

# URBIS SUBMISSION TO BETTER APARTMENTS DRAFT DESIGN STANDARDS



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PREPARED BY URBIS WITH INPUT FROM LOCALLY RESPECTED ARCHITECTS





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# INTRODUCTION

Urbis is Australia's leading advisory firm on city and community development. We have enjoyed a very strong working relationship with the Victorian State Government and, together, have helped influence and shaped the built form fabric of Melbourne's CBD and metropolitan area over many decades. On the back of this relationship, we trust that this submission will be given weight in the final drafting of the 'Better Apartment Design Standards'.

Recently, there has been wide media coverage and public debate expressing concern about the quality of some of the apartment product that has subsequently been built. This has, in part, been enabled through the absence of any strict regulatory framework to effectively guide a baseline standard for product and has resulted in the development of apartments that could not be delivered in other cities, e.g. Sydney.

Melbourne's long-term international competitiveness is underpinned by the quality of its built environment and its ability to provide housing to support a diverse and changing population. Urbis supports the introduction of 'Better Apartment Design Standards' into Victorian Planning Schemes (VPS) and believes it provides an opportunity to give clarity to the community, developers and decision makers on the design and approval of apartment buildings.

While we support the introduction of a new Provision into the Victorian Planning Provisions, this submission seeks to highlight areas where clarification is required on the proposed Draft Design Standards (DDS) and offers recommendations to achieve the desired outcomes sought by the Government, while at the same time limiting unintended adverse impacts and providing improved efficiency for the built environment professionals.

The introduction of the guidelines will be an important and significant step in influencing the future of housing supply in Victoria and we urge that robust testing of these guidelines is conducted to ensure Victoria continues to lead innovative design through a performance based system. We believe the guidelines should provide clear objectives which allow recognition of innovative and creative design to achieve high levels of amenity for occupants as well as high quality contributions to Melbourne's urban setting without negatively impacting housing affordability.

In preparing this submission Urbis hosted a workshop with many of Melbourne's top and emerging architecture practices on 29 August, 2016. This approach ensured a deep understanding of the DDS in practice (and leveraged experience from Sydney [SEPP65] and other international cities) and has been used to inform, and in some cases test, key issues highlighted in this document.

Urbis hopes this information provides valuable feedback to Government that will be considered prior to the guidelines being finalised and implemented. We welcome further discussion on any of the issues raised within this submission.

Our review of the DDS has considered the full spectrum of proposed standards; however, this submission focuses on the following:

- Chapter 1 - Overarching Themes – the need for clarity, objectives and decision guidelines, a panel review process and points of clarification
- Chapter 2 - Assessment of Key DDS – Building Setback, Room Depth, Windows and Private Open Space



Urbis hosting architects from leading partner firms in our Collins Street offices to discuss the impacts of the Draft Apartment Design Standards for Victoria

# BATESSMART™



**BRUCE  
HENDERSON  
ARCHITECTS**

**Ascui & Co.**  
Architects



bg architecture

**FENDER KATSALIDIS ARCHITECTS**

**E Finniss Architects**

**Clarke  
Hopkins  
Clarke**



**Perkins** Architects



**CONRAD**

**ROTHE LOWMAN**

**D K O**



# 1. OVERARCHING THEMES

## 1.1. THE NEED FOR CLARITY: OBJECTIVES AND DECISION GUIDELINES TO ENCOURAGE DESIGN INNOVATION

In line with Victoria's performance based planning system Urbis supports the use of an objective, standard and decision guideline approach, similar to that currently applied in Clause 54 and 55 (ResCode). While the DDS identifies the specific design standards (i.e. building setback, light wells, etc.) it is not clear from the DDS what the objective or decision guidelines of each standard are. If the DDS are implemented in their current guise it will add uncertainty and stifle alternate design solutions and innovation.

We are concerned that a 'one size fits all' approach will limit innovative design that currently makes a significant contribution to Melbourne's streetscapes.

There are many benefits of architectural creativity and design innovation such as providing interesting and attractive streetscapes that Melbourne is known for. In addition to allowing for creativity and high quality building outcomes, there are circumstances where an alternative design solution may have community or environmental benefits.

For example, alternative design solutions with superior environmental outcomes, such as 'The Commons' in Brunswick (refer to Picture 1 and 2) may not meet setback standards but provide a high level of internal amenity and offer alternative and affordable design solutions with excellent ESD outcomes.



Picture 1 – The Commons (front view), Brunswick  
Source: Site photo – September 2016



Picture 2 – The Commons (rear view), Brunswick  
Source: Site photo – September 2016

### 1.1.1. Objectives

**Urbis recommends** the DDS should be applied as the base case or as a 'deemed to comply' standard. Where the prescribed standard is not met, clear objectives and decision guidelines should be articulated to allow for consideration of alternative design solutions.

### 1.1.2. Decision Guidelines

**Urbis recommends** decision guidelines be added to each apartment standard.

The decision guidelines should be applied in the same way as ResCode, to guide discretion where the standard is varied and to demonstrate that the stated objective is met. This will allow for innovative design responses and longevity of the guidelines to remain relevant over time.

**Urbis recommends** that overarching decision guidelines be applied for each apartment standard. This will allow the overall building amenity to be considered. There are also some standards which work together – e.g. a south facing apartment could be located in a building with a large north facing communal open space area.

**Urbis recommends** the following overall decision guidelines to allow for buildings to be designed with an overall amenity focus and to allow consideration of other factors when deciding whether or not to vary a standard:

- The level of design innovation and achievement of architectural excellence.
- The ability to adapt existing building stock through refurbishment or renewal.
- The contribution of the building to achieving a positive urban design outcome.
- Whether a high level of resident amenity will be achieved.
- The site context and the ability to manage constraints through an alternative design response.
- The impact on the amenity of the surrounding area.

## 1.2. PROCESS

Urbis welcomes the process undertaken by Government to date on this important reform, including the extensive public engagement and discussion and Reference Groups. The impact and wide application of the apartment design standards will be significant and it is essential that appropriate evidence based assessment and review are undertaken.

Our experience in Sydney with SEPP65, in place since 2002, has been one of review and refinement over time to fine tune the objectives in response to changes to industry standards, innovations in design and technology improvements.

**Urbis recommends** the guidelines are first implemented on an interim basis (similar to the Moreland Design Code) to be tested and trialled for a 12 month period. During this time a Panel should consider the guidelines in more detail providing an opportunity for robust testing and ability to respond to issues as they emerge in practice. This approach will ensure lengthy VCAT arguments are avoided about interpretation and application of standards.

## 1.3. POINTS REQUIRING CLARIFICATION

The following is a list of general points of clarification and recommendations. While the DDS is comprehensive there are elements where multiple interpretations can be drawn and this creates uncertainty.

**Urbis recommends** the following clarifications be made to avoid time delays caused by disputes:

Clarification	Implication / Comment	Urbis Recommendation
Overlay Precedence wording is unclear	Many overlays, for example Design and Development Overlays (DDOs), relate to building form, but are silent on other matters such as internal layout.	Clarify when an Overlay overrides the DDS. In particular, building setbacks and DDOs and landscaping and Significant Landscape Overlay (SLO) or Environmental Significance Overlay (ESO).
Replacement of Design Guidelines for Higher Density Residential Development (DGHDRD)	A number of the components of the DGHDRD will no longer be addressed, notably matters such as good design and streetscape integration.	Retain or replace the DGHDRD and supersede redundant objectives that will be covered by the DDS.



Clarification	Implication / Comment	Urbis Recommendation
Aged care, special care housing or social housing	It is not clear whether the guidelines apply to Residential Aged Care Facilities. There are many standards that will not be suitable for aged care facilities, as they require a different approach for health, supervision and care.	The DDS should not apply to specialist accommodation which is designed for specific uses such as health or education purposes, including aged care, retirement villages and student accommodation. In these situations, the model of care and accommodation relies on a smaller room size (which may include small kitchen facilities such as a sink) and accommodation models.
Refurbishment of existing buildings, including heritage listed	Retained buildings may offer the opportunity for habitable room windows using original fabric but not meet the setback or daylight requirements. Likewise, there are potential benefits from refurbishing other buildings which may be eliminated by the need for 'compliance' with the standards.	Note in decision guidelines, that certain standards (e.g. building setbacks and room depth) do not apply to existing buildings where the objectives can be met.
Existing regulations (BCA and DDA) and Planning Provisions	Will the planning scheme override DDA and BCA requirements? Is this fair given planning does not cover all dwellings?	Remove non planning related standards including ventilation, access and noise.
Four (4) storeys; and, 5 or more storeys	<p>Four (4) storey buildings subject to ResCode (B17) will have less setback requirements than a 5 storey building where the DDS specifies a 6m setback for Levels 1-5.</p> <p>This is likely to result in building heights being pushed up to make up for loss of yield (from 6m setbacks in DDS) or underdevelopment where 4 storeys is favoured over 5 or 6 storey to avoid the DDS setback requirements.</p>	Adjust the building setback DDS to match the setbacks in ResCode Standard B17 for levels 1-4.
Commercial and residential context	The standards generally appear more appropriate in a residential setting. Landscaping and lower level setbacks are not considered appropriate in a commercial activity centre.	Decision guideline to consider zone, site context and surrounding land uses

## 1.4. FURTHER IMPLICATIONS TO CONSIDER

When finalising the design standards we suggest that the following factors be taken into account:

- Impacts on housing affordability noting that the design guidelines generally move towards a more premium housing product.
- The standards increase bedroom, bathroom and balcony sizes, which may result in smaller living rooms (typically where most time is spent by residents).
- The combination of changes by the Neighbourhood Residential Zone, Planning Scheme Amendment C270 and DDOs with mandatory height limits all need to be considered in the context of meeting housing targets.
- Reducing residential development yields in well serviced areas can have broader impacts, and may result in increased demand for housing on the fringe where the cost of providing community facilities and services including public transport is heightened.

## 2. DRAFT DESIGN STANDARDS

Urbis is broadly supportive of the introduction of apartment design standards to ensure that the baseline standard of apartment amenity is improved.

Notwithstanding our support of this approach, we consider there is the potential to further strengthen the guidelines to provide flexibility to achieve better outcomes potentially using varied architectural solutions. Such an approach is consistent with the manner in which the current Clauses 54 and 55 apply.

**Urbis recommends** that the following standards are further refined:

- Building setback
- Room depth
- Windows
- Private open space

We also question how some of the more technical detailed design standards will work in conjunction with other existing regulations - e.g. Building Code, EPA and Australian Standards. Many of these regulatory/compliance matters occur after the planning process.

**Urbis recommends** the following matters be addressed after town planning approval has been obtained:

- Noise impacts
- Natural ventilation
- Access (Disability Discrimination Act [DDA] Standards)

### 2.1. BUILDING SETBACK

We question whether this standard is needed in apartment design guidelines as setback and built form issues are generally dealt with through design controls such as DDO and neighbourhood character policies. Further, there are numerous other standards throughout the DDS that cover daylight access and therefore, in our view this standard is not required.

In relation to achieving privacy, we note that Standard B22 could be including in the Apartments 5+ storey table. This has generally been applied to ensure a minimum 9.0 metre setback to provide privacy between habitable room windows.

The significant setback requirements proposed within the DDS will create significant negative impacts on meeting housing targets. Refer to **Appendix A** – Bruce Henderson Architects Case Studies. The case studies provided by Bruce Henderson architects highlight the impacts of this standard on yield and high quality design outcomes.

**Urbis recommends** the standard be deleted from the DDS.

Should this recommendation not be accepted, there are a number of issues that need to be addressed.

A measurable definition of the term 'adequate' would allow for development proposals to appropriately respond to context and potentially meet the standard using an alternative technique which may be more appropriate or constitute a preferable outcome. Such an approach encourages design innovation and is consistent with the performance based system upon which the VPP are based.

#### 2.1.1. Issues for Consideration

In addition to the above, the following matters require further consideration:

- The draft design standards do not adequately articulate why the setback requirements that apply to buildings four storeys or less under ResCode are not appropriate for the first four levels of any building. As drafted, the requirements are more stringent than the ResCode Standards at lower levels of buildings.
- It appears that the setback requirements apply equally within all zones and localities. We submit that in the example of a commercial and mixed use zone, this requirement may not be appropriate and could unreasonably impact on the extent of development which can be achieved and the continuation of historical zero lot lines within strip centres.

- The draft apartment guidelines do not distinguish between different types of habitable room windows. It is submitted that there are inherent differences in what constitutes ‘adequate’ daylight between a kitchen, living room and bedroom and that it would be appropriate that the setback requirements and any ensuing ‘daylight’ benchmarks had regard to this.
- The setbacks will have the effect of providing large areas of sites without development and we question whether this represents an appropriate and efficient use of land.

## 2.1.2. Suggested Standard

In the event the standard is not deleted, **Urbis recommends** the following changes be made to the Building Setback guideline:

### Objective:

~~The standard seeks to~~ ensure that new apartment buildings are setback an appropriate distance from a side and rear boundaries to receive an adequate amount of daylight and privacy.

### Standard:

A habitable room window or a balcony should be setback from a side or rear boundary at least the distance specified in Table 1.

A habitable room window or a balcony should be setback from another building within the site at least the distance specified in Table 1.

The setback is measured from the external surface of the habitable room window or the open side of the balcony, whichever is the lesser.

If the setbacks are not met, the habitable rooms should meet a lux level of X for main living area(s) and X for bedrooms and studies.<sup>1</sup>

Table 1 Building Setback

Building Height	Minimum Setback From Side And Rear Boundaries	Minimum Setback From Buildings Within The Site
Up to 13.5 metres	<del>6 metres</del> Refer to ResCode Standard B17	<del>12</del> 9 metres
13.5 to 25 metres	9 metres	18 metres
Over 25 metres	12 metres	24 metres

### Decision Guidelines:

Before deciding on an application, the Responsible Authority must consider:

- The purpose and objectives of the zone.
- Any relevant neighbourhood character objective, policy or statement set out in this scheme.
- The design response.
- Whether a reduced setback would be more appropriate taking into account the prevailing setbacks of existing buildings on nearby lots, equitable development potential and the nature of the building interface.
- The visual impact of the building when viewed from the street and from adjoining properties.

## 2.2. ROOM DEPTH

The current controls which apply to apartments do not provide any standards by which to assess the adequacy of access to daylight having regard to the internal height of the room and the distance from a window. Urbis broadly supports the inclusion of such a standard.

<sup>1</sup> X should be replaced with a minimum lux level, noting the lux levels should vary between rooms.

In our view there are issues with the wording of this standard which require further consideration. Without reconsideration, there is potential that the objective sought will not be achieved through application of the standard.

### 2.2.1. Issues for Consideration

Specifically, we note:

- The standard does not have consideration as to the dimensions of the window to which the room relies on its access to daylight. This is a critical factor in access to daylight. A larger window (floor to ceiling) may dictate a different ratio and the standard should be adjusted to cater for this.
- We are also advised that whether glazing is clear or tinted is a significant factor in access to daylight.
- The standard makes a distinction between south facing habitable room windows and other windows. This is a significant error in so far as there is no difference in access to light to a south facing window compared to a window which has a northern, eastern or western aspect. The difference relates to direct sunlight, which is not a measure which is sought to be addressed as part of this standard.
- The standards do not consider the impact of rooms with more than one orientation and how to consider the influence of secondary windows.

**Urbis recommends** that a quantifiable standard be established (such as minimum lux level, or percentage of the habitable room to achieve the setback to depth ratio) to provide the opportunity for design flexibility to achieve the stated objective.

By way of an example we note the **Figure 1** apartment layout. In this layout, the effect of this standard would be smaller apartments. In our view, a larger apartment would provide for a greater level of internal amenity.

### 2.2.2. Suggested Standard

**Urbis recommends** the following changes be made to the Room depth guideline:

#### Objective:

To ensure that each apartment is able to receive an adequate amount of daylight, ~~including south facing, single aspect apartments.~~

#### Standard:

A habitable room should not exceed:

- ~~A room depth to ceiling height ratio of 2:1 for a south facing, single aspect, or~~
- ~~A room depth to ceiling height ratio of 2.5:1 for all other dwellings~~

The depth of a habitable room with an open plan layout that includes the living, dining and kitchen areas may be increased to 8 metres where the following requirements are met:

- The kitchen area is located furthest from the window
- The ceiling height is at least 2.7 metres (measured from the finished floor level to finished ceiling level)
- ~~The dwelling is not a south facing, single aspect dwelling~~
- The ceiling height of the kitchen, study nook or edge of a living area (not the main living area) can be reduced to accommodate services
- The window should have an a minimum area of X sqm<sup>2</sup>
- It can be demonstrated that a lux level of X is achieved in one living area<sup>3</sup>

#### Decision guidelines:

Before deciding on an application, the responsible authority must consider:

- The design response.

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<sup>2</sup> X should be replaced with a minimum sqm area for a window.

<sup>3</sup> X should be replaced with a minimum lux level.



- Whether there are other windows in the habitable room which have access to daylight.
- Whether the building is an existing building where alterations and additions are proposed.
- The development potential of adjoining land
- Outlook and views

Figure 1 Room Depth Case Study

Room depths exceed the DDS standard due in part to their generous area. The typical apartment size for a 1 bedroom apartment in the subject project is 60m<sup>2</sup>.



Source: Bates Smart

## 2.3. WINDOWS

This standard seeks to ensure that all habitable rooms have direct access to daylight by requiring a window to be directly visible from any point in the room.

We understand that the underlying intention of this standard is to remove the potential for habitable rooms to be approved which do not have direct access to a window on an external wall of a building (i.e. borrowed light). We broadly support this intention.

Notwithstanding this view, we have some concerns in relation to the wording of the standard. Firstly, the ability to see the window does not improve the internal amenity of the room or necessarily provide improved access to daylight. We consider that the other standards within the DDS ensure that the access to daylight is acceptable.

In addition, the proposed wording of the standard has the effect of prohibiting the 'saddleback' apartment layout which has been widely used in apartment buildings throughout Melbourne. It is our view that a well dimensioned saddleback apartment ('snorkel' in the order of 1.2m width and 2.4m depth or ratio of 2:1)

provides an appropriate amenity outcome and often provides an entirely appropriate daylight solution which allows optimal development outcomes on a constrained site. This is an approach which was adopted in the Moreland Guidelines, and in our view is an appropriate approach. We are also aware of a number of planning permits in the central city that have recently been issued by the Minister that include a permit condition *minimum depth-to-width ratio of 2:1, taking into account the outer edge of any roof structure if the window is to a covered balcony.*

Please refer **Appendix B** - Ascui & Co. Case Studies. Architects that gives an example of a well-designed 'snorkel' that provides an appropriate amenity outcome and a poor example where the snorkel is too long and narrow.

The example provided highlights the following.

Commentary from Ascui and Co.:

*We note that a typical alcove runs along the bedhead wall of the bedroom and actually makes the room feel more spacious than a conventional rectangular room, (factually, the room is bigger), as the wall behind the bed extends into the alcove, and it can be used to display artwork, hang things, etc.*

*The alcove is a very useful 'nook' in the bedroom – can accommodate a study desk, make up table, pot plant or other small furniture for additional storage.*

*We often treat the saddleback bedroom alcoves as expressed deep rebates in the building facade, (see page 3) which in low rise projects is usually a very effective means of achieving vertical articulation and modulation of elevations, especially in residential zones where neighbourhood character is important. If the floor plans are mirror imaged, the external façade rebates are wide and allow as much daylight penetration as a window in an external wall, provided there are no wide horizontal overhangs wider than a standard eaves or approx. 500 – 600mm.*

**Urbis recommends** that the standard is amended to delete reference to the requirement for the window to be accessible from 'any point in the room'.

### **2.3.1. Issues for Consideration**

The following matters also require further consideration:

- How would this standard apply to a loft space, mezzanine or studio apartment?
- If a 'saddleback' arrangement is acceptable should the standards provide some quantifiable measurements to assess the acceptability of such an arrangement?
- There is a need to provide some flexibility in the wording of the decision guidelines to allow for good design outcomes.

**Figure 2** shows differently configured apartment layouts that demonstrate how well dimensioned and appointed apartments would not meet the draft standard by would achieve the outcome sought by this requirement.

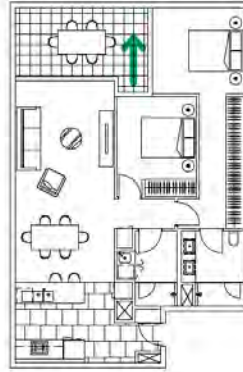
Figure 2 Windows Case Study

Snorkel arrangement, although shallow, would likely not satisfy the DDS standard. It is unclear if this configuration would satisfy the objective.

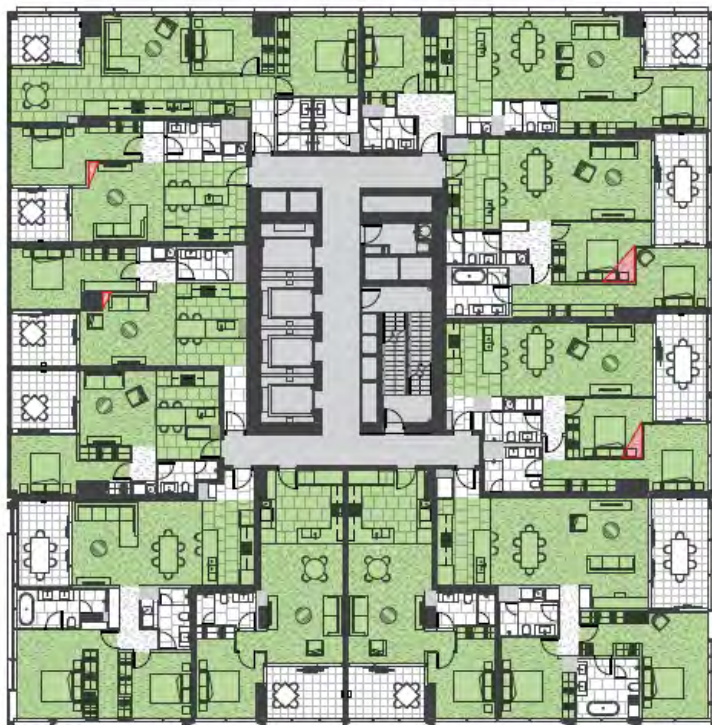
/ Unclear if this would be acceptable under proposed standards, common in NSW to approve minor variations to the standards.



/ Satisfactory arrangement, irregular balcony extension  
/ Potential for living room to be compromised in favour of bedroom



/ Sliding door provides additional views and flexibility



Source: Bates Smart

### 2.3.2. Suggested Standard

Urbis recommends the following changes be made to the Windows guideline:

#### Objective:

To ensure that all habitable rooms have direct access to daylight by requiring a window to be directly visible from any point in the room.

#### Standard:



- A habitable room should have a window in an external wall of the building ~~that is visible from any point in the room.~~
- Any 'saddleback' windows may only be applied in bedrooms or studies (not main living areas) and must have a minimum depth-to-width-ratio of 2:1 taking into account the outer edge of any roof structure if the window is to a covered balcony.

#### Decision Guidelines:

Before deciding on an application, the responsible authority must consider:

- The design response.
- Whether there are other windows in the habitable room which have access to daylight.
- Whether the building is an existing building where alterations and additions are proposed.
- Whether the internal layout of the dwellings provides an appropriate level of amenity for a range of future occupiers.
- The size (area) of the window.

## 2.4. NATURAL VENTILATION

Urbis supports the intention of providing natural ventilation to apartments where practical; however, we are concerned the standard requires natural cross ventilation as opposed to natural ventilation.

We also note that there may be examples where wind conditions may result in doors slamming, or pictures (or plaster in extreme examples) being pulled off walls, where this is not designed appropriately. We note that the BCA currently addresses ventilation and consider that this is a more appropriate compliance phase to consider this issue – when the detailed design and internal features of the building are known. There are other implications to consider such as airlocks and vibrations.

Refer to example from Ascui & Co in **Appendix B**. This diagram is from a medium density development (typically 4-8 storeys) and they note the diagram:

*Illustrates a typical non corner condition is a 'long' building type. We claim that it is not practical to provide 'dual aspect' apartments in sites that are long (ie low proportion of corner dwellings) and that a saddleback layout as illustrated provides appropriate breeze path via the bedrooms and living area.*

There are also situations where mechanical ventilation is appropriate, particularly during winter months in Melbourne. Technology is evolving rapidly in this area as the below commentary highlights.

**Urbis recommends** the decision guidelines allow for this. From an architect's perspective the following is provided from Ascui & Co:

*Mechanical ventilation - In many cold climate parts of the world Heat Recovery Ventilators (HVR) are common, as windows are not opened as it's too cold, and the buildings are constructed air tight for optimal thermal efficiency.*

*HRV units use very low use energy fans to draw fresh air from outside via a heat exchanger and air filter which ducts air into the room at the internal room temperature. The same unit is also used to exhaust air from bathrooms and laundries, and they remove excess condensation from within dwellings.*

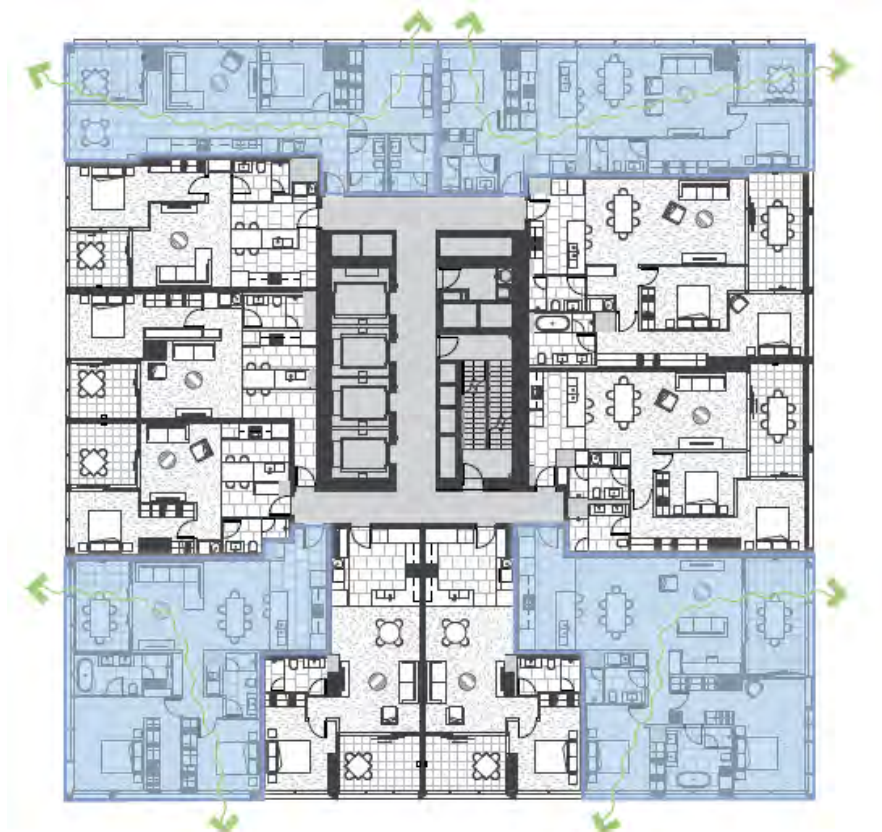
*We have installed these into two projects in Melbourne... and... you can provide excellent internal air quality without necessarily opening windows, especially if a building is located on a busy main road, where there is high noise and air pollution.*

Figure 3 demonstrates that on a typical block it will be very difficult to meet the cross ventilation standard of 60% and requires apartments to have a dual aspect.

We understand that in Sydney vertical slots are often introduced in buildings to address ventilation issues. We note that this may be appropriate in taller buildings but are concerned about the impact on medium density (4-8 storeys) developments.

Figure 3 Natural Ventilation Case Study

Not enough dwellings provide ventilation – 33% vs. 60% requirement from the DDS.



Source: Bates Smart

### 2.4.1. Suggested Standard

Urbis recommends the following changes be made to the Natural Ventilation guideline:

#### Objective:

~~The standard seeks~~ To ensure that an appropriate significant proportion of apartments in a new development have adequate natural ventilation.

#### Standard:

At least 640 per cent of dwellings with a finished floor level less than 35 metres in height should be naturally cross-ventilated. The length of breeze path through the dwelling should be a maximum of 15 metres (as measured between openable windows and doors).

All habitable rooms less than 80 metres in height should be provided with openable windows or doors in an external wall of the building.

#### Decision Guidelines:

Before deciding on an application, the responsible authority must consider:

- An assessment of the Wind conditions
- The surrounding urban context
- Whether mechanical ventilation can provide an appropriate outcome



## 2.5. PRIVATE OPEN SPACE

The standard seeks to ensure that each apartment is provided with an area of private open space that will meet the reasonable recreation and service needs of residents.

We support the objective of providing open space for future residents; however, we note that there are numerous ways to provide useable open space and different residents have different recreational and service requirements.

**Urbis recommends** the standard reflect this flexibility and allow for changing recreational needs of various age groups.

### 2.5.1. Issues for Consideration

The following should be considered in finalising the standards and have informed our recommended objective, changes to the draft standard and decision guidelines below:

- Why is more space (15 square metres) required at podium base level? What is the purpose of this option if balconies that are smaller than this are permissible?
- There should be a link between the amount of communal open space available and a reduced private open space area.
- Does the suggestion that balconies are only suitable up to 35 metres mean that no balconies are required at higher levels?
- There are instances where no balconies or outdoor space is appropriate, for example, near a freeway or main road.
- Open space in front setback areas in a residential context can be landscaped to be made private through design.

### 2.5.2. Winter Gardens

In an urban context, additional balcony depth can unnecessarily constrain the internal living space of the dwelling and the use of bi-fold doors can appropriately integrate the outdoor and indoor areas to the benefit of future residents.

Please refer to **Appendix C** by the Buchan Group where a detailed study of the benefits of bi-folding doors and generous living areas resulted in a higher level of internal amenity than a deeper balcony.

### 2.5.3. Suggested Standard

**Urbis recommends** the following changes be made to the Private Open Space guideline:

#### Objective

~~The standard seeks~~ To ensure that each apartment is provided with has access to an area of private open space that will meet the reasonable recreation and service needs of residents

#### Standard

A dwelling should have private open space consisting of:

- An area of 25 square meters, with a minimum dimension of 3 metres at natural ground floor level and convenient access from a living room; or
- ~~An area of 15 square metres, with a minimum dimension of 3 metres at a podium or other similar base and convenient access from a living room; or~~
- A balcony with a minimum area and dimension specified in Table 1 and convenient access from a living room. This only applies to a dwelling with a finished floor level less than 35 metres ~~height~~ high (measured from natural ground level), or
- A roof-top area of 10 square metres with a minimum dimension of 2 metres and convenient access from a living room
- Part of the internal living area (winter garden) may be included in this calculation where doors (e.g. bi-fold) are able to be fully opened ~~and connected to the external area and provide a direct connection between a living room and outdoor area.~~

If an air conditioning/heating unit is located within the private open space, the area occupied by the unit should not be included in the calculation of the required minimum area.

**Decision Guidelines:**

Before deciding on an application, the responsible authority must consider:

- The urban context
- External conditions such as noise and pollution
- The size of the internal living area
- An assessment of the wind conditions
- The amount of communal open space available to residents within the development
- Proximity to public open space.

### **3. CONCLUSION**

This submission supports the introduction of the Apartment Design Standards into the Victorian Planning Scheme and commends the Victorian Government for its leadership and approach on this matter. In finalising this significant reform Urbis recommends further consideration be given to:

- Implementing the guidelines on an interim basis to allow a trial period and Panel process
- Clear objectives, standards and decision guidelines that allow performance based innovation
- Further refinement of several key guidelines
- The exclusion of guidelines that will be difficult or exhaustive to assess in the town planning phase.

We trust this submission is helpful to the Department in resolving the Design Standards and we welcome the opportunity to meet and discuss our feedback further as required.



**APPENDIX A**

**BRUCE HENDERSON ARCHITECTS CASE  
STUDIES**

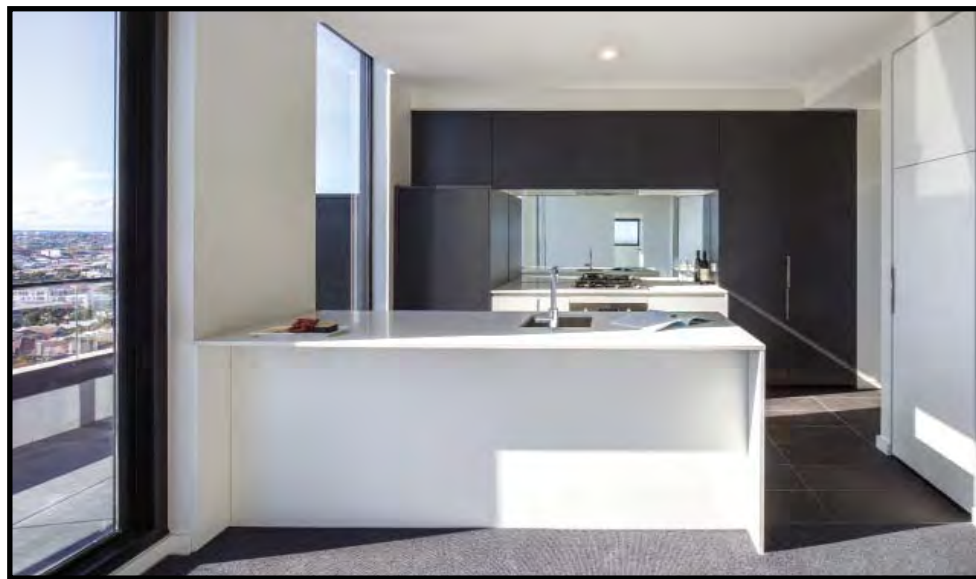




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# DESIGN APARTMENT GUIDELINE ANALYSIS

## PRECEDENT EXAMPLES



Ascent at 101 St Kilda Road is a 14-level residential tower completed in 2016. It is a relatively small parcel of land which resides between other large apartment buildings (the Maxx Apartments at 12 levels and the St.K. development at 24 levels).

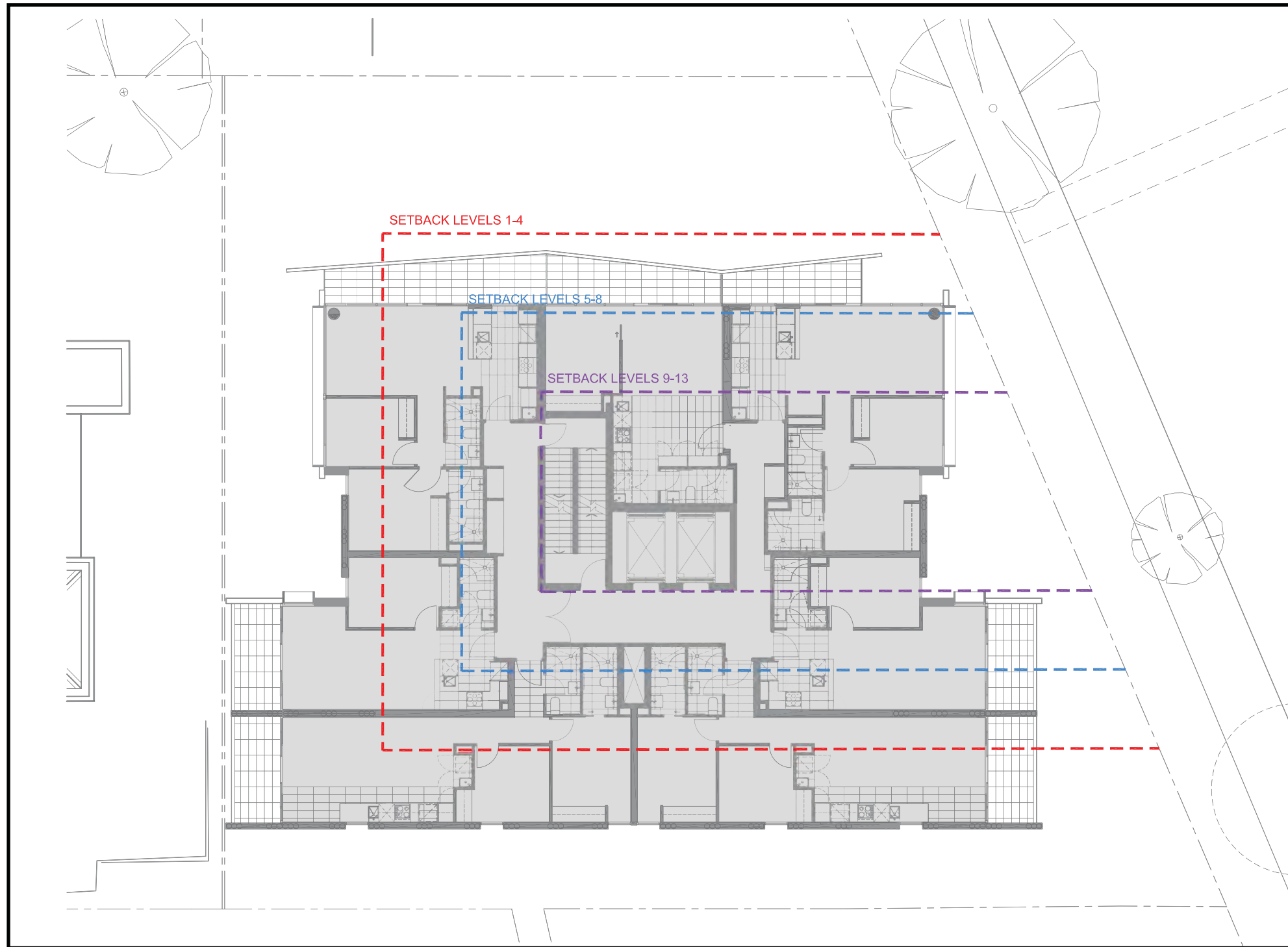
The design went through a relatively lengthy planning process including a detailed assessment by Heritage Victoria as the subject site is directly adjacent to 42 Barkly Street which houses a heritage mansion.

Despite its small footprint, the building features generous setbacks from the boundaries, particularly the northern setback which was consciously increased to allow the creation of an urban laneway which connected through to the heritage building from St Kilda Road. The built form is also highly articulated and visually engaging and sits comfortably within the urban context.

The relatively shallow floor plates with a high proportion of external facade area to internal area ensure that all internal rooms have excellent outlook and access to natural light.

Overall the building resides well within its context and exhibits design outcomes both internally and externally which are consistent with appropriate scaling and building setback / separation.





As a 14-level building form, this proposal would trigger the side and rear setback requirements as per the Draft Apartment Design Guidelines.

Despite the building's considerable setback from the side boundaries and sympathetic massing and scale with the urban context (including approval by the Heritage Victoria in regard to its relationship with the adjacent heritage building, the proposed footprint would need to reduce considerably from ground floor up.

At ground level the current building footprint houses services rooms, carpark access and resident facilities - the reduction in footprint would effectively prevent these elements all being included in the ground level space. Furthermore, the introduction of setbacks at ground level would create a reasonably large apron of space at the perimeter of the site which would have minimal occupation, surveillance or usage.

At the upper floors (above Level 4) the footprint reduces to the point that once the structural core is considered, the remaining floor space is no longer feasible.



As can be seen when applying the Apartment Design Guidelines to the built form as constructed, a design solution which sets comfortably and proportionally within the urban context of St. Kilda Road is reduced to a highly attenuated and stepped tower form which does not result in a good urban design outcome in terms of defining the streetscape character, whether as a single example or, as would be more likely, a series a separated tower forms.





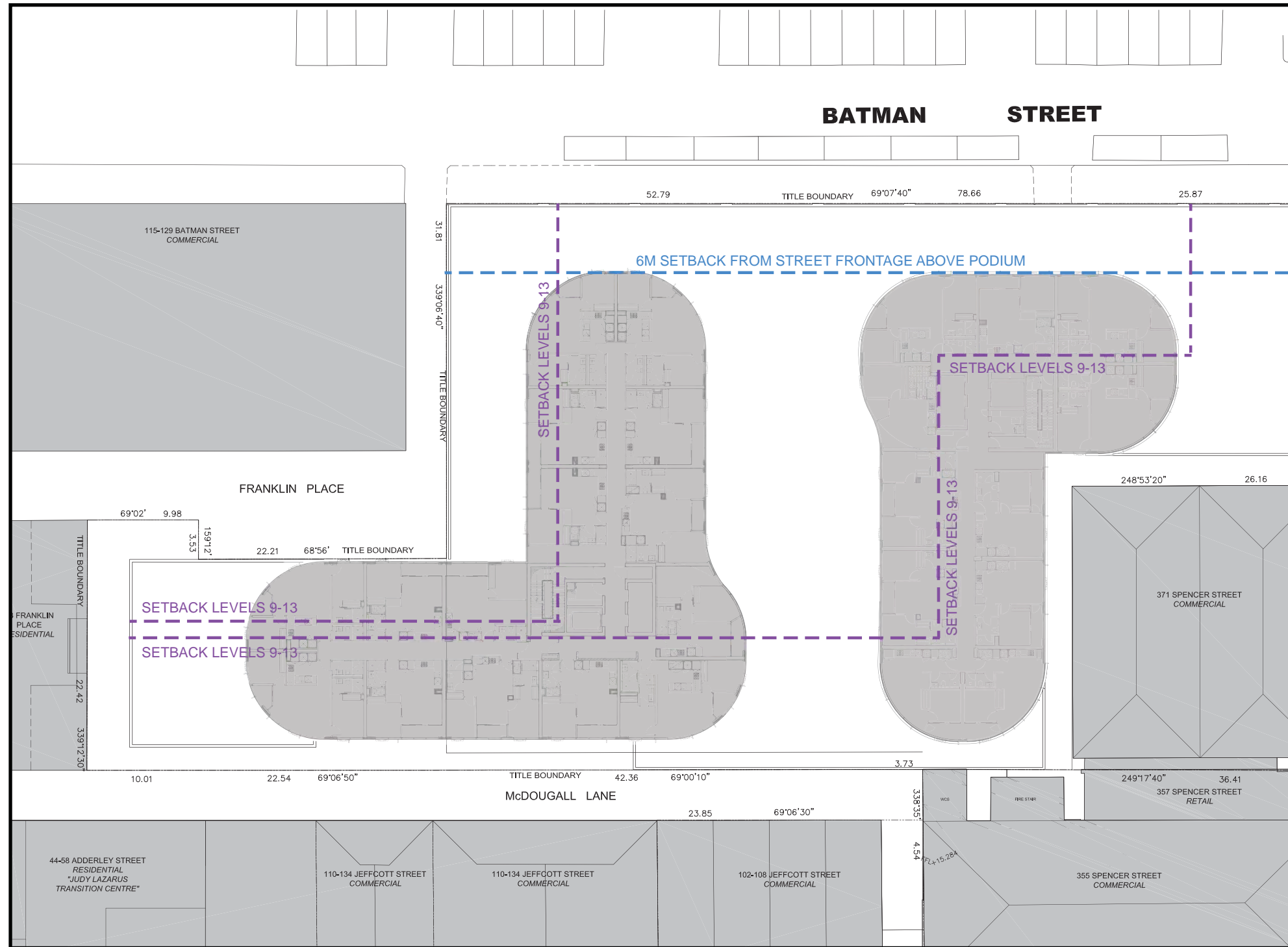
The proposed building at 371 Spencer Street is a 26-level residential development currently under construction documentation. It is a large parcel of land for its urban context which sits within a mixture of other tower forms and smaller warehouse-style buildings.

The scheme accommodates 529 apartments within two separate tower forms whilst maintaining good separation and access to views / daylighting by virtue of the large nature of the site.

The proposed was supported by DTPLI and it was noted in their report that the design achieves an appropriate transition in scale from the Central City to the lower building forms in west Melbourne. DTPLI also remarked on view retention through the site which was created by the scale, siting and orientation of the buildings, as well as noting the clever design, tower setbacks, simplistic materials and use of podium form to complement surrounding buildings.

As a strategic development site this proposal appropriately balances the need for a reasonable scale of development against contextual sensitivity and response.



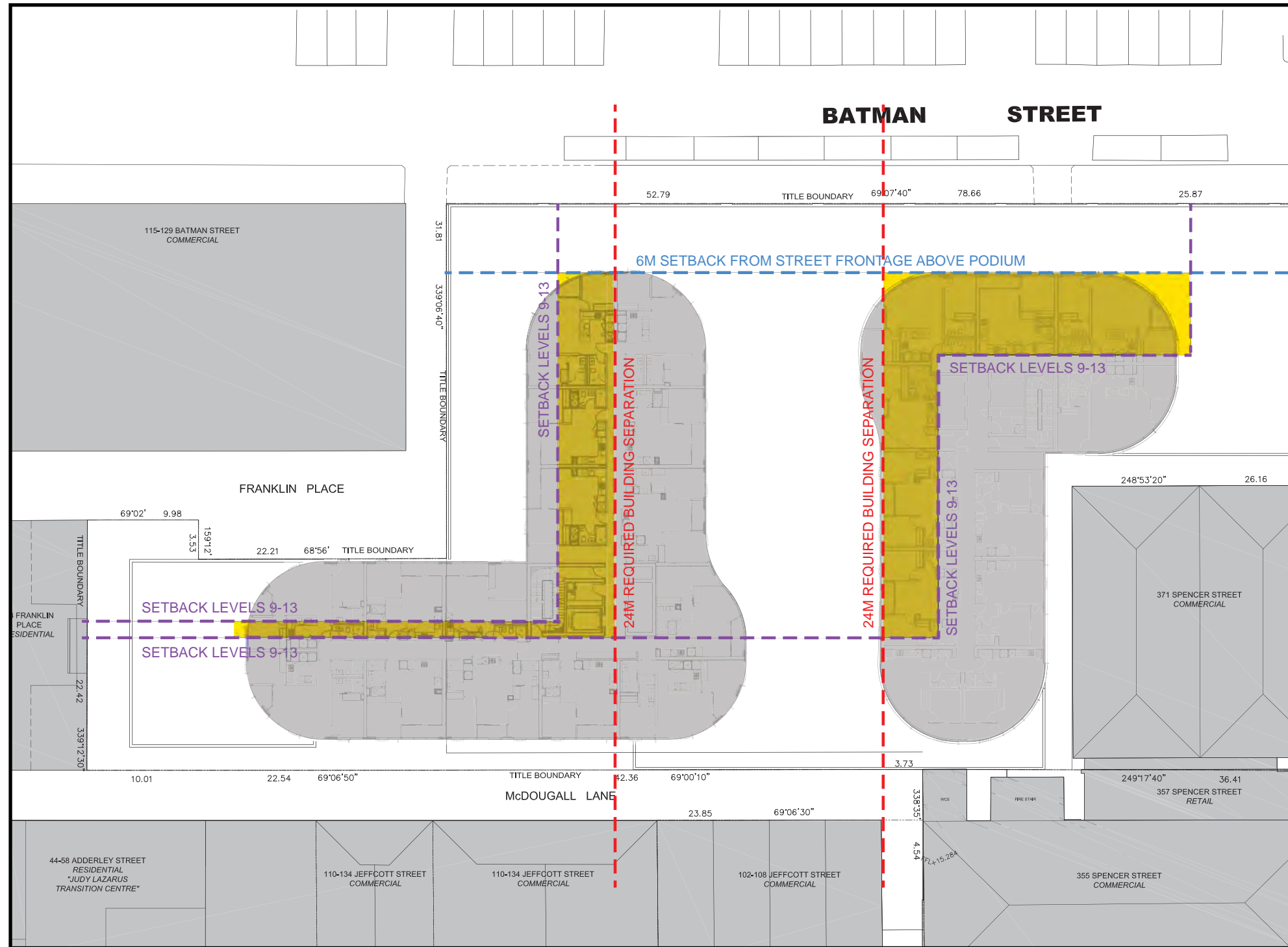


As a 26-level building form, this proposal would trigger the side and rear setback requirements as per the Draft Apartment Design Guidelines.

Despite the tower forms' considerable setback from all boundaries and the lack of potential development sites adjacent which could house a building of this scale, the proposed footprint would need to reduce considerably from podium level up.

Although the draft guidelines are unclear on this point, under the strict interpretation of the guidelines the podium would also have to set back from the rear laneway boundaries by 6m - this does not conform with the existing urban pattern of the area and leaves a non-usable setback at the rear of the building facing onto a service laneway.

At the upper floors (above Level 8) in order to comply with the setbacks the footprint for the proposed two new tower forms would need to either reduce greatly, move significantly closer together, or a combination of both.

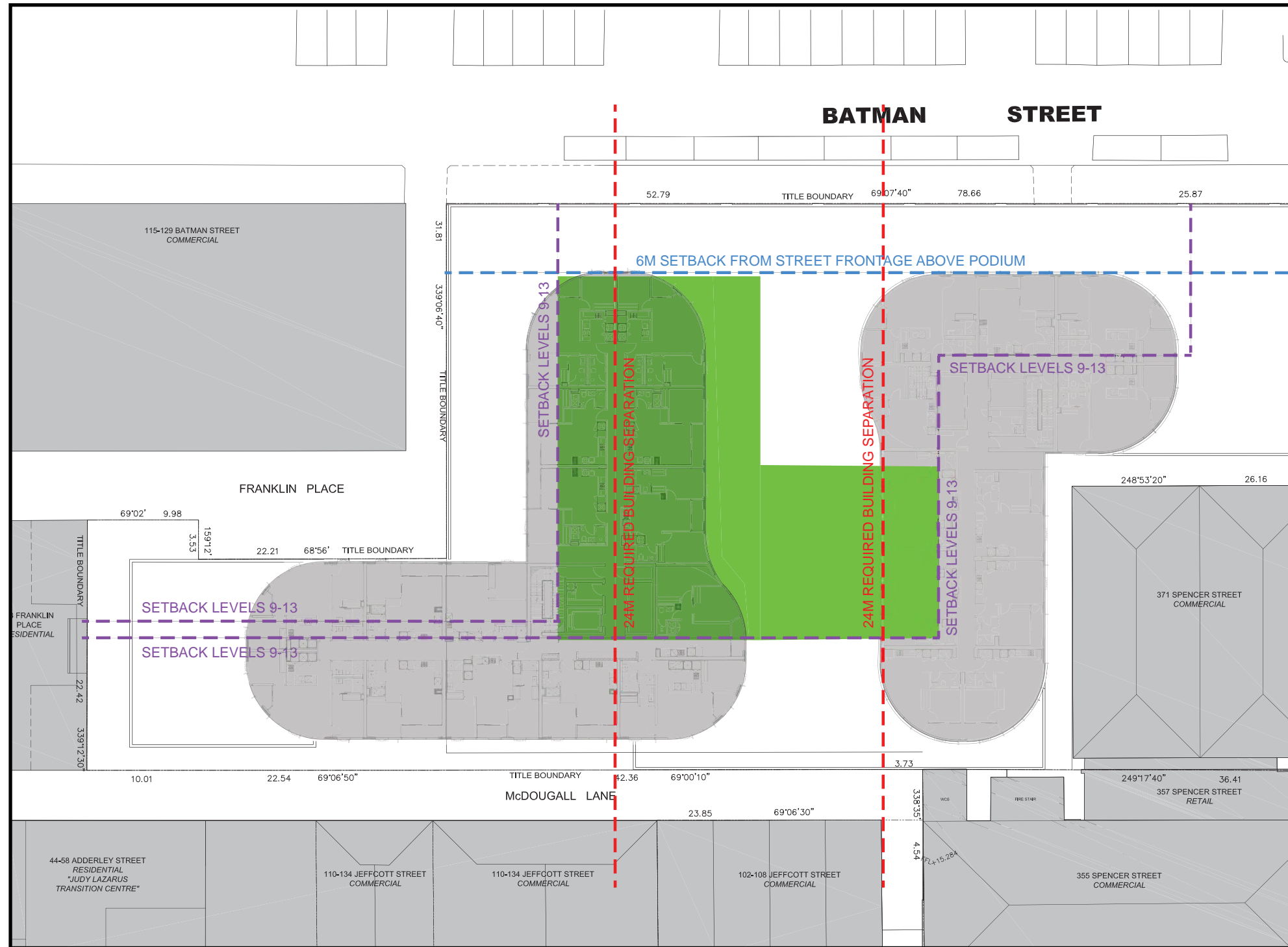


Creating two tower forms in this instance would also trigger the guidelines in regard to separation between buildings on site (in this case a 24 metre separation).

This required setback between two separate building forms, coupled with the side and rear setbacks, reduces the allowable footprint of a double-tower solution to the point where it becomes unworkable as a plan.

A 4000-sq.m. site which under the previous planning guidelines could comfortably support two tower forms now only supports one.





The limitations on apartment depth due to daylighting requirements further limits the opportunities to achieve floorplate area within the defined setback area.

As a result the tower floor plate reduces from a previously allowable 1950 sq.m. to approx. 830 sq.m. The maximum achievable tower floor plate is 20% of the site area which is not a feasible yield outcome for site of this size.



ALLOWED ENVELOPE  
UNDER APARTMENT DESIGN  
GUIDELINES

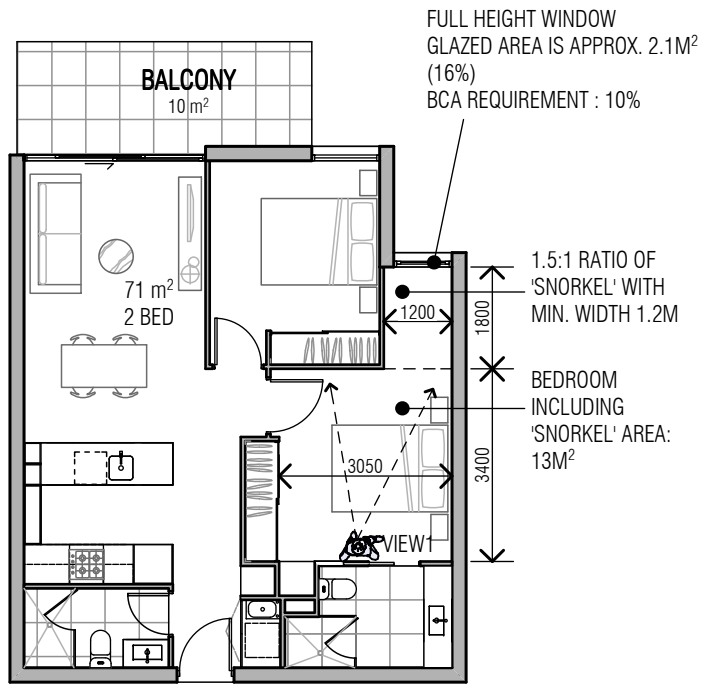
As a single tower form allowable under the guidelines, given the surrounding context it is questionable whether a more optimal urban design solution is achieved through this massing. Although the built form achieves much greater setbacks from its boundaries, the resultant built form is less visually articulated, as well achieving a significantly lesser outcome for the site in terms of built form.



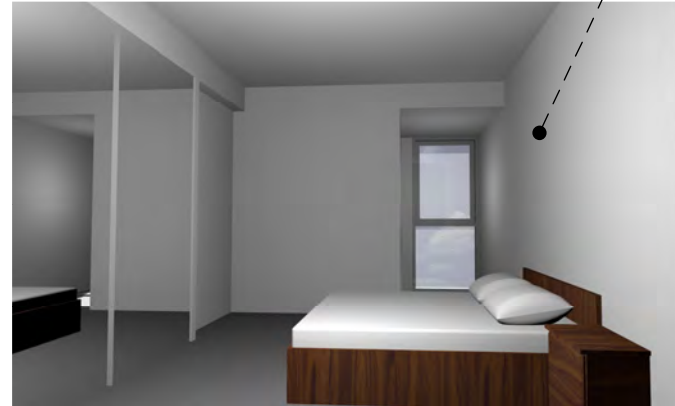
# **APPENDIX B      ASCUI & CO. CASE STUDIES**







GREATER SENSE OF SPACE DUE TO  
EXTENDED WALL BEHIND BED COMPARED  
TO CONVENTIONAL BEDROOM PLAN

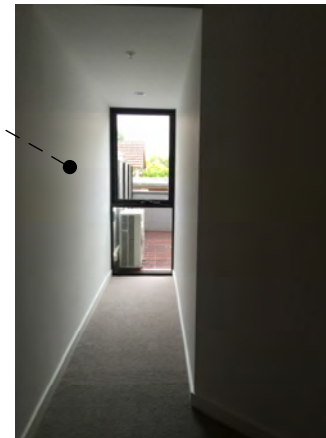
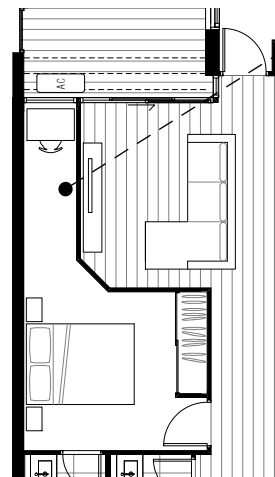


**PERSPECTIVE TAKEN AT VIEW 1 POSITION**

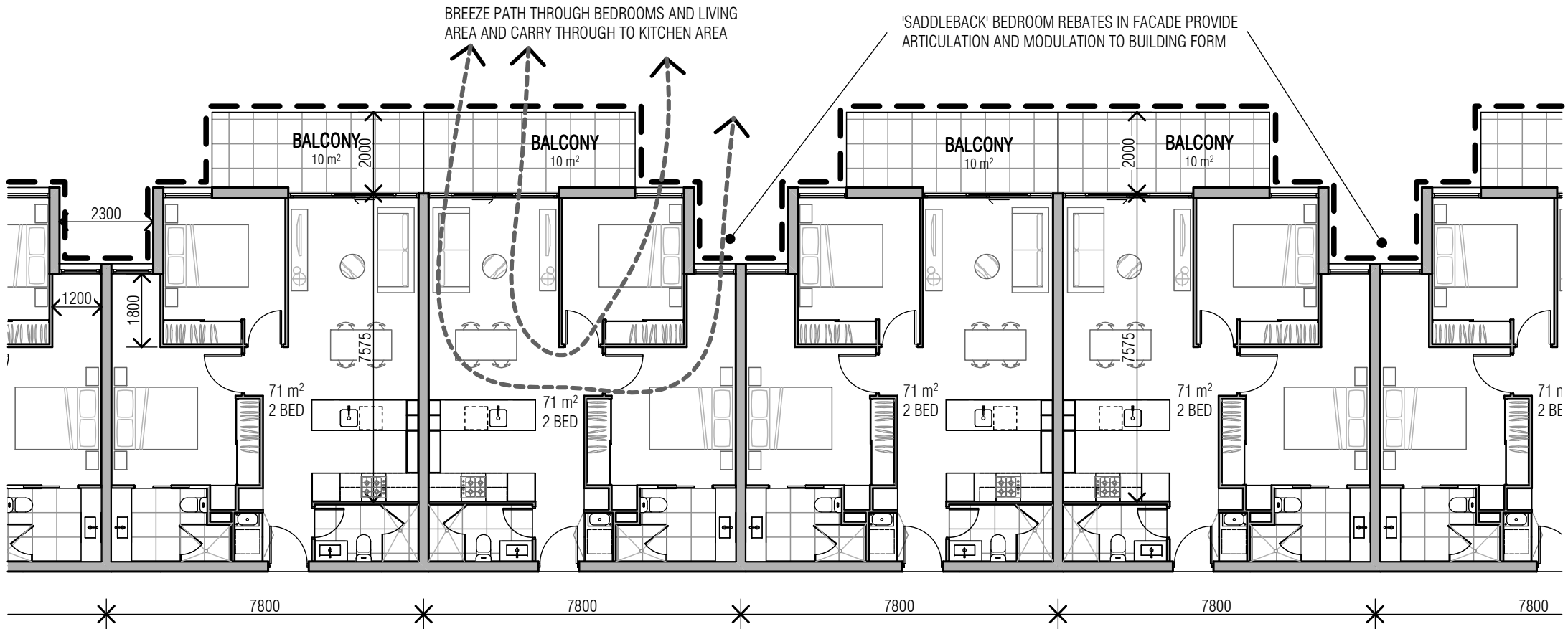
WINDOW IS VISIBLE FROM USABLE AREA OF BEDROOM (BED, ENSUITE)

**FUNCTIONAL TWO BEDROOM 'SADDLEBACK' APARTMENT PLAN**

'SNORKEL' IS TOO LONG AND NARROW  
AND WINDOW TOO DISTANT FROM  
USABLE AREA OF BEDROOM



**POOR EXAMPLE OF 'SADDLEBACK' BEDROOM PLAN**



**TYPICAL NON-CORNER APARTMENT PLAN**

- PROVIDES SUFFICIENT OPPORTUNITY FOR NATURAL CROSS VENTILATION BREEZE PATH

# **APPENDIX C      BUCHAN GROUP**





## 01 Design Amenity

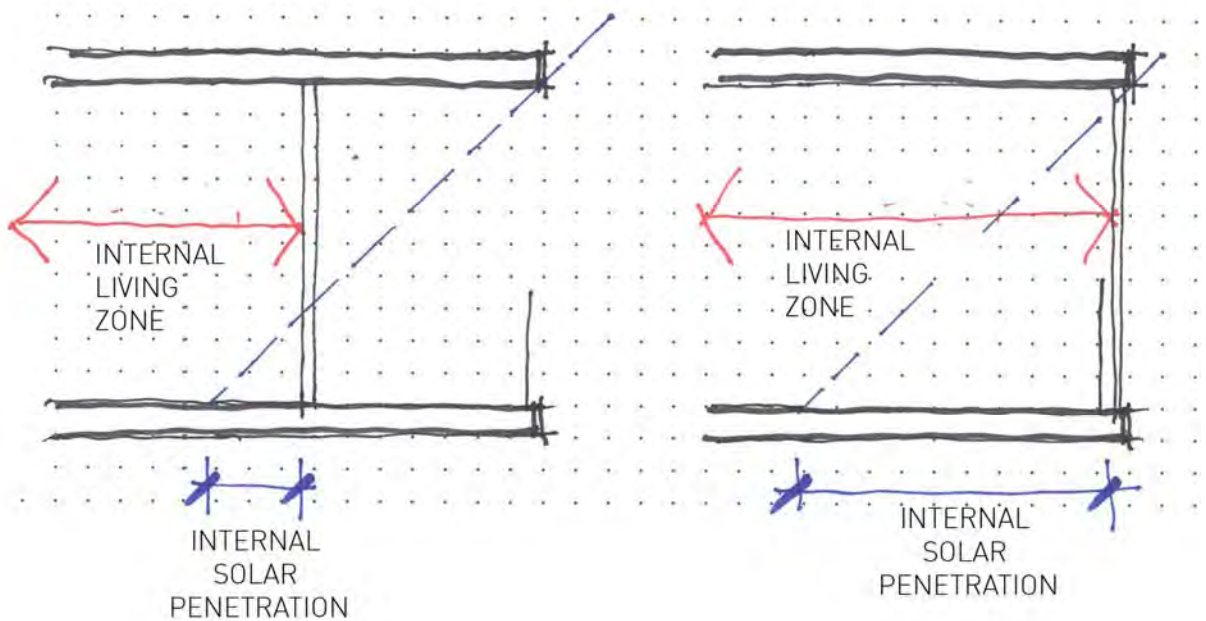
### Improved Internal Amenity

#### a. INCREASE IN USABLE & ACCESSIBLE DAY LIGHT

A typical suburban villa house generally has access to sunlight at all times of the day due to their size and suburban layout, however, apartments usually do not have this full access to daylight. A primary goal of this development is to maximise and improve access to natural daylight for the benefit of the residents.

Traditionally, a balcony would buffer the living space to the outside environment, retracting the primary living space, where residents will most engage with external daylight the most, further into the floor plate. The balcony thus demotes the living room into a darker space. The revised design approach for Orr Apartments brings the primary living space of the apartment to the forefront of the external building line. This provides a much improved interaction with the available daylight.

The diagrams below show how far light will penetrate within a typical living space in both a traditional balcony apartment compared to the proposed design proposal.



Reduced solar penetration with traditional apartment

Increased solar penetration with proposed design

**For a typical north facing apartment the dwelling will experience at all times a greater ingress of light into the living spaces.**

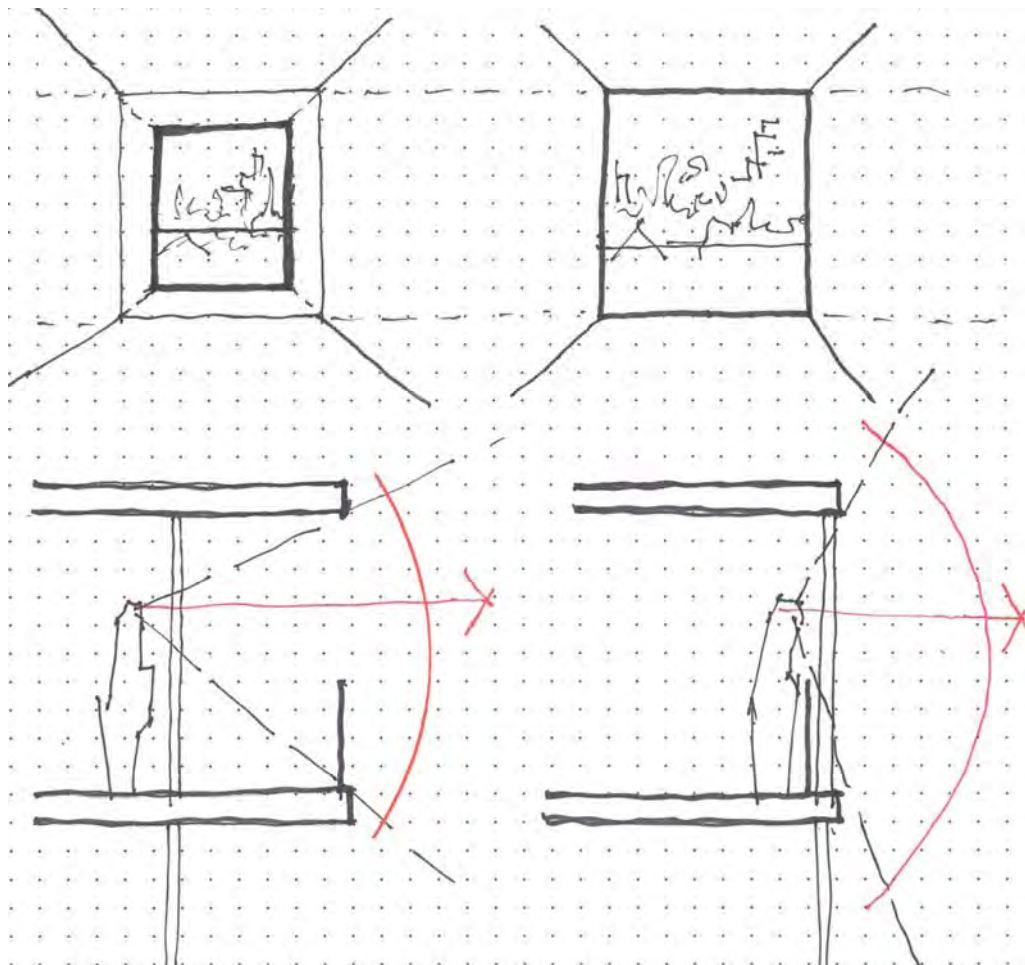
b. INCREASED VENTILATION

The proposed operable facade design for Orr apartments increases ventilation within the apartments. It is often difficult to achieve ample ventilation within apartments. As noted previously, a balcony will always recess the internal space from the building facade. Dividing party walls between apartments will generally extend out to the balcony edge to provide privacy for residents. The balconies wing walls reduce the free flow of air to the enclosing facade of a typical apartment. By promoting the living space to the front of the facade will enable greater capture of a wider angle of natural winds.

**Improved ventilation aids the thermal comfort for occupant's and will have a direct benefit, particularly during Autumn and spring, reducing reliance on air conditioning.**

c. IMPROVED VIEWS

City living in apartments generally demand access to un-interrupted views. When rooms are located closer to the primary building facade line, vistas will open up and become more expansive. A greater angle of view is permitted, providing residents with a greater amenity of increased views and light. Better views and larger windows are not only a market demand, but a necessity. The proposed design increases the views from apartments to their maximum potential.



Reduced views with balcony

Increased view aperture without balcony

d. IMPROVED VISUAL & ACOUSTIC OUTCOMES

Typically, balconies are used to house air conditioning compressors which can become unsightly from street frontages. The proposed design for Orr apartments removes the unsightly air conditioning compressors to the roof top out of sight from the street and surrounding residential dwellings, greatly improving the visual amenity.



**Example of poor visual design outcome not proposed for Orr Apartments**

Relocating compressors to the roof will also improve acoustics for both the residents and the population within the street. Modern compressors are reasonably quiet, however, when a number of compressors are grouped and within viewing distance to the street, the operation of the motors can add to the general baseline suburban noise. Relocating the compressors to the roof removes additional noise from the neighbourhood.

## 02 PRECEDENCE

### 7 Belford St, St Kilda

A similar development to that proposed at 356 Orrong Rd, recently completed, a 4 level boutique development incorporating a variety of apartment types including 1 bedroom apartments with an operable facade overlooking the street below.



### Concept Blue, Melbourne

Concept Blue utilises a balcony edge through the opening up of approx a three metre double sliding door and when in the open position provides a fixed glazed balustrade and integrated handrail providing a full vista, excellent ventilation and ample access to natural daylight.



### A'Beckett, Melbourne

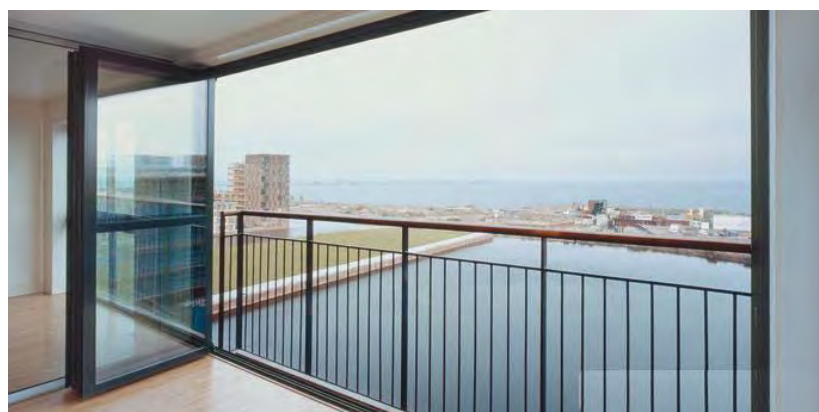
A combination of 1 & 2 bedroom apartments, with south east facade dwellings incorporating an operable facade wall to open the apartment to the external environment.





## International Examples

With similar climactic conditions to Melbourne, below are some examples of operable facade apartment buildings without balconies located in Holland.





## 03 ESD OUTCOMES

### Improved energy efficiency

#### a. STAR RATING

EnergyLab were engaged to undertake a thermal performance assessment report on two design options for Orr Apartments. Both designs utilised the same floor plates and unit design, with the only difference being the inclusion of a balcony which recessed the primary living space, compared with the current design proposal which brings the living space forward to the facade line.

The report shows an increase of 0.5 stars for three proposed typical apartment types analysed when compared to apartments with an external balcony. This outcome highlights benefits to apartment residents through improved comfort and reduced energy bills, the building owner/manager through reduced running and maintenance costs and the greater population through reduced energy use and pollution reduction.

**EnergyLab report indicates that the proposed apartment design will reduce artificial lighting by 8.5% and heating and cooling energy by 11.1%**

#### b. IMPROVED COMFORT

The reduction in energy use is primarily due to increased sunlight into conditioned spaces within the apartment via a reduction of shading caused by the balcony ceilings and walls. This demonstrates, particularly within the Melbourne climate which primarily relies on heating energy throughout the year, that increased sunlight into the internal spaces of the apartment has a significant improved impact on the thermal comfort of residents.

## 04 MARKET FEEDBACK & DRIVERS

### Real Estate Market Advice

Castran Gilbert Estate Agents were approached to provide the design team with feedback regarding the market demands and desires as well as to make comment on the proposed current design approach for Orr Apartments. The advice that was provided (in part attached) indicated that previous developments that did not include external balconies were both received very well by the market exemplified by their selling potential as well as by residents who don't utilise an external balcony space.

The current market seeks apartments of varying design and living opportunities. The target market for Orr apartments are young professionals seeking an inner city lifestyle who may not be able to afford an apartment in the CBD or inner suburbs but who still interact with the inner city lifestyle.

Societal trends also indicate that when residents seek engagement with the outside environment, it is usually undertaken in cafe's, bars and communal public spaces. It is common to see most balconies either empty, or littered with unused furniture and/or pot plants.

### **Orr apartments seeks to provide options for different buyers, by providing variance in dwelling type.**

Some apartments feature balconies, particularly east facing apartments where residents will utilise them to capture the morning sun as well as apartments that maximise the living space where balconies will not be used or taken advantage of by residents.

## 05 ATTACHMENTS

- a. EnergyLAB Report
- b. Casrtran Gilbert Report

To whom it may concern,

## **RE: 356 Orrong Road, Caulfield - Energy Efficiency Use by Design**

Our aim was to establish which suggested design alternative, Winter Garden or Balcony would provide a measured increase in energy efficiency.

Using the FirstRate5 simulation software we have assessed 3 random units from each proposed design to establish a quantified difference in energy use.

Our sample data used units 2.03, 2.07 and 2.14 from Level 2 of each design. The results are as follows:

### **Winter Garden Design**

Unit 2.03	6.9 Stars
Unit 2.07	6.9 Stars
Unit 2.14	7.2 Stars

### **Balcony Design**

Unit 2.03	6.5 Stars
Unit 2.07	6.4 Stars
Unit 2.14	6.7 Stars

The results indicate the Winter Garden Design has an approximate 0.5 Star increase over the Balcony Design from our test data.

In realistic terms the energy saved by adopting the Winter Garden design is estimated as;

545MJ of Gas will be saved per unit per year  
137kWh of Electricity saved per unit per year

As the design change affects 48 individual units this equates to a total building saving of:

26160MJ p/a on gas consumption and;  
6576kWh p/a of electricity

These savings will result in the following improved efficiencies:

8.5% reduction in energy used for lighting per unit  
11.1% reduction in required energy loads per unit

By reducing each unit's reliance on mechanical heating and cooling the occupants will enjoy improved air quality and a reduction in temperature fluctuations.

Improvements to natural lighting, ventilation and temperature in more sustainable homes is known to positively affect common physical ailments such as loss of concentration, headaches, eyestrain and lethargy.

In Victoria's predominately colder climate zone removing eaves over the balconies will embrace the winter sun therefore each occupant will enjoy a more comfortable living environment all year round.

Based on the above results and observations it can be demonstrated from an energy efficiency and holistic perspective the Winter Garden design is the preferred construction option.

Please contact our office on 1300 033 343 should you have any further enquiries.

Yours Sincerely,

Brian Haines  
Director – EnergyLab

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Tuesday, 17 June 2014

Carolyn A. Febey  
Group Manager,  
Lustig & Moar Group of Companies,  
Level 3,  
115-119 Collins Street,  
Melbourne, Vic., 3000.

# Castran Gilbert

Dear Carolyn,

## RE 356 ORRONG RD CAULFIELD NORTH

Thank you for the opportunity to comment on the design principles of the proposed redevelopment of the above mentioned property.

Castran Gilbert has been at the forefront of OFF THE PLAN project marketing across Melbourne for the past 20 years in which we have sold in excess of 25,000 apartments.

We are often called upon by our developers' architects to provide relevant market feedback on what potential buyers want in new developments.

Recently there have been a number of exceptional developments that have been offered that have featured what we describe as winter gardens, that have sold extremely well.

The concept creates an opportunity for a more exciting façade and allows for the external wall to open up allowing for both fresh air and natural light to flood into the apartment.

Examples of this are;

- The Avenue a landmark development on the corner of Alexandra Ave and Chapel St South Yarra
- Concept Blue, 68 LaTrobe Street, Melbourne
- Lucient, 430 St. Kilda Road, Melbourne

Winter gardens allow for an extended living area that opens directly to the outside rather than a transition zone being a balcony. They have proved very popular in Melbourne where for the vast majority of the year the weather is inclement and the balcony is effectively decorative only and cannot be used.

The concept that the architects have come up with for the site in my belief is absolutely first class this is a landmark site for Caulfield and deserves an exciting development one which the architects have prepared and which will be admired and copied for years to come.

Kind Regards



Tim Brown  
Director







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