

**Submission
No 46**

INQUIRY INTO APARTMENT DESIGN STANDARDS

Organisation: Blackburn Village Residents Group

Date Received: 31 October 2021



BLACKBURN VILLAGE RESIDENTS GROUP INC.

Protecting the distinctive features of Blackburn since 1987

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October 31, 2021

The Committee Manager
Legislative Assembly Environment and Planning Committee
Parliament House
Spring Street
EAST MELBOURNE VIC 3002

Email: apartmentdesign@parliament.vic.gov.au

Re: Inquiry into Apartment Design Standards.

The Blackburn Village Residents' Group Inc. (BVRG) wishes to lodge a submission to the above Inquiry.

Terms of Reference

Consider better apartment design standards, in a global context including, but not limited to, an examination of the:

- (a) current apartment living standards in Victoria.
- (b) improvements that can be made to the liveability in apartments and apartment building developments, including communal areas; and
- (c) initiatives undertaken by other states or nations that have improved apartment design standards.

Thank you for the opportunity to comment on apartment standards. Our submission picks aspects of the current apartment standards under the planning scheme and identifies areas for improvement. Within the text and at the end of our submission are some general suggestions.

Boundary Setbacks (Standard D14)

Front setbacks must be provided along street frontage, sufficient to allow landscaping and in particular canopy trees that complement existing street setbacks and street amenity. Far too often Apartments are built boundary with little or no opportunity for meaningful landscaping. Canopy trees must be provided with adequate space for them to reach maturity and provide shade for amenity and to reduce the heat island effect. Wider setbacks reduce noise, the visual canyoning

effect, shadowing and allow for meaningful landscaping on the property and through street tree planting.

Adequate side setbacks must be required to allow visual permeability and air movement.

Rear setbacks must be provided for private landscaped open space for building occupants.

Setbacks to laneways, side streets and public open space need to be generous to provide landscaping for the occupants and public realm amenity.

Adequate open space at ground level is the trade-off for more storeys in height. Adequate open space at street level does not prevent a development contributing to the preferred future development outcomes identified in a planning scheme. You can have both with creative design.

WHITEHORSE PLANNING SCHEME

21/12/2017
C192

SCHEDULE 4 TO THE DESIGN AND DEVELOPMENT OVERLAY

Shown on the planning scheme map as **DDO4**.

NEIGHBOURHOOD ACTIVITY CENTRES

WHITEHORSE PLANNING SCHEME

Table to Schedule 4

N'hood Activity Centre Category	Preferred maximum height	Preferred front (street) setbacks	Preferred rear setbacks	Preferred side setbacks	Built form outcome
1A	11m (3 storeys) 7.5m (2 storeys) on a boundary adjoining a residential zone.	0m Set back upper levels over 7.5m a minimum of 3m from the front boundary.	Where the rear of the lot abuts a residential property or street, set back buildings a minimum of 3 metres from the rear boundary. Where the rear of the lot abuts a laneway, setback buildings a minimum of 1 metre from the rear boundary. Set back upper levels over 7.5 metres a minimum of 5 metres from the rear ground level building footprint.	Where the side of the lot abuts a residential property, buildings over 7.5 metres should be set back 1 metre from that boundary.	Development respects the low scale built form character of the surrounding residential areas.

Figure 1. Example from an activity centre type 1A where street level, rear and side setback is 1m and no front setback.

WHITEHORSE PLANNING SCHEME

58.04

13/04/2017
VC136

58.04-1

13/04/2017
VC136

AMENITY IMPACTS

Building setback objectives

To ensure the setback of a building from a boundary appropriately responds to the existing urban context or contributes to the preferred future development of the area.

To allow adequate daylight into new dwellings.

To limit views into habitable room windows and private open space of new and existing dwellings.

To provide a reasonable outlook from new dwellings.

To ensure the building setbacks provide appropriate internal amenity to meet the needs of residents.

Figure 2. Setbacks are guided by schedules. If the schedule minimises setbacks the Building Setback Objectives, no matter how noble will not be achieved.

Noise Impacts objectives (Standard D16)

While the standards address fairly well internal noise impacts, external noise is problematic.

Apartment buildings located in Residential Growth Zones (RGZ's) are often along major transit corridors or concentrated in activity centres. Historic and recent design standards have allowed boundary to boundary developments of square flat surface form. When located along busy roads or streets, tall towers in close proximity are subject to maximum street noise from raised voices, background traffic, intermittent high dB burst from noisy cars, motor bikes, trucks or emergency service vehicle sirens. The problem is that sound has nowhere to go but be reflected from building to building along the urban canyon.

The resulting noise means that residents close street facing doors and windows, which may be double glazed to meet noise requirements, to be able to hear the TV or allow a peaceful sleep. By closing doors and windows to keep out noise ventilation is reduced or cut off altogether. In summer this necessitates running the cooling system instead of opening up to the cooler fresh outside air, adding to greenhouse gasses and electricity bills.

Landscaped setbacks able to accommodate dense planting including canopy trees that help to deflect and absorb noise, articulated building frontages that include generous balconies, gaps between buildings and stepped back upper levels if mandated would improve the amenity for apartment residents and at street level. More sunlight, less noise and greater permeability would allow for good airflow in and around buildings. The articulated stepped profile from the street would also avoid sun glare issues from flat fronted buildings with large amounts of glass and reduce wind turbulence effects from large flat surfaces.

Solar access objectives (Standard D8)

Apartment buildings must be designed to an energy efficiency star rating to the highest standard. Apartments must not impinge on an adjoining site's ability to use the sun to power PV systems or solar hot water and should not unduly shade private open spaces.

Apartment construction must include:

- Double glazing
- PV installation the size of which enable renewable energy to provide at least up to 50% of the anticipated power used per apartment.
- Windows that have direct solar access particularly in the cooler months and for north, east and west facing windows. (See discussion below)
- The ability to externally shade the glass in the summer months to reduce internal heating without significant loss of natural light. (See discussion below)
- Energy efficient appliances and lighting
- Provision of PV charging points at resident car parking to at least 50% of car spaces provided. It is estimated that by 2030 50% of Australian cars will be electric

The need for north facing windows to maintain solar access to reduce heating costs in the winter is important. Summer temperatures are getting hotter and with climate change the trend will continue. Most energy in apartments is required for cooling. Therefore, the design standards need to be reviewed so that heat gain during the hotter months can be managed/reduced. This will result in less energy required to cool apartments as well as reducing power bills to occupants.

Discussion

The Planning scheme Standard B23 specifies design for energy efficiency. The current design however doesn't accommodate the 2 seasons (summer/winter) instead is optimised for the cooler months. The resulting summer hot box effect needs to be addressed. A document Prepared for the Australian Building Codes Board dated October 2018 in titled '**Inclusion of Heating and Cooling Energy Load Limits in NatHERS assessments Final Regulation Impact Statement for Decision**' provides some guidance -

2.1 The Overview - Page 15 ¹..... However, industry feedback to policy makers on the energy efficiency provisions of the NCC has included a concern that the current annual average thermal load requirement can lead to designs that are over-optimised for one season, and under-optimised for the opposite season. This can lead to poor thermal comfort (in the opposite season), and hence excessive space conditioning energy consumption.

The National Energy Efficient Building Project found, for instance, considerable stakeholder concern with what is known as "hot box syndrome".⁷ This refers to homes that perform well in winter conditions (minimising energy demand for heating) but poorly in summer (with concerns about over-heating). Such homes may require large quantities of cooling energy to bring comfort to acceptable levels.'

1. Inclusion of Heating and Cooling Energy Load Limits in NatHERS assessments Final Regulation Impact Statement for Decision - Prepared for the Australian Building Codes Board, October 2018

3.2.1 Implementation – Page 23 ²*‘That the Code would be amended such that clause J0.2(a) for Class 2 SOUs and Class 4 parts of a building would require to collectively achieve an average energy rating of not less than 6 stars, including the separate heating and cooling load limits, and individually achieve an energy rating of not less than 5 stars, including the separate heating and cooling load limits.’*

Planning Scheme Standard B35 – Suggested change in Red

Buildings should be:

- Oriented to make appropriate use of solar energy.
- Sited and designed to ensure that the energy efficiency of existing dwellings on adjoining lots is not unreasonably reduced.
- Sited and designed to ensure that the performance of existing rooftop solar energy systems on dwellings on adjoining lots in a General Residential Zone, Neighbourhood Residential Zone or Township Zone are not unreasonably reduced. The existing rooftop solar energy system must exist at the date the application is lodged.
- Living areas and private open space should be located on the north side of the development, if practicable.
- Developments should be designed so that solar access to north-facing windows is optimised **for providing warmth in cooler months and reduced heat load in the hotter months.**
- Dwellings located in a climate zone identified Table B4 in should not exceed the maximum NatHERS annual cooling load specified in the following table.

Communal open space objectives (Standard D7)

Currently developments with 40 or more dwellings provide a minimum area of communal open space of 2.5 square metres per dwelling or 250 square metres, whichever is lesser.

We suggest that all apartment buildings must provide communal open space. A minimum standard should apply something like:

10 apartments or less – 50sqm

11-20 apartments – 100sqm

21-30 apartments – 150sqm

31-40 apartments – 200sqm

>40 apartment – 250sqm minimum or 2.5 square metres per dwelling

² *Inclusion of Heating and Cooling Energy Load Limits in NatHERS assessments Final Regulation Impact Statement for Decision - Prepared for the Australian Building Codes Board, October 2018*

Natural ventilation objectives (Standard D27)

- To encourage natural ventilation of dwellings.
- To allow occupants to effectively manage natural ventilation of dwellings.

With the COVID 19 pandemic it is clear that good ventilation is essential. The current standard leaves 60% of apartments without effective cross ventilation.

All apartments need effective cross ventilation to a prescribed standard. As discussed above street noise in poorly designed buildings poses an unfortunate trade-off for occupants, fresh air and street noise or quiet but a poorly ventilated apartment. The objective of this standard for occupants to effectively manage natural ventilation is limited if all factors are not considered in the design.

Ventilation must also be improved in the public spaces such as corridors and lifts. This can be managed mechanically with dampers that open to ambient air. As warm air rises in hi rise towers, in the heat of summer, there is a lot of warmth moving upward through the public spaces. This warm air needs to be vented to the outside and cooler ambient fresh air needs to replace it from the lower levels.

Landscaping objectives (Standard D10)

The proportion of site area at ground level set aside for landscaping is generally too low. Developers often seek additional height for all sorts of reasons but the trade off should be more space for landscaping at street level. This provides open space for residents and better street level amenity.

The landscape layout and design of the current standard is 'To encourage development that respects the landscape character of the area.' The problem with this is that the Urban context objectives (58.02) are 'To ensure that the design responds to the existing urban context or contributes to the preferred future development of the area'. The urban context objectives in practice are given more weight and landscaping objectives are secondary.

If for example a development was proposal within a RGZ where that RGZ adjoins a Neighbourhood Residential Zone (NRZ) with a Significant Landscape Overlay the landscaping opportunities for the development are inevitably based on the preferred future development character of the RGZ.

It is preferable that good design allows for landscaping that retains and compliments the former character and that of the adjoining zone while allowing a higher density development proposal. A high standard for street level amenity doesn't preclude a building density or height outcome that are encouraged in the future preferred development objectives of the RGZ.

To address the urban heat island effect (UHI) and poor amenity, more ambitious requirements are needed for canopy tree planting. Smaller canopy trees in 30sqm of deep soil will provide limited

landscape and shading amenity. Providing adequate space for larger trees will ensure both UHI and amenity are addressed.

Deep soil planting provisions should be at least 50sqm per site no matter the size and then scaled up, as is done in the following table. Every site no matter how small should be required to make a meaningful landscaping contribution, for the amenity of residents as well as the street.

52.20-7.4 Deep soil areas and canopy trees

The landscape layout and design should:

- Be responsive to the site context.
- Consider landscaping opportunities to reduce heat absorption such as green walls, green roofs and roof top gardens and improve on-site storm water infiltration.
- Maximise deep soil areas for planting of canopy trees.
- Integrate planting and water management.

Developments should provide the deep soil areas and canopy trees specified in the Table 5.

If the development cannot provide the deep soil areas and canopy trees specified in Table 5 an equivalent canopy cover should be achieved by providing either:

WHITEHORSE PLANNING SCHEME

- Canopy trees or climbers (over a pergola) with planter pits sized appropriately for the mature tree soil volume requirements.
- Vegetated planters, green roofs or green facades.

Table 5 Deep soil areas and canopy trees

Site area	Deep soil areas	Minimum tree provision
750 - 1000 square metres	5% of site area (minimum dimension of 3 metres)	1 small tree (6-8 metres) per 30 square metres of deep soil
1001 - 1500 square metres	7.5% of site area (minimum dimension of 3 metres)	1 medium tree (8-12 metres) per 50 square metres of deep soil

or

Accessibility objective (Standard D17)

To ensure the design of dwellings meet the needs of people with limited mobility.

Standard D17 prescribes that at least 50 per cent of dwellings should have doors and bathrooms wide enough for wheelchair access and accessibility adaptable bathrooms, hobless showers and a toilet located in a corner. These accessibility measures would benefit all occupants.

This standard needs to apply to all apartments. The reason is that design for accessibility is good design for all. Apartments are no longer only a stepping-stone to home ownership. Buyers of

apartments are now buying for the long term. They need to be places a family can live, raise children and age in.

A typical scenario: You are living in an apartment that you own, and you or a family member becomes disabled or is, because of age, required to use a wheelchair or you have a visitor, a friend or family member who is in a wheelchair, but is unable to negotiate the bathroom. Because your apartment was one of the 50% not able to accommodate accessibility modifications. If wheelchair access becomes necessary, you have to sell and bear the cost of relocating. A relatively straight forward design response, at minimum additional cost, at construction could avoid this inefficient cost.

Good design standards should apply to all apartments allowing the maximum future flexibility.

Private open space objective (Standard D9)

To provide adequate private open space for the reasonable recreation and service needs of residents.

Balconies typically provide private open space. External air conditioning units should not be located on a balcony but must be located on the roof or in a basement area. Airconditioning split system heat pumps remove heat from within the apartment to outside where the A/C outside unit is located.

If the AC outdoor unit is located on the balcony, the utility of the balcony is limited. In hot weather heat from within the apartment is released to the balcony. Instead of enjoying the cool ambient air, the noise of the fan and the heat from the A/C unit prevent the quiet and cool enjoyment and prevent reasonable recreation and service needs expected from a balcony. The space occupied by an outdoor A/C unit also reduces the utility of the balcony, which for a 1- or 2-bedroom unit is already small.

The minimum dimension for any balcony should be no less than 2m with area with a covered area no less than 8sqm. This provides space for a small table and chairs. The current standard for studio apartment has minimum dimensions of 1.8m and 8sqm area.

Some general comments.

Laundries

Some modern apartment buildings in Europe have a communal laundry located at basement level similar to a laundromat, which provides efficiencies in power use. It allows apartments to use the space normally allocated to washer and dryer to be utilised for other purposes. But if this option was to be taken the space released must remain in the apartments and not provide an opportunity to decrease the size of all apartments, making them even smaller. The space could also be designed to be used as laundry if required.

Public Open Space and COVID 19

Public open space that is attractive, cool and landscaped has been highlighted as a very important but limited offering in apartment buildings in Australia in recent times. COVID 19 means more people are working from home. Public open space such as parks and reserves are not always located near activity centres or along transport corridors. Developers must be required to make a meaningful contribution to open space within their developments for occupants. Natural space at ground level is important and rooftop garden BBQ areas are also desirable spaces.

Bicycle parking/storage.

With the reduction of carparking close to transport nodes there needs to be an increase in the infrastructure for bicycles in all apartment developments. The ratio of bicycle parking and storage should be standard across all apartment types. Currently **Car and bicycle parking policy guidelines for student accommodation** provides at least one resident bicycle parking space per three beds. For other apartments above 4 storeys only 1 space per 5 units is provided. The same ratio should apply to all apartment buildings, or the ratio should be standard based on bedroom numbers.

Affordable Housing

The promise of providing a greater mix of housing types was that housing needs would be met and would be more affordable. The planning scheme seeks to increase the supply of well-located affordable housing through strategies that provide a range of dwelling types, sizes and tenures, including affordable housing, in larger developments.

However, developers are reluctant to honour the intent of this aspect of the planning scheme.

In a recent planning application for a 51-level apartment tower with 366 apartments at Box Hill, the applicant acknowledged the importance of affordable housing but as there is no requirement to provide it, elected not to. The applicant's view that the provision of public benefit works contributions (most required under the planning scheme) negates the need for affordable housing.

Some level of regulated contribution by developers to affordable housing is required. Be it a proportion of affordable housing units in the proposed development, a shared role between the developer and the state Housing Authority or a financial contribution similar to that required for public open space contributions, to fund the construction of social housing.

Building defects.

There is an urgent need for a scheme that developers must sign up to, such as an insurance scheme or a significant bond held by a trustee, which can meet the 'make good' expenses of new owners when building defects are discovered. A method of ensuring a quick remediation is also needed (dedicated tribunal or through a body like VCAT) so that the builder cannot avoid action through indifference or through the courts.

There have been numerous instances in the press over recent years from combustible cladding, structural cracking, leaking window seals etc. where the developer's shell company has no funds or has been wound up and there is no recourse for compensation.

As well as the above, an enforceable compliance regime with strong monitoring and deterrence mechanisms is required. This is necessary to enforce existing and future standards relating to design, building materials, building code and quality.

Housing for families

Much of the apartment offering in recent years has been 1 and 2 bedrooms. Due to housing affordability the cost of dwelling houses is out of reach for many or don't meet the needs of others. More 3-bedroom apartments should be provided to increase the diversity of apartment styles. Couples with children, retirees downsizing, or mixed generation housing want more than a 2-bedroom apartment. The number of 3-bedroom apartments could be increased by regulating a proportion of apartment types required in developments.

Storage

More generous provision than in the standard, is needed for storage, either within apartments or in lockable storage areas in basement car parks. For apartments to provide longer term, aging in place or family friendly accommodation, storage space is a critical factor. Families very quickly outgrow a small apartment.

David Morrison

Secretary BVRG