Expert Witness Statement of Jeremy McLeod



1 Name Jeremy McLeod

Address 101/9 Florence Street, Brunswick VIC 3056

2 Qualifications Bachelor of Architecture (UTAS)

Registered Architect, VIC (15792), NSW, WA Member of Australian Institute of Architects

Recipient of 2016 Leadership in Sustainability Prize (AIA)

3 Experience Founding Director of Breathe Architecture, an architectural

practice based in Brunswick with a reputation for

delivering high quality design and sustainable architecture for projects across multiple scales, focussing on sustainable

urbanisation and the delivery of more affordable urban housing in Melbourne. Key projects as design lead include

Nightingale 1 Apartments, The Commons, Paramount House Hotel, DHA Huntley Green/Arcadia Apartments, Slack Offices, and Collingwood Arts Precinct. Founding

Director of Nightingale Housing.

4 Other significant contributors to the statement

Mark Ng (B. Envs (Arch), M. Arch) — project lead of the West Melbourne Built Form Control Testing report, experienced in multi-residential building design, feasibility studies, masterplanning, and high level urban design.

Expert Witness Statement

5 Instructions

You are instructed to prepare an expert witness statement that includes:

- Details of your role in preparing or overseeing the 'West Melbourne Built Form Control Testing' and any further report provided to Council in response to the request for further modelling as set out in Appendix A.
- Confirmation that you adopt the earlier report(s), with or without changes and if you adopt them with changes, what those changes are and why they have been made;
- Any key assumptions made in preparing the earlier report(s) that are not disclosed in those reports;
- Your expert opinion on whether the following aspects of the proposed planning controls are workable from an architectural perspective (giving examples where possible):
 - the mandatory FAR combined with preferred height control; and
 - the mandatory minimum non-accommodation floor area

6 Details of persons who have carried out tests

Mark Ng (B. Envs (Arch), M. Arch) — project lead of the West Melbourne Built Form Control Testing report, experienced in multi-residential building design, feasibility studies, masterplanning, and high level urban design.

7 Declaration

I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel.

8 Role

My role in the preparation of the 'West Melbourne Built Form Control Testing' report involved providing design direction on test sites, overseeing the modelling and report writing process, attending and leading workshops with the City of Melbourne team responsible for the structure plan, and speaking at community consultation events. I was also involved in providing design direction and oversight in the further modelling work requested in May 2019. Across both the original report and the further modelling, design direction involved proposing site planning and urban design strategy for test sites (e.g. orientation of primary outlook, provision of through-site links, etc.), implementing realistic development motives such as increasing floor plate efficiency, capturing city views, and assessing the potential marketability of the various development types.

9 Confirmation

I confirm that I adopt the earlier report ('West Melbourne Built Form Control Testing') without changes, in addition to the report titled 'Further Modelling' (20 June 2019), a copy of which is attached to this statement as appendix 4. This report was prepared at the request of the City of Melbourne beginning in May 2019, undertaken to test potential amendments to the originally proposed FAR and preferred height figures.

10 Assumptions

 Floorplate layouts and apartment plans are realistic to the extent that they comply with (or can be planned in detail to comply with) Better Apartment Design Standards (BADS) wherever possible to determine key spatial dimensions such as living and bedroom sizes.

11

 Building separation dimensions and light court sizes are appropriate as measured using a reference document, the Moreland Apartment Design Code (MADC) as a guide.

12

 Back-of-house areas (BOH) nominated represent an appropriate indicative area required on the ground floor of a typical mixed use apartment building — any additional requirement may be provided in basement areas with no effect on the FAR calculation.

13

 In order to simulate realistic outcomes, a feasible apartment building should contain a mix of apartment types appropriate to the scale and type of development, such that it would be deemed to be marketable as compared to similar developments, as this impacts on floorplate efficiency and site coverage.

14

 Commercial and residential programs are co-located such that their uses do not impede on each other in a prohibitive manner, or are capable of being designed in detail to avoid this.

15

 Some discretion is to be provided in some cases regarding setbacks, streetwall heights and building separation in order to allow designers to respond to each site's unique context and conditions. 16 Expert opinion regarding the mandatory FAR combined with preferred height control

Based on the testing undertaken, the mandatory FAR combined with preferred height control is workable from an architectural perspective to the extent that it makes it possible to design buildings that appear to provide high-amenity housing, meet the overall and precinct-specific Design Recommendations of the West Melbourne Structure Plan 2018 (P40, included in appendix 1, and P86, 97, 107 and 117, included in appendix 2), and negotiate developer interests such as yield maximisation without penalty.

17

The experience of working with the controls from an architectural perspective was highly positive, allowing for design flexibility to respond to context with good architectural, sustainability, and urban design principles while providing certainty on yield expectations to remove yield maximisation as a key driver of built form.

18

For many sites tested, the controls appear to encourage outcomes that offer better internal apartment amenity and urban design outcomes compared to those expected in the absence of such controls (which can tend towards maximum site coverage at the expense of amenity).

19

An example of this in the Flagstaff precinct is illustrated in Site 2, Option A in the West Melbourne Built Form Control Testing report (P105—108) where a neighbouring tower to the north limits views, solar access and daylight amenity to the site. Under the controls it is possible to orient all primary outlooks West and South to towards primary streets which can provide better amenity to potential residents and subsequently provide more easily marketable housing for developers. The area of the site which would otherwise be occupied by potentially undesirable, lowamenity apartments is able to be left for open space that provides communal space for residents as well as daylight and ventilation amenity without borrowing from other sites. Without the FAR control, a developer would be incentivised by financial profit to occupy this area with

built form. The outcome is able to respond effectively to the relevant specific design recommendations of the Flagstaff precinct (West Melbourne Structure Plan 2018, P97) included in Appendix 4, notably in stepping down to a lower scale interface to the northern laneway. and in its flexibility to accommodate generous floor-to-ceiling heights, particularly on ground and level 1, to provide adaptable spaces for a range of uses.

20

An example in the Spencer precinct is illustrated in Site 4, Option A (P121–123) where the controls encourage the site to be broken into a collection of mid-rise buildings with a range of streetwall heights responding to the character of the site, with rear setbacks and light courts that ensure high internal amenity that does not compromise, and is not compromised by, neighbouring developments. The controls also support a high amount of open space with deep soil planting to improve ground permeability. The outcome is able to respond effectively to the relevant specific design recommendations of the Spencer precinct (West Melbourne Structure Plan 2018, P86) included in Appendix 4, notably in providing some taller built form to King St and in expanding the laneway network through setbacks and the provision of open spaces. Note that in diagram form the built form may appear monolithic, however in detail this site is imagined as a series of diverse buildings with greater variation than possible to illustrate in basic massing.

21

An example in the Adderley precinct is illustrated in Site 8, Option A (P150—152) where the controls encourage the retention of an existing warehouse on this site which is able to provide the mandatory commercial floor area while offering a sense of character to the development itself as well as the neighbourhood streetscape, seen as beneficial to both speculative developers and the broader city. The outcome is able to respond effectively to the relevant specific design recommendations of the Adderley precinct

(West Melbourne Structure Plan 2018, P107) included in Appendix 4, notably in contributing to the creation of a low-mid scale precinct that responds to heritage/character form and scale.

22

An example in the Station precinct is illustrated in Site 10, Option A (P165–167) where the controls encourage the site to be broken up into one primarily residential building with active ground floor interfaces, and one primarily commercial building which is located to shield the residential building from a busy road interface which would otherwise provide compromised residential outlook. The ability to vary the height of the residential building streetwall is indicated by stepping down to the North in response to the scale of the existing adjacent building, however the flexibility of the controls allows this modulation of height to be expressed at any point across the street frontages to provide articulation in otherwise large scale buildings. The outcome is able to respond effectively to the relevant specific design recommendations of the Station precinct (West Melbourne Structure Plan 2018, P117) included in Appendix 4, notably in contributing to a medium density precinct in its scale, and in having the flexibility to provide generous floor-tofloor heights to allow for future adaptation.

23

The combination of specific FAR figures and discretionary height limits prescribed to each precinct in West Melbourne were found to be workable and achievable with only one site (Site 5) posing some difficulty in reaching the maximum FAR. This occurred because the scale and constraints of the site (mid-block with 2 outward aspects) required multiple buildings to have primary outlooks facing each other, requiring significant building separation, forcing large areas of the site to be unable to accommodate built form. In this case it was recommended to potentially consider further testing with considerations including

increasing the discretionary height limit to limited areas of the site such as the centre where they might have the least impact on other sites and streets.

24

In all other testing scenarios, the combination of specific FAR figures and discretionary height limits prescribed were neither deemed to be excessively high to the extent that poor urban design or apartment amenity outcomes would be resorted to in order to achieve the maximum allowable gross floor area (GFA); or excessively low to the extent that they would result in small building footprints that eroded desired streetwall enclosure or street activity.

25

As founding director of a practice passionate about environmental sustainability, the potential for buildings designed under the controls to provide exceptional sustainability outcomes was found to be particularly exciting and promising, notably, the flexibility of site planning allowing primary aspects to be oriented for improved solar access to improve passive heating and cooling; the ability to introduce large courtyards and generous building separation to enable cross-flow ventilation and good access to daylight; and the ability to provide large areas of deep soil planting to help relieve issues such as stormwater management, Urban Heat Island Effect, and loss of biodiversity.

26

The potential for buildings designed under the controls to encourage vibrant, social streetscapes that foster community was also found to be highly aspirational, notably through the provision of highly walkable, permeable pedestrian environments supported by activated through-site links; publicly accessible open space in the form of small parks such as in the Heller St Park and Residences by Six Degrees Architects in Brunswick, Victoria; human-scale interfaces that encourage passive surveillance and interaction between building residents and

pedestrians through retaining proximity to the ground via the preferred building heights, especially in the Spencer, Adderley and Station precincts.

27 Expert opinion regarding the mandatory minimum non-accommodation floor area

Based on the testing undertaken, the mandatory minimum non-accommodation floor area (nominated as commercial use which may take the form of offices, hospitality, retail, etc.) was deemed to be a simple and efficacious mechanism to mandate the inclusion of program that may introduce street life activity and provide places for employment where there may otherwise be no incentive for a developer to do so. Without this control, and without any additional incentive, the inclusion of commercial floor area is typically limited to as little as possible as commercial net saleable area is often sold at a lower square metre rate than residential net saleable area.

28

From an architectural perspective, the mandatory non-accommodation floor area was found to be easy to deploy as the potential for a wide variety of commercial uses meant it was simply able to be located on levels above ground within the envelope of the typical floor plan so long as it could feasibly be leased (as office, studio, light manufacturing, arts space, etc.). Beyond this, to the benefit of the developer, this mandatory area was able to be located on parts of site less suited to residential use due to less onerous constraints regarding orientation, outlook and floorplate depth compared to residential use.

29

On larger sites, the FAR control allowed the non-accommodation floor area to be consolidated in the form of a separate multi-storey commercial building as seen in Site 4, Option B (P126—128), in a similar manner to that described in Site 10 above, with the benefit of clearly separating access and circulation between residential and commercial program while still benefiting from a diversity of uses on the site.

30

On smaller sites such as Site 11 (P173—175) which may appear to have difficulty incorporating this area, the controls were found to be adaptable enough to be workable, allowing the non-accommodation floor area to be deployed as a shallow sleeve of small commercial tenancies on the ground floor that could take the form of retail or hospitality spaces, and one level of commercial area on level one which could take the form of an office/studio. The commercial areas illustrated here are seen as lease-able, high-amenity spaces which could work for a variety of uses. Broadly, the combination of commercial area and residential area on small sites is seen as achievable and potentially successful in bringing fine grain vitality to streets as seen in laneways in the Melbourne CBD such as Degraves St.

31 Additional Modelling Beginning in May 2019, Breathe Architecture was asked to produce a document titled 'Further Modelling' which:

32

 clarified some of the assumptions made when carrying out the modelling in my earlier report 'West Melbourne Built Form Control Testing' [5 October 2018]

32

 contained additional modelling primarily that I completed at council's request in preparation for the Panel hearing in relation to Amendment C309.

33

The additional modelling was carried out in the same way as the initial modelling, as set out in my earlier report. For the additional modelling, I was asked to use FARs and discretionary heights different to those in the exhibited Amendment C309, for the purposes of testing. The FAR and building height limit in 'site data' for each modelling exercise are the modelled controls, rather than the exhibited controls. The sites tested in this additional modelling work are indicated on the map attached in appendix 3.

34

Note that where modelling does not comply with the Amendment C309 proposed controls, including where the streetwall height exceeds the range outlined in the design recommendations, testing illustrates that in order for it to be possible to reach the new maximum GFA (in compliance with the increased FARs) while achieving the design recommendations as per the earlier report, the streetwall height may need to increase above the preferred.

35 Expert opinion regarding additional modelling

For the additional testing in the Flagstaff precinct (P5—14) the outcomes of increased FARs of 7:1 and 8:1 were all found to be workable to a base level of compliance, however the ability for the controls to encourage some significant design recommendations in the structure plan was seen to be compromised, notably in the ability to support courtyard buildings below 10 storeys with the benefits of cross-flow ventilation, open-space with deep root planting, human-scale street interfaces, and the ability to foster strong communities. It is noted, however, that the podium tower typology may be appropriate in some areas to the context of this precinct.

36

For the additional testing in the Spencer precinct on Site 4 (P15), the increased FAR of 5:1 was found to still support the design of a cluster of varied buildings with some internal courtyards and a large open space as seen in the Site 4 testing in the original report. With the 5:1 FAR, while retaining a similar amount of site coverage, the residential buildings were all taken to 8 storeys to achieve the maximum FAR, failing to provide variation in building height in response to each interface. This could be avoided by increasing site coverage to allow greater flexibility in building height variation, however the quality of open space provided would be expected to decrease. Where it was easy to achieve both the design recommendations of providing varied building heights and providing significant open space with deep soil planting under the 4:1 FAR, under the 5:1 FAR, some design recommendations may need to be compromised in order to achieve others.

37

For the additional testing of a smaller site in the Spencer precinct (Site 16, P20—21) the controls resulted in small buildings that accommodated one apartment per level and did not encounter any difficulty in creating amenity within the site or locating program, including commercial tenancies.

38

For the additional testing on Site 17 (P21—24), the 9:1 FAR and 10:1 FAR tests produced 18 to 24 storey tower forms that, like the other tests in the Flagstaff precinct, are workable, but appear to compromise design recommendations concerning human-scaled neighbourhood environment. By contrast, the 6:1 FAR test appeared to be able to better respond to these.

39 Response to panel directions

16.a. the relationship between the proposed floor area ratios and the proposed building envelopes in each precinct/place.

40

The precincts/places and their relevant proposed FARs and preferred heights can be identified in the following maps extracted from the West Melbourne Structure Plan 2018.

Fig 1 West Melbourne Structure Plan 2018 (P42)

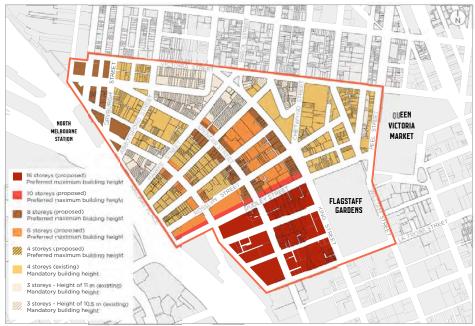


Figure 2.4: Proposed and existing building heights in West Melbourne.

Fig 2 West Melbourne Structure Plan 2018 (P45)

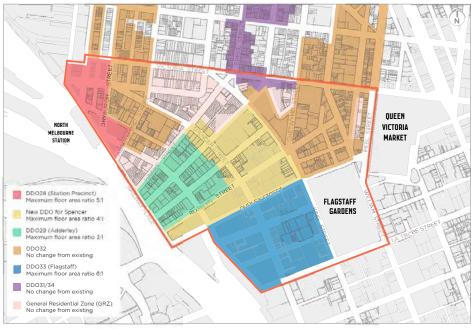


Figure 2.7: Proposed changes to the Design and Development Overlays in West Melbourne.

41

• Flagstaff: the relationship between the 6:1 FAR and the 16 storey preferred height felt congruous and the most flexible of the four precincts with a diversity of forms that accommodated workable floorplates. While flexible, in no case was the relationship between the floor area ratio and preferred height so loose that, for example, an impractically slender tower could be placed in the middle of a completely open ground floor. Such an outcome would nonetheless be mediated by the structure plan design recommendations as well as developer interests such as floorplate efficiency and construction methodology.

42

• Spencer: the relationship between the 4:1 FAR and context dependent preferred heights felt congruous and sufficiently flexible, and only marginally tight in one specific case (Site 5, as mentioned earlier) where significant building separation was inevitable, resulting in inherently lower site coverage, resulting in some difficulty achieving the maximum FAR when all forms were taken to their maximum heights. On more typical sites, the relationship was not seen to be too tight such that it was not possible to achieve the maximum FAR within the preferred height without undesirably covering the entire site, or too loose such that built form could be distributed in a patchy manner that failed to align with the structure plan design recommendations.

43

• Adderley: the relationship between the 3:1 FAR and typical 4 storey preferred height felt congruous but of the four precincts was the least flexible. This, however, was not to any notable detriment to design outcomes. In almost all cases the 3:1 FAR was only achievable at 4 storeys which limited the ability to vary building heights across the site. Other design recommendations such as the provision of deep soil planting areas and the retention of heritage buildings were nonetheless

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21 June 2019

44

achievable and the creation of human-scaled street environments was seen to be inherent to the preferred heights.

45

 Station: the relationship between the 5:1 FAR and typical 8 storey preferred height felt congruous and flexible with a similar level of flexibility to the Spencer precinct. No tests in this precinct produced any difficulty that suggested the relationship was unworkably tight or undesirably loose. Appendix 1 21 June 2019

West Melbourne Structure Plan 2018 (P40), Overall Design Recommendations

Design recommendations

The following design recommendations are proposed for the Spencer, Flagstaff, Adderley (part of) and Station Precinct (part of) areas of West Melbourne in order to help deliver the vision. Additional design recommendations specific to each place are included in *Part Three: Places*.

The recommendations, including the guidance on interfaces, will help inform the proposed *Design and Development Overlays* for West Melbourne in the planning scheme amendment (see page 42 for more details).

Design recommendations

To ensure development responds to the valued attributes of West Melbourne and contributes positively to the existing and future vision and character of each of the five identified places within West Melbourne - Spencer, Flagstaff, Adderley, Station Precinct and Historic Hilltop.

To provide for a largely mid-rise, human-scaled neighbourhood with a diverse range of building types with some higher built form in specified areas.

To maintain and enhance the valued built and social heritage characteristics of West Melbourne and to ensure buildings retain their three dimensional form as viewed from the public realm to avoid 'facadism'.

To ensure development responds appropriately to the hierarchy of main streets (Spencer Street, King Street, Dudley Street and La Trobe Street), local streets and laneways in its address, activation and management of services.

To achieve variable building heights, including street wall heights, that contribute positively to the specific character of each site.

To encourage larger sites to be broken up into a series of smaller building forms that relate and contribute positively to their context and their historic urban grain.

To ensure development appropriately considers the amenity impacts on neighbouring development and achieves a high standard of internal amenity within the development.

To ensure that new development respects the scale of adjoining residential and heritage buildings and does not overwhelm the existing building.

To ensure the consideration to minimise the impact of development on solar access to adjacent solar panels.

To encourage the retention of existing buildings of character (including non-heritage) and the reuse of existing materials in new developments.

To require developments to be set back from side and rear boundaries to ensure internal spaces receive adequate levels of daylight and privacy.

To support equitable development by ensuring primary outlook is secured to the street or within development sites.

To provide for fine grain adaptable tenancies within the lower levels of buildings.

To provide a highly walkable neighbourhood with increased permeability and laneways through blocks.

To ensure development is adaptable to changes in future land use by requiring adequate floor to ceiling heights (above and below ground).

To encourage deep soil planting that increases permeability and supports tree planting in the private realm.

Appendix 2 21 June 2019

West Melbourne Structure Plan 2018 (P86), Spencer precinct specific Design Recommendations

Design recommendations for Spencer

The following design recommendations will be reflected in the new Design and Development Overlay for Spencer:

To create a mid-rise precinct (largely of between three and eight storeys) of the highest design quality. Taller built form fronting the main streets of Spencer Street, King Street and Dudley Street. Development respects the scale of existing low rise residential and heritage buildings and its site layout, massing and built form.

To reinforce the role of Spencer Street as the active, safe and well-designed local high street of West Melbourne.

To reference the industrial history of the precinct through the adaptive reuse of heritage and character buildings and contemporary use of common materials such as red brick.

To expand the laneway network and ensure development frames the laneways to be positive additions to the public realm network.

To ensure developments are adaptable to different uses by providing adequate floor to ceiling heights.

To create an active interface along Dudley Street and improve its amenity and connections with Docklands.

West Melbourne Structure Plan 2018 (P97), Flagstaff precinct specific Design Recommendations

Design recommendations for Flagstaff

The following design recommendations will be reflected in the revised Design and Development Overlay (DDO33) for Spencer:

To create a precinct with variable building heights between six and 16 storeys.

To ensure new development adequately responds to heritage buildings through materiality, scale and form.

To ensure development contributes to the amenity of, and outlook from, Flagstaff Gardens and St James' Old Cathedral.

To deliver a lower scale of development to the laneways and the activation of the laneway interface.

To ensure developments are adaptable to different uses by providing adequate / generous floor to ceiling heights.

West Melbourne Structure Plan 2018 (P107), Adderley precinct specific Design Recommendations

Design recommendations for Adderley (area covered by DDO32).

The following design recommendations will be reflected in the revised Design and Development Overlay (DDO29) for Adderley:

To create a low-mid scale precinct (between two and six storeys) of the highest design quality with taller (six storey) development fronting Adderley Street between Hawke Street and Dudley Street.

To ensure new development adequately responds to heritage through form, scale and materiality.

To enforce a lower scale of development to the laneways and the activation of the laneway interface.

To reinforce the role of Railway Place as an important pedestrian link between North Melbourne (future West Melbourne) station and Docklands, Arden and the Central City.

To ensure developments can accommodate different uses over time by providing adequate floor to ceiling heights and active ground floor uses.

West Melbourne Structure Plan 2018 (P117), Station precinct specific Design Recommendations

Design recommendations for Station Precinct (for area covered by DDO28)

New developments in Station Precinct must respond to the following specific design recommendations:

To create a medium density precinct (between four and eight storeys) of the highest design quality.

To generate activity around North Melbourne (future West Melbourne) Station by including non-residential uses.

To encourage the adaptation of former industrial buildings.

To provide adequate floor-to-floor heights to ensure developments can be adapted to different uses.

To maximise passive surveillance around North Melbourne (future West Melbourne) Station and Railway and Miller Reserve.

Appendix 3 21 June 2019

Sites for additional modelling



- 1 496-501 La Trobe St
- 2 404-418 Spencer St
- 3 42-48 Batman St
- 4 92-94 Rosslyn St, 523-527 King St, 511-521 King St, 501-509 King St
- 5 62-80 Stanley St
- 6 103-113 Stanley St
- 13 300 Dudley St
- 16 495 Spencer St
- 17 60-80 Adderley St

Appendix 4 21 June 2019

Full report 'Further Modelling' on following pages Further Modelling



Contents

Clarifications				3
Site 1 — Option A	496—501 La Trobe St	7:1 FAR	16 Storey Disc. Height	5
Site 1 — Option A.1	496—501 La Trobe St	7:1 FAR	16 Storey Disc. Height	6
Site 1 — Option B	496—501 La Trobe St	8:1 FAR	16 Storey Disc. Height	7
Site 1 — Option B.1	496—501 La Trobe St	8:1 FAR	16 Storey Disc. Height	8
Site 2 — Option A	404—418 Spencer St	7:1 FAR	16 Storey Disc. Height	9
Site 2 — Option B	404—418 Spencer St	8:1 FAR	16 Storey Disc. Height	10
Site 3 — Option A	42—48 Batman St	7:1 FAR	16 Storey Disc. Height	11
Site 3 — Option B	42—48 Batman St	8:1 FAR	16 Storey Disc. Height	12
Site 3 — Option C	42—48 Batman St	8:1 FAR	~20 Storey Disc. Height	13
Site 3 — Option C	42—48 Batman St	Shadow I	Diagrams	14
Site 4 — Option C	92 Rosslyn St et al	5:1 FAR	8 Storey Disc. Height	15
Site 5 — Option C	62—80 Stanley St	4:1 FAR	10 Storey Disc. Height	16
Site 5 — Option D	62—80 Stanley St	5:1 FAR	8 Storey Disc. Height	17
Site 6 — Option C	101—113 Stanley St	4:1 FAR	6 Storey Disc. Height	18
Site 13 — Option B	300 Dudley St	5:1 FAR	12 Storey Disc. Height	19
Site 16 — Option A	495 Spencer St	4:1 FAR	8 Storey Disc. Height	20
Site 16 — Option B	495 Spencer St	5:1 FAR	8 Storey Disc. Height	21
Site 17 — Option A	60-80 Adderley St	9:1 FAR	~20 Storey Disc. Height	22
Site 17 — Option B	60-80 Adderley St	6:1 FAR	16 Storey Disc. Height	23
Site 17 — Option C	60-80 Adderley St	10:1 FAR	24 Storey Disc. Height	24



Clarifications

Floorplate size assumptions (maximum/minimum) for residential and commercial buildings (when not constrained by site size)

No untested assumptions were made regarding floorplate sizes as all floorplates were planned on a case by case basis to ensure each individual apartment within overall floorplates was compliant (or able to be planned in detail to be compliant) with the Better Apartment Design Standards (BADS).

Based on hypothetical possibilities and the floorplates produced in the testing process the following typical minimums and maximums may be considered as assumptions. Note it may be possible to produce floor plates greater and lower in size than the following under some special conditions.

Minimum residential floorplate area — Approximately 70m² Maximum residential floorplate area — Approximately 600m² for a building with one core

Minimum commercial floorplate area — Approximately 70m²
Maximum commercial floorplate area — Approximately 1200m²

Maximum building depths for residential and commercial buildings

No untested assumptions were made regarding floorplate depths as all floorplates were planned on a case by case basis to ensure each individual apartment was compliant (or able to be planned in detail to be compliant) with the Better Apartment Design Standards (BADS).

Based on hypothetical possibilities and the floorplates produced in the testing process the following typical minimums and maximums may be considered as assumptions. Note these include balconies. Note it may be possible to produce floor plates greater and lower in depths than the following under some special conditions.

Minimum residential floorplate depth — Approximately 5.5m Maximum residential floorplate depth for a double loaded building with no internal courtyards — Approximately 22m Maximum residential floorplate depth for a dual primary aspect building with internal lightcourts — Approximately 40m overall including lightcourt voids. Approximately 15m for each half of the floor plate separated by light court(s).



Р3

Clarifications

Minimum setbacks from site boundary adopted below the street wall Testing used the Moreland Apartment Design Code (C142) as a guide (refer table below). The setbacks shown in testing may be interpreted as varying from these depending on the context of each site relating to the scale, height and orientation of adjoining properties which are futureproofed (e.g. already developed to the current zoning or strata titled such as in the case of many 2 to 4 storey residential warehouse conversions). In some cases, a degree of discretion to accept a marginal reduction in these setbacks was deemed to be reasonable and appropriate.

Minimum building separation (measured from property boundary)		
	Living/Main balcony outlook to boundary line	Bedroom outlook to boundary line
Up to 4 storeys/12 metres	6 metres	3 metres
5-8 storeys/up to 25 metres	9 metres	4.5 metres
9+ storeys/over 25 metres	12 metres	6 metres

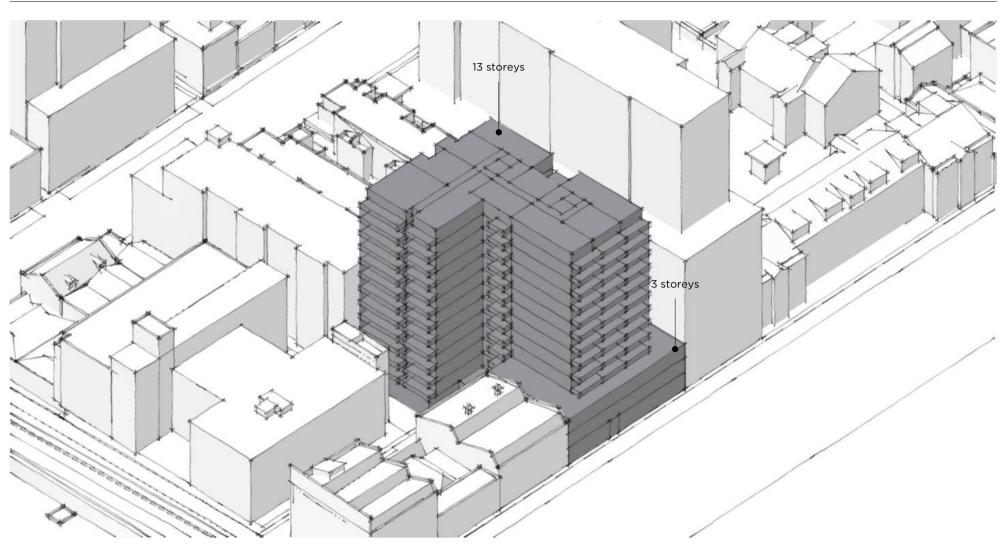
Minimum building separation distances adopted on larger sites with multiple buildings Testing used the Moreland Apartment Design Code (C142) as a guide (refer table below). The building separation distances shown in testing may be interpreted as varying from these depending on the context of each site relating to both the ambiguity of measurement in scenarios such as where living to living outlooks are sufficiently staggered such that they may be considered living to bedroom or living to no outlook interfaces; and the precedent building separation distances established by the existing street network itself in the local context.

Minimum building separation					
	Living/Main balcony outlook to Living/Main balcony outlook	Bedroom outlook to bedroom outlook	Living/Main balcony outlook to bedroom outlook	Living/Main balcony outlook to no outlook	Bedroom outlook to no outlook
Up to 4 storeys/12 metres	12 metres	6 metres	9 metres	6 metres	3 metres
5-8 storeys/ up to 25 metres	18 metres	9 metres	13.5 metres	9 metres	4.5 metres
9+ storeys/ over 25 metres	24 metres	12 metres	18 metres	12 metres	6 metres



496—501 La Trobe St 7:1 FAR, 16 Storey Discretionary Height Limit 1A

Isometric Massing Diagram



Site Data

DDO33 (Flagstaff) Mandatory FAR 7:1 Discretionary Building Height 16 storeys Mandatory Commercial FAR 1:1

Site Area 1,855m² Site Coverage: 92%

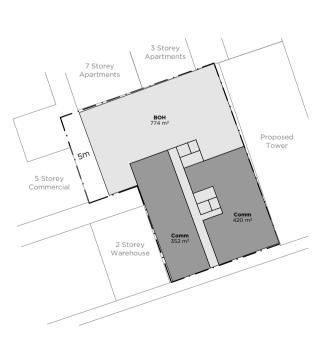
Apartment Numbers	
Туре	Quantity
1BR	58
2BR	44
3BR	12
Total	114

Areas by Category		
Zone Category	Measu	red Area
Apt NSA	8,096	
Circ/BOH	2,695	
Comm NSA	1,868	(Min. 1,855)
POS	1,200	

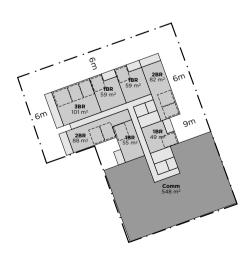
Total GFA	
GFA	Max Allowable GFA
12,659	12,985

Floor Plans

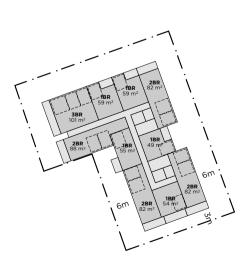
Ground Floor Plan



Level 1 to 2 Typical Plan



Level 3 to 12 Typical Plan



Scale — 1:1000 at A3

North - \bigcirc

Date — 20/6/19



1A.1 496—501 La Trobe St 7:1 FAR, 16 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO33 (Flagstaff)
Mandatory FAR 7:1
Discretionary Building Height 16 storeys
Mandatory Commercial FAR 1:1

Site Area 1,855m²

Apartment Numbers	
Туре	Quantity
1BR	21
2BR	61
3BR	28
Total	110

Areas by Category	
Zone Category	Measured Area
Apt NSA	8,388
Circ/BOH	2,418
Comm NSA	2,042 (Min. 1,855)
POS	1,051

Total GFA	
GFA	Max Allowable GFA
12,848	12,985

Floor Plans

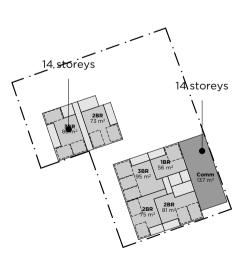
Ground Floor Plan



Level 1 to 6 Typical Plan



Level 7 to 15 Typical Plan



Scale — 1:1000 at A3

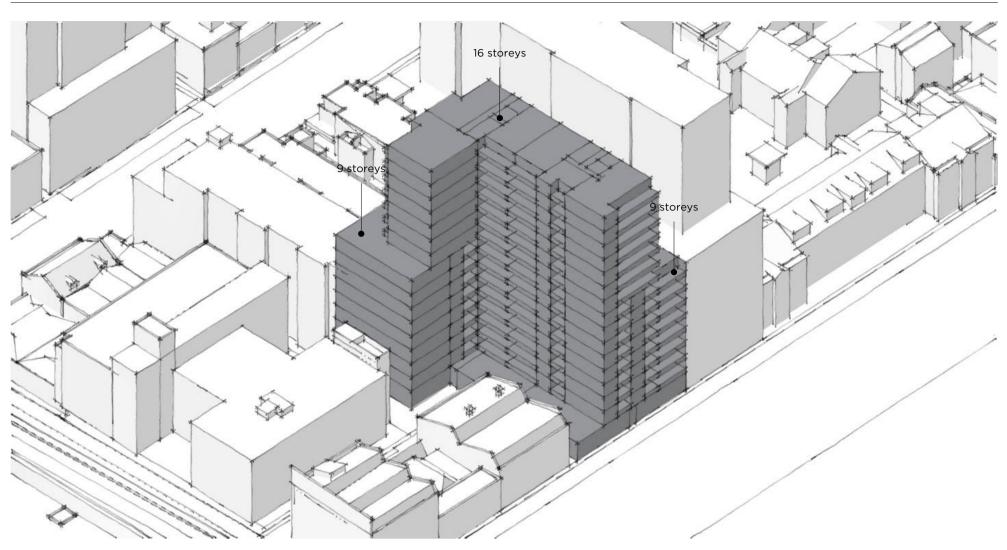
North - \bigcirc

Date - 20/6/19



1B 496—501 La Trobe St 8:1 FAR, 16 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO33 (Flagstaff)
Mandatory FAR 8:1
Discretionary Building Height 16 storeys
Mandatory Commercial FAR 1:1

Site Area 1,855m² Site Coverage: 82%

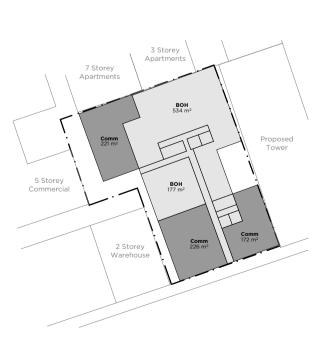
Apartment Numbers	
Туре	Quantity
1BR	39
2BR	23
3BR	60
Total	134

Areas by Category		
Zone Category	Measur	red Area
Apt NSA	9,579	
Circ/BOH	2,699	
Comm NSA	2,387	(Min. 1,855)
POS	1,402	

Total GFA	
GFA	Max Allowable GFA
14,665	14,840

Floor Plans

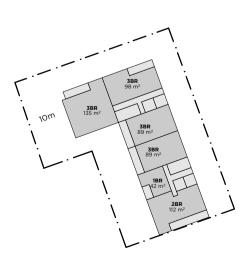
Ground Floor Plan



Level 1 to 8 Typical Plan



Level 9 to 15 Typical Plan



Scale — 1:1000 at A3

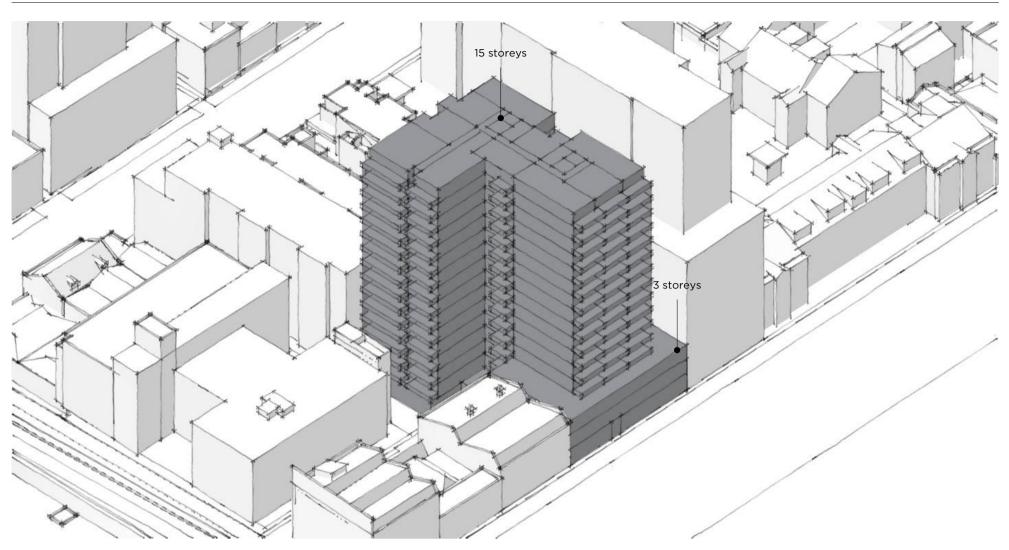
North - \bigcirc

Date — 20/6/19



1B.1 496—501 La Trobe St 8:1 FAR, 16 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO33 (Flagstaff)
Mandatory FAR 8:1
Discretionary Building Height 16 storeys
Mandatory Commercial FAR 1:1

Site Area 1,855m²

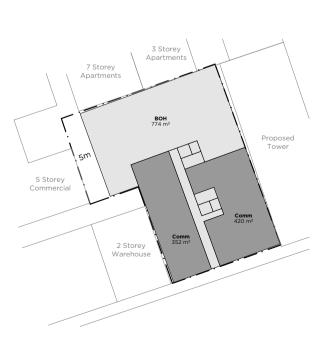
Apartment Numbers	
Туре	Quantity
1BR	68
2BR	52
3BR	14
Total	134

Areas by Category		
Zone Category	Measu	red Area
Apt NSA	9,518	
Circ/BOH	2,989	
Comm NSA	1,868	(Min. 1,855)
POS	1,412	

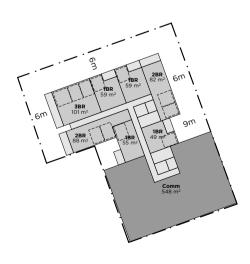
Total GFA	
GFA	Max Allowable GFA
14,375	14,840

Floor Plans

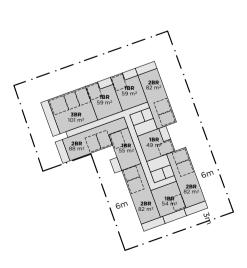
Ground Floor Plan



Level 1 to 2 Typical Plan



Level 3 to 14 Typical Plan



Scale — 1:1000 at A3

North - \bigcirc

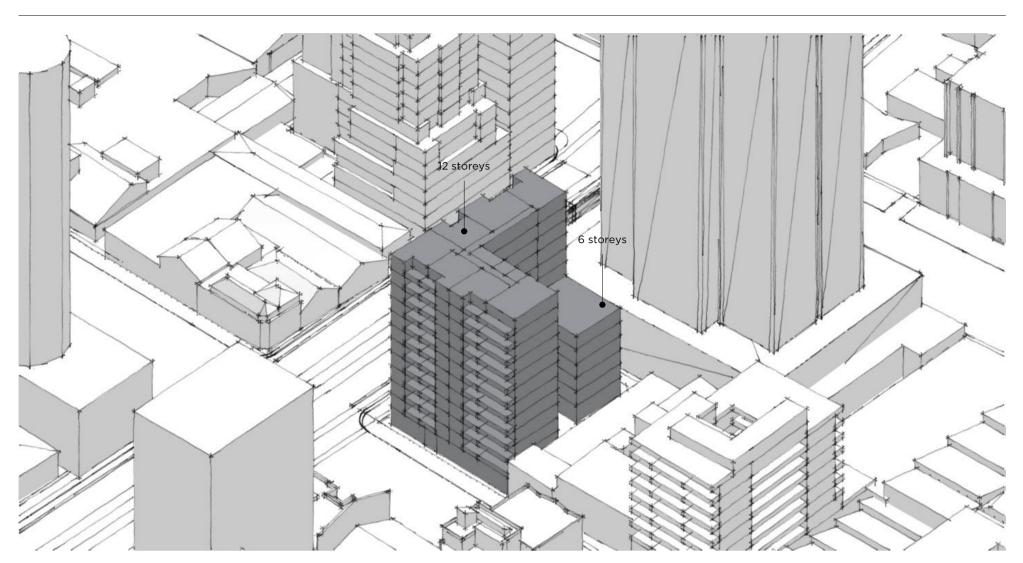
Date — 20/6/19

Р8



2A 404—418 Spencer St 7:1 FAR, 16 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO33 (Flagstaff)
Mandatory FAR 7:1
Discretionary Building Height 16 storeys
Mandatory Commercial FAR 1:1

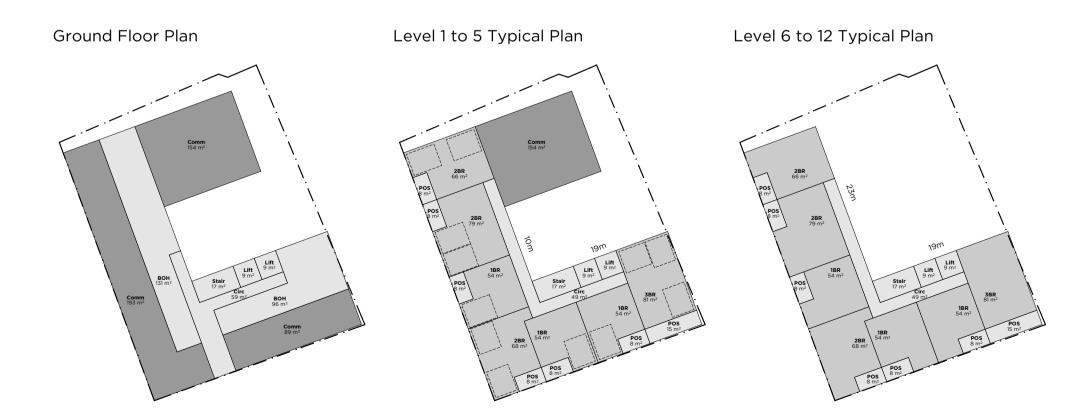
Site Area 1,067m² Site Coverage: 71%

Apartment Numbers	
Туре	Quantity
1BR	33
2BR	33
3BR	11
Total	77

Areas by Category		
Zone Category	Measur	red Area
Apt NSA	5,016	
Circ/BOH	1,245	
Comm NSA	1,206	(Min. 1,067)
POS	693	

Total GFA	
GFA	Max Allowable GFA
7,467	7,469

Floor Plans

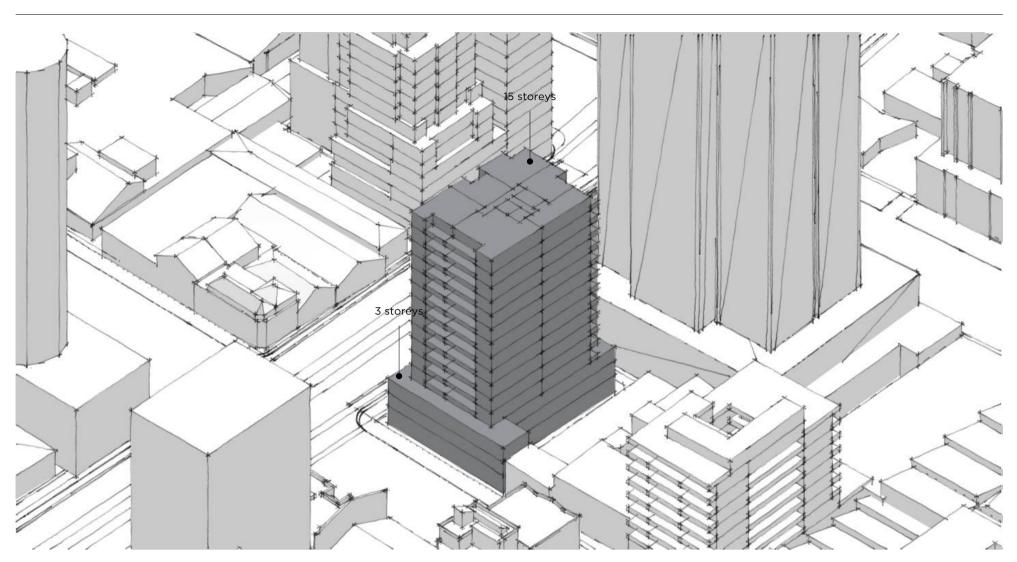


Scale - 1:500 at A3 North - \bigcirc Date - 20/6/19



2B 404—418 Spencer St 8:1 FAR, 16 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO33 (Flagstaff)
Mandatory FAR 8:1
Discretionary Building Height 16 storeys
Mandatory Commercial FAR 1:1

Site Area 1,067m² Site Coverage: 79%

Apartment Numbers		
Туре	Quantity	
1BR	36	
2BR	24	
3BR	12	
Total	72	

Areas by Category		
Zone Category	Measu	red Area
Apt NSA	5,256	
Circ/BOH	2,136	
Comm NSA	1,119	(Min. 1,067)
POS	684	

Total GFA	
GFA	Max Allowable GFA
8,511	8,536

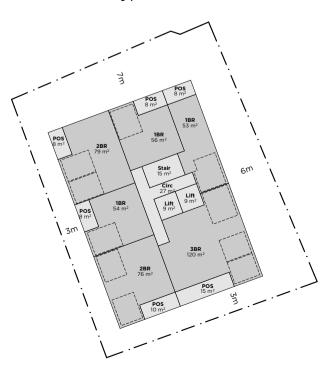
Floor Plans

Ground to Level 2 Typical Plan

Stair
15 m²
Clic
22 ps Lift
19 m²
9 m²

Comm
373 m²

Level 3 to 14 Typical Plan



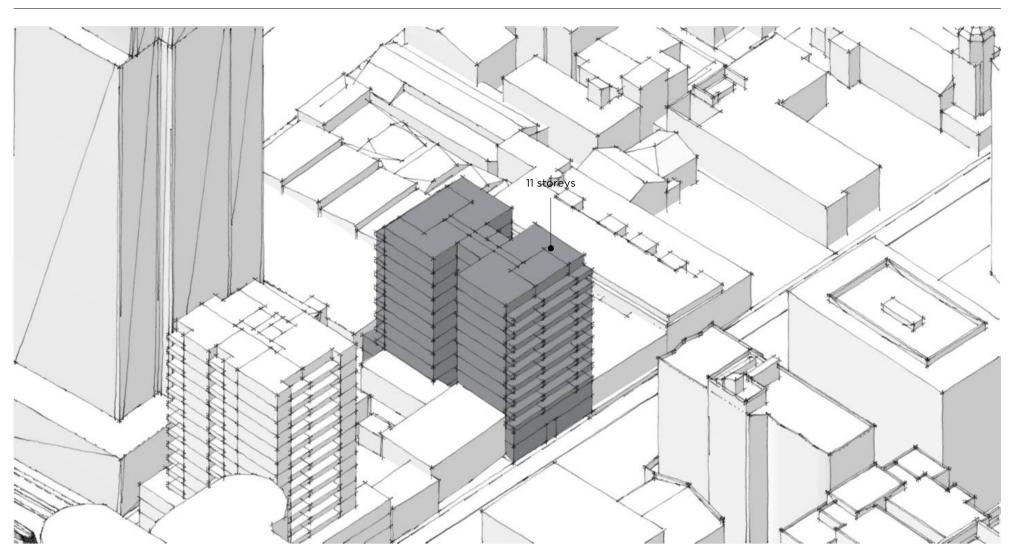
Scale - 1:500 at A3 North - \bigcirc

Date - 20/6/19 P10



3A 42—48 Batman St 7:1 FAR, 16 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO33 (Flagstaff)
Mandatory FAR 7:1
Discretionary Building Height 16 storeys
Mandatory Commercial FAR 1:1

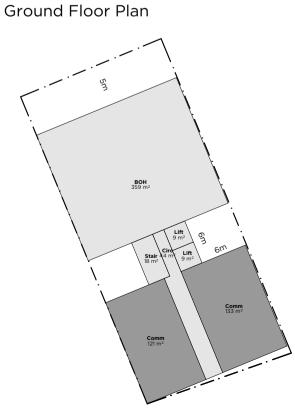
Site Area 895m² Site Coverage: 77%

Apartment Numbers		
Туре	Quantity	
1BR	9	
2BR	36	
3BR	9	
Total	54	

Areas by Category		
Zone Category	Measu	red Area
Apt NSA	4,293	
Circ/BOH	1,070	
Comm NSA	902	(Min. 895)
POS	720	

Total GFA	
GFA	Max Allowable GFA
6,265	6,265

Floor Plans



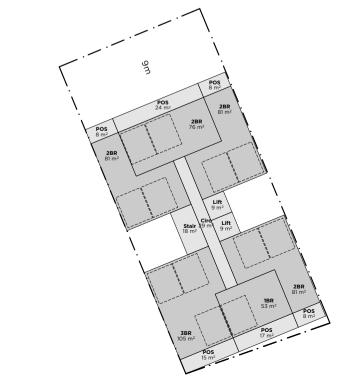
Scale — 1:500 at A3

North — ①

Date — 20/6/19

P11

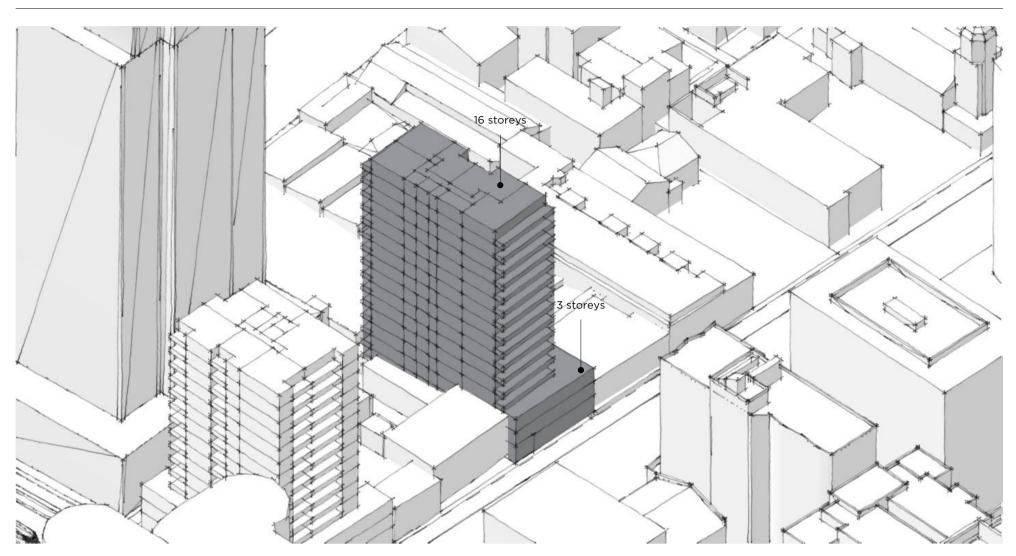
Level 1 Plan Level 2 to 10 Typical Plan





3B 42—48 Batman St 8:1 FAR, 16 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO33 (Flagstaff)
Mandatory FAR 8:1
Discretionary Building Height 16 storeys
Mandatory Commercial FAR 1:1

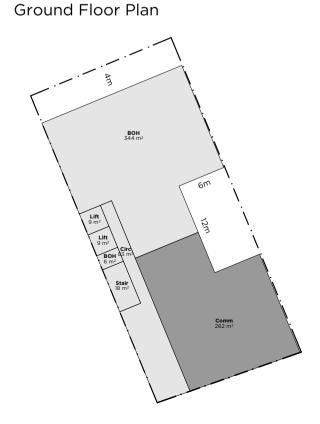
Site Area 895m² Site Coverage: 82%

Apartment Numbers		
Туре	Quantity	
1BR	45	
2BR	26	
вон	17	
Total	88	

Areas by Category		
Zone Category	Measu	red Area
Apt NSA	4,524	
Circ/BOH	1,550	
Comm NSA	1,026	(Min. 895)
POS	979	

Total GFA	
GFA	Max Allowable GFA
7,100	7,160

Floor Plans

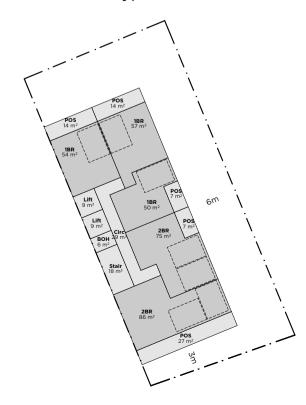


Scale - 1:500 at A3 North $- \bigcirc$ Date - 20/6/19P12

Level 1 to 2 Typical Plan



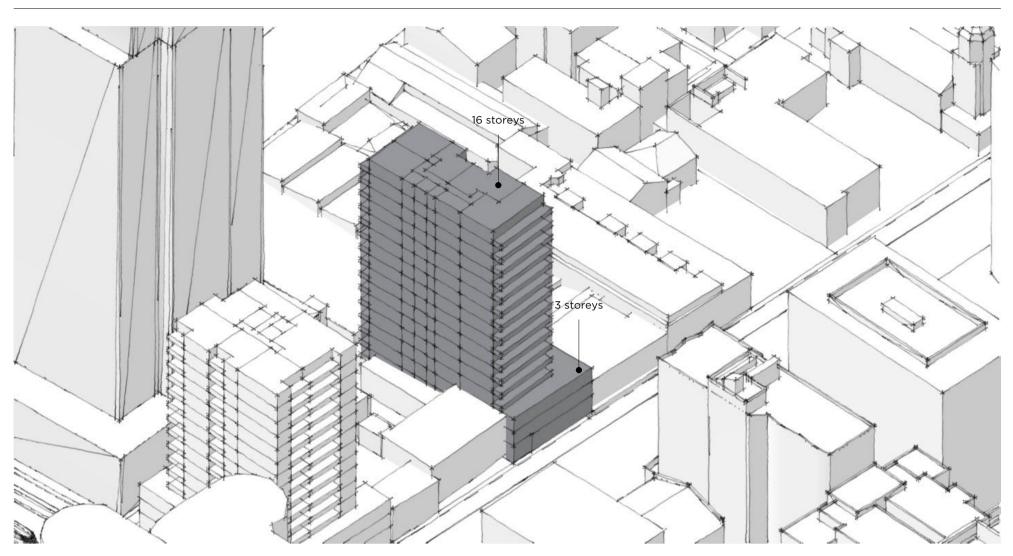
Level 3 to 15 Typical Plan





3C 42—48 Batman St 8:1 FAR, 16 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO33 (Flagstaff)
Mandatory FAR 8:1
Discretionary Building Height 16 storeys
Mandatory Commercial FAR 1:1

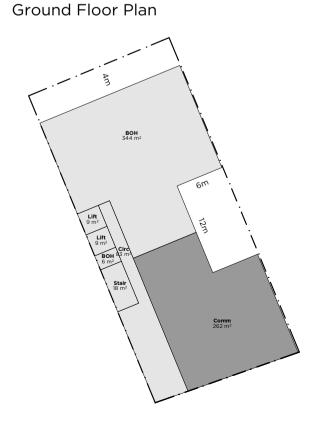
Site Area 895m² Site Coverage: 82%

Apartment Numbers		
Туре	Quantity	
1BR	45	
2BR	26	
вон	17	
Total	88	

Areas by Category		
Zone Category	Measur	ed Area
Apt NSA	4,524	
Circ/BOH	1,550	
Comm NSA	1,026	(Min. 895)
POS	979	

Total GFA	
GFA	Max Allowable GFA
7,100	7,160

Floor Plans

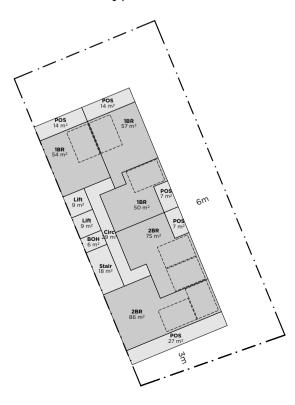


Scale - 1:500 at A3 North $- \bigcirc$ Date - 20/6/19P13

Level 1 to 2 Typical Plan



Level 3 to 15 Typical Plan





3C 42—48 Batman St 8:1 FAR, 16 Storey Discretionary Height Limit

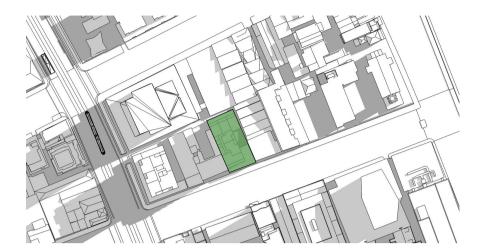
June 22 Shadow Diagrams

September 22 Shadow Diagrams

9AM



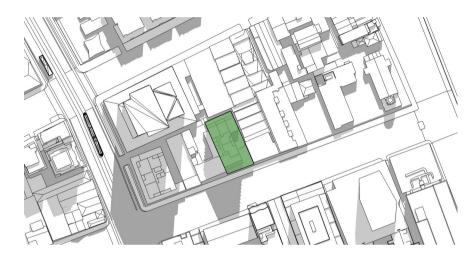
9AM



12PM



12PM



3PM

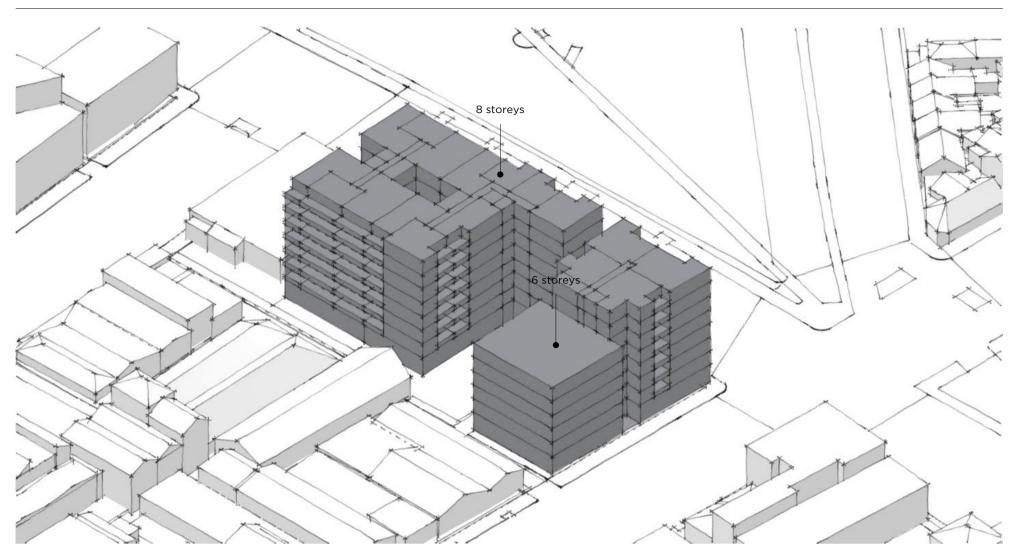


3PM



92 Rosslyn St et al 5:1 FAR, 8 Storey Discretionary Height Limit 4C

Isometric Massing Diagram



Site Data

DDO29-1 (Spencer) Mandatory FAR 5:1 Discretionary Building Height 8 storeys Mandatory Commercial FAR 1:1

Site Area 2935m² Site Coverage: 70%

Apartment Numbers		
Туре	Quantity	
1BR	35	
2BR	56	
3BR	28	
Total	119	

Areas by Category		
Zone Category	Measur	ed Area
Apt NSA	9,205	
Circ/BOH	2,311	
Comm NSA	2,968	(Min. 2,935)
POS	1,267	

Total GFA	
GFA	Max Allowable GFA
14,484	14,675

Floor Plans

Ground Floor Plan

Level 1 to 5 Typical Plan



Level 6 to 7 Typical Plan



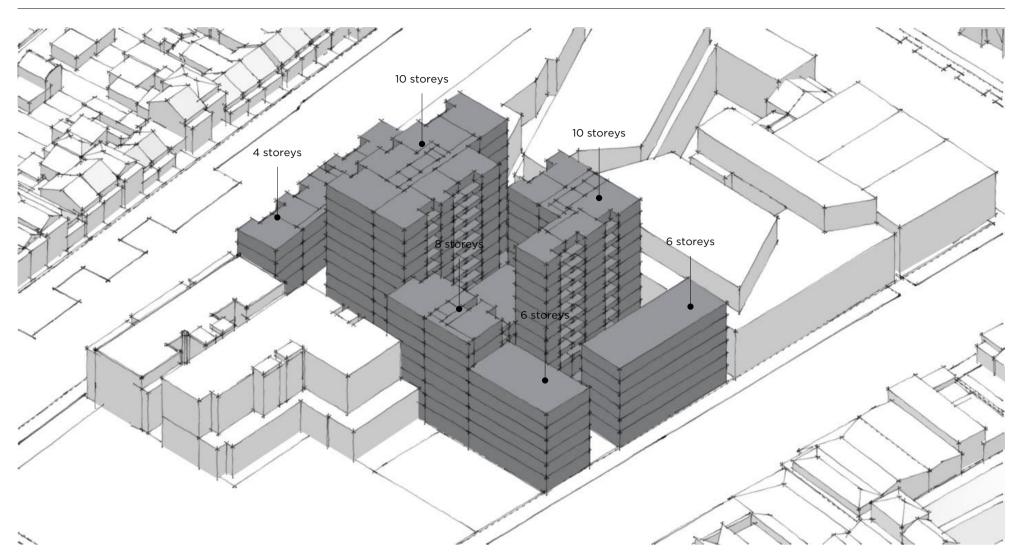
Scale — 1:1000 at A3 North - \bigcirc

Date — 20/6/19



5C 62-80 Stanley St 4:1 FAR, 10 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO29-1 (Spencer)
Mandatory FAR 5:1
Discretionary Building Height 8 storeys
(4 to Roden St, 6 to Stanley St)
Mandatory Commercial FAR 1:1

Site Area 4,571m² Site Coverage: 56%

Apartment Numbers		
Туре	Quantity	
1BR	65	
2BR	42	
3BR	39	
Total	146	

Areas by Category	
Zone Category	Measured Area
Apt NSA	10,754
Circ/BOH	2,526
Comm NSA	4,654 (Min. 4,571)
POS	1,107

Total GFA	
GFA	Max Allowable GFA
17,934	18,284

Floor Plans



Scale — 1:1000 at A3

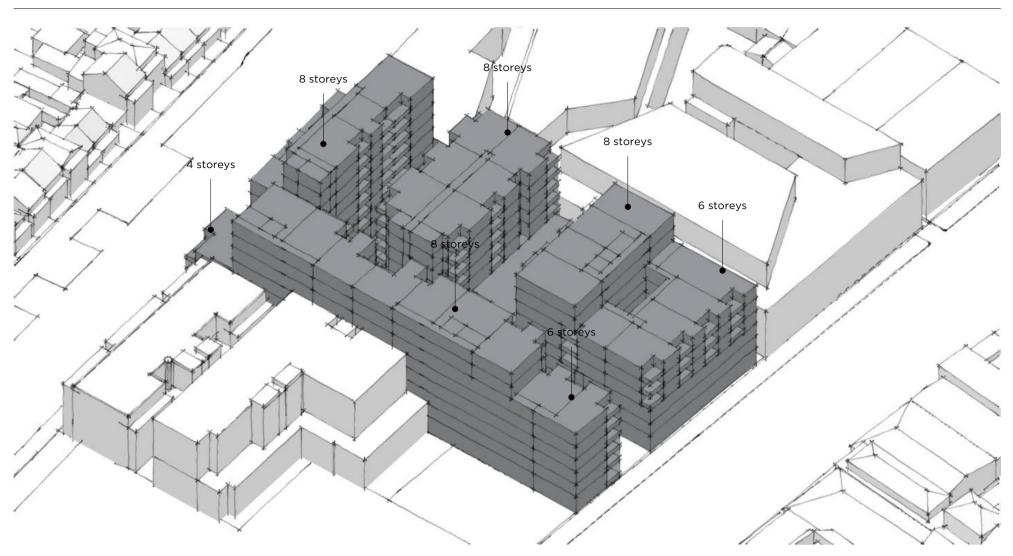
North — \bigcirc

Date — 20/6/19



5D 62-80 Stanley St 5:1 FAR, 8 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO29-1 (Spencer)
Mandatory FAR 5:1
Discretionary Building Height 8 storeys
(4 to Roden St, 6 to Stanley St)
Mandatory Commercial FAR 1:1

Site Area 4,571m²

Apartment Numbers	
Туре	Quantity
1BR	22
2BR	128
3BR	23
Total	182

Areas by Category	
Zone Category	Measured Area
Apt NSA	13,503
Circ/BOH	3,516
Comm NSA	4,342 (Min. 4,571)
POS	1,398

Total GFA	
GFA	Max Allowable GFA
21,361	22,855
	(24,031 including FAR bonus for heritage building retention)

Floor Plans



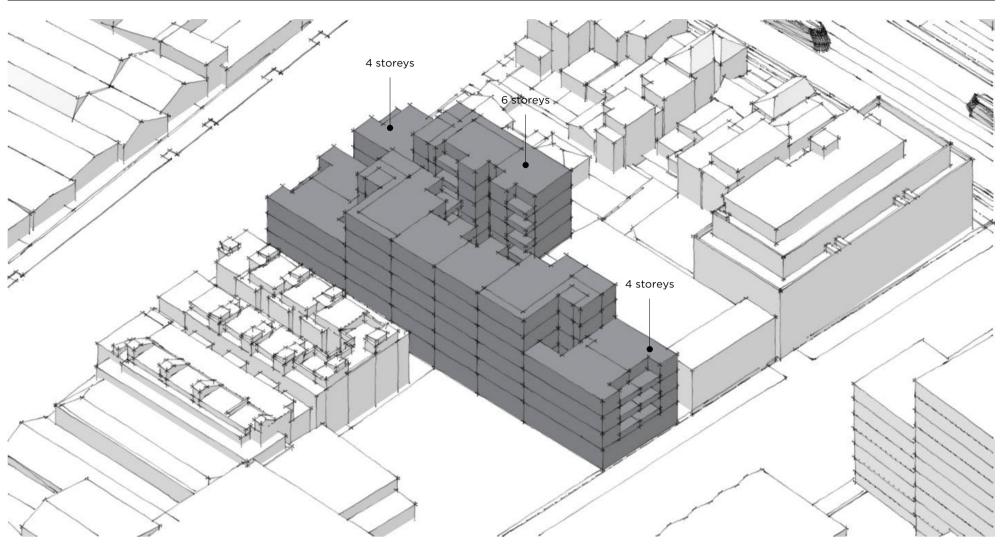
Scale - 1:1000 at A3 North - \bigcirc

Date — 20/6/19



6C 103—113 Stanley St 4:1 FAR, 6 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO29-2 (Adderley)
Mandatory FAR 4:1
Discretionary Building Height 6 storeys
(4 storey streetwall)
Mandatory Commercial FAR 1:1

Site Area 1,732m² Site Coverage: 76%

Apartment Numbers	
Туре	Quantity
2BR	26
3BR	19
Total	45

Areas by Category		
Zone Category	Measu	red Area
Apt NSA	3,960	
Circ/BOH	1,321	
Comm NSA	915	(Min. 866)
POS	451	

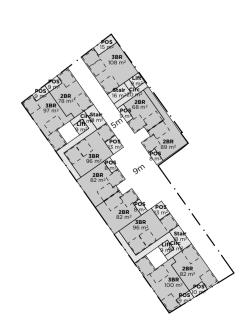
Total GFA	
GFA	Max Allowable GFA
6,196	6,928

Floor Plans

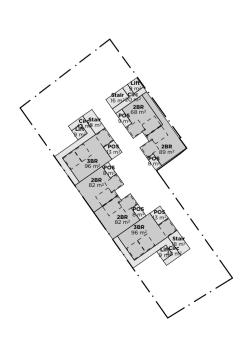
Ground Floor Plan

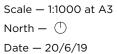


Level 1 to 3 Typical Plan



Level 4 to 5 Typical Plan

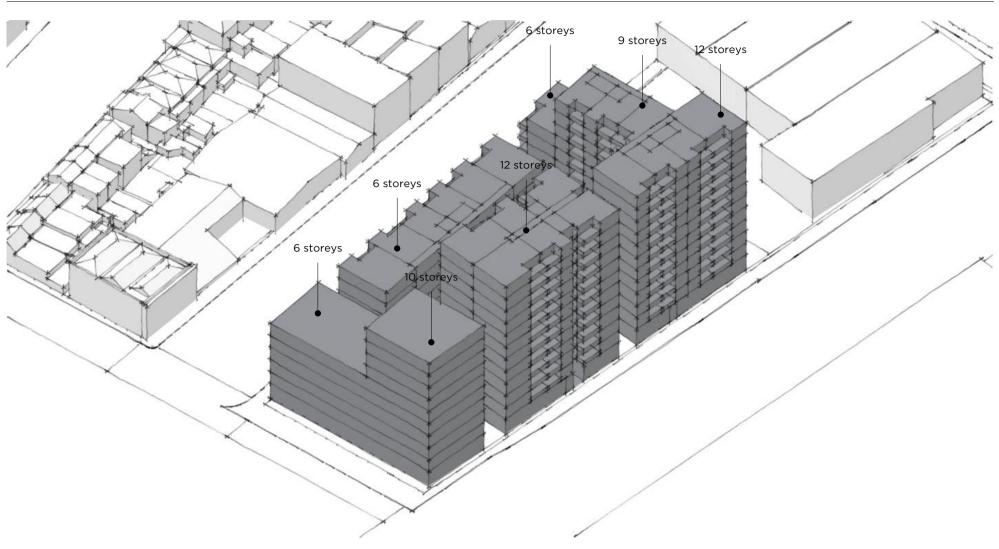






13B 300 Dudley St 5:1 FAR, 12 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO29-1 (Spencer)
Mandatory FAR 5:1
Discretionary Building Height 12 storeys
to Dudley St, 6 storeys to Rosslyn St)
Mandatory Commercial FAR 1:1

Site Area 4,125m² Site Coverage: 59%

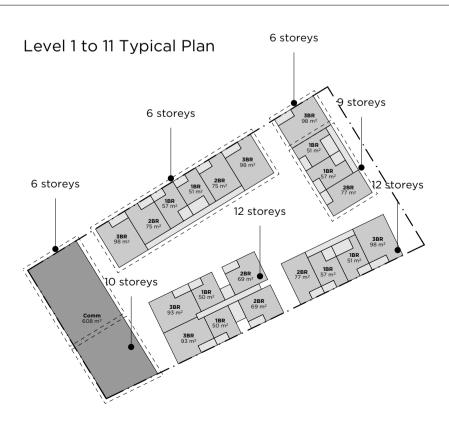
Apartment Numbers	
Туре	Quantity
1BR	72
2BR	53
3BR	50
Total	175

Areas by Cat	egory	
Zone Catego	ry Measur	red Area
Apt NSA	12,471	
Circ/BOH	2,534	
Comm NSA	5,269	(Min. 4,125)
POS	1,409	

Total GFA	
GFA	Max Allowable GFA
20,274	20,625

Floor Plans



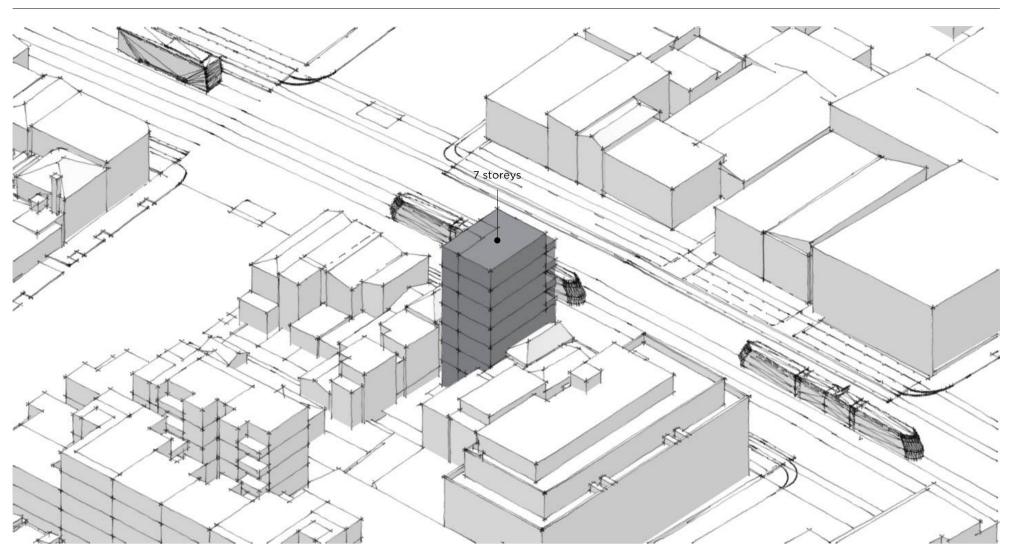


Scale - 1:1000 at A3 North $- \bigcirc$ Date - 20/6/19P19



16A 495 Spencer St 4:1 FAR, 8 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO29-1 (Spencer)
Mandatory FAR 4:1
Discretionary Building Height 8 storeys
Mandatory Commercial FAR 1:1

Site Area 186m² Site Coverage: 85%

Apartment Numbers	
Туре	Quantity
2BR	4
Total	4

Areas by Category	
Zone Category	Measured Area
Apt NSA	300
Circ/BOH	234
Comm NSA	210 186
POS	68

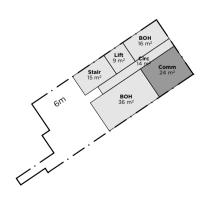
Total GFA	
GFA	Max Allowable GFA
744	744

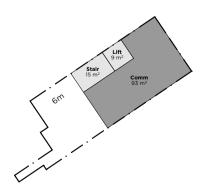
Floor Plans

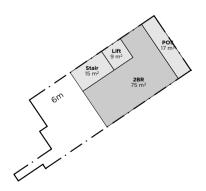
Ground Floor Plan

Level 1 Plan

Level 2 to 6 Typical Plan

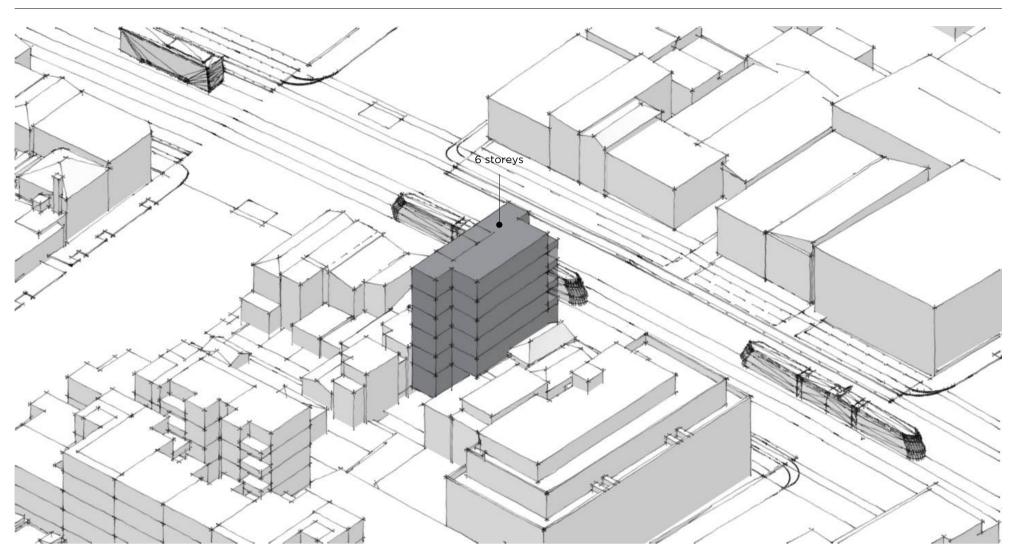






16B 495 Spencer St 5:1 FAR, 8 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO29-1 (Spencer)
Mandatory FAR 5:1
Discretionary Building Height 8 storeys
Mandatory Commercial FAR 1:1

Site Area 186m² Site Coverage: 61%

Apartment Numbers		
Туре	Quantity	
3BR	4	
Total	4	

Areas by Category		
Zone Category	Measur	red Area
Apt NSA	496	
Circ/BOH	238	
Comm NSA	175	186
POS	40	

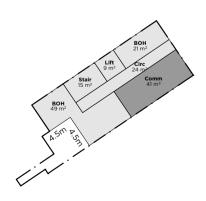
Total GFA	
GFA	Max Allowable GFA
909	930

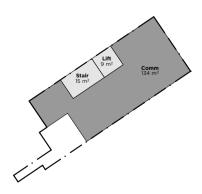
Floor Plans

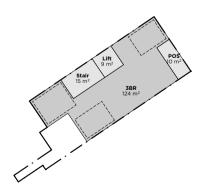
Ground Floor Plan

Level 1 Plan

Level 2 to 5 Typical Plan

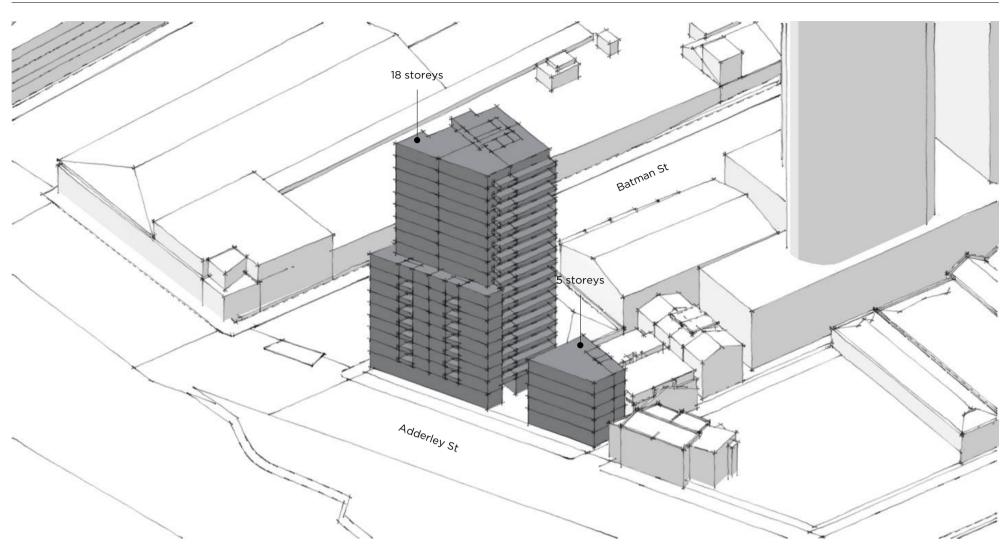






17A 60—80 Adderley St 9:1 FAR, 20 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO33 (Flagstaff)
Mandatory FAR 6:1
Discretionary Building Height 20 storeys
Mandatory Commercial FAR 1:1

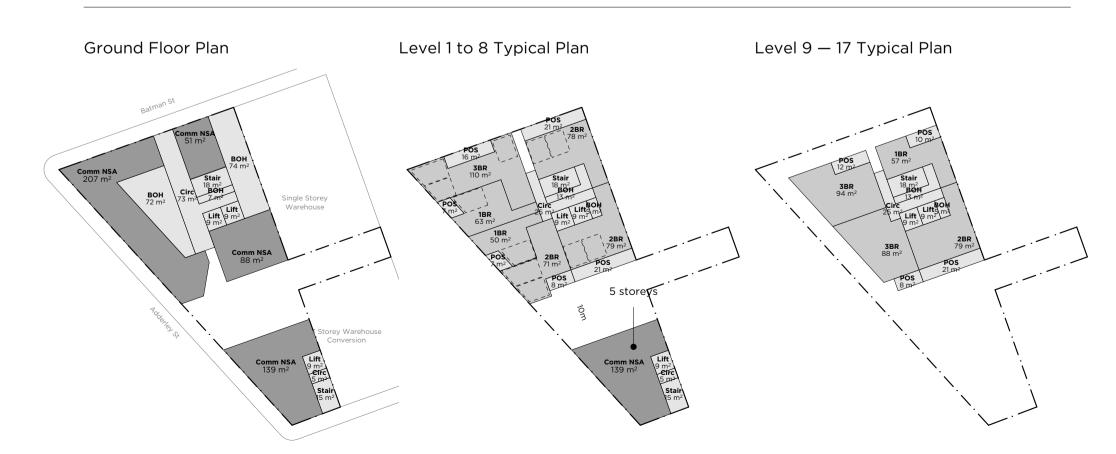
Site Area 1,030m² Site Coverage: 75%

Apartment Numbers	
Туре	Quantity
1BR	25
2BR	33
3BR	26
Total	84

Areas by Category		
Zone Category	Measur	ed Area
Apt NSA	6,470	
Circ/BOH	1,750	
Comm NSA	1,041	(Min. 1,030)
POS	1,099	

Total GFA	
GFA	Max Allowable GFA
9,261	9,270

Floor Plans



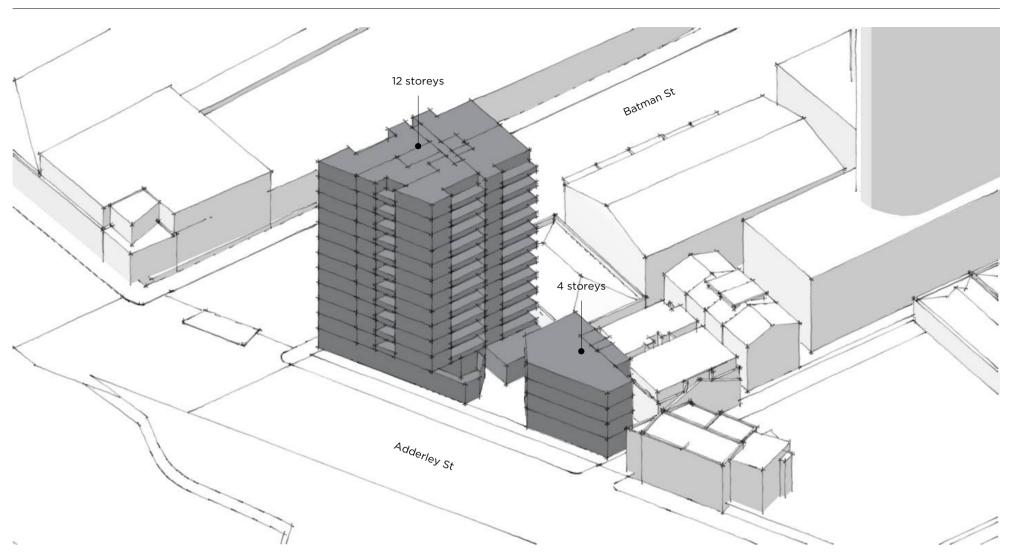
Scale - 1:600 at A3 North $- \bigcirc$ Date - 20/6/19

P22

BREATHE ARCHITECTURE

17B 60—80 Adderley St 6:1 FAR, 16 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO33 (Flagstaff)
Mandatory FAR 6:1
Discretionary Building Height 16 storeys
Mandatory Commercial FAR 1:1

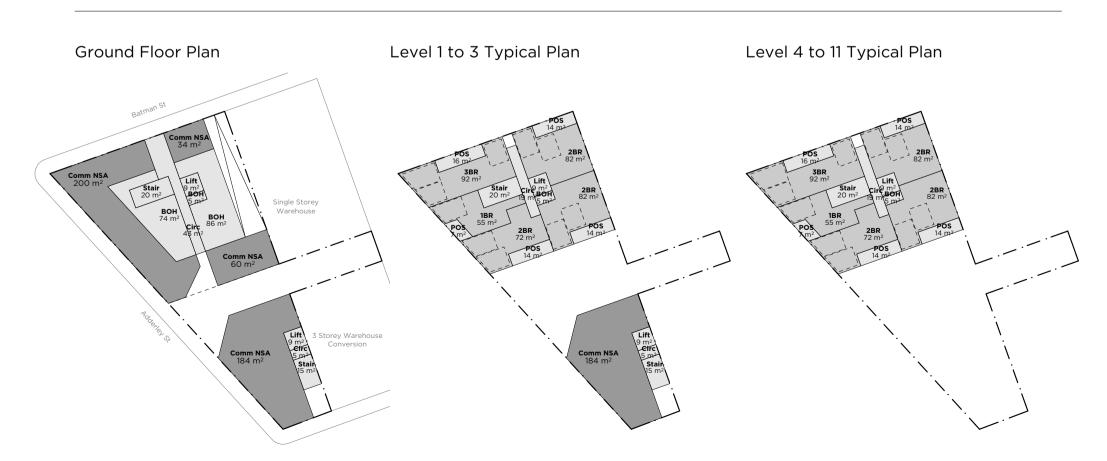
Site Area 1,030m²

Apartment Numbers	
Туре	Quantity
1BR	11
2BR	33
3BR	11
Total	55

Areas by Category		
Zone Category	Measur	ed Area
Apt NSA	4,213	
Circ/BOH	936	
Comm NSA	1,030	(Min. 1,030)
POS	715	

Total GFA	
GFA	Max Allowable GFA
6,179	6,180

Floor Plans

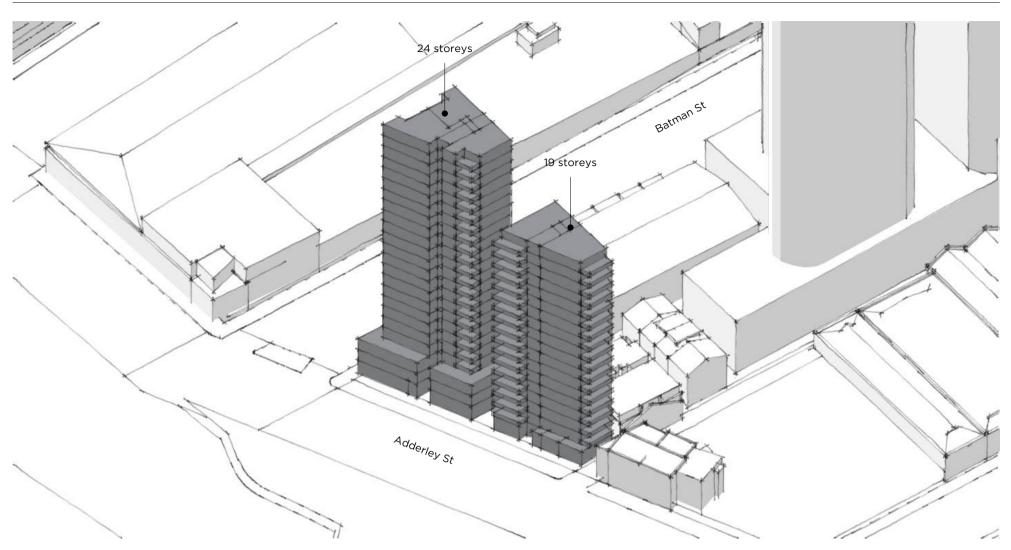


Scale - 1:600 at A3 North $- \bigcirc$ Date - 20/6/19



17C 60—80 Adderley St 10:1 FAR, 24 Storey Discretionary Height Limit

Isometric Massing Diagram



Site Data

DDO33 (Flagstaff)
Mandatory FAR 6:1
Discretionary Building Height 16 storeys
Mandatory Commercial FAR 1:1

Site Area 1,030m²

Apartment Numbers		
Туре	Quantity	
2BR	94	
Total	94	

Areas by Category	
Zone Category	Measured Area
Apt NSA	7,035
Circ/BOH	1,844
Comm NSA	1,385 (Min. 1,030)
POS	1,025

Total GFA	
GFA	Max Allowable GFA
10,264	10,300

Floor Plans



Scale - 1:600 at A3 North $- \bigcirc$ Date - 20/6/19

