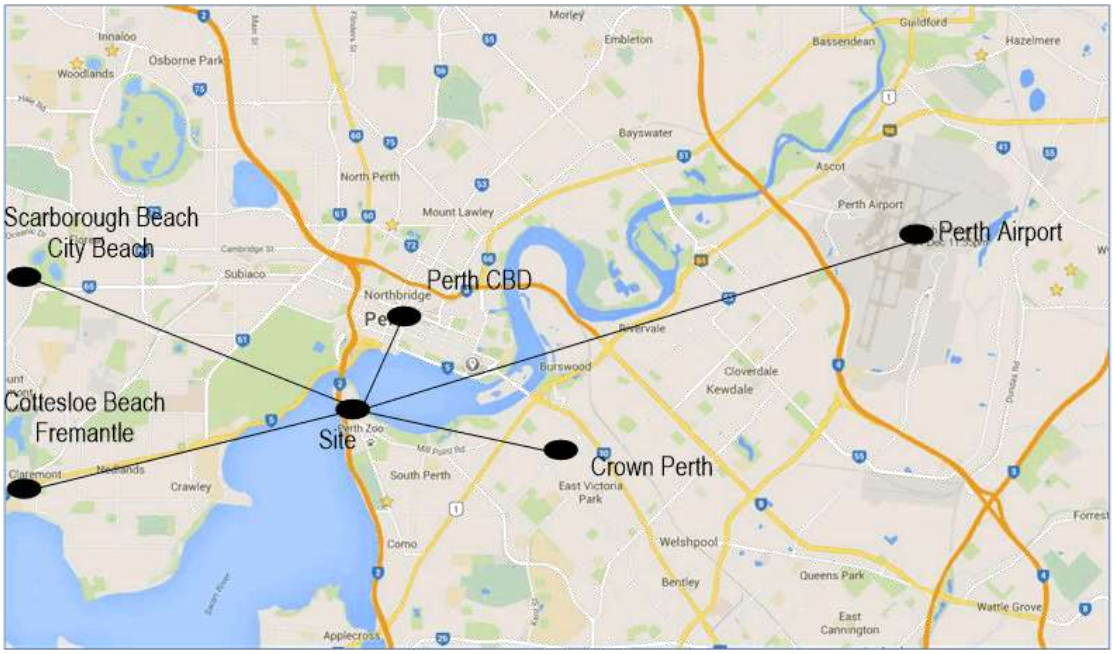


Figure 5 - Major Attractors and Generators

3. Existing Situation

3.1. Existing Roads

Kwinana Freeway

The Kwinana Freeway is an 8-lane divided *Control of Access* freeway located to the south-west of the site with direct access provided via the existing signalised intersection with Mill Point Road/Labouchere Road. It has been classified as a *Primary Distributor* road under the Main Roads *Functional Road Hierarchy* (road hierarchy).

The Kwinana Freeway operates under a posted speed limit of 100kph in the vicinity of the site transitioning to 80kph on approach to the Narrows Bridge and carries in the range of 85,000 to 90,000 vehicles per day

Mill Point Road

Mill Point Road, east of the signalised intersection of Mill Point Road/Labouchere Road/Kwinana Freeway, is classified as a *District Distributor B Road* under the MRWA road hierarchy. Mill Point Road (East) has a dual divided carriageway and operates under a 60kph speed limit.

North of the signalised intersection, Mill Point Road is a *Local Distributor Road* under the MRWA road hierarchy. Mill Point Road (North) has been constructed as a single undivided carriageway with a 9m wide seal with on-street parking permitted on both sides in the vicinity of the subject site and operates under a 50kph speed limit.

Mill Point Road is owned, operated and maintained by the City of South Perth.

Labouchere Road

Labouchere Road is classified as a *District Distributor B Road* under the MRWA road hierarchy and is operated and controlled by the City of South Perth. Labouchere Road is described as having a dual divided carriageway in the vicinity of the signalised intersection.

Labouchere Road operates under a posted speed limit of 60kph.

Frasers Lane

Frasers Lane is an *Access Road* under the MRWA road hierarchy. Frasers Lane functions as a one-way access street (west to east only) with a seal of approximately 3m along the western boundary of the site. It has been constructed as a single undivided carriageway across the frontage of the site. Frasers Lane currently operates under a posted speed limit of 50 km/h.

Figure 6 shows the existing road classification under the MRWA *Road Information Mapping System* for roads in the vicinity of the site.

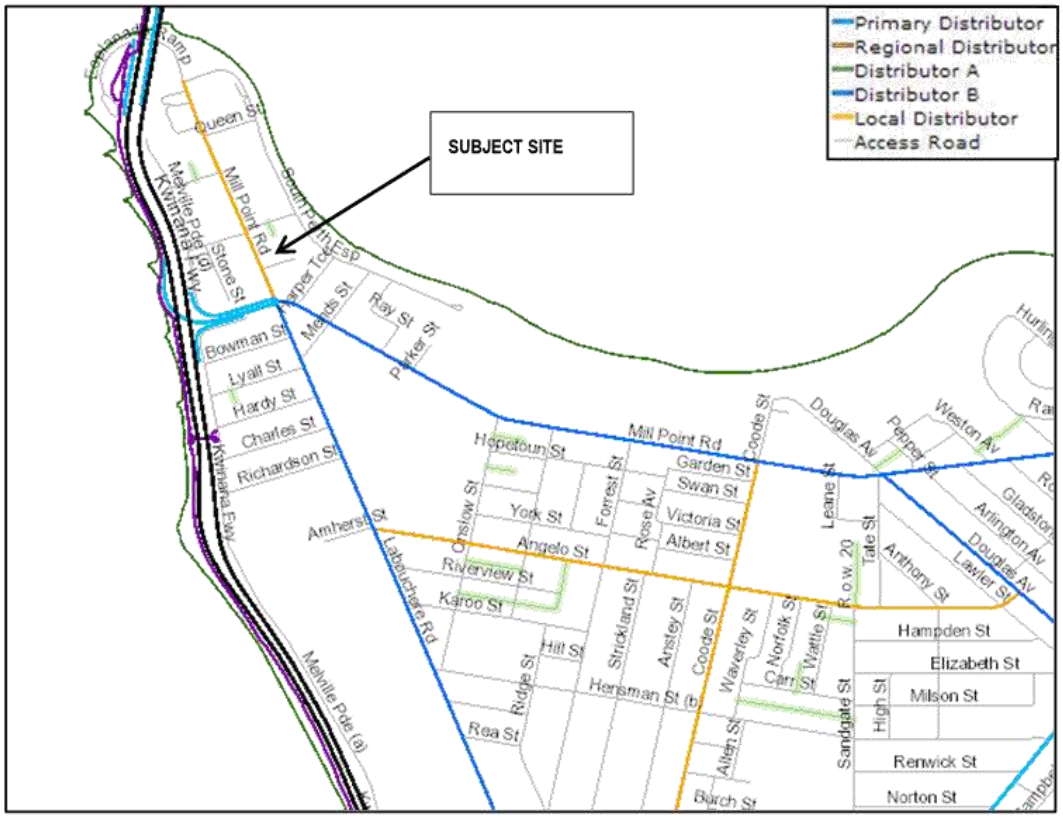


Figure 6 - Road Hierarchy

3.2. Road Hierarchy vs Actual Flows

Table 2 details the comparison of current traffic volumes against the maximum desirable volumes provided within the MRWA Functional Hierarchy and Liveable Neighbourhoods criteria.

Table 2 - Road Classification and Indicative Maximum Traffic Volumes

Location of Count	MRWA Classification	Liveable Neighbourhoods Indicative Traffic Volume (vpd)	Traffic Volume (vpd)	Source	Date
Mill Point Road (East)	District Distributor B	15,000	22,850	MRWA	2014
Mill Point Road – between Labouchere Road and Ferry Street	Local Distributor	7,000	5,844	City of South Perth	August 2015
Labouchere Road (south of signalised intersection)	District Distributor B	15,000	15,400	MRWA	2014
Frasers Lane	Access Road	<3,000	<500	No data available	

The table above indicates that Mill Point Road and Frasers Lane, adjacent to the site is currently operating in accordance with the respective classifications. Mill Point Road East and Labouchere Road are operating at levels

greater than the Liveable Neighbourhoods guidelines; however the construction of both of these roads as divided dual carriageways means that they still have spare capacity.

3.3. Changes to the Surrounding Network

There are no major planned changes to the surrounding road network in the vicinity of the subject site; however, planning for increased public transport services in the area includes the construction of a second-stage railway station at South Perth near Judd Street along the existing Southern Suburbs Railway Line.

A review of the *South Perth Station Precinct Transport and Access Strategy* (GHD, 2012) indicates that the localised improvements in the broader area surrounding the proposed railway station are recommended with the only improvement to the Kwinana Freeway On/Off Ramp/Mill Point Road East/Mill Point Road North/Labouchere Road signalised intersection consisting of a bus queue jump lane from Labouchere Road to the Kwinana Freeway on-ramp.

No other road improvements are noted for the area in the vicinity of the subject site. It is also noted in this study that due to the nature of the transit-oriented development proposed within the precinct that a limited amount of additional vehicular traffic is expected to be generated with the majority of transport movements to be accommodated by public transport and walking/cycling.

3.4. Crash History

The very low number of crashes along Mill Point Road in the context of the daily traffic volumes along the road indicates that that there would be minimal risk associated with entering and exiting the site crossover to Mill Point Road and the existing risk profile would not be impacted along this section of road.

4. Transport Assessment

4.1. Assessment Years

The development is assessed on current network conditions.

4.2. Time Periods for Assessment

Assessment is based on both daily traffic and peak hour periods.

4.3. 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" was referenced. Generation based on this document is shown on **Tables 3 and 4.**

Table 3 - Predicted Daily Trip Generation

Land use	Generation rate			Unit	Quantum	Estimated Generation		
	ADT	AM Peak	PM Peak			ADT	AM Peak	PM Peak
Serviced Apartments *(Motel)*	3	0.4	0.4	Units	147	441	59	59
Cafe *(Restaurant)*	60	5	5	GFA ('00m²)	295	177	15	15
Multipurpose Room *(Commercial premises)*	10	2	2	GFA ('00m²)	69	7	1	1
Residential Dwelling (1-2 BR)	4.5	0.45	0.45	Units	11	50	5	5
Residential Dwelling (>2 BR)	6	0.6	0.6	Units	74	444	44	44
Total						**1,119**	**124**	**124**

Table 4 - Predicted Peak Hour Movements

Land use	Peak Distribution			
	AM Peak In	AM Peak Out	PM Peak In	PM Peak Out
Serviced Apartments *(Motel)*	21	38	32	27
Cafe *(Restaurant)*	9	6	5	10
Multipurpose Room *(Commercial premises)*	1	0	0	1
Residential Dwelling (1-2 BR)	2	3	3	2
Residential Dwelling (>2 BR)	17	27	27	17
Total	**50**	**74**	**67**	**57**

It is estimated that the proposed development has the potential to generate approximately 1,119 vehicle trips per day with 124 vehicles in the each of the morning and afternoon peak hours.

Based on the limited on-site parking available to residents and commercial staff, and the inner city location within a walkable catchment to public transport, this development has qualities of a Transit Oriented Development (TOD). Some of the measures of TOD are:

Permeability – with a choice of vehicle, bicycle and pedestrian routes available;
Variety – the range of land uses available;
Connectivity;
Parking; and
Public Transport.

The NZ Transport Agency *Research Report 453 – Trips and parking related to land use* (November 2011) report states that research and surveys of established TOD blocks have vehicle trip generation rates of around 35% - 75% of the typical database trip rates, and that the most significant reductions were those adjacent to high-quality transit stations on the fringe of the city centre, much like the proposed development site.

While the theoretical site generated traffic seems high, these rates are seen as quite conservative and in practice it is anticipated that the actual trip generation will be significantly discounted.

4.4. Distribution

Main desire lines are expected to be between the site and the Kwinana Freeway to the high-order road network, and between the site and Mill Point Road to the East and Labouchere Road to the south to local attractors and towards Canning Highway.

Traffic is expected to be distributed as follows:

20% of site-generated traffic originates from and is destined to the north via Mill Point Road;
80% of site-generated traffic originates from and is destined to the south via Mill Point Road; with
- 20% of site-generated traffic originates from and is destined to the east via Mill Point Road (East);
- 20% of site-generated traffic originates from and is destined to the south via Labouchere Road; and
- 40% of site-generated traffic originates from and is destined to and from the Kwinana Freeway.

Figure 7 illustrates the future traffic at the site crossover to Mill Point Road. **Figure 8** shows future traffic at the signalised Kwinana Freeway (on/off ramp)/Mill Point Road East/Mill Point Road North/Labouchere Road intersection.

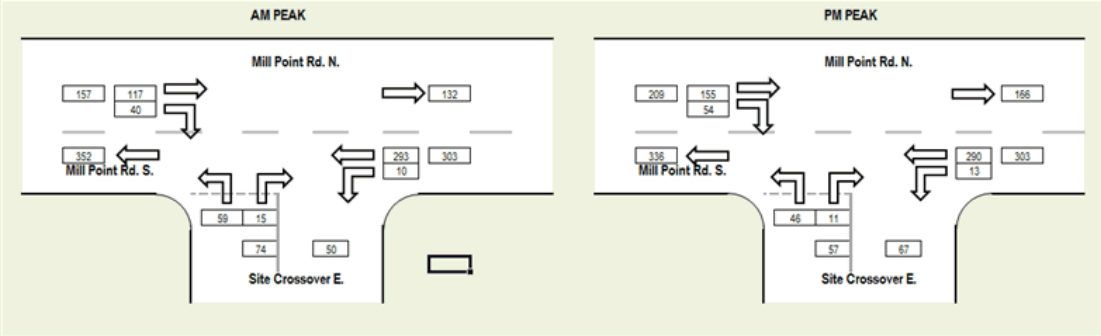


Figure 7 - Future Traffic: Mill Point Road Crossover.

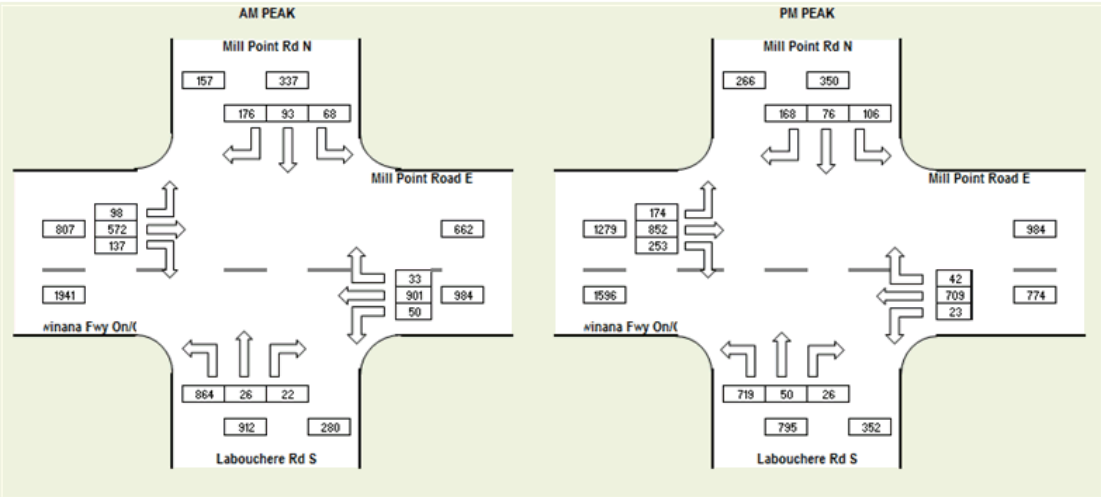


Figure 8 - Future Traffic: Kwinana Freeway On/Off Ramp/Mill Point Road East/Mill Point Road North/Labouchere Road Intersection

The anticipated site-generated traffic has been assigned onto the boundary road system based upon the assumptions above and the resultant increases in weekday daily and peak hour traffic on the boundary roads associated with the proposed development are shown in **Table 5.**

Table 5 - Predicted site-generated traffic volumes

Location of Count	Predicted Increase			Predicted Weekday Volume (vpd)
	Weekday (vpd)	AM Peak (vph)	PM Peak (vpd)	
Kwinana Freeway Ramp	448	50	50	41,332
Mill Point Road (North)	1,119	124	124	6,963
Mill Point Road (East)	224	25	25	23,074
Labouchere Road	224	25	25	15,624
Frasers Lane	112	12	12	612

The anticipated increases in vehicular traffic on the boundary road network associated with the proposed development on the site can be comfortably accommodated within the existing practical capacity of the road network and is not expected to have any significant impact on the existing traffic operations of these roads. A review of the future 2031 traffic volumes projected for the road network in the vicinity of the site as documented in the GHD report indicate that the site traffic volumes will represent less than 1% of overall traffic in the area under future conditions and will have no impact on traffic operations in the area. The GHD report also notes that the majority of traffic growth on local roads relates to background traffic and is not associated with the developments in and around the railway station precinct.

4.5. Impact on Intersections

The signalised intersection at Mill Point Road / Labouchere Road / Kwinana Freeway Ramp was modelled using Sidra Intersection 6.1 and recent SCATS counts with the results shown in **Appendix C**. Modelling confirms that the signalised intersection will continue to operate at a comparable level following development of the site, have a negligible impact on the operations at this location during weekday a.m. and p.m. peak periods under future traffic conditions.

The proposed site access crossover and Mill Point Road (North) were also modelled using Sidra Intersection 6.1 As indicated by the SIDRA results, the proposed site crossover is expected to operate at very good Levels of Service (LOS) during the weekday a.m. and p.m. peak hours, respectively, with a minimal impact to existing traffic operations on Mill Point Road with no measurable increase in delays or vehicle queuing along the frontage of the site. The results of the SIDRA analysis for the signalised intersection indicate that the proposed development will continue to operate at a comparable LOS to the existing scenario.

As mentioned previously, the actual trip generation from the site is anticipated to be less than the theoretical generation rates due to the TOD nature of the development.

5. Pedestrian and Cycle Networks

Existing pedestrian infrastructure in the vicinity of the site includes:

A footpath on both sides of Mill Point Road adjacent to and opposite the site;

A shared path on the South Perth Foreshore along The Esplanade east of the site;

A Principal Shared Path along the Kwinana Freeway to the west of the site; and

Mill Point Road designated as a *Walking Trail* adjacent to the site.

An extract from the Department of Transport (DoT) TravelSmart Walk and Cycle Map – City of South Perth (West) is shown in **Figure 9** and illustrates the extent of the existing pedestrian/cyclist network within the vicinity of the site.

Figure 9 - Existing Cycling and Pedestrian Infrastructure

6. Public Transport

The subject site has excellent access to the public transport network and is located within short walking distance of an existing line haul bus Route 34 (Perth-Cannington Station via Como) on Mill Point Road adjacent to the site. Bus stops are in place on both sides of the road within close walking distance, respectively. This existing service provides 15-minute service during the weekday a.m. and p.m. peak periods, respectively, and half hourly service during the midday and hourly service during the evening off-peak and weekend periods. The existing Transperth ferry services from the Mends Street Jetty are also within a 5-minute walk from the subject site providing direct service to the Perth CBD.

Figure 10 shows the existing public transport services in the area.

Figure 10 - Travel Smart Map: Public Transport Infrastructure in Vicinity of Site

7. Parking

The proposed on-site car parking is to be provided at ground level, within the three basements levels and within the above grade Levels 1 through 3.

The proposed car parking on the site will be allocated as shown in **Table 6**.

Table 6 - Proposed Car Parking Supply

Level	Resident Parking	Tandem	Resident Visitor	Bicycle	Commercial Parking	Commercial Tandem	Commercial visitor	Total Bays
Basement 3	41			12				41
Basement 2	28			9	11			39
Basement 1	14			9	24			38
Ground				15			4	4
Level 1	6	4	14	5	15	4	5	48
Level 2	12	10		4	28			50
Totals	**101**	**14**	**14**	**54**	**78**	**4**	**9**	**220**

The minimum on-site parking requirements as stipulated in the *South Perth Precinct Study Design Guidelines* and the proposed supply is compared in **Table 7**.

Table 7 - South Perth Parking Requirements

Level	Quantum	Rate	Required Number of Bays	Total Bays supplied
1 bed dwelling	11 dwellings	0.75 per dwelling	8	11
2+ bed dwelling	74 dwellings	1 per dwelling	74	104
Residential Visitors	85 dwellings	1 per 6 dwellings	14	14
Serviced Apartments	147 serviced apartments	0.5 per serviced apartment	74	74
Commercial (Café and Meeting Room)	364m²	1 per 50m2	8	8
Serviced Apartment Visitors	74 bays	0.1 per required bay	8	8
Commercial Visitors	8 bays	0.1 per required bay	1	1
		Totals	**187**	**220**

The proposed on-site supply of 220 standard bays including 18 tandem bays and is consistent with the statutory requirements for the site. There is also proposed parking for 5 scooters or motorcycles on the ground floor.

The site is classed as a 1A parking facility (residential, domestic and employee parking) and comparison of the required dimensions versus the bay dimensions assessed from the drawing are summarised in **Table 8.**

Table 8 - Parking Bay Dimensions

Bay details.	Bay dimension required.	Bay dimension provided.	Comment
Ninety degree bays	5.4 x 2.4 x 5.8 aisles.	5.4 x 2.4 x 5.8m aisles.	Complies.
Tandem bays	5.4 x 2.4 x 5.8 aisles	10.0 x 2.4 x 5.8m aisles	Complies

Bay dimensions and parking area layout complies with the requirements of AS 2890.1 – Parking Facilities: Off Street Car Parking.

One accessible parking bay is shown on Level 1 and is required to be in accordance with Australian Standard AS 2890.6 *Parking Facilities Part 6: Off-street Parking for People with Disabilities*. The number of accessible parking bays is compliant with the Building Code of Australia (BCA) requirements for the commercial component of the building which is one bay per 100 bays provided. There is no requirement for the residential component of the building.

7.1. Bicycle Parking

The proposed development includes individual secure storage facilities for personal effects including bicycles within the car parking levels of the development for each residential dwelling unit.

Dedicated bicycle storage is also available for the commercial and residential tenants and visitors with 9 secure bicycle bays and 6 public bicycle bays available on the ground floor, and an additional 39 bicycle bays provided over the parking levels.

The requirements for bicycle parking are shown in **Table 9** and determined that the 54 bicycle spaces supplied satisfies the requirements under TPS6.

Table 9 - Bicycle Parking Requirements

Category	Quantum	TPS6 Required Rate	Required Spaces
Tourist Accommodation	147 serviced apartments	1 per 20 units	7 bicycle spaces
Cafe	295m²	1 per 40m² of dining area	7 bicycle spaces
Meeting Room		N/A	
Residential	85 dwellings	1 bicycle space to each three dwellings	29 bicycle spaces
Residential Visitors	85 dwellings	1 bicycle space to each ten dwellings	9 bicycle spaces
		Total Required	**52 bicycle spaces**
		Total Supplied	**54 bicycle spaces**

8. Site Access

8.1. Development Accesses

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:

(i) The grade is a downgrade for traffic leaving the property and entering the frontage road.

(ii) The user class is Class 1, 1A or 2 only.

(iii) The maximum car park size is—

(1) for entry into an arterial road—25 car spaces, or

(2) for entry onto a local road—100 car spaces.

The maximum grade across the property line shall remain at 1 in 20 (5%).

Based on the concept design crossover gradients are likely to comply with AS2890.1.

The proposed layout of the car parking within the undercroft area is appropriate and consistent with Australian Standard *AS 2890.1: Off-Street Parking* and relevant traffic engineering standards.

An Autotrack simulation was undertaken for the site car parks and determined that all car bays were accessible using the B85 vehicle template.

All vehicles will be able to enter and exit the site in forward gear.

8.2. Service Vehicles

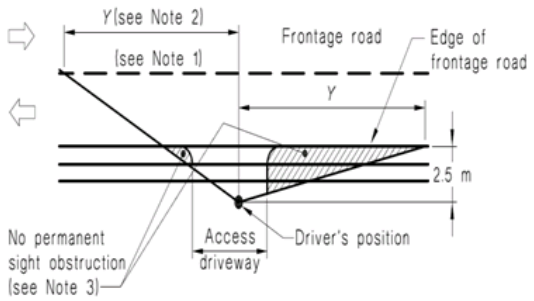
A bin storage room is located on the ground floor, adjacent to the site access laneway running along the southern boundary of the site.

The development waste will be collected by a private contractor, with a standard waste collection vehicle reversing from Mill Point Road into the ROW to collect the bins which have been pushed out to the laneway. The waste collection vehicle will exit in forward gear to Mill Point Road on completion of the collection.

This would be undertaken outside of peak hours in order to minimise conflict with entering and exiting vehicles with this task undertaken a maximum of twice per week. A review of the site lines to Mill Point Road indicate that they are sufficient for the waste management vehicle to exit safely. A Waste Management Plan has been prepared separately in consultation with the City of South Perth.

8.3. Access Vehicle Sight Distance

Sight distance from the car park egress along the street is defined in Figure 3.2 of AS2890.1 which is reproduced in **Figure 11**.



Frontage road speed	Km/h	Desirable gap (m)	Minimum gap (m)
	50	69	45

NOTES:
1 Centre-line or centre of road (undivided road), or right hand edge of right hand through lane (divided road)
2 A check to the left is not required at a divided road where the median is wide enough to shelter a vehicle leaving the driveway.
3 Parking on this side of the frontage road may need to be restricted on either side of the driveway so that the sight distance required by the above table to an approaching vehicle is not obstructed.

Figure 11 - Sight Distance Requirements

8.4. Access Pedestrian Sight Distance

The Australian Standard AS2890.1:2004 also provides details for sight lines and distances for pedestrian movements across an access to a car park. Those details are shown in the AS2890.1 Figure 3.3 extract on **Figure 12**.

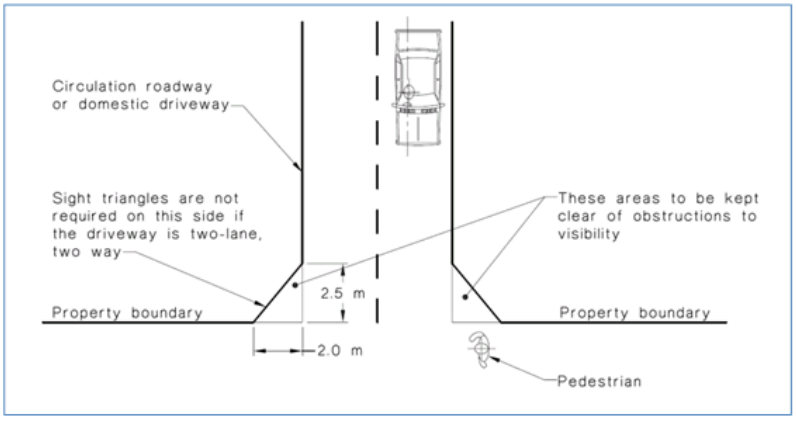


Figure 12 - AS 2890 Requirements for Pedestrian Sight Lines

The concept plan does not indicate any obstructions to pedestrian sight distance where the access intersects with Mill Point Road.

9. Conclusion

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 is considered acceptable and no adverse impacts associated with the accesses are identified.

The adjacent signalised intersection is expected to perform satisfactorily in both the AM peak and PM peak periods.

Parking Bays are in accordance with AS2890 and the number of parking bays provided is compliant with the City of South Perth TPS6.

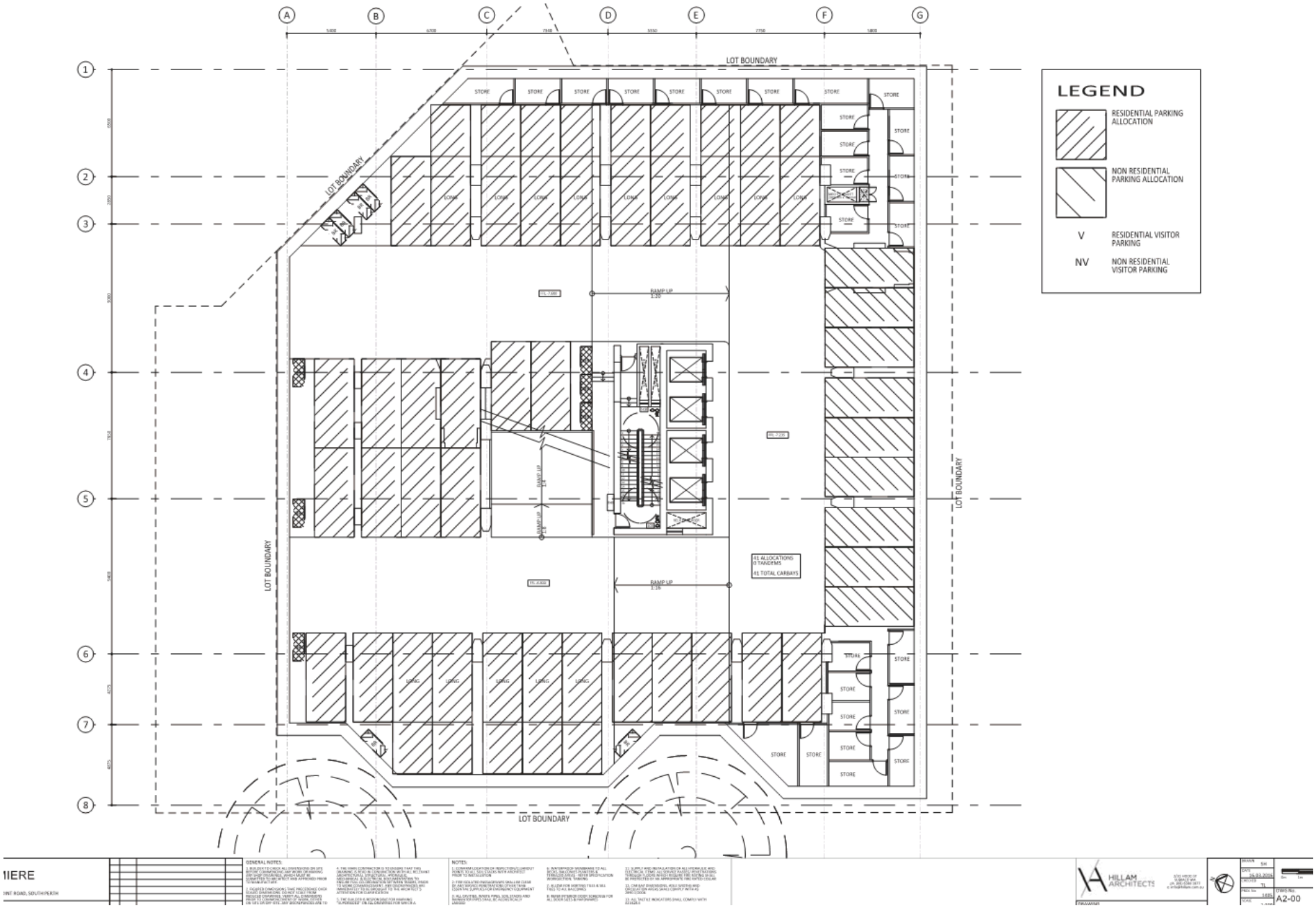
Bicycle Parking provided on site is compliant with the City of South Perth TPS6 and the WAPC R-Codes.

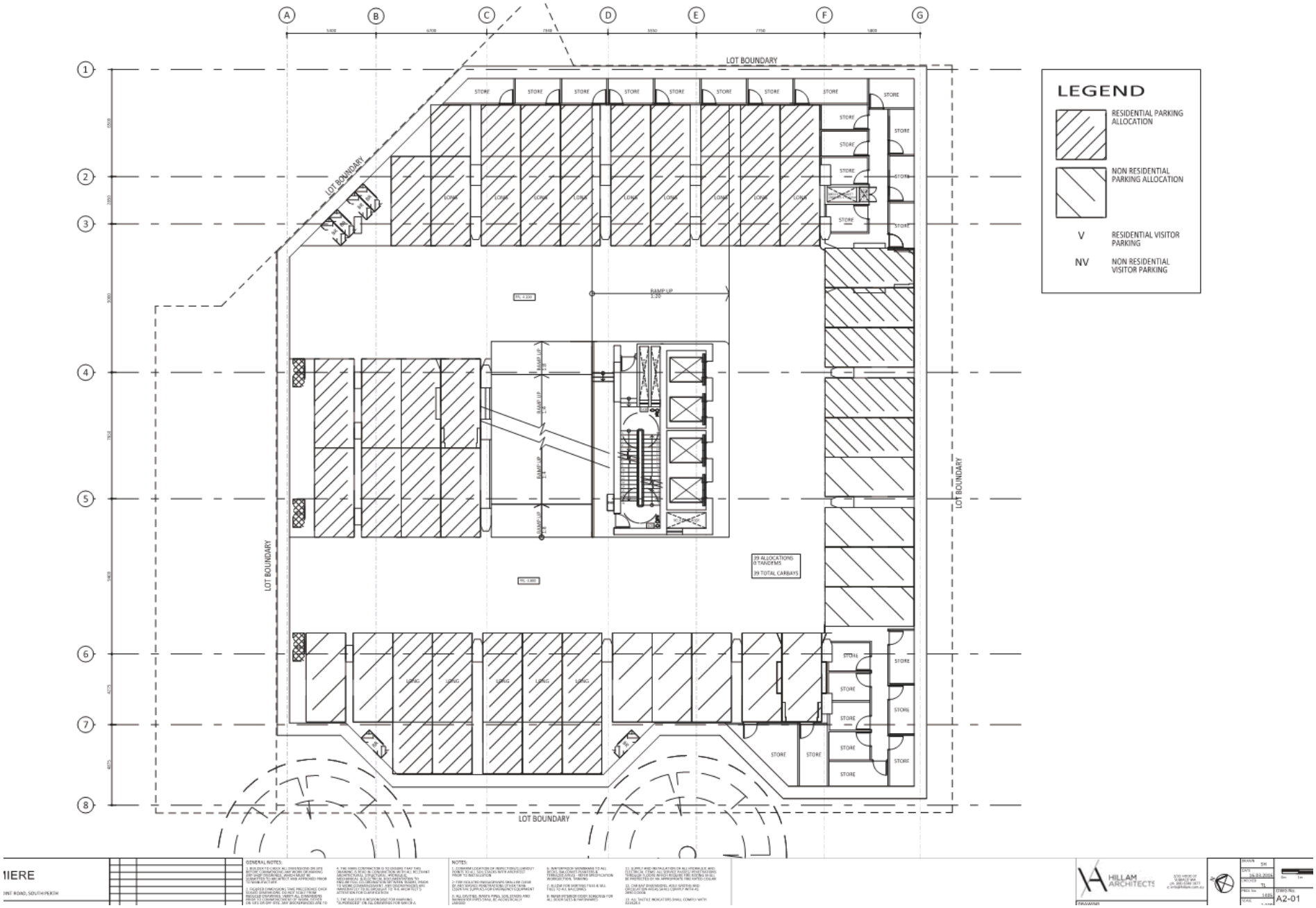
The peak and daily traffic generated from the site will account for less than 1% increase under 2031 conditions.

The future peak and daily traffic generated from the site is anticipated to be much lower than the theoretical rates due to the proximity to the future South Perth train station.

Consulting Civil and Traffic Engineers, Risk Managers

Appendix A - Site Plan


LOT BOUNDARY
LEGEND
RESIDENTIAL PARKING ALLOCATION
NON RESIDENTIAL PARKING ALLOCATION
V RESIDENTIAL VISITOR PARKING
NV NON RESIDENTIAL VISITOR PARKING
STORE
LONG
RAMP UP 1:20
41 ALLOCATIONS
0 TANDEMS
41 TOTAL CARBAYS
HILLAM ARCHITECTS
A2-00


LOT BOUNDARY
LEGEND
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NON RESIDENTIAL PARKING ALLOCATION
V RESIDENTIAL VISITOR PARKING
NV NON RESIDENTIAL VISITOR PARKING
STORE
LONG
RAMP UP
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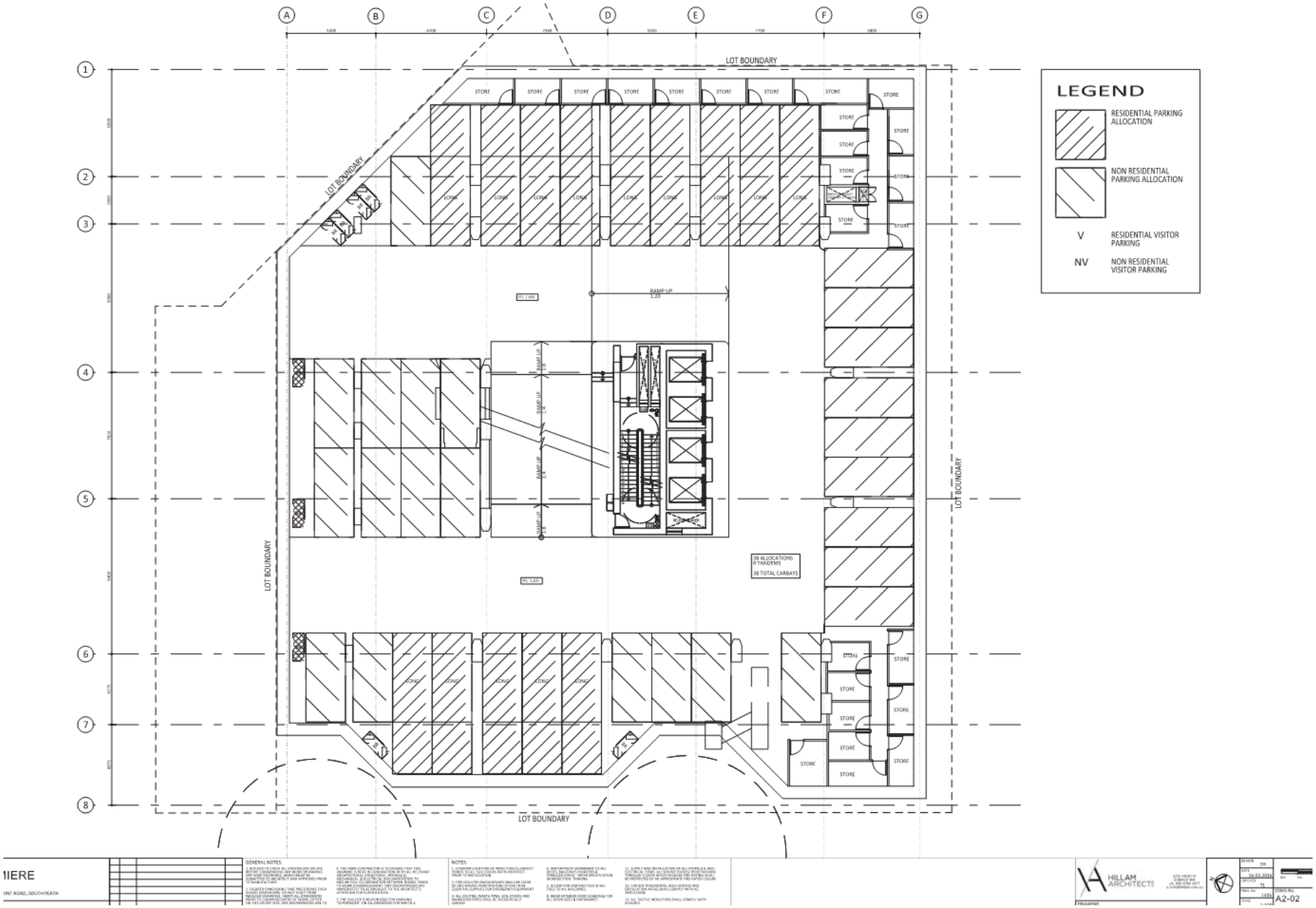
0 TANDEMS
29 TOTAL CARBAYS
HILLAM ARCHITECTS
A2-01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LEGEND
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NON RESIDENTIAL PARKING ALLOCATION
V RESIDENTIAL VISITOR PARKING
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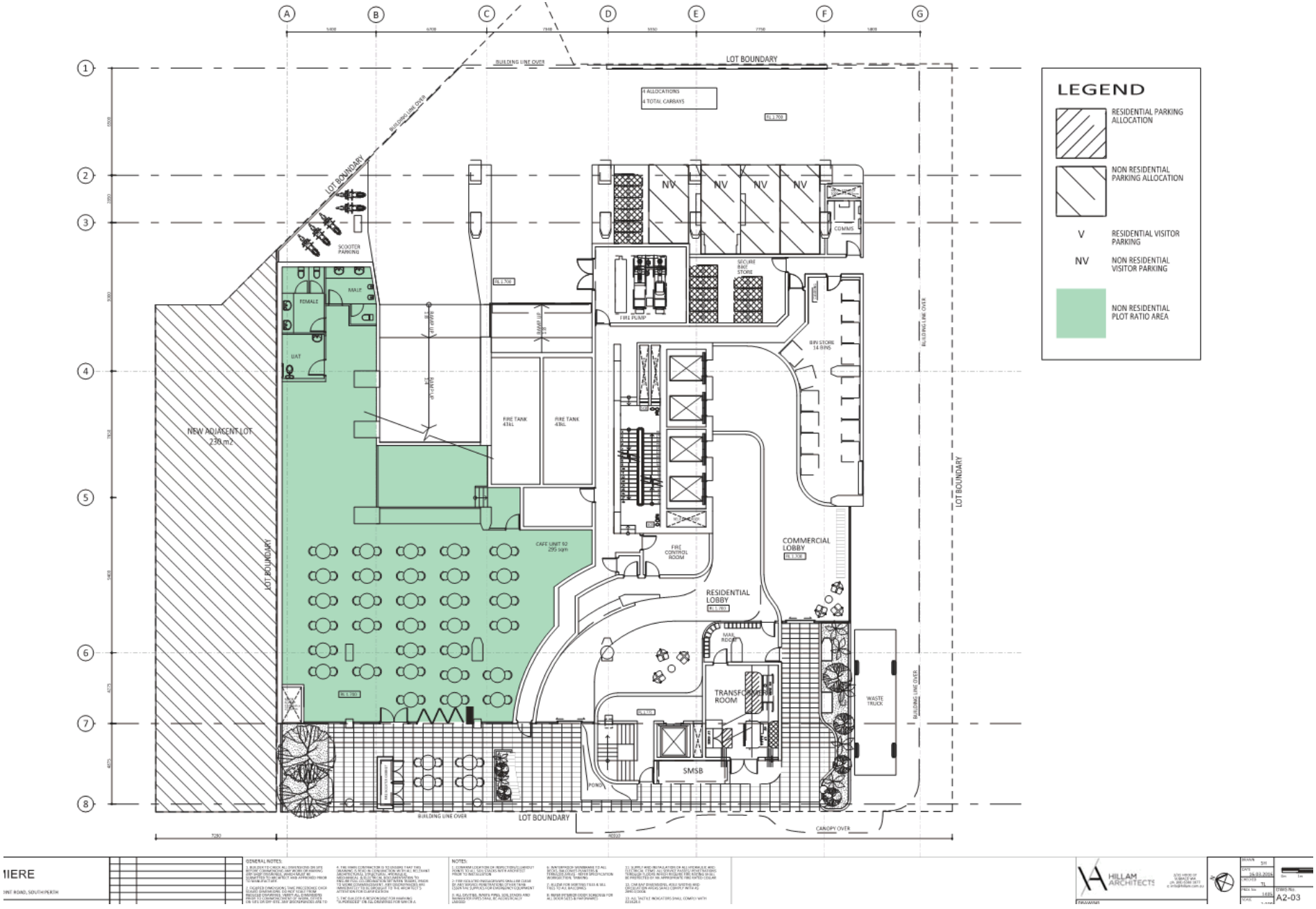
STORE
RAMP UP
38 ALLOCATIONS
0 TANDEMS
38 TOTAL CARBAYS
HILLAM ARCHITECTS
A2-02



HILLAM ARCHITECTS
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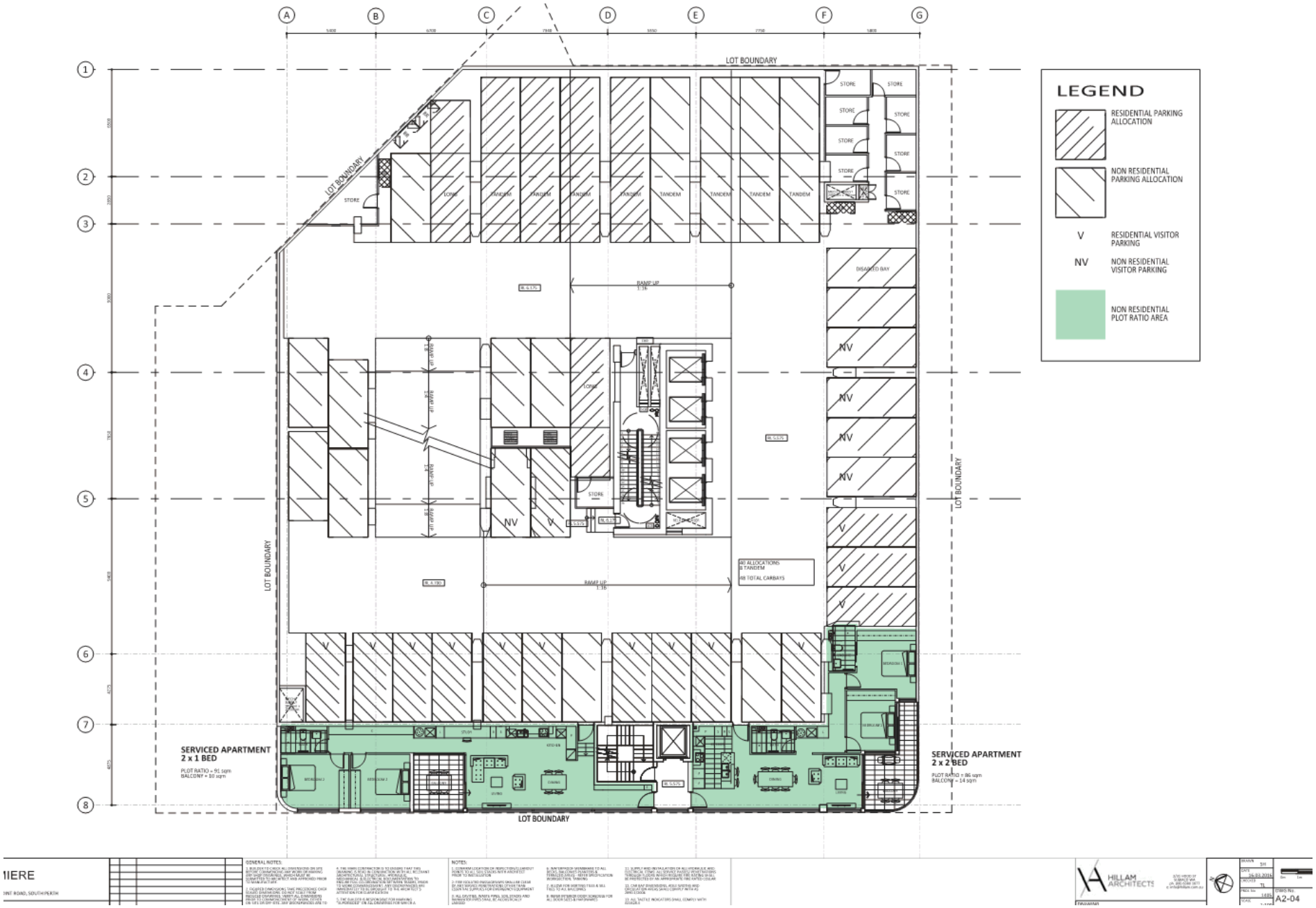
LOT BOUNDARY
LEGEND
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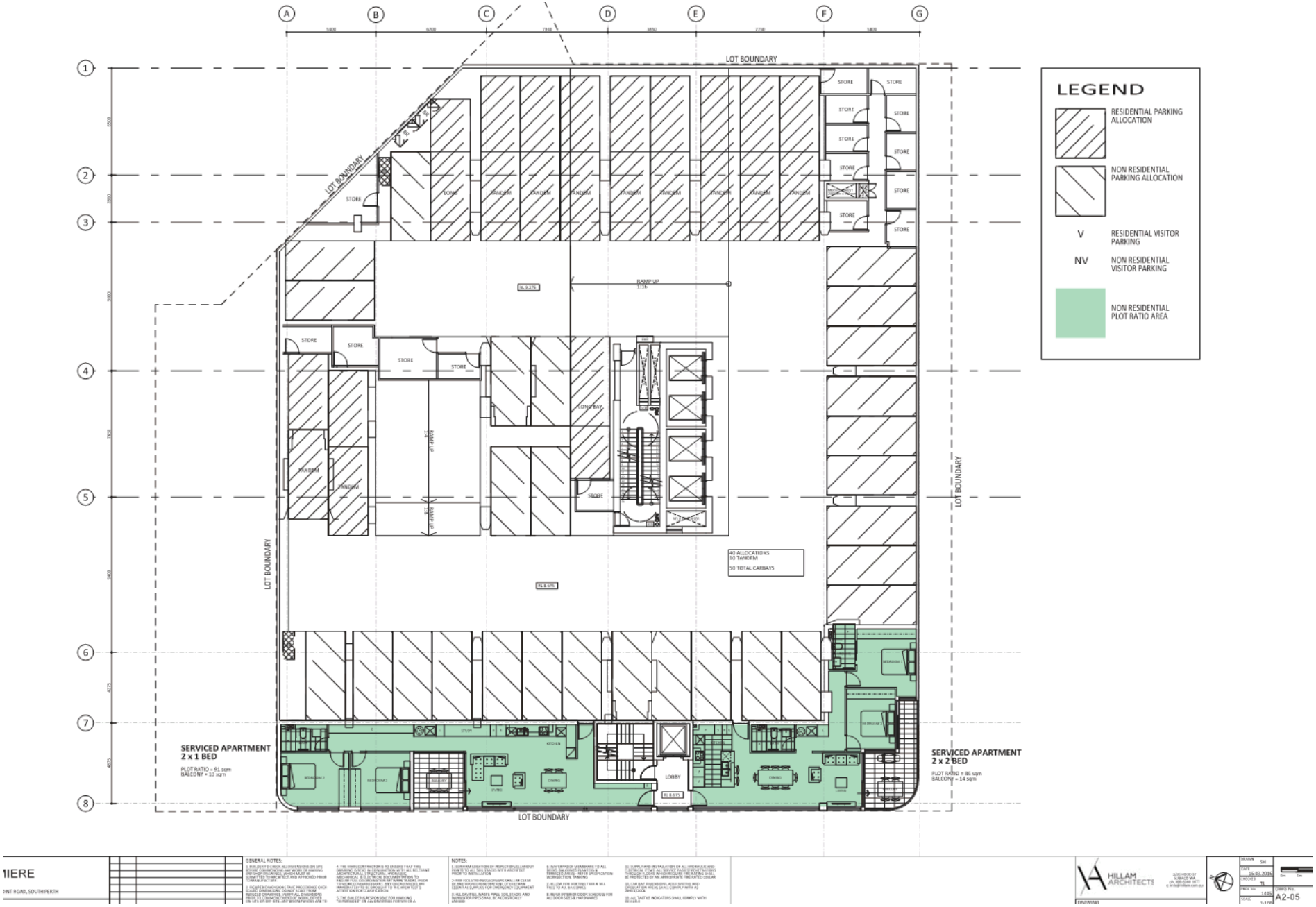
NON RESIDENTIAL PARKING ALLOCATION
V RESIDENTIAL VISITOR PARKING
NV NON RESIDENTIAL VISITOR PARKING
NON RESIDENTIAL PLOT RATIO AREA
STORE
TANDEM
DISABLED BAY
RAMP UP 1:16
SERVICED APARTMENT 2 x 1 BED
SERVICED APARTMENT 2 x 2 BED
LOT BOUNDARY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LEGEND
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NON RESIDENTIAL PARKING ALLOCATION
V
RESIDENTIAL VISITOR PARKING
NV
NON RESIDENTIAL VISITOR PARKING
NON RESIDENTIAL PLOT RATIO AREA
STORE
TANDEM
RAMP UP 1:16
LONG BAY
40 ALLOCATIONS
10 TANDEM
50 TOTAL CARBAYS
LOBBY
SERVICED APARTMENT
2 x 1 BED
PLOT RATIO = 91 sqm
BALCONY = 10 sqm
SERVICED APARTMENT
2 x 2 BED
PLOT RATIO = 86 sqm
BALCONY = 14 sqm
LOT BOUNDARY
LOT BOUNDARY
LOT BOUNDARY
LOT BOUNDARY

Consulting Civil and Traffic Engineers, Risk Managers

Appendix B - Traffic Counts

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-55 -- English (ENA)

Datasets:

Site:	**[COSP185N] Mill Point Rd,between Labouchere and Ferry <50>**
Direction:	1 - North bound, A hit first. **Lane:** 0
Survey Duration:	13:10 Thursday, 20 August 2015 => 12:25 Friday, 28 August 2015
Zone:	
File:	COSP185N 0 2015-08-28 1225.EC0 (Plus)
Identifier:	A7664DVM MC56-1 [MC55] (c)Microcom 07/06/99
Algorithm:	Factory default (v3.21 - 15275)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**13:11 Thursday, 20 August 2015 => 12:25 Friday, 28 August 2015**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	All - (Headway)
Name:	Default Profile
Scheme:	Vehicle classification (ARX)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 14793 / 14816 (99.84%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-55
Site: COSP185N.0.0N
Description: **Mill Point Rd,between Labouchere and Ferry <50>**
Filter time: **13:11 Thursday, 20 August 2015 => 12:25 Friday, 28 August 2015**
Scheme: Vehicle classification (ARX)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	16.0	8.0	15.0	12.0	13.0	32.0	39.0	12.8	18.5
0100-0200	2.0	1.0	9.0	7.0	5.5	14.0	29.0	5.0	9.1
0200-0300	4.0	2.0	3.0	4.0	3.5	14.0	21.0	3.3	6.9
0300-0400	4.0	3.0	5.0	6.0	7.0	7.0	17.0	5.3	7.0
0400-0500	6.0	8.0	4.0	2.0	6.0	8.0	6.0	5.3	5.8
0500-0600	19.0	23.0	16.0	37.0	26.5	12.0	14.0	24.7	21.8
0600-0700	51.0	66.0	73.0	72.0	51.0	22.0	29.0	60.7	51.9
0700-0800	109.0	106.0	100.0	103.0	107.5	43.0	45.0	105.5	90.1
0800-0900	97.0	107.0	105.0	88.0	106.5	72.0	64.0	101.7	93.3
0900-1000	**140.0<**	**110.0<**	**120.0<**	116.0	109.0	84.0	83.0	**117.3<**	108.9
1000-1100	116.0	107.0	116.0	**116.0<**	**118.0<**	107.0	101.0	115.2	112.4
1100-1200	124.0	108.0	104.0	98.0	112.0	**135.0<**	**134.0<**	109.7	**115.9<**
1200-1300	109.0	115.0	116.0	120.0	92.0	138.0	112.0	107.3	111.8
1300-1400	127.0	114.0	114.0	99.0	122.0	120.0	125.0	112.5	115.0
1400-1500	121.0	110.0	106.0	129.5	116.0	138.0	**131.0<**	118.7	122.6
1500-1600	138.0	131.0	123.0	123.0	119.0	122.0	120.0	126.2	124.9
1600-1700	133.0	**157.0<**	137.0	143.0	**166.0<**	**146.0<**	111.0	146.5	142.0
1700-1800	**156.0<**	146.0	**162.0<**	**156.5<**	154.0	114.0	121.0	**155.2<**	**145.8<**
1800-1900	116.0	142.0	159.0	140.0	115.0	115.0	124.0	135.3	131.4
1900-2000	87.0	96.0	135.0	104.0	97.0	91.0	80.0	103.8	99.3
2000-2100	83.0	80.0	79.0	93.5	70.0	54.0	64.0	83.2	77.1
2100-2200	60.0	93.0	77.0	73.5	68.0	66.0	45.0	74.2	69.5
2200-2300	31.0	25.0	44.0	46.5	56.0	63.0	29.0	41.5	42.6
2300-2400	16.0	14.0	25.0	23.5	49.0	48.0	8.0	25.2	25.9
Totals									
0700-1900	1486.0	1453.0	1462.0	1432.0	1437.0	1334.0	1271.0	1451.0	1413.9
0600-2200	1767.0	1788.0	1826.0	1775.0	1723.0	1567.0	1489.0	1772.8	1711.6
0600-0000	1814.0	1827.0	1895.0	1845.0	1828.0	1678.0	1526.0	1839.5	1780.1
0000-0000	1865.0	1872.0	1947.0	1913.0	1889.5	1765.0	1652.0	1896.0	1849.1
AM Peak	0900	0900	0900	1000	1000	1100	1100		
	140.0	110.0	120.0	116.0	118.0	135.0	134.0		
PM Peak	1700	1600	1700	1700	1600	1600	1400		
	156.0	157.0	162.0	156.5	166.0	146.0	131.0		

* - No data.

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-56 -- English (ENA)

Datasets:

Site:	**[COSP185S] Mill Point Rd,between Labouchere and Ferry <50>**
Direction:	3 - South bound, A hit first. **Lane:** 0
Survey Duration:	13:11 Thursday, 20 August 2015 => 12:21 Friday, 28 August 2015
Zone:	
File:	COSP185S 0 2015-08-28 1221.EC0 (Plus)
Identifier:	A960293P MC56-1 [MC55] (c)Microcom 07/06/99
Algorithm:	Factory default (v3.21 - 15275)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**13:12 Thursday, 20 August 2015 => 12:21 Friday, 28 August 2015**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	All - (Headway)
Name:	Default Profile
Scheme:	Vehicle classification (ARX)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 31473 / 31501 (99.91%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-56
Site: COSP185S.0.0S
Description: **Mill Point Rd,between Labouchere and Ferry <50>**
Filter time: **13:12 Thursday, 20 August 2015 => 12:21 Friday, 28 August 2015**
Scheme: Vehicle classification (ARX)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	18.0	12.0	13.0	24.0	24.0	39.0	69.0	19.2	27.9
0100-0200	8.0	10.0	13.0	10.0	10.5	24.0	42.0	10.3	16.0
0200-0300	11.0	11.0	4.0	8.0	6.0	19.0	24.0	7.7	11.1
0300-0400	5.0	10.0	5.0	15.0	8.0	15.0	23.0	8.5	11.1
0400-0500	13.0	12.0	9.0	7.0	13.0	15.0	8.0	11.2	11.3
0500-0600	54.0	52.0	54.0	58.0	73.5	24.0	23.0	60.8	51.5
0600-0700	145.0	142.0	144.0	167.0	147.5	87.0	52.0	148.8	129.0
0700-0800	199.0	210.0	217.0	194.0	206.0	111.0	57.0	205.3	175.0
0800-0900	250.0	242.0	279.0	265.0	264.5	206.0	166.0	260.8	242.1
0900-1000	**300.0<**	270.0	279.0	**309.0<**	**299.0<**	284.0	300.0	**292.7<**	292.5
1000-1100	283.0	**287.0<**	262.0	285.0	264.0	**334.0<**	345.0	274.2	290.5
1100-1200	281.0	272.0	**293.0<**	295.0	282.0	333.0	**364.0<**	284.2	**300.3<**
1200-1300	280.0	272.0	263.0	266.0	184.0	339.0	**334.0<**	241.5	265.3
1300-1400	278.0	278.0	242.0	240.0	283.0	**349.0<**	275.0	260.2	273.1
1400-1500	269.0	285.0	258.0	269.5	287.0	317.0	242.0	273.0	274.6
1500-1600	282.0	270.0	262.0	275.5	**291.0<**	282.0	263.0	276.0	275.1
1600-1700	272.0	268.0	249.0	277.0	260.0	243.0	205.0	267.2	256.4
1700-1800	**296.0<**	**295.0<**	295.0	**292.0<**	270.0	247.0	228.0	**290.0<**	**276.9<**
1800-1900	216.0	236.0	**295.0<**	260.0	257.0	243.0	203.0	254.0	246.3
1900-2000	140.0	148.0	181.0	178.0	202.0	206.0	135.0	171.2	171.0
2000-2100	108.0	114.0	115.0	134.0	120.0	137.0	94.0	120.8	119.5
2100-2200	98.0	90.0	103.0	113.0	102.0	111.0	85.0	103.2	101.9
2200-2300	40.0	51.0	86.0	79.5	91.0	113.0	45.0	71.2	73.1
2300-2400	26.0	29.0	32.0	33.0	67.0	95.0	27.0	36.7	42.8
Totals									
0700-1900	3206.0	3185.0	3194.0	3228.0	3147.5	3288.0	2982.0	3179.0	3168.0
0600-2200	3697.0	3679.0	3737.0	3820.0	3719.0	3829.0	3348.0	3723.0	3689.4
0600-0000	3763.0	3759.0	3855.0	3932.5	3877.0	4037.0	3420.0	3830.8	3805.3
0000-0000	3872.0	3866.0	3953.0	4054.5	4012.0	4173.0	3609.0	3948.5	3934.1
AM Peak	0900	1000	1100	0900	0900	1000	1100		
	300.0	287.0	293.0	309.0	299.0	334.0	364.0		
PM Peak	1700	1700	1800	1700	1500	1300	1200		
	296.0	295.0	295.0	292.0	291.0	349.0	334.0		

* - No data.

Consulting Civil and Traffic Engineers, Risk Managers

Appendix C - SIDRA Analysis

Existing A.M. Peak Hour
Signals - Fixed Time Cycle Time = 75 seconds (Optimum Cycle Time - Minimum Delay)Variable Sequence Analysis applied.
The results are given for the selected output sequence.

Movement Performance - Vehicles

Mov ID	ODMov	Demand Flows Total	Demand Flows HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	95% Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Labouchere Road South											
1	L2	909	2.0	0.791	34.5	LOS C	17.1	121.8	0.97	0.91	37.6
2	T1	16	2.0	0.261	37.4	LOS D	1.4	10.2	0.97	0.72	36.1
3	R2	23	2.0	0.261	43.0	LOS D	1.4	10.2	0.97	0.72	35.6
Approach		948	2.0	0.791	34.7	LOS C	17.1	121.8	0.97	0.91	37.5
East: Mill Point Road East											
4	L2	53	2.0	0.039	7.3	LOS A	0.4	2.6	0.29	0.61	52.8
5	T1	948	2.0	0.781	27.2	LOS C	17.2	122.3	0.95	0.90	41.5
6	R2	24	2.0	0.165	42.5	LOS D	0.9	6.3	0.96	0.70	34.8
Approach		1025	2.0	0.781	26.6	LOS C	17.2	122.3	0.91	0.88	41.8
North: Mill Point Road North											
7	L2	53	2.0	0.649	43.2	LOS D	5.0	35.4	1.00	0.83	35.7
8	T1	78	2.0	0.649	37.6	LOS D	5.0	35.4	1.00	0.83	36.3
9	R2	146	2.0	0.749	45.1	LOS D	5.8	41.2	1.00	0.89	34.0
Approach		277	2.0	0.749	42.7	LOS D	5.8	41.2	1.00	0.86	35.0
West: Kwinana Fwy SB Off Ramp/NB SB On Ramp											
10	L2	145	2.0	0.764	34.9	LOS C	8.5	60.6	1.00	0.93	38.4
11	T1	602	2.0	0.764	18.3	LOS B	11.8	83.8	0.96	0.87	45.8
12	R2	144	2.0	0.492	37.9	LOS D	5.0	35.8	0.96	0.79	36.6
Approach		892	2.0	0.764	24.2	LOS C	11.8	83.8	0.97	0.87	42.7
All Vehicles		3142	2.0	0.791	29.8	LOS C	17.2	122.3	0.95	0.88	40.0

Figure 13 - Intersection Performance – AM Peak Existing Traffic

Existing P.M. Peak Hour
Signals - Fixed Time Cycle Time = 90 seconds (Optimum Cycle Time - Minimum Delay)Variable Sequence Analysis applied.
The results are given for the selected output sequence.

Movement Performance - Vehicles

Mov ID	ODMov	Demand Flows Total	Demand Flows HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	95% Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Labouchere Road South											
1	L2	757	2.0	0.610	31.1	LOS C	14.5	102.9	0.87	0.83	39.0
2	T1	39	2.0	0.528	47.3	LOS D	3.0	21.7	1.00	0.76	33.2
3	R2	27	2.0	0.528	52.9	LOS D	3.0	21.7	1.00	0.76	32.8
Approach		823	2.0	0.610	32.6	LOS C	14.5	102.9	0.88	0.82	38.4
East: Mill Point Road East											
4	L2	24	2.0	0.019	8.2	LOS A	0.2	1.7	0.30	0.61	52.1
5	T1	746	2.0	0.613	26.9	LOS C	13.8	98.6	0.88	0.76	41.7
6	R2	31	2.0	0.250	51.5	LOS D	1.4	9.7	0.98	0.72	32.1
Approach		801	2.0	0.613	27.3	LOS C	13.8	98.6	0.87	0.75	41.5
North: Mill Point Road North											
7	L2	100	2.0	0.806	53.7	LOS D	8.0	57.2	1.00	0.93	32.1
8	T1	67	2.0	0.806	48.2	LOS D	8.0	57.2	1.00	0.93	32.6
9	R2	153	2.0	0.750	51.9	LOS D	7.1	50.7	1.00	0.88	32.0
Approach		320	2.0	0.806	51.7	LOS D	8.0	57.2	1.00	0.91	32.1
West: Kwinana Fwy SB Off Ramp/NB SB On Ramp											
10	L2	154	2.0	0.812	36.7	LOS D	15.2	108.0	1.00	0.96	38.1
11	T1	897	2.0	0.812	21.0	LOS C	19.1	136.3	0.96	0.90	44.4
12	R2	266	2.0	0.655	41.0	LOS D	11.0	78.1	0.96	0.84	35.5
Approach		1317	2.0	0.812	26.9	LOS C	19.1	136.3	0.96	0.89	41.5
All Vehicles		3261	2.0	0.812	30.9	LOS C	19.1	136.3	0.92	0.84	39.5

Figure 14 - Intersection Performance – PM Peak Existing Traffic

Existing A.M. Peak Hour
Signals - Fixed Time Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)Variable Sequence Analysis applied. The results are given for the selected output sequence.

Movement Performance - Vehicles

Mov ID	ODMov	Demand Flows Total	Demand Flows HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	95% Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Labouchere Road South											
1	L2	909	2.0	0.808	34.2	LOS C	16.6	118.0	0.97	0.93	37.7
2	T1	27	2.0	0.313	34.8	LOS C	1.7	12.4	0.98	0.73	37.3
3	R2	23	2.0	0.313	40.4	LOS D	1.7	12.4	0.98	0.73	36.9
Approach		960	2.0	0.808	34.3	LOS C	16.6	118.0	0.97	0.92	37.7
East: Mill Point Road East											
4	L2	53	2.0	0.040	7.5	LOS A	0.4	2.6	0.31	0.62	52.7
5	T1	948	2.0	0.833	30.0	LOS C	17.5	124.3	0.97	0.98	40.3
6	R2	35	2.0	0.221	40.0	LOS D	1.2	8.4	0.96	0.72	35.7
Approach		1036	2.0	0.833	29.2	LOS C	17.5	124.3	0.94	0.95	40.6
North: Mill Point Road North											
7	L2	72	2.0	0.787	43.2	LOS D	6.4	45.4	1.00	0.93	35.6
8	T1	98	2.0	0.787	37.7	LOS D	6.4	45.4	1.00	0.93	36.3
9	R2	185	2.0	0.885	48.9	LOS D	7.6	54.2	1.00	1.04	32.9
Approach		355	2.0	0.885	44.6	LOS D	7.6	54.2	1.00	0.99	34.3
West: Kwinana Fwy SB Off Ramp/NB SB On Ramp											
10	L2	103	2.0	0.784	27.1	LOS C	7.2	51.5	1.00	0.91	42.4
11	T1	602	2.0	0.784	18.5	LOS B	10.3	73.7	0.98	0.90	45.7
12	R2	144	2.0	0.551	37.4	LOS D	4.8	34.5	0.98	0.79	36.8
Approach		849	2.0	0.784	22.8	LOS C	10.3	73.7	0.98	0.88	43.5
All Vehicles		3200	2.0	0.885	30.7	LOS C	17.5	124.3	0.97	0.93	39.6

Figure 15 - Intersection Performance – AM Peak Predicted Traffic

Existing P.M. Peak Hour
Signals - Fixed Time Cycle Time = 95 seconds (Optimum Cycle Time - Minimum Delay)Variable Sequence Analysis applied. The results are given for the selected output sequence.

Movement Performance - Vehicles

Mov ID	ODMov	Demand Flows Total	Demand Flows HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	95% Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Labouchere Road South											
1	L2	757	2.0	0.612	32.3	LOS C	15.4	109.5	0.87	0.83	38.5
2	T1	53	2.0	0.670	51.5	LOS D	4.0	28.3	1.00	0.82	32.1
3	R2	27	2.0	0.670	57.1	LOS E	4.0	28.3	1.00	0.82	31.7
Approach		837	2.0	0.670	34.3	LOS C	15.4	109.5	0.88	0.83	37.7
East: Mill Point Road East											
4	L2	24	2.0	0.019	8.6	LOS A	0.3	1.9	0.31	0.61	51.9
5	T1	746	2.0	0.636	29.0	LOS C	15.0	106.8	0.89	0.77	40.7
6	R2	44	2.0	0.382	55.0	LOS E	2.1	15.1	1.00	0.74	31.1
Approach		815	2.0	0.636	29.8	LOS C	15.0	106.8	0.88	0.76	40.3
North: Mill Point Road North											
7	L2	112	2.0	0.811	55.2	LOS E	9.6	68.6	1.00	0.94	31.7
8	T1	80	2.0	0.811	49.7	LOS D	9.6	68.6	1.00	0.94	32.2
9	R2	177	2.0	0.765	53.4	LOS D	8.7	61.7	1.00	0.89	31.6
Approach		368	2.0	0.811	53.2	LOS D	9.6	68.6	1.00	0.92	31.7
West: Kwinana Fwy SB Off Ramp/NB SB On Ramp											
10	L2	183	2.0	0.824	41.7	LOS D	17.3	122.9	1.00	0.98	36.1
11	T1	897	2.0	0.824	22.7	LOS C	21.5	153.1	0.96	0.91	43.4
12	R2	266	2.0	0.628	41.7	LOS D	11.3	80.7	0.95	0.83	35.3
Approach		1346	2.0	0.824	29.1	LOS C	21.5	153.1	0.96	0.90	40.5
All Vehicles		3366	2.0	0.824	33.2	LOS C	21.5	153.1	0.93	0.85	38.6

Figure 16 - Intersection Performance – PM Peak Predicted Traffic

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delivering solutions

Asset Management | Environmental Services | Spatial Intelligence | Waste Management

Waste Management Plan

74 Mill Point Road, South Perth

Prepared for Hillam Architects
March 2016
Project Number TW14016

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DOCUMENT CONTROL

Version	File Ref	Author	Reviewer
1a	TW14016 – Waste Management Plan.1a	Brice Campbell	Ronan Cullen
1b	TW14016 – Waste Management Plan.1b	Brice Campbell	Ronan Cullen
1c	TW14016 – Waste Management Plan.1c	Paul Gauci	Ronan Cullen
1d	TW14016 – Waste Management Plan.1d	Ross Cullen	Ronan Cullen
1e	TW14016 – Waste Management Plan.1e	Ross Cullen	Ronan Cullen
1f	TW14016 – Waste Management Plan.1f	Casey Felmingham	Ross Cullen

Summary

Table 1-1: Proposed Waste Collection Summary

Waste Type	Generation (L)	Bin Size (L)	Number of Bins	Collection Frequency (per week)	Collection
Refuse	19,355	1,100	6	3	Private Contractor
Recycling	18,445	1,100	6	3	Private Contractor

Generation rates were obtained from the City of South Perth's Waste Guidelines for New Developments as requested by the City of South Perth.

A Private waste contractor will service the Proposal providing 1,100L receptacles for refuse and recyclables which are to be collected by a rear lift collection vehicle.

A suitably qualified Strata Manager will be engaged to oversee relevant aspects of waste management at the Proposal.

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Tables

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1 Introduction

Hillam Architects Pty Ltd (Hillam) is currently seeking planning approval for the development of a mixed use building at 74 Mill Point Road, South Perth (the Proposal). The Proposal is located in the South Peth Peninsula area to the east of Mill Point Road and south of Fraser Lane as shown in **Figure 1**. The Proposal consists of 3 basement levels, a ground floor along with 44 floors made up of:

- 1 bedroom apartments – 11;
- 2 bedroom apartments – 43;
- 3 bedroom apartments – 25;
- 4 bedroom apartments – 6;
- Serviced apartments – 147; and
- Café – 295 m^2.

As part of the planning approval process, the City of South Perth (the City) requires the development of a Waste Management Plan (WMP) that identifies how waste is to be stored and collected from the Proposal. Hillam has therefore engaged Talis Consultants Pty Ltd (Talis) to prepare this WMP to satisfy the City's requirements.

1.1 Objectives and Scope

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

- Adequately cater for the anticipated quantities of waste and recyclables to be generated;
- Provide a suitable Bin Storage Area including appropriate receptacles; and
- Allow for efficient collection of receptacles by appropriate waste collection vehicles.

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

- Chapter 2: Waste Generation;
- Chapter 3: Waste Storage;
- Chapter 4: Waste Collection;
- Chapter 5: Bulk Verge Collection; and
- Chapter 6: Conclusion.

2 Waste Generation

To determine the bin requirements at the Proposal, the anticipated quantities of refuse and recyclables were estimated based on the number of apartments and the café floor area. The Proposal consists of predominantly residential apartments, serviced apartments and a café.

Residential and commercial waste generation rates were obtained from the City of South Perth's Waste Guidelines for New Developments. Consideration was also given to City of Sydney's *Policy for Waste Minimisation in New Developments* (2005), City of Melbourne's *Guidelines for Preparing a Waste Management Plan* (2014), Randwick City Council's *Waste Management Guidelines for Proposed Developments* (2004) and Western Australian Local Government Association's *Draft Multi Dwelling Development Waste Management Plan Guidelines* (2014). Where a range of values were provided for a particular waste source, a conservative approach was adopted and the largest value was taken to ensure that sufficient receptacle volumes will be provided.

Waste generation is estimated by volume in Litres (L) as this is generally the influencing factor when considering receptacle size, numbers and storage space required. The estimated volumes in Litres per week (L/week) of refuse and recyclables generated for the tenancies are shown in **Table 2** and **Table 3**.

Table 2: Estimated Waste Generation – Apartments

Use	Number of Units	Generation Rate (L/week)	Waste Generation (L/week)
Refuse			
Apartment (One Bed)	11	80	880
Apartment (Two Bed)	43	100	4,300
Apartment (Three Bed)	25	120	3,000
Apartment (Four Bed)	6	120	720
Serviced Apartment	147	35	5,145
Total			**14,045**
Recycling			
Apartment (One Bed)	11	80	880
Apartment (Two Bed)	43	120	5,160
Apartment (Three Bed)	25	120	3,000
Apartment (Four Bed)	6	120	720
Serviced Apartment	147	35	5,145
Total			**14,905**

As shown in **Table 1**, it is anticipated that the residential apartments will generate 14,045L of refuse and 14,905L of recycling per week.

Table 3: Estimated Waste Generation – Café

Use	Floor Area (m^2)	Generation Rate ($L/100m^2/day$)	Waste Generation (L/week)
Refuse			
Café	295	300	5,310
Total			**5,310**
Recycling			
Café	295	200	3,540
Total			**3,540**

As shown in **Table 2**, it is anticipated that the Proposal will generate 5,310L of refuse and 3,540L of recyclables per week from the café. These waste generation quantities are based on six days of operation per week for the café tenancy.

Table 4: Estimated Waste Generation – Combined

Use	Waste Generation (L/week)
Refuse	
Apartments	14,045
Café	5,310
Total	**19,355**
Recycling	
Apartments	14,905
Café	3,540
Total	**18,445**

The totals for both the residential apartment and café space are summarised in **Table 3** above. It is anticipated that 19,355L of refuse and approximately 18,445L of recyclables will be generated at the Proposal per week.

3 Waste Storage

To ensure that waste is managed appropriately at the Proposal, it is important to allow for sufficient receptacle volume in the Bin Storage Area. The procedure and receptacles to be used in this area are described in the following sections.

3.1 Internal Receptacles

Waste materials generated within the apartments will be taken by residents and placed in the appropriate receptacles located in the Bin Storage Area as shown in **Figure 2**. These receptacles will be used for the disposal of:

- Refuse; and
- Recyclables.

In the café space, separate receptacles will be used for refuse and recycling. These receptacles will then be emptied into the larger receptacles in the Bin Storage Area.

3.2 Bin Storage Area

3.2.1 Size

To ensure sufficient area is available for storage of the waste receptacles prior to collection, the quantity of receptacles required was modelled utilising a range of receptacle sizes from 240L to 1,100L, as shown in **Table 5**.

Table 5: Receptacle Requirements

Waste Stream	Waste generation (L/week)	Number of Receptacles Required		
		240L	660L	1,100L
Refuse	19,355	27	10	6
Recycling	18,445	26	10	6

Based on typical receptacle dimensions as per **Table 6**, the placement of the receptacles within the Bin Storage Area has been considered, as shown in **Figure 2**. This was based on three collections per week of refuse and recyclables. The larger 1,100L receptacles will be used at the Proposal to ensure that the space available within the Bin Storage Area is sufficient and to reduce collection times during servicing. Bins will be monitored by the Strata Manager and receptacles will be rotated to ensure uniform access when required.

Table 6: Typical Bin Dimensions

Bin Size (L)	Depth (m)	Width (m)	Area (m^2)
240	0.735	0.580	0.426
660	0.765	1.360	1.040
1,100	1.070	1.240	1.327

Reference: SULO Australia Bin Specification Data Sheets

3.2.2 Design

The Bin Storage Area is located on the ground level of the Proposal. The Bin Storage Area will have an impervious floor draining to the sewer and a tap to facilitate washing of bins inside the store. Doors to the Bin Storage Area will be self-closing and vermin proof. The Bin Storage Area will also be ventilated to a suitable standard. To reduce potential odours in the Bin Storage Area, the receptacles, floor and walls will be cleaned by the Strata Manager when required. Receptacles will be washed down in a designated area inside the Bin Storage Area.

It should be noted that the number of receptacles and corresponding placement of receptacles as shown in **Figure 2** represents the maximum requirements assuming three collections per week for refuse and recyclables. More frequent collections would reduce both the number of receptacles and the storage space required.

Receptacle capacity and storage space within the Bin Storage Area will be monitored during the operation of the Proposal to ensure that the receptacles provided are sufficient.

3.2.3 Strata Management Activities

Due to the communal nature of the Bin Storage Area a suitably qualified Strata Manager will be engaged to complete the following tasks:

- Monitoring of the Bin Storage Area;
- Maintenance of receptacles and Bin Storage Area; and
- Clean receptacles and Bin Storage Area when required.

4 Waste Collection

A Private waste contractor will service the Proposal providing 1,100L receptacles for refuse and recyclables which are to be collected by a rear lift collection vehicle. The rear lift collection vehicle will park adjacent to the Bin Storage Area's external door for servicing as shown in **Figure 2**. As the truck is not able to collect the receptacles directly from the Bin Storage Area, the receptacles will be ferried to and from the waiting collection vehicle by the Strata Manager so that they can be emptied by the Contractor. Depending on the services agreement, this could be undertaken by the service provider. This servicing method will reduce the number of receptacles on the verge, maintain the amenity of the area and remove the requirement for a lay down area to temporarily store receptacles on the verge before the collection vehicle arrives.

Collection vehicle movements to service the Proposal are outlined in *Transport Statement for the Development of 74 Mill Point Road, South Perth* including proposed modification to the existing laneway. The collection vehicle will access the Proposal from Mill Point Road and reverse into the laneway to be level with the Bin Storage Area's external door. The collection vehicle will exit the laneway after servicing in forward gear via Mill Point Road.

The service provider engaged to service the Proposal will be required to service the building with a rear lift collection vehicle that can operate with an overhead clearance of 3.5 metres. During preparation of this WMP, several Waste Collection Contractors were contacted. A number of those contacted have rear lift collection vehicles which can meet this requirement.

As described previously, there is sufficient space within the Bin Storage Area for the number of receptacles required for three collections per week for refuse and recycling. However, increased collection frequency would reduce the number of receptacles required.

5 Bulk Verge Collection

Given the streetscape adjacent to the Proposal, placement of bulk verge material on the verge is not considered desirable. Instead bulk waste material will be removed from the Proposal as it is generated. Removal of this material will be the responsibility of each person(s) residing at the Proposal.

Collier Park Transfer Station (Collier Park) is located approximately 4.6 kilometres from the Proposal and accepts self-hauled material from residential properties. Collier Park is open from 9:00am to 4:45pm, seven days per week excluding Good Friday, ANZAC Day, Christmas Day and New Year's Day. The City of South Perth provides three entry vouchers annually with Rate Notices.

The above will be communicated to residents residing at the Proposal by the Strata Manager and information sheets distributed to new owners.

6 Conclusion

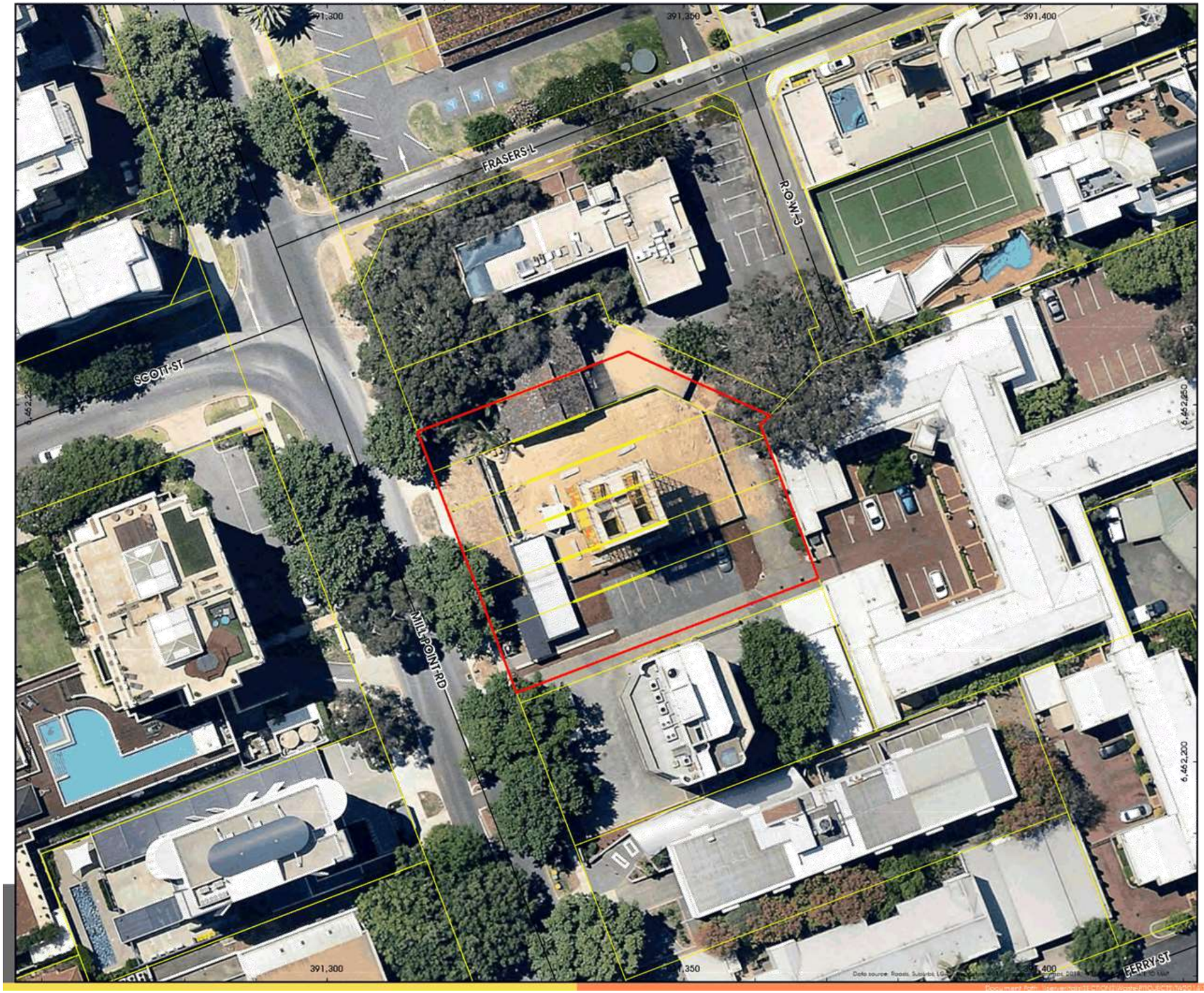
As demonstrated within this WMP, the Proposal provides a sufficiently large Bin Storage Area for the storage of receptacles for both refuse and recyclables based on a configuration of suitable receptacles. This indicates that a satisfactorily designed Bin Storage Area has been provided and collection of both refuse and recycling receptacles can be completed from the Proposal.

The above is achieved using six 1,100L receptacles collected three times per week for refuse and six 1,100L recycling receptacles collected three times per week. The collection vehicle will park adjacent to the Bin Storage Area to services the Proposal. Receptacles will be emptied directly from the Bin Storage Area by the service provider.

Bulk waste material generated at the Proposal will be taken to Collier Park for disposal as it is generated.

Figures

P PO Box 454, Leederville WA 6903 | A Level 1 660 Newcastle St, Leederville WA 6007 | T 1300 251 070 | W www.talisconsultants.com.au



LEGEND

- Site Boundary
- Cadastral Boundary
- Road Network (MRWA)

LOCALITY

SITE AERIAL
74 Mill Point Road Waste Management Plan

0 2.5 5 10 15 20 metres
Coordinate System: GDA 1994 MGA Zone 50
Projection: Transverse Mercator Datum: GDA 1994
Scale @ A3:1:500

Prepared: RPC	Date: 22/10/2014
Checked: CF	Project No: TW14016
Reviewed: NK	Revision: A

talis delivering solutions

Figure 01

talis delivering solutions
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ASSET MANAGEMENT
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
SPATIAL INTELLIGENCE
WASTE MANAGEMENT
6/663 Newcastle Street, Leederville WA 6007
PO Box 454, Leederville WA 6903
T: 1300 251 070

Client: Hillam Architects

NOTES
1. This drawing is the property of Talis Consultants Pty Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. All levels refer to Australian Height Datum.
3. DO NOT SCALE, use figured dimensions only, if in doubt please contact Talis Consultants.

No.	Date		Amendment / Issue	App.
B	18/03/16	CF RC	WMP	RC
A	09/12/15	PD RC	WMP	RC

Project: 74 Mill Point Road Waste Management Plan

Title: Bin Store Area

Drawn by:	CF	Job No:	TW14016
Checked by:	RC	File No:	TW14016FIG002
Approved by:	RC	Fig. No:	002
Scale: 1:50 @A3		Rev:	B
Date: 18/03/2016			

EDGE

VISIONARY LIVING

Lumiere- 74 Mill Point Road, South Perth
Management Plan for Holiday Rental Accommodation.

This Management Plan has been prepared by Edge Visionary Living with respect to The City of South Perth's *Strategic Direction 3- Housing and Land Uses Policy P312 Serviced Apartments.*

This Management Plan is a preliminary document that is to be revised and refined once the Serviced Apartment Operator is selected by the developer. The manager of the rental accommodation will then update this document to reflect their specific business practices to the satisfaction of The City of South Perth.

It will be a requirement for of all occupants of serviced apartments to comply with the House Rules and Code of Conduct as detailed below. It will be the responsibility of the Serviced Apartment Manager to ensure that the House Rules and Code of Conduct are communicated to all owners and guests.

This Code of Conduct applies to the planned 147 dwelling properties that are rented for the purposes of holiday accommodation at *Lumiere*, 74 Mill Point Road.

Code of Conduct

1.0 Holiday Rental- Terms and Conditions between Owners and Guests

The Terms and Conditions upon which a Property is offered, booked and occupied for Holiday Rental under the contract between the Owner and Guest must adequately cover and be consistent with this Code of Conduct and provisions set out below:

1.1 Formalities:
The Terms and Conditions:

a) Must be in writing;
b) May be in electronic, printed or other legally compliant form;
c) Must include the information and cover the matters in Part 1 of this Code of Conduct;
d) May incorporate information by reference including Booking Conditions, Occupancy Agreement, House Rules, By Laws and information made available to the Guest from web sites; and
e) May cover such other matters generally required in relation to Holiday Rental of the

Property and any special conditions provided they are not inconsistent with this Code of Conduct.

1.2 General Content

a) The Terms and Conditions must include:
i. the address and description sufficient to identify the particular Property;
ii. Guest's name, usual residential address, email and phone number(s);
iii. dates of occupancy and check-in/check-out times;
iv. total rental payable and any other charges;
v. amount and timing for payment of deposit and balance of moneys due;
vi. provisions on variation, cancellation and forfeiture or refund of moneys paid; and
vii. contact details for the Manager or their nominated representative.
b) The Terms and Conditions must not offend the unfair contract terms and other provisions of the Australian Consumer Law.

1.3 Licence not a tenancy

The Terms and Conditions must include:
a) Guests are granted a limited permission to occupy the Property for holiday purposes;
b) This is not a residential tenancy agreement under the residential tenancy legislation; and
c) Failure to comply with the Guest's obligations in the Terms and Conditions may result in termination of permission to occupy the Property and eviction.

1.4 Maximum number of Guests and maximum duration of stay.

a) The maximum number of Guests permitted at a Property must not exceed a maximum of 2 adults per bedroom; and
b) The number of Visitors permitted at a Property must not be such as may conflict with residential amenity and must comply with all the other requirements of this Code of Conduct including the Terms and Conditions and House Rules.
c) The maximum length of stay for any Guest must not exceed 15 weeks.

1.5 General obligations of Guests and Visitors

Guests and Visitors must:
a) Comply with all House Rules and By-Laws;
b) Respect the residential amenity and security of the Property and neighbours;
c) Refrain from anti-social behaviour;
d) Guests must control and be responsible for Visitors and ensure that Visitors comply with the House Rules;
e) Comply with any instructions from the Manager and security services during their stay; and
f) Notify the Manager of any disputes or complaints as soon as is practicable.

1.6 Noise and Residential Amenity

a) Guests must not create noise which is offensive to neighbours especially between 10pm-8am and during arrival and departure at any time throughout the occupancy.
b) Offensive noise is prohibited and may result in:

i. termination of permission to occupy the Property;
ii. eviction;
iii. loss of rental paid; and
iv. extra charges for security and other expenses which may be deducted from Security Deposits or Bonds.

c) Guests must abide by any noise abatement conditions, standards and orders issued by police or any regulatory authority to minimise impacts upon the residential amenity of neighbours and local community.

1.7 Functions and parties

a) The Property is not a "party house" and any such activities are strictly prohibited; and
b) Any gathering, celebration or entertainment permitted at the Property must not conflict with residential amenity and must comply with all House Rules.

1.8 Access and Parking

a) Guests and Visitors must comply with parking regulations and show consideration to neighbours;
b) Information on any constraints on access or any parking restrictions to ensure ease of access with minimum disturbance to other residents or neighbouring properties;
c) Guests are required to pre-book a parking bays if required.
d) Guests will be required to supply vehicle/trailer registration numbers.

1.9 Recycling and Garbage

a) Guests must dispose of garbage and recycling in accordance with the usual practice at the Property and in the allocated bins;
b) Guests must not leave excess rubbish in public or common areas; and
c) Guests should be co-operative in complying with requirements in relation to the relevant private contractor garbage and recycling collection days, and any special requirements relating to the disposal of garbage or waste minimisation.

1.10 Complaints and dispute resolution procedure

Information on complaints handling including:
a) Guest's obligations to report any problems or incidents promptly; and
b) Complaints and dispute resolution procedure.

1.11 Consequences of not meeting the Terms and Conditions

a) The consequences of not complying with the Terms and Conditions requirements can include enforcement action from the owner, Manager, security services, local councils or, in some instances, the Police.
b) Enforcement action is subject to the Australian Consumer Law and other relevant legislation.
c) Such enforcement action could result in termination of permission to occupy the Property, eviction, loss of rental paid, deductions from security deposits and extra charges.
d) It is therefore important for all Guests to be aware of their obligations and of their responsibilities to make any Visitors to the Property aware of these requirements to maintain the amenity of the Property and its neighbourhood.

2.0 Holiday Rental- House Rules for Guests and Visitors

House Rules are provided at the Property to ensure that Guests and Visitors know and comply with the specific Rules governing their permission to enter and occupy the Property. House Rules are to be displayed in a conspicuous place in the Property so they can be easily viewed by Guests and Visitors, such as in the Property's kitchen. Matters contained in House Rules should include those set out in this Part and should be adapted and augmented to suit the particulars of the Property, such as specific instructions for car parking arrangements and the like and rules appropriate for any special equipment, facilities or local risks.

2.1 General requirements

a) Guest and Visitors must comply with all House Rules, By-Laws and instructions from the Manager and security services during their stay; and
b) Guests must notify the Manager of any disputes or complaints from neighbours as soon as is practicable.

2.2 Noise and Residential amenity

a) Guests and Visitors must not create noise which is offensive to occupiers of neighbouring properties especially between 10pm - 8am and during arrival and departure at any time throughout the occupancy;
b) Offensive noise is prohibited and may result in termination of permission to occupy the Property, eviction, loss of rental paid and extra charges for security and other expenses which may be deducted from Security Deposit or Bond under the Terms and Conditions; and
c) Guests and Visitors must not engage in anti-social behaviour and must minimise their impact upon the residential amenity of neighbours and local community.

2.3 Check-in and check out

a) Guests shall check-in and check-out generally between the hours of 6.00am and 11.00pm on any day, with occasional exceptions for early or late arrivals or departures.

2.4 Visitors

a) Guests are responsible for ensuring the limits set on Visitor numbers is complied with at all times; and
b) Guests are responsible for ensuring that Visitors comply with these House Rules.

2.4 Gatherings or functions

a) The Property is not a "party house" and any such activities are strictly prohibited; and
b) Any gathering, celebration or entertainment permitted at a Property must not conflict with residential amenity and must comply with all the other requirements.

2.5 Parking

a) Guests and Visitors are to comply with parking regulations and other requirements set out below and show consideration to neighbours and other vehicles; and
b) Parking arrangements at the Property are as follows:

i. All guests are required to pre-book a parking bay if required prior to check-in.
ii. The Serviced Apartment manager is to notify the guest of parking bay access and location.
iii. Guests may only use the allocated parking bay provided.
iv. Guests must adhere to the developments' parking management plan.
v. Guests must refrain from parking on the street or on verges and in bays reserved for long-term residents.

2.6 Garbage and recycling

a) Guests and Visitors are to dispose of garbage and recycling in accordance with the usual practice at the Property (as set out below) in the allocated bins, and excess rubbish must not be left in public or common areas; and
b) Garbage and recycling arrangements at the Property are as follows:

i. All garbage and recycling is to be placed in the bin store located at ground floor level.

2.7 Security

a) Whenever absent from the Property, close all windows and doors to maintain security and prevent rain and water damage.

2.8 Swimming pool

a) The swimming pool/spa must not be used between the hours of 10.00pm and 7.00am.
b) No glassware is permitted in the pool.
c) Only the pool at Level 4 may be used by guests.

2.9 Smoking

Smoking is not permitted indoors and within communal any communal area.

2.10 Pets

Pets are not permitted with the exception of registered guide dogs.

2.11 BBQ

a) All communal BBQ equipment must be cleaned after use.
b) The BBQ area must not be used between the hours of 10.00pm and 7.00am.

2.12 Damages and breakages

Damages and breakages must be reported to the Manager.

2.13 On departure arrangements

Arrangements for keys, security, dishwashing, rubbish, etc are: [to be confirmed with secured operator]

2.14 Emergency Contact
In the event of an emergency relating to the Property, please telephone [to be confirmed with secured operator] on [to be confirmed with secured operator]

2.15 Compliance

a) Breach of these House Rules is a breach of the Terms and Conditions of occupancy.
b) The Owner and Manager reserve the right to terminate permission to occupy and to evict from the Property, Guests or Visitors who refuse to follow these House Rules or who cause a nuisance.

3.0 PERFORMANCE CRITERIA - RESPONDING TO TABLE B

3.3 OVERSHADOWING

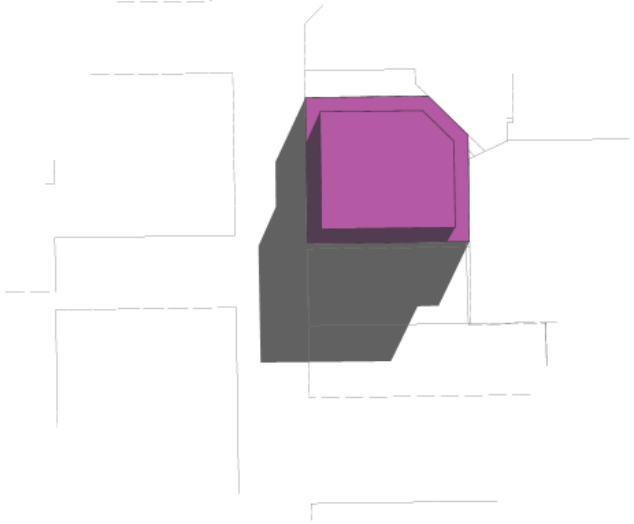

Diagram 3.3
Tower and podium based on City's Town Planning Scheme
Overshadowing at 12pm June 21st.

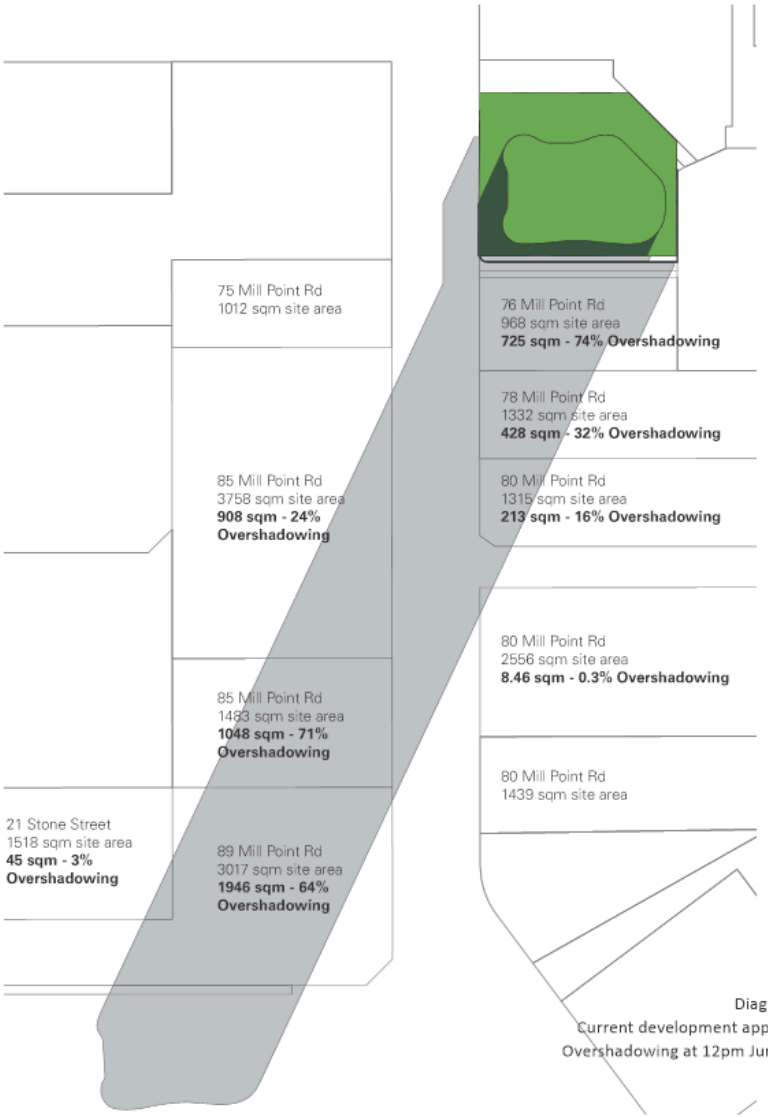

Diagram 3.4
Current development application
Overshadowing at 12pm June 21st.

3.0 PERFORMANCE CRITERIA - RESPONDING TO TABLE B

3.3 OVERSHADOWING

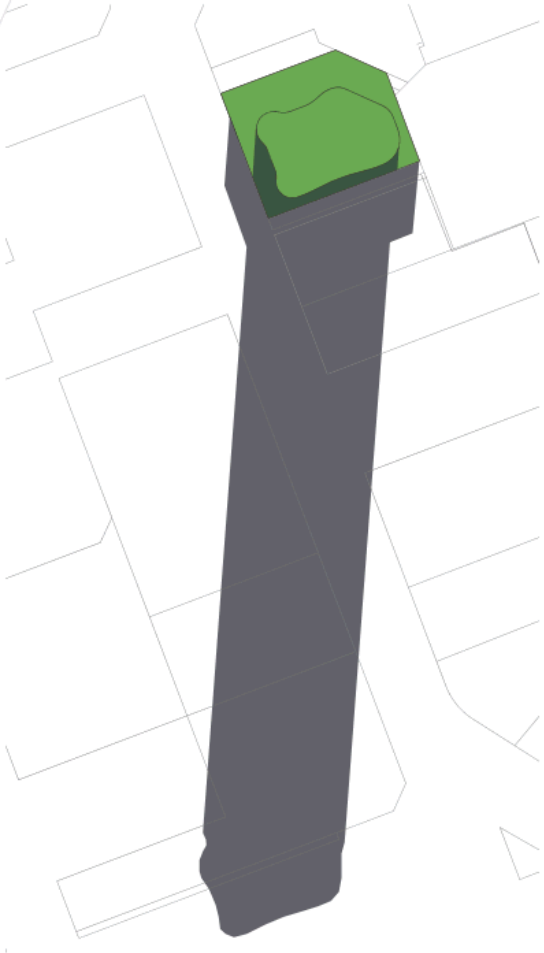

Diagram 3.5 Proposed Tower.

Overshadowing at 12pm June 21st.

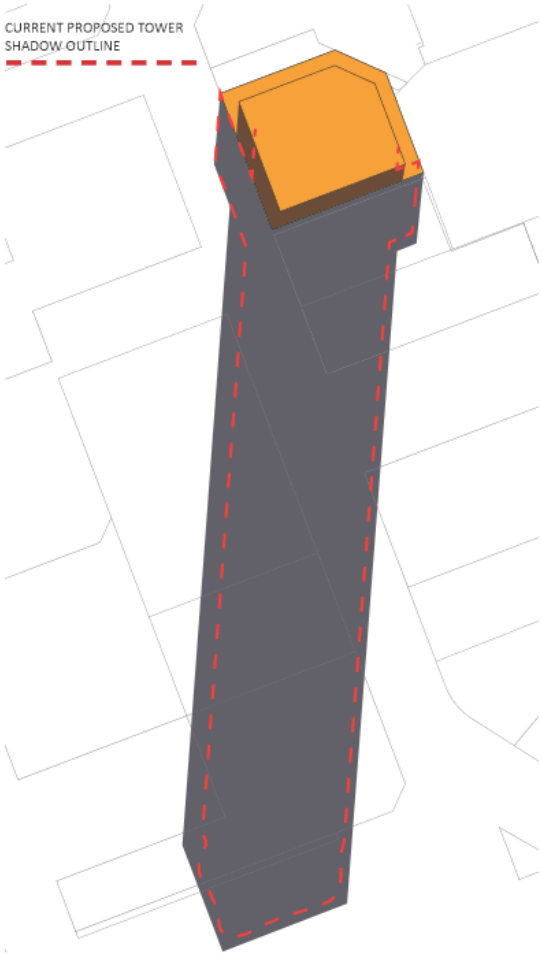

Diagram 3.6 Max podium and tower envelope.

Overshadowing at 12pm June 21st.

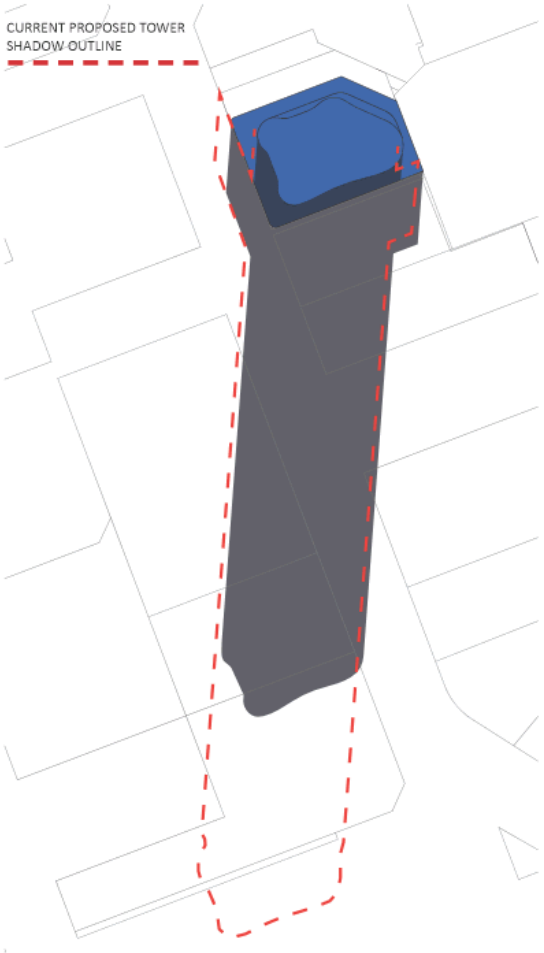

Diagram 3.7 Previous JDAP approved development 25th May 2015.

Overshadowing at 12pm June 21st.

Environmental Health Services Planning Approval Comments

Details	
Proposed Development: (Property address)	Lot 2-20 (No. 74) Mill Point Road SOUTH PERTH
Application: (Type)	Proposed Mixed Use Development with 44 Storey Tower With Revised Plans Including Waste Management Plan
Officer: **Department:**	Jason Jenke Environmental Health Services
Date:	6 April 2016

Hi Erik

With reference to the above, the following environmental Health comments apply;

Car park Ventilation
Car park ventilation to be designed to ensure that the carbon monoxide build up in the parking area does not exceed 50 ppm per hour in accordance with the *Health Act (Carbon Monoxide) Regulations 1975*.

Waste Management
The waste management plan is accepted and to be implemented as per the plan.

Noise Generally
Please ensure that all service and other equipment are compliant with the *Environmental Protection Act 1986* and *Environmental Protection (Noise) Regulations 1997* in relation to other premises.

Gym & Community Meeting Room
These areas are considered to be 'public areas' and as such, must comply with the *Health (Public Building) Regulations 1992*. The Community meeting room will be limited to a maximum of 50 persons based on only having 1 exit.

Lodging House
By definition, this premise will be classed as a lodging house for the serviced apartments and must comply with the *Health Act 1911* and the *City of South Perth Health Local Laws 2002*.

Swimming Pool
In accordance with the *Health (Aquatic Facilities) Regulations 2007* the proposed pool is an Aquatic Facility and as such, in complying with Regulation 7 & 8 of the above Regulations, approval is required by the EDPH (Executive Director Public Health) via the Department of Health.

Cafe
I appreciate that there is not much detail provided for the café kitchen however; in general the size/space provided for the kitchen appears to be particularly small. Please keep in mind that there will be space requirements for a freezer and a dry store etc.

Jason Jenke
Environmental Health Officer

Application for Planning Approval Requiring Engineering Comments

TO:	Engineering Design
FROM:	Mr E J Dybdahl Statutory Planning Officer, Development Services
DATED:	6 January 2016

PROPERTY ADDRESS:	Lot 2-20 (No. 74) Mill Point Road South Perth
PROPOSAL:	Mixed Use Development With 44 Storey Tower
APPLICATION DATE:	01 January 2016
ID NUMBER:	11.2016.2.1
PLAN ATTACHED:	**D-16-1021** for report and **D-15-1016** for plans **D-15-1024** for traffic assessment

GENERAL COMMENT:	Yes
VEHICLE MOVEMENTS:	Yes / No
ONSITE PARKING:	Yes / No
STREET TREES:	Yes / No
CROSSOVER DESIGN:	Yes / No
VERGE TREATMENTS:	Yes / No
GROUND LEVELS:	Yes / No
LOWEST POINT OF STREET: (DRAINAGE ISSUE)	Yes / No
BUS STOP RELOCATION:	Yes / No
OTHER:	Stormwater/Gradient

ENGINEERING COMMENTS IN RELATION TO ABOVE:

General Comment

This Development proposes three basement levels of parking with a further three levels above ground for parking. Any proposal that requires extensive excavation for basement parking in the fragile "water environment" on the Peninsula is a concern. The ShawMac "*Transport Impact and Parking Assessment*" statement identifies the number of parking bays provided at 313 bays exceeds the minimum requirements under the South Perth Station Precinct by 50% with the combination of both tandem and long bays for residential parking. The earlier proposal identified only two basement levels which would appear to be much more closely aligned to the guidelines.

A method of construction involving perimeter piling or sheet walling must be embraced for the development. By reducing the volume of dewatering required, the impact on the surrounding properties (by the drawdown) will be greatly reduced.

Traffic Statement

The Traffic Statement has been prepared as if the development was isolated from everything occurring around it. The cumulative impact of multiple developments will simply exacerbate an existing situation that has extended queue lengths at certain times and a lowered level of service at most times. While the increase in traffic will be manageable through the existing network with the intersection and signal upgrades identified within the GHD Report it will never be to the pre development movements used as the basis and eventual conclusion of the assessment.

Application for Planning Approval Requiring Engineering Comments

Parking Layout

The Development proposes a mix of standard parking bays, Tandem Bays and Long Bays. The Tandem and Long Bays are provided for selected one and two bedroom units as well as residential bays. The concept of Tandem and Long Bays has certain merit considering the form of the development. It would be a clear case of the unit owner at the time of acquiring the property being made aware of and clearly understanding the limitations of the parking arrangement with one vehicle parked directly behind the other, and a size constraint on the vehicles that can be accommodated. Ramp gradients and aisle widths are consistent with AS 2890.1 Off street Parking.

Stormwater Design Requirements

The development is located within the Mill Point Drainage Precinct as defined in *Policy P354 (Stormwater Drainage Requirements for Proposed Buildings)* and *Management Practice M354*. Within the precinct the allowable means of disposal of stormwater are reuse or via a private drainage connection (PDC) to the street system. The building plans to be submitted will need to include sufficient detail to satisfy the following:

- *All stormwater drainage facilities will be designed and installed in accordance with Policy P354 (Stormwater Drainage Requirements for Proposed Buildings) and Management Practice M354; and*
- *The stormwater drainage designer must consider and incorporate as appropriate the Principles of Water Sensitive Urban Design (WSUD) as outlined below.*

WUSD has, amongst others, the objective to:

- Ensure Water Sensitive Urban Design best management practices are implemented for all new development proposals and City operations to maximise the use of captured lot (roof) rainfall and grey water to reduce the reliance on external resources;
- Ensure stormwater within the urban environment is retained and treated as close to source as possible; and
- Reduce nuisance flooding and adverse drainage impacts.

For the purpose of completing an Application for PDC the following will apply:

- The discharge from the site as defined in the PDC is the amount of overland flow that would have resulted from the site in an undeveloped form i.e. the site area only;
- The impervious area or effective area for the purpose of calculating the quantity of rainfall discharge will be the plan area including all paths, paved areas etc. plus 50% of the largest vertical wall face;
- The discharge from the site will be determined by a Hydraulics Engineer or similar using the impervious area calculation above;
- The designer needs to be mindful of the general requirement that all storm water falling on the site must be contained on site and suitably disposed via a controlled outflow to the drainage system;
- Unless otherwise determined the flow to the street system would be expected to be no greater than 1 litre per second for each 500 square metres of site area;
- The discharge pipe is to be fitted with a simple reflux or non-return valve;
- Sufficient storage is required on site to cater for the short duration high intensity 100 year storm event with a controlled discharge to the street system, although the designer will need to satisfy themselves that the longer duration but less intense event can still be accommodated within the proposed onsite storage;
- Depending on the method of controlled discharge, if pumping is required the designer must consider the likelihood of a power outage and make provision for the event when determining on site storage;
- With the relatively low flow expected from the site there is little likelihood of a larger sized diameter pipe being acceptable without some limiting device notwithstanding the ease of cleaning etc. An "orifice plate" can be fixed to a larger diameter pipe to control flow

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to the prescribed amount; and
- The Draft WUSD Guidelines require that 300 mm freeboard to building floor levels be provided to accommodate the 1:100 storm event. The alternative is to increase the storage capacity of the collection tanks to meet this target.

An application for a PDC along with the design calculations is to be submitted to Engineering Infrastructure for approval prior to installation. It should be noted that approval of the PDC is conditional on the owner accepting all of the conditions attached to the application including ensuring future owners are informed of the conditions relating to the PDC.

Dewatering Management Plan
As dewatering in some form will be required for the basement infrastructure and the on-site stormwater storage tanks the Applicant will be required to prepare a Management Plan for the Office of Water and the Department of Parks and Wildlife (Rivers and Estuaries Division). A copy of the Plan and all relevant correspondence is to be submitted to the City. The Plan will address both the environmental aspects as well as the physical activities of the dewatering operations.

The Management Plan is required as part of a Planning Approval if groundwater is to be pumped, via the City's drainage system, into the Swan River as part of the dewatering operation.

The Dewatering Management Plan is to be prepared by a suitably qualified Environmental Consultant who will:
- undertake water testing to ensure the samples satisfy all the criteria;
- commit to a monitoring regime during dewatering to ensure water quality of discharge does not deteriorate; and
- outline a recovery plan should the dewatering operations result in a loss of water quality.

As the downstream outfall to the River is controlled by stormwater pumps a dewatering contractor will be required to ensure that the rate of discharge from the system does not exceed the rated capacity for continuous pumping by the "small jockey pump" forming part of the pumping station.

Waste Management
Comments with respect to Waste Management will come from the Coordinator Environmental Health Services after consultation with Engineering Infrastructure.

The Waste Report provides for a waste collection that does not entail a verge side collection (this would be undesirable with this style of development) and servicing from the ROW (laneway) with the collection vehicle reversing off Mill Point Road and then re-entering in a forward direction when collection has been completed. The collection point for the rubbish bins is underneath the First Floor overhang and adjacent to a "shared right of access" for the adjacent property and the property to the rear. A serious question remains as to whether sufficient clearance is available for the rubbish collection vehicle servicing this development or the properties having access off the "shared ROW". Furniture vans and other high sided enclosed delivery vehicles would appear to be prevented from using the "shared access".

Construction Management Plan
Every person that expects to undertake work from the street is required to produce a Traffic Management Plan in accordance with the Main Roads "*Code of Practice – Traffic Management for Works in the Street*". However as a result of compliancy issues being experienced with the preparation and execution of the Traffic Management Plans and the coordination with multiple projects in close proximity Engineering Infrastructure will require a Construction Management Plan (CMP) to be submitted for approval. The CMP will address in

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order all of the following although the list is not exhaustive and may require other matters not listed to be considered. The CMP will provide:

- an appropriately detailed Traffic Management Plan (TMP) that is endorsed by an accredited Road Traffic Manager (RTM);
- the Traffic Management Plan that ensures no works including substantial deliveries of building materials are undertaken during the peak morning hours (7am to 9am), minimal approved movements down Mends Street and minimal impact to other road users of the South Perth Esplanade;
- detailed information regarding proposed pedestrian treatments, including an approved overhead gantry, for all buildings with zero setback at the lower levels and whether the gantries will be required for site offices and/or staff facilities;
- details of how and where building materials will be stored before use on site and whether a Licence to Store Materials on the verge is required;
- an acknowledgement that excavation works (within 3 metres of the road edge) will require 'work zone barriers';
- detailed analysis of how the adjacent road network will best operate during construction;
- project time-lines with appropriate mile-stones (to allow for appropriate coordination and communication to surrounding stakeholders);
- details of proposed treatments for through traffic and construction vehicles in and around site (to allow Ranger Services and Traffic & Design jointly coordinate the best parking outcomes); and
- the proposed route for trucks servicing the site including lay over areas where required (to allow Ranger Services and Traffic & Design jointly coordinate the most appropriate routes for trucks).

Crossing

The general requirement that the footpath is to be continuous through the crossing results in the path section in concrete. However in this location there is an expectation that the "hard landscaping" and pavement upgrade will be detailed on landscape plans and submitted to Engineering Infrastructure for approval by the Landscape Architect. Segmental pavers of a form to be determined (but in line with the general principle of "quality streetscapes") will be the footpath material and therefore can be used as the crossing material. The footpath will be defined as continuous through the crossing by change of pattern. Where segmental pavers are used a concrete apron at the kerb line is to be provided. The concrete apron will transition into the adjacent kerbing. The type and form of the kerbing is still to be determined but along with the paving is consistent with the principle of "quality streetscapes".

The crossing will be:

- At the same level as the street verge from a point nominally 500mm from the kerb line and at right angles to the street; and
- Constructed with the footpath section clearly defined by jointing or similar as continuous through the crossing in seeking to minimise the impact.

A crossing application is to be submitted and approved by the City prior to construction and the crossing will be checked for compliance during and post construction.

Name:	**LES CROXFORD** **Manager Engineering Infrastructure**	Date:	14 January 2016

Cardno
Shaping the Future

Technical Memorandum

Title	**74, Mill Point Road, Development Proposal Peer Review of Traffic Report**		
Client	City of South Perth	**Project No**	CW951000
Date	11/04/2016	**Status**	Rev B
Author	Daniel Jenkins	**Discipline**	Traffic and Transport
Reviewer	Ray Cook	**Office**	Perth

Introduction

Cardno have been engaged by the City of South Perth (the City) to undertake a peer review of the "*74 Mill Point Road Mixed-Use Development Traffic Impact Assessment - Revised*" ("the Report") prepared by Shawmac and dated 23.3.16.

This review includes a cross-reference of the Report to the requirements listed in the Western Australia Planning Commission (WAPC) "*Transport Assessment Guidelines for Developments, Volume 4 – Individual Developments*" (2006).

The Report describes the proposed development as mixed use commercial and residential, comprising the following:

- 147 serviced apartments;
- 85 residential apartments;
- 295m^2 café;
- 69m^2 Community Meeting Room;
- Car, scooter and bicycle parking;
- Leisure facilities for the commercial uses;
- Residential leisure facilities;
- Storage rooms.

Peer-Review Findings

Table 1 and 2 summarise the key review findings identified as part of the review undertaken. **Table 1** is a summary of the review against WAPC Guidelines, while **Table 2** is a summary of the review against the "*South Perth Station Precinct Traffic Impact Assessment Criteria*", where these are additional to the WAPC Guidelines.

Where the review has found that the relevant sections have been sufficiently addressed or no issues have been identified, the text has been coloured in **green**, while orange text has been used for sections where non-critical improvements can be made to the report, and **red** text has been used for sections that have been omitted or insufficiently addressed in the report.

Table 1 Peer-Review Findings: reviewed against WAPC Guidelines

Relevant Item in Checklist C2 (Transport Assessment in WAPC Transport Assessment Guidelines Vol 4 (Individual Developments), 2006	Peer-Review Commentary
Is Transport *Assessment* the correct level of assessment?	Yes
Development location and context	Included
Description of development proposal.	Included
existing site uses (if any)	Included (Vacant site)
existing parking and demand (if appropriate)	Not applicable
existing access arrangements	Not applicable
existing site traffic	Not applicable
surrounding land uses	Included
surrounding road network	Included
traffic management on frontage roads	Included
traffic flows on surrounding roads (usually AM and PM peak hours)	Not included for peak hours; the Report must include such data as a basic requirement
traffic flows at major intersections (usually AM and PM peak hours)	Partially included; extent of assessment may be too small. Other critical intersections could include Mends Street/Mill Point Road and Mends Street/Labouchere Road. As detailed further below, there are several omissions in the analysis to determine traffic volumes; when these are addressed, it will be possible to understand the required extent of assessment. The WAPC Guidelines require that the assessment of links and intersections mustcover, *as a minimum*, all sections of road where the development traffic would be likely to increase traffic on any lane by more than 100 vehicles per hour and all intersections where flows on any leg would increase by 10%, or any movement by 20%.
operation of surrounding intersections	As above, extent of assessment may be too small. Also, there are several omissions in the analysis to determine traffic volumes; when these are addressed, then a review of the intersection modelling can be undertaken.
existing pedestrian / cycle networks	Included
existing public transport services surrounding the development	Included; however, the description of public transport as 'excellent' seems over-optimistic given the frequencies of services
crash data	Not included; this is a basic requirement
Changes to surrounding transport networks	
road network	Included
intersection layouts and controls	Included

Relevant Item in Checklist C2 (Transport Assessment in WAPC Transport Assessment Guidelines Vol 4 (Individual Developments), 2006	Peer-Review Commentary
pedestrian/cycle networks and crossing facilities	**Included**
public transport services	**Included**
Integration with surrounding area	
surrounding major attractors/generators	**Included**
proposed changes to land uses within 1,200 metres	**Not included; several committed developments need to be accounted for in the assessment of future traffic and intersection analysis (see Table 2 "*South Perth Station Precinct Traffic Impact Assessment Criteria*" also)**
travel desire lines from development to these attractors/generators	**As above**
adequacy of existing transport networks	**Partially included; see various other comments regarding omissions from the determination of traffic volumes. These need to be addressed as they are fundamental to the entire assessment**
deficiencies in existing transport networks	**Partially included; see various other comments regarding omissions from the determination of traffic volumes. These need to be addressed as they are fundamental to the entire assessment**
remedial measures to address deficiencies	**Not included; and as there is no review of committed developments and the future performance of the network is unknown (together with the other omissions detailed in this review), this cannot be assessed as yet**
assessment years	**Not included; future traffic growth must be accounted for. WAPC Guidelines state that the assessment years are "*generally to be the year of full opening of the development and 10 years after full opening, (or a similar year if one is available from the prior structure plan or subdivision assessments)*". The Guidelines further recommend discussing the assessment years with the approving authority.** **(See Table 2 "*South Perth Station Precinct Traffic Impact Assessment Criteria*" also).**
time periods	**Included**
development generated traffic	**The AM peak trip rate for the 147 serviced apartments is incorrect. The RTA Guide does not actually have an AM rate and the Report applies the PM rate.** **As the AM peak is often most critical, and as the number of serviced apartments is quite high, it is vital to determine this traffic accurately. In the absence of a trip rate from the RTA Guide, an alternative methodology needs to be employed as this is a fundamental aspect of the overall assessment. This alternative methodology and the data sources must be fully explained** **Paragraph 4.3 of the Report argues that the site has the qualities of a Transit-oriented Development (TOD) and that the stated trip generation is therefore robust. However, while the site does have some of these qualities, it is overly optimistic to consider it to be a TOD. Many TODs are built over train stations and with extensive provision of services such as supermarkets right on the doorstep. A good example is the Forum development around St Leonard's Railway Station in Sydney, which is built around a pedestrian plaza through which the station is accessed; the site also has a supermarket and 34 other shops.** **If the Report is to use the non-car transport provision as a factor in reducing trip generation, this would need to be supported by data from comparable locations, not TODs in general.**

Relevant Item in Checklist C2 (Transport Assessment in WAPC Transport Assessment Guidelines Vol 4 (Individual Developments), 2006	Peer-Review Commentary
distribution of generated traffic	Not explained at all; the methodology and data used to determine this must be fully explained as this is a fundamental aspect of the overall assessment
parking supply & demand	Car parking exceeds minimum requirements by 33 bays plus 5 motorcycle bays; the TPS 6, Schedule 9 "*South Perth Station Precinct*" states that "*Maximum car parking requirements may be applied in the future*". While this does not strictly apply yet, it would be advisable to limit car parking, particularly when traffic generation needs to be curtailed. Furthermore, the Report in Section 4.3 argues that the development has limited on-site parking available; this cannot really be claimed when the development exceeds its requirements. Cycle parking meets requirements for most of the land uses, with these exceptions: • No cycle parking is proposed for the Meeting Room; this is given as "NA" but it will generate travel demand, depending on use, so an appropriate rate should be applied. • The serviced apartments are to be provided with 1 cycle space per 20 units; the actual requirement is 1 cycle space per 20 bedrooms so if the serviced apartments have more than 1 bedroom each, this would need to be increased. • As well as cycle parking and lockers, showers are also required for the non-residential uses, in accordance with TPS 6, Schedule 9 "*South Perth Station Precinct*".
committed developments and transport proposals	Not included at all; this must be included, especially in this location in which there is considerable new development planned
base and "with development" traffic flows	Several omissions in the analysis to determine traffic volumes; when these are addressed, then a review of the intersection modelling can be undertaken. See other comments too including Table 2 as well.
analysis of development accesses	Several omissions in the analysis to determine traffic volumes; when these are addressed, then a review of the intersection modelling can be undertaken. See other comments too including Table 2 as well.
impact on surrounding roads	Several omissions in the analysis to determine traffic volumes; when these are addressed, then a review of the intersection modelling can be undertaken. See other comments too including Table 2 as well.
impact on intersections	Several omissions in the analysis to determine traffic volumes; when these are addressed, then a review of the intersection modelling can be undertaken. See other comments too including Table 2 as well.
impact on neighbouring areas	Several omissions in the analysis to determine traffic volumes; when these are addressed, then a review of the intersection modelling can be undertaken. See other comments too including Table 2 as well.
traffic noise and vibration	Not included at all.
road safety	Not included at all.
public transport access	Partially included
pedestrian access / amenity	Included
cycle access / amenity	Included
analysis of pedestrian / cycle networks	Partially included

Relevant Item in Checklist C2 (Transport Assessment in WAPC Transport Assessment Guidelines Vol 4 (Individual Developments), 2006	Peer-Review Commentary
safe walk/cycle to school (for residential and school site developments only)	**Not included at all.**
traffic management plan (where appropriate)	**Not included at all. The need for this must be discussed with the approving authority.**
Conclusions	**Several omissions in the analysis to determine traffic volumes; when these are addressed, then a review of the intersection modelling can be undertaken. See other comments too including Table 2 as well.** **These omissions are fundamental to the whole assessment, so it is important that they are addressed before the Conclusions of the Report can be verified.**
Miscellaneous	Various design-related issues, such as compliance with Australian Standards, and swept paths, have not been reviewed as we do not have the CAD files. However, these assessments are beyond the scope of a TA peer-review.

Table 2 Peer-Review Findings: reviewed against South Perth Station Precinct Traffic Impact Assessment Criteria

Relevant Item	Peer-Review Commentary
Is the Site within the South Perth Station Precinct?	Yes
Peak hours to be used for assessment purposes within this precinct are: • **AM Peak – 8.00am – 9.00am** • **PM Peak – 5.00pm – 6.00pm**	**The actual hours are not given, just 'AM' and 'PM'; the base traffic volumes are not quoted for the peak hours in the Report. These should be quoted, for the peak periods shown.**
All assessments must take into account additional traffic generated by approved developments within the precinct area. A list of these developments can be obtained from the City of South Perth on request.	**Not included at all; this is critical for this area.**
Intersection modelling is expected for any development impact assessment within the precinct; however, the area of influence to be assessed will be smaller for a transport statement than an assessment as per the WAPC guidelines.	**Several omissions in the analysis to determine traffic volumes; when these are addressed, then a review of the intersection modelling can be undertaken. See other comments too including Table 1 as well.**
All modelling must be undertaken for year of development opening, not current year.	**The Report only assesses the current year. The City's micro-simulation modelling shows considerable increases in future years, so these must be accounted for, with assessment years and other parameters agreed with the City.**

Relevant Item	Peer-Review Commentary
Has the growth factor been agreed with the City? Or what justification has been given for the chosen growth factor? It is vital to consider the *cumulative* traffic impact on the roads in a development's vicinity	As an example, between 2015 and 2021, northbound traffic on Labouchere Road is forecast to increase by 33% (and southbound by 100%) during the AM peak hour period. Between 2015 and 2021, southbound traffic on Labouchere Road is forecast to increase by 67% (northbound by 55%) during the PM peak hour.
For large scale developments the City may require that a 10 year horizon also be assessed as part of the traffic modelling. This potential should be discussed with the City prior to undertaking the traffic impact assessment. Has the growth factor been agreed with the City? Or what justification has been given for the chosen growth factor? It is vital to consider the *cumulative* traffic impact on the roads in a development's vicinity	The Report only assesses the current year; a 10-year horizon (beyond development opening) must be included. The City's micro-simulation modelling shows considerable increases in future years, so these must be accounted for, with assessment years and other parameters agreed with the City.

Government of **Western Australia**
Department of **Parks and Wildlife**
Rivers and Estuaries Division

Your ref: MI3/74 11.2016.2.1
Our ref: SRT6276
Enquiries: Suzanna Chan
Phone: 9278 0935
Email: Suzanna.Chan@dpaw.wa.gov.au

Mr Geoff Glass
Chief Executive Officer
City of South Perth
Cnr Sandgate St and South Tce
SOUTH PERTH WA 6151

Attention: Erik Dybdahl

Dear Mr Glass

CLAUSE 30A(2)b(ii) – PROPOSED MIXED USE DEVELOPMENT WITH 44 STOREYS AND 3 BASEMENT LEVELS – LOT 2 TO 20 (No. 3-7/74) MILL POINT ROAD, SOUTH PERTH

Thank you for providing the Swan River Trust (the Trust) with the opportunity to comment on the above mentioned application received on 11 January 2016. It is understood that the application has been referred under Clause 30A(2)b(ii) of the *Metropolitan Region Scheme* as there may be potential for impact to the waters of the Development Control Area. It is noted that another development application for a 29 mixed use storey with 3 basement levels has also been proposed for the subject site.

The Department of Parks and Wildlife (Parks and Wildlife) has assessed the application on behalf of the Trust, and although you are advised that there are no in-principle objections to the proposal, there are significant issues associated with the management of groundwater and stormwater during construction and the operation of the building that should be addressed before the proposal is approved.

The proposal includes three storeys below ground for car parking and other infrastructure, which indicates that significant deep excavations will be required. As the City is aware, there are currently several multi-storey mixed use developments in the area requiring deep excavation for basement car parking. Given this and the proximity of the subject site to the river, there is a need to address the potential cumulative effect the dewatering of these sites may have on the quality of the groundwater, and particularly the potential for contamination of the groundwater through "drawdown" (i.e. as groundwater continues to flow as it is removed from the site, it draws in more groundwater from a wider area, and therefore increases the likelihood of contamination from other sources such as the river, in this instance).

It is therefore considered preferable that appropriate design and construction methods are implemented to reduce the volume of dewatering tailwater from the site (e.g. installation of secan piles, or similar and injected concrete flooring, prior to excavating the basement – known as the bathtub method. This would ensure that only the groundwater trapped within the "bathtub" is removed.).

Rivers and Estuaries Division
Locked Bag 104, Bentley Delivery Centre, Western Australia 6983
Phone: (08) 9219 9000 Email: rivers.planning@dpaw.wa.gov.au
www.dpaw.wa.gov.au

The application did not include any site-specific information regarding groundwater levels or quality and it is not clear how much dewatering will be required to construct the below-ground levels, where the dewatering tailwater will be disposed, and whether any treatment will be required. It is noted that the subject site is fairly constrained for space and there may be limited opportunity to dispose dewatering tailwater to sewer in this location. It is not clear whether there is the capacity in the local stormwater for the dewatering tailwater, if the quality of the groundwater is suitable for discharge to the river, if treatment is required, and whether there is sufficient space to achieve adequate treatment. This issue has the potential to affect the design of the building and the extent of the below-ground infrastructure and should therefore be considered up-front as a matter of priority, before the proposal is significantly progressed.

In addition, it is not clear how groundwater levels will be managed following construction, and whether there will be a need for subsoil drainage and/or ongoing dewatering during operation of the building.

It is noted that the site is proposed to be developed without any setback (podium level) and hence the impervious area of the site will increase, but little to no information was provided in the application regarding stormwater management.

Parks and Wildlife requires that necessary reports and management plans are submitted at least 30 days prior to submitting the building application with the City. The applicant is to be advised that Parks and Wildlife will not clear the conditions until it is satisfied that the management plans would achieve a satisfactory outcome.

If the City and the Development Assessment Panel (DAP) determine that the amended application be approved, it is recommended that the following conditions and advice notes be applied:

1. The applicant shall notify the Department of Parks and Wildlife, Rivers and Estuaries Division, in writing not less than seven (7) days prior to the commencement of works.

2. Unless agreed in writing by the Department of Parks and Wildlife, no development shall commence until all plans requiring the advice of the Department of Parks and Wildlife have been submitted and approved.

3. At least thirty (30) days prior to submitting the application for a building licence, the applicant shall provide details of the engineering/construction methods which will be used to reduce the volumes of dewatering effluent, and reduce the groundwater drawdown impact zone radius, to the Department of Parks and Wildlife, Rivers and Estuaries Division (Advice Note 1).

4. At least thirty (30) days prior to submitting the application for a building licence, the applicant shall prepare a dewatering management plan to the satisfaction of the City of South Perth on the advice of the Department of Parks and Wildlife, Rivers and Estuaries Division, and implement (Advice Note 2).

5. At least thirty (30) days prior to submitting the application for a building licence, the applicant shall prepare plans showing how groundwater will be managed post-development to the satisfaction of the City of South Perth on the advice of the Department of Parks and Wildlife, Rivers and Estuaries Division, and implement (Advice Note 3).

6. At least thirty (30) days prior to submitting the application for a building licence, the applicant shall prepare a stormwater management plan shall to the satisfaction of the

City of South Perth on the advice of the Department of Parks and Wildlife, Rivers and Estuaries Division, and implement (Advice Note 4).

ADVICE TO APPLICANT

1. The applicant is advised that the Department of Parks and Wildlife, Rivers and Estuaries Division's preferred method of construction to reduce the volume of dewatering effluent is the "bathtub method" – i.e. secant piles or similar to create impervious walls and floor prior to excavation of the site.

2. If site-specific investigations reveal that appropriate and technically feasible dewatering disposal options are limited, consideration may need to be given to modifying the building design and the extent of the below-ground levels/infrastructure.

3. The applicant is advised that the Department of Parks and Wildlife, Rivers and Estuaries Division is unlikely to support the connection of subsoil drains, if required, to the local government stormwater system and the river without treatment prior to discharge.

4. The stormwater management system should be designed in a manner that will enhance the environmental quality of the river through the use of water sensitive urban design. Stormwater runoff from constructed impervious surfaces generated by up to a 15 mm rainfall depth for all rainfall events should be retained and/or detained on the lot.

5. Notification of commencement of works and required management plans can be emailed to rivers.planning@dpaw.wa.gov.au

If you have any queries regarding this matter, please contact Suzanna Chan, Environmental Officer, on 9278 0910. In all correspondence please quote the above reference number.

Yours sincerely

Glen McLeod-Thorpe
A/Manager, Statutory Assessments
As delegate of the Swan River Trust
Under Section 28B(2) of the SCRM Act 2006

17 March 2016

www.caddsenergy.com.au

CADDS ENERGY

30/04/2015

David Hillam
Hillam Architects
2/31 Hood St, Subiaco

Attention: David Hillam,

Cadds Energy has conducted an ESD Strategy for the proposed multi-unit building at 74 Mill Point Rd, South Perth.

This project offers an excellent opportunity to showcase how a large mixed-use building can utilise design features, materials and good quality finishes and selections to achieve a sustainable outcome. By focussing on the solar passive principles by maximising north facing glazing for winter sun and reducing summer sun with deep balconies; thermally efficient high rated homes will be achieved. Additionally incorporating sustainable features and systems (solar pv), a strong environmental outcome can be achieved that occupants and surrounding residents will embrace.

As an industry benchmark the intent of the building is to achieve a 4 Star Green Star Rating. Additionally it will target a Seven Star Average NatHERS Rating (thermal comfort) for all residential apartments along with a Four Star NABERS Rating for the offices (Energy Efficiency). These rating systems are considered industry-benchmarking tools that facilitate in comparisons between similar projects. They are often used to quantify sustainable outcomes throughout Australia to demonstrate best practice environmental rating.

Cadds Energy have included our ESD Strategy Report outlining how the Industry benchmarks will be met.

Regards,

Evan Logan
Energy Manager | Lead ESD Consultant

9418 7725 | F 9418 8557 | M 0408 693 320 evan.logan@cadds.com.au | www.caddsenergy.com.au

CADDS ENERGY

ESD Strategy

Ref Number: 109127

Date: 13 April 2016

Multi-Residential Development

74 Mill Point Rd, South Perth

www.caddsenergy.com.au

CADDS ENERGY

Document History and Revision Details

Date	Completed By	Reviewed By	Approved By	Revision Number
1/05/2015	Evan Logan	Evan Logan	Matthew Pike	1
13/04/2016	Laura Smith	Evan Logan	Evan Logan	2

Confidentiality

The contents of the report are confidential. This report is for the purpose of initial guidance in achieving best practice ESD guidelines and 'Best Practice' Industry benchmarks.

All included information and documentation shall remain the property of Cadds Energy. Therefore shall not be replicated in any form without written consent from Cadds Energy.

Disclaimer

The contents of this report have been based of the documentation and plans provided by the Client to Cadds Energy.

This review is an estimate and is therefore based on a necessarily simplified and idealised version of the building that does not and cannot fully represent all of the intricacies of the building once built. As a result, these results only represent an interpretation of the potential of the building based on the provided information.

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CADDS ENERGY

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Introduction

Cadds Energy have prepared this ESD Design Review to provide an overview of the sustainable features that will be included within the Multi-Residential Development at 74 Mill Point Rd, Perth

This project consists of a multi-level basement car park, 85 Residential Apartments & 147 Serviced Apartments and associated communal spaces are provided. These apartments offer an assortment of sizes from single bedroom apartments through to three bedroom penthouses.

With the combination of its close proximity to South Perth's ferry terminal and other forms of public transport, a plethora of restaurants, cafés, parks and other amenities, this development offers a variety of conveniences for its occupants. The project's location, along with its magnitude increases the longevity of the design while appropriating a community connection between the development and its surroundings. The combination of these facilities and services support the sustainability of the project.

The design incorporates excellence in architectural design that seamlessly integrates solar passive principles with a multitude of sustainable features and systems. The combination of this provide a dynamic, pleasurable and sustainable outcome.

Sustainability Strategy

This project offers an excellent opportunity to showcase how a large mixed-use building can utilise design features, materials and good quality finishes and selections to achieve a sustainable outcome. By focussing on the solar passive principles and incorporating sustainable features and systems, a strong environmental outcome can be achieved that occupants and surrounding residents will embrace.

As an industry benchmark the intent of the building is to achieve a 4 Star Green Star Rating. Additionally it will target a Seven Star Average NatHERS Rating for all residential apartments along with a Four Star NABERS Rating for the offices. These rating systems are considered industry-benchmarking tools that facilitate in comparisons between similar projects. They are often used to quantify sustainable outcomes throughout Australia to demonstrate best practice.

Key aspects of the project will be consolidated within the main categories as shown below:

Category	***Design intent***
Management	Documenting contractual obligation to ensure processes and procedures are put in place that facilitate sustainability and constructability.
Indoor Environment Quality	Creating a pleasing living environment by reducing discomfort, noise and toxicity while improving security, health and wellbeing.
Energy	Reducing $C0^2$ emissions and overall energy usage.
Transport	Aiding occupants to utilise a variety of transport options, such as ferries, buses or bikes.
Water	Reducing excess usage of potable water.
Materials	Improving material longevity and ensure good environmental practice is incorporated.
Land Use and Ecology	Facilitating in the reuse of existing buildings and the commitment to ongoing environmental practices.
Emissions	Reducing the use of ozone depleting refrigerants and insulants. Along with mitigating other emissions from buildings.

Initiatives

Management

By ensuring the construction process is well managed, significant reductions to the surrounding environmental impacts can be achieved, additionally ongoing emissions and various forms of waste are reduced. With this in mind, the following will be incorporated into the contractual documentation:

- The Contractor shall produce an Environmental Management Plan and the waste contractor should be ISO 14001:2004 certified;
- The Contractor shall produce a Waste Management Plan that ensures a minimum of 60% of waste is re-used or recycled throughout the construction process; and
- The electrical and mechanical design consultants shall ensure the following are undertaken:
    - Metering design and calibration; and
    - Commissioning and reporting.

Indoor Environment Quality

As this project is predominantly apartments and office spaces, occupants will utilise these spaces for long periods therefore having an inviting and comfortable environment is essential.

This design naturally incorporates spacious and comfortable apartments that realize good air quality through a reduction to harmful toxins and applies high ventilation rates through either natural cross ventilation or enhanced single sided ventilation performance. This is achieved through suitable exposure and appropriate façade design. These inclusions facilitate good passive heating and cooling. Ensuring access to natural light and external views, a positive atmosphere throughout the apartments is afforded to occupants. Consequential liveability along with health and amenity are substantially enhanced.

Through excellent use of solar passive design and suitable construction methodologies, a high level of thermal comfort will be achieved throughout the project. Coupled with the high quality architectural design, an enduring development will be created.

Energy

Through the improvement of thermal comfort aided by appropriately selected efficient systems, this project will see a large reduction in energy usage and therefore a resultant reduction in greenhouse gas emissions.

Outlined below are numerous inclusions within the project:

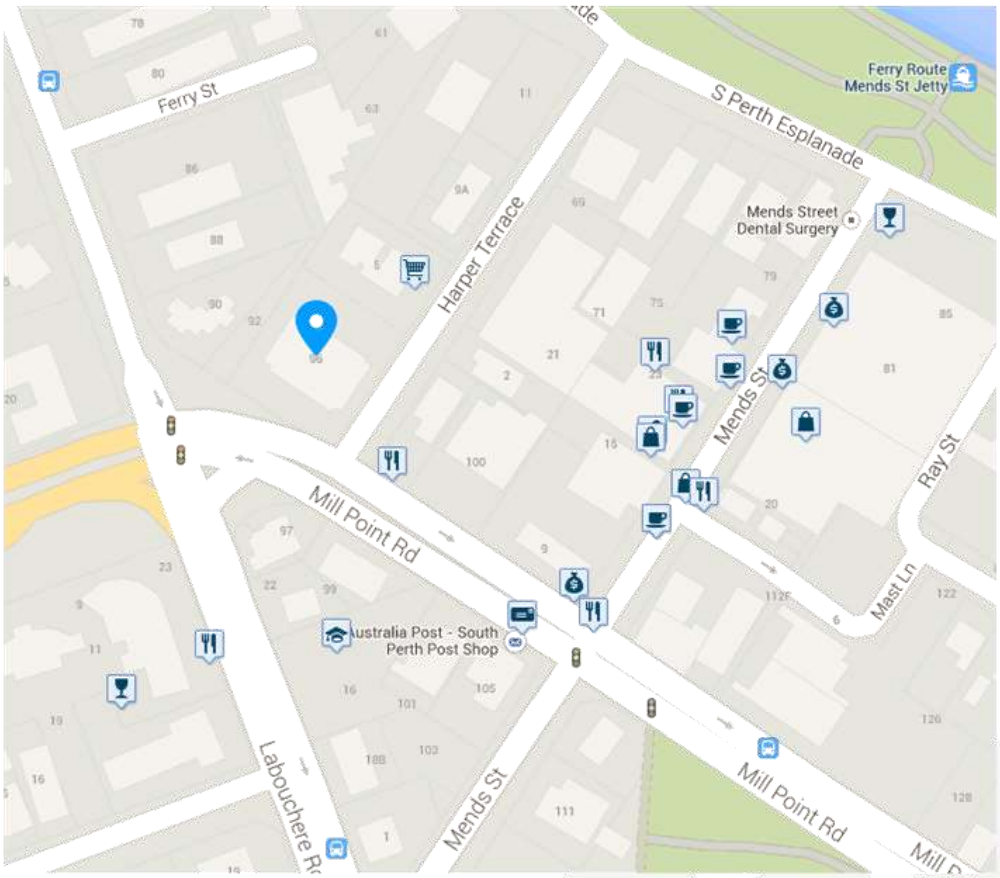
- Solar heated swimming pool;
- HVAC and lighting control systems;
- Efficient systems and lighting design;
- Central gas hot water system;
- 4 Star Estimate NABERS Rating for office areas;
- 7 Star average NatHERS for apartments;
- High level metering strategy;
- High performance glazing; and
- High levels of insulation.

Transport

This project offer a high level of cyclist facilities, well above the minimum requirements as set by the planning policy also offering cyclist end of trip facilities and suitable bike storage. The surrounding areas include abundant amenities that enable the occupants to utilise alternative transport methods such as public transport, walking or cycling along with offering a variety of social spaces including cafés, restaurants, parks and shops. This results in occupants being able to accomplish numerous errands on either foot or by utilising alternative transport options.

Outlined below are some of the copious facilities located nearby:

- South Perth Ferry Terminal;
- Perth Zoo;
- IGA Shopping centre
- Richardson Park;
- Windsor Park;
- Windsor Hotel;
- Post office; and
- Multiple bus routes.



Water

Water usage in Perth is an extreme concern. This is due to Perth's reducing rainfall levels and ever increasing usage. To assist in combatting this, this project will utilise a number of concepts. These will include the following:

- Water wise planting;
- High WELS Ratings for tap ware, showers and toilets; and
- Reduced water piping runs.
- Greywater for landscape irrigation

Materials

Due to the large volume of built form within this project, a detailed review of the materials, layouts and construction shall be undertaken. Where applicable, materials shall have environmental certifications and manufacturing quality certification, shall seek to have recycled or eco preferred content and product stewardship. By imposing these criteria to the materials of this project will vastly reduce the environmental impact this building has.

- Environmental materials selections;
- Reused or recycled content; and
- Minimal airborne toxins.

Land Use and Ecology

Due to the size and scope of this project will see an increased longevity. The variety of uses offered also facilitates in developing a connection to the wider community.

- An ongoing Waste Management Policy will be incorporated by the tenant that permits recycling areas throughout the office, includes waste monitoring and a compactor system;
- Communal facilities;
- Waste compactor; and
- Waste chutes.

Emissions

Emissions comprises substances released from the development such as light, water and hazardous gases. Reducing the impact of these emissions is crucial to ensure the sustainability of any project.

Ozone depleting potential (ODP) materials such as insulation and refrigerants are to be excluded where possible. These would include any air conditioning systems, thermal and acoustic insulation or the like.

By including higher WELS rated tap ware and the like, the building will see a reduction in the volume of water usage and will see a reduction in sewerage outflow. This reduction helps to moderate the load on the sewerage treatment system and the sweeping effects it has.

These reductions provide the following impacts:

- Declined levels of watercourse pollution;
- Reduced refrigerant pipe runs;
- A reduced impact on biodiversity; and
- Lower level ODP materials.

NatHERS Thermal performance

The House Energy Rating process involves modelling the proposed building(s) in accordance with the technical and modelling requirements of the Nationwide House Energy Rating Scheme (NatHERS) to provide a rating of the building(s). This rating is used to demonstrate compliance with the Energy Efficiency Provisions of the NCC.

The process also allows for a comparison between buildings throughout Australia by the inclusion of the Star Rating Benchmark. Current Energy Efficiency requirements state that a minimum average Star Rating of Six Stars is to be achieved within Western Australia. This is in line with the current national requirements.

The residential component of this development will strive to achieve a Seven Star average NatHERS rating, which is well above the minimum average of Six Stars. This will be achieved through solar passive design, incorporating high levels of insulation, appropriated shading design and applicable levels of thermal mass.

Additional Recommendations

Further to the main strategy, the design team will review a number of building attributes through the design phases to ensure the targeted ratings area achieved. These may include the following:

- Additional thermal performance upgrades;
  - High levels of insulation;
  - Double glazing; and
  - Appropriate thermal mass.
- Applicable materials selections;
- Centralise and efficient systems selections;
- External shading devices;
  - Vertical projections; and
  - Horizontal fins.
- Suitable metering strategy; and
- Onsite Solar Photovoltaic system

A number of these recommendations will be included throughout the design and documentation process. They will contribute to achieving the targeted ratings.

Conclusion

This strategy addresses multiple aspects such as the design, the building's size and scope along with construction methodologies and systems to be included.

To quantify this building's sustainability, a Green Star and NatHERS Rating will be undertaken with an intent to achieve a higher than average thermal rating. These rating tools are well-established industry-benchmarking tools. By targeting these higher ratings, the building will perform substantially better than comparable projects. Additionally a review of materials and selections is planned to be undertaken ensuring that this design seamlessly combines sustainability with the high quality architectural design.

The strategy outlined above will provide excellent environmental performance and facilitate in reducing ongoing costs and maintenance for the site, resulting in a better outcome for occupants, owners and local residents alike.

NO. 74 MILL POINT ROAD, SOUTH PERTH: HISTORY OF INCLUSION IN SOUTH PERTH STATION PRECINCT AND SPECIAL DESIGN AREA

25 March 2015

NO. 74 MILL POINT ROAD, SOUTH PERTH: HISTORY OF INCLUSION IN SOUTH PERTH STATION PRECINCT AND SPECIAL DESIGN AREA

BACKGROUND

Under the City of South Perth Town Planning Scheme No. 6, the development site at No. 74 Mill Point Road, South Perth (the subject site) is situated within the area comprising Special Control Area SCA 1: South Perth Station Precinct. The development requirements applicable in SCA 1 are contained in Schedule 9. This schedule includes Plan 1 "Sub-Precinct Plan", Plan 2 "Special Design Area" and Plan 3 "Building Height Plan". The subject site is within the Special Design Area. Schedule 9 also includes Table A "Development Controls" and Table B "Performance Criteria". Table A specifies a range of development requirements. A building height limit of 25 metres applies to the subject site. However, in the case of sites within the Special Design Area, approval may be granted for higher buildings if the proposed development is shown to be consistent with relevant guidance statements; and also specifically meets all of the performance criteria set out in Table B.

At the Joint Development Assessment Panel (JDAP) meeting held on 16 March 2015, a development application for the site at No. 74 Mill Point Road, South Perth was considered, however a decision on the application was deferred. The JDAP directed that, by 30 April 2015, the City of South Perth is to present a report relating to the following:

1. Advice obtained from a suitably qualified independent person as to whether the proposed development complies with all of the performance criteria in Table B because the JDAP considered that insufficient information has been submitted to confirm compliance.

2. The history of when properties north of Judd Street / Harper Terrace were included within the South Perth Station Precinct; and more specifically, when Mill Point Road properties in this locality, including the subject site, were included in that portion of the precinct comprising the Special Design Area. The report is to also contain information about related public submissions and to explain what changes were made in response to submissions.

HISTORY OF INCLUSION IN SOUTH PERTH STATION PRECINCT AND SPECIAL DESIGN AREA

By way of response to Part 2 of the JDAP direction, the following chronology of key events is presented:

June 2008: *"South Perth Station Precinct"*: Study Brief

Section 4 of the Study Brief, titled: 'Project Study Area', states that the study focuses on the South Perth rail station precinct, based upon an 800 metre radius from the proposed station near Richardson Street. This section of the Brief also includes the following statement:

"The study area boundary is not rigid and will be treated as a guide only. Appropriate natural study boundaries will be confirmed at the Inception Meeting based on an understanding of the land use structure of the areas surrounding the rail station to enable optimal links and interfaces to be established."

The notional 800 metre radius broadly represents a 10-minute walk to the future train station. This is generally regarded as the maximum distance that large numbers of potential train patrons would be prepared to walk. In this regard, it is important to appreciate that the future train station will have a long platform, extending northwards from Richardson Street to the vicinity of Hardy Street. From the northern end of the station, a pedestrian thoroughfare will extend still further northwards to Lyall Street. Lyall Street will then provide the most direct pedestrian linkage to the Mends Street shopping centre. Therefore, in terms of likely patronage of the train station, it is more correct to measure the 800 metre walking distance from the Melville Parade end of Lyall Street. Measured in this manner, the area as far north as Scott Street and Frasers Lane is comfortably within the 'walkable catchment' area.

September 2008: *"South Perth Station Precinct Study"*: Memorandum of Understanding
The parties to this MOU were the Western Australian Planning Commission; WA Department for Planning and Infrastructure; and City of South Perth. The MOU contains an aerial photograph indicating the extent of the South Perth Station Precinct. At that early stage, the boundary was indicative only, represented by a circle with an 800 metre radius, centred on the approximate location of the future train station at the western end of Richardson Street, within the Kwinana Freeway median. The northern extremity of the circle is close to Scott Street. Under the aerial photograph is the following explanatory note:

"Note: The boundaries of the study area are to be confirmed at the inception stage in consultation with the Project Consultant, Syme Marmion."

May 2009: *"South Perth Station Precinct Study"*: Report on 6 April 2009 Public Forum
This report, prepared by, the Study consultants, Syme Marmion & Co, documents the proceedings of the Public Forum held on 6 April 2009. In addition to representatives of the City of South Perth, the WA Department of Planning and Infrastructure, the Study consultants and the Public Transport Authority, this Public Forum was attended by 35 members of the public. Appendix 2 to the report is the slide presentation delivered at the Public Forum by John Syme and Malcolm Mackay. Those slides confirm that, at that time, the northern boundary of the Study Area was Scott Street and the western half of Frasers Lane. Melville Parade properties as far north as Scott Street were included, together with properties fronting on to both sides of Stone Street and both sides of Mill Point Road as far north as Scott Street and Frasers Lane. South Perth Esplanade properties north of Ferry Street were not included at that time.

As evidenced by the slides presented at the 6 April 2009 Public Forum, the "Special Design Area" included all Mill Point Road properties as far north as the southern boundary of the Scott Street road reserve. At that time, on the east side of Mill Point Road, Lot 1 (No. 66) Mill Point Road on the south-east corner of Frasers Lane was not included. *(Note: Prior to advertising the preliminary draft of the Scheme Amendment proposals, the Special Design Area was extended further north, on the east side of Mill Point Road, to include that corner property.)*

At the time of the 6 April 2009 Public Forum, all properties between Melville Parade and Stone Street were also included in the Special Design Area. *(Note: Subsequently, in response to public submissions on the preliminary draft of the Scheme Amendment proposals, these properties were removed from the Special Design Area.)*

July 2010: *"South Perth Station Precinct Plan"*: Consultants' Final Report

The consultants' July 2010 final report, titled *"South Perth Station Precinct Plan"* includes Figure 3: South Perth Station Precinct Boundary. As depicted on Figure 3 in that report, the alignment of the northern boundary of the precinct is identical to the alignment as presented at the Public Forum on 6 April 2009.

In the final version of the *"South Perth Station Precinct Plan"*, the extent of the "Special Design Area" is identical to its extent when presented at the April 2009 Public Forum.

January 2011: *"South Perth Station Precinct Plan"* released by WA Planning Commission

In January 2011, after the South Perth City Council and the Western Australian Planning Commission had adopted the *"South Perth Station Precinct Plan"* in its final form, the WAPC published the final report. In that document, the position of the northern boundary of the precinct and the extent of the "Special Design Area" are identical to their depiction in the consultants' final report of July 2010.

3 May 2011: Council considered 'first round' submissions on preliminary draft Amendment No. 25

In accordance with clause 9.8(3) of the City's Town Planning Scheme No. 6, before initiating the statutory process towards adoption of Scheme Amendment No. 25, on 4 March 2011, the Council sent letters to all property owners in the South Perth Station Precinct (and owners on the perimeter, outside the precinct) inviting submissions on the preliminary draft Amendment proposals (referred to as 'first round' community consultation). The closing date for lodging submissions was 30 March 2011. Over 900 letters were mailed to property owners.

At the time of the 'first round' community consultation, the advertised Amendment documents showed that the northern boundary of the South Perth Station Precinct was once again Scott Street and Frasers Lane. With respect to the area north of Judd Street, the Special Design Area included all properties between Melville Parade and Stone Street; Lot 188 (No. 20) Stone Street (east side, near Judd Street); and all Mill Point Road properties (both sides) up to Scott Street and Frasers lane.

A total of 126 'first round' submissions were received. Thirty-one of the submissions (objections) were from apartment owners in Stone Street and four from Scott Street property owners. Those owners expressed general concern about increased height limits in the area north of Judd Street, and particular concern about the prospect of tall buildings being constructed on the west side of Stone Street obstructing their views and radically affecting the character of Stone Street which is a cul-de-sac. Another submission lodged on behalf of the owner of a large South Perth Esplanade property requested that the boundary of the South Perth Station Precinct be extended to include all South Perth Esplanade properties as far north as Frasers Lane.

In response to the 'first round' submissions, at its meeting held on 3 May 2011, acting in accordance with the requirements in the Town Planning Regulations, the Council resolved to endorse draft Scheme Amendment No. 25 proposals for 'second round' community consultation. Those draft Amendment documents included modifications from the preliminary draft version. Three of the modifications were as follows:

- For the properties between Melville Parade and Stone Street, the 41 metre building height limit was reduced to 14 metres.
- All properties between Melville Parade and Stone Street were also removed from the Special Design Area.
- The South Perth Station Precinct was enlarged to include the South Perth Esplanade properties as far north as Frasers Lane. The additional properties were not included in the Special design Area.

22 May 2012: Council considered 'second round' submissions on Draft Amendment No. 25

The 45-day 'second round' community consultation period commenced on 24 January 2012 when the City mailed more than 1,200 letters and supporting documents to landowners in, and adjoining the precinct, inviting submissions on the draft Amendment documents which had already been modified in response to 'first round' submissions. The closing date for 'second round' submissions was 9 March 2012.

At the time of the 'second round' community consultation, the advertised draft Amendment documents again showed that the northern boundary of the South Perth Station Precinct was Scott Street and Frasers Lane. Those Amendment documents showed that the building height limit for all properties between Melville Parade and Stone Street had been reduced to 14 metres; and that those Melville Parade - Stone Street properties had been removed from the Special Design Area. Lot 188 (No. 20) Stone Street and all Mill Point Road properties (both sides) north of Judd Street, up to Scott Street and Frasers Lane remained in the Special Design Area.

A total of 151 'second round' submissions were received. Of those submissions, 106 (70%) supported the Amendment proposals. Fifty-six (56) of the supporting submissions were from landowners within the South Perth Station Precinct, the remaining supporting submissions being from landowners outside the precinct. Forty-five (45) of the 56 supporting landowners from within the precinct owned properties south of Judd Street. One submitter from Stone Street supported the proposed train station in order to reduce car dependency / traffic congestion; support inner-city living; and increase the viability of businesses. There were no other supporting submissions from the area bounded by Judd Street, Melville Parade, Scott Street and Mill point Road. Five objecting submissions were received from that area.

Altogether, 13 objectors sought a modification to exclude the area north of Judd Street from the South Perth Station Precinct. A Report on Submissions covering all issues raised was presented to the 22 May 2012 Council meeting. In response to the 13 submissions objecting to the inclusion of the area north of Judd Street, the Report on Submissions (Agenda Attachment 10.0.2(b)) contained the following comments:

"A total of 13 submissions identified that they did not want the amendment area extending north of Judd Street. Five of these submissions were from people outside the precinct (Mill Point Road, north of the amendment area) and six of those submissions were from the Scott Richardson Precinct, north of Judd Street. The area north of Judd Street was included within the amendment area as it is within 800 metres of the proposed railway station.

The request to exclude the land north of Judd Street is not supported on the basis that it is Council's vision to make the area more vibrant with an introduction of commercial uses which assist in enlivening the area during the day on weekdays.

The scheme provisions currently in place for the amendment area north of Judd Street presently provide for commercial uses in this area.

Introduction of the new height limits may also assist in providing a varied and interesting skyline whereas at present many buildings in the Peninsula area are all built to a similar height.

It is also noted that there may be limited opportunities to develop some parts of this locality in the near future due to the existing properties being strata titled with many owners.

Having regard to all of the relevant considerations, it is recommended that:
(a) the submissions related to exclusion of the area north of Judd Street be NOT UPHELD; and
(b) Amendment No. 25 not be modified in this regard."

At its 22 May 2012 meeting, the Council resolved to recommend to the Western Australian Planning Commission that Scheme Amendment No. 25 be adopted with 14 modifications. However, no change to the alignment of the precinct boundary was recommended. Similarly, no further change to the extent of the Special Design Area was recommended.

Subsequently, the Western Australian Planning Commission supported the Council's recommended modifications and the Minister for Planning granted final approval to Amendment No. 25 incorporating all of the recommended modifications, but no further modifications.

ROD BERCOV
STRATEGIC URBAN PLANNING ADVISER

25 March 2015