

Creating better neighbourhoods

The liveability and housing supply case for FAR controls



Practice Note

Urban Design Forum Australia



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Thank you

Thank you to the Members and Supporters of the Urban Design Forum Australia who have funded this practice note.

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Urban Design Forum is a non-profit organisation that supports public interest outcomes in our cities. We believe in the role that cities can play in solving the major challenges of our time.

The Forum has three roles: creating a supportive network of urban designers and allied professionals, sharing knowledge on best practice urbanism, and researching and advocating for better urban education, systems and outcomes.

Author

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Author's acknowledgments

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This practice note explains the role of Floor Area Ratio (FAR) controls in creating liveable, high-density neighbourhoods.

It unpacks the complex relationships between development feasibility, design quality and planning assessment, and how these interact to either support or hinder housing supply and quality living environments.

It demonstrates why FAR controls are employed globally as an effective way to manage these relationships – supporting a fair and efficient development process, creating places people want to live in, and sustaining a market that genuine developers can keep investing in and building on.

Image 1. Swiftwalk, Kensington (Front cover)
Hayball, Kerstin Thompson Architects, SBLA
Masterplan
4-8 storeys
Gross FAR: 3.8
Image: Ben Moynihan

1. Introduction

Image 2. Escala, Docklands
Six Degrees, GBLA
Developer: MAB
Tower on island site
20 storeys
Net FAR: 10:1
Image: Dan Preston



Across Australia, there's a push to deliver higher-density housing to address the housing crisis. The focus has been squarely on supply, with new planning controls aimed at delivering higher densities around transport nodes and existing centres.

But housing stock on its own does not create liveable, inclusive places. A more holistic and integrated approach is needed to successfully transition our largely low-density cities into desirable, liveable and inclusive high-density neighbourhoods.

An integrated approach provides the opportunity to:

- Deliver good-quality places to live, including liveable apartment developments and the public infrastructure needed to support higher residential densities, such as community facilities, parks, and new streets and laneways that support walkability.
- Create space for nature in our cities to address the climate and biodiversity crises and create more liveable places.
- Deliver social housing to meet our community's needs.
- Incentivise land consolidation to create larger sites that are more feasible to develop and can deliver greater housing numbers.
- Provide greater certainty in market assessments of the current and future value of development sites, deterring development speculation.

Achieving the first three outcomes – liveability, more space for nature, and social housing – will have long-term consequences for the health of our communities and natural ecosystems, and for the resilience, competitiveness and productivity of our cities. The fourth and fifth outcomes – sufficient land consolidation and deterring development speculation – will continue to hinder housing supply if left unaddressed.

FAR controls aren't a silver bullet, but they're a proven planning tool that can help deliver all of these outcomes. That's why they're widely used in high-density urban settings across the globe where supply and liveability are the goals.

Fundamentally a FAR control is simply a tool. Like all tools what matters is the intent, judgment, and skill brought to its use. FAR controls, zoning, height limits: none of these will produce good urbanism by their mere existence. Everything depends on where and how they are applied.

2. Key FAR concepts

Image 3. GTV9, Richmond

Hayball, OCULUS

Developer: Lend Lease

Masterplan

4-8 storeys

Gross FAR (Northern precinct): 2:1

Image: Tom Blachford



What is a Floor Area Ratio?

A Floor Area Ratio (FAR) is a type of density control that manages how much building can be built on a site.

A FAR is expressed as a ratio of total allowable floor area to site area. A FAR of 4:1, for example, permits 4,000m² of floor area on a 1,000m² site.

A FAR is also known as a plot ratio, or as a Floor Space Ratio (FSR) in other Australian states.

The FAR does not determine the shape of the building. The allowable floor space can be massed into different building forms, as shown in the examples below, all of which have a FAR of 4:1.

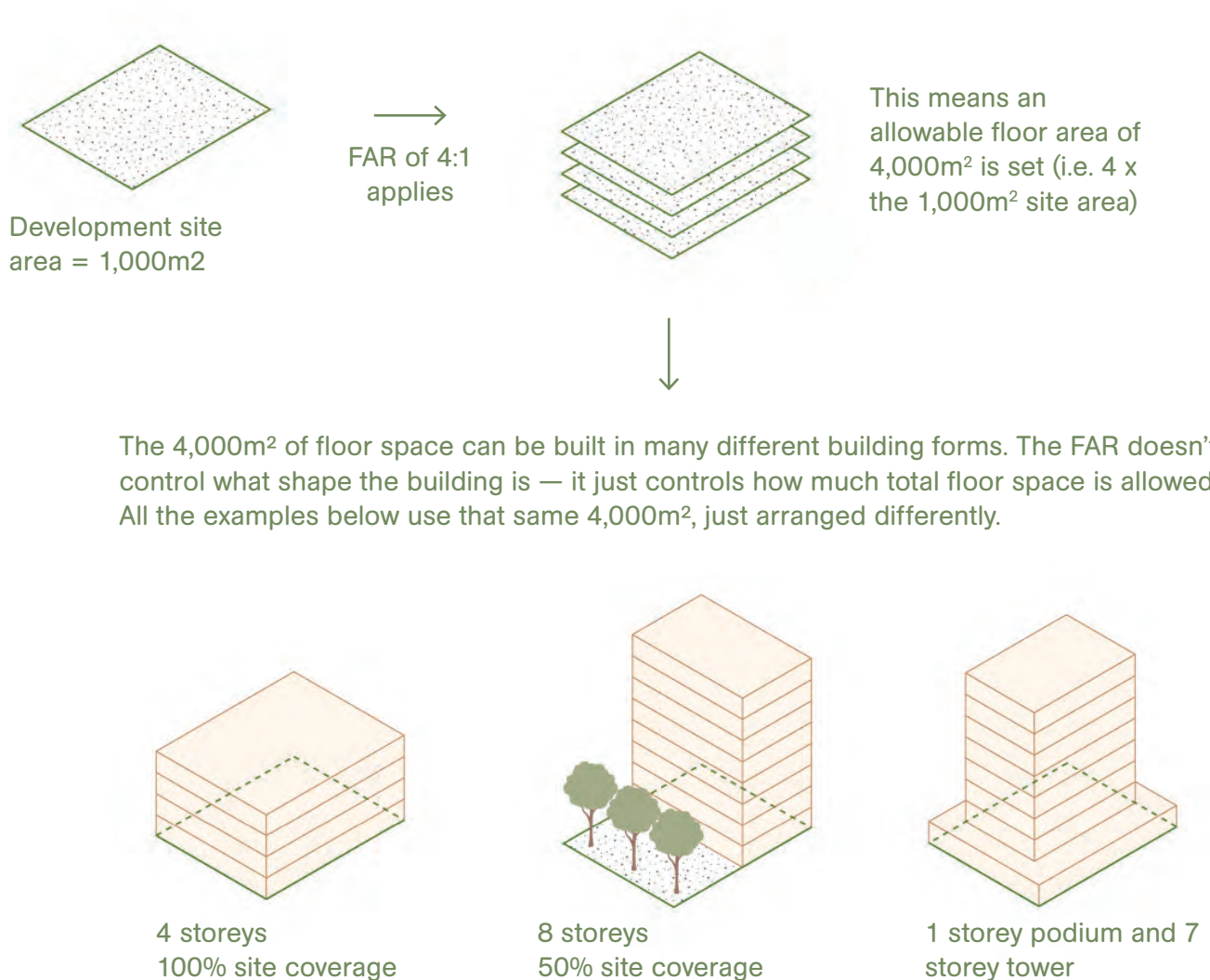


Figure 1. Understanding the concept of FARs

Building envelope controls

The FAR does not determine the form and siting of a building. This is the role of building envelope controls. These controls set the building height, and other built form requirements such as setbacks from boundaries (see Figure 2). Building envelope controls can be mandatory, discretionary and/or deemed-to-comply.

Mandatory controls

If a building envelope control is mandatory, the building cannot extend beyond it. To stay competitive in acquiring land for development, the developer will maximise floorspace within the envelope, filling every corner and leaving just enough unbuilt space to meet minimum amenity standards (see Figure 3).

Discretionary controls

If a discretionary building envelope control applies, buildings can extend beyond the envelope (see Figure 4), with no set limit on the degree of variance. The developer will maximise floorspace within the envelope and build beyond it as much as possible, while still meeting minimum amenity standards.

Deemed-To-Comply (DTC) controls

Victoria has recently adopted code-compliant envelope controls, which co-exist with the discretionary system. If a developer builds in line with all height and setback provisions, the development is deemed-to-comply and cannot be refused a permit on those grounds. A compliant scheme will therefore resemble one delivered under mandatory envelope controls. The developer can still choose to build beyond the envelope.

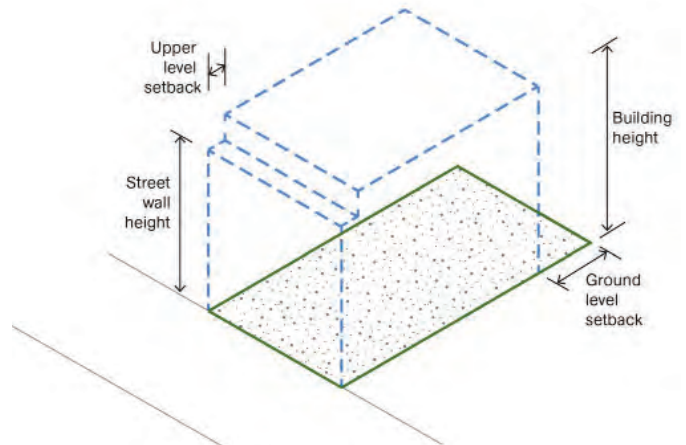


Figure 2. Example of a building envelope

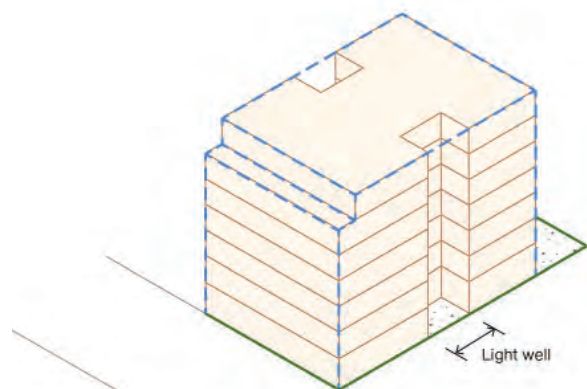


Figure 3. Mandatory envelope - all floor area must be built within the defined envelope

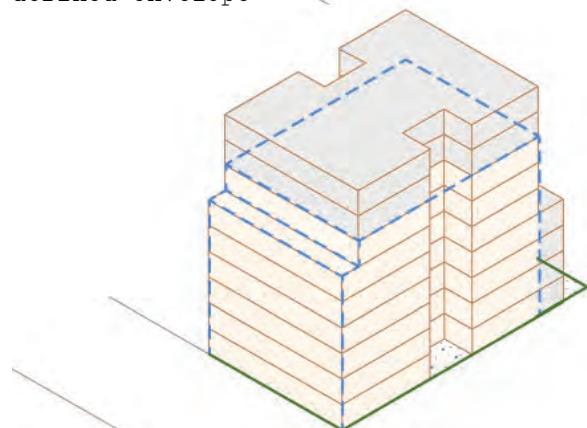


Figure 4. Discretionary envelope - floor area can be built outside of the envelope.

FARs work together with envelope controls

The FAR is set so it can be delivered within the building envelope. This creates room to deliver flexible design responses aligned with the preferred development character and responsive to the site context and development brief.

It allows the designer to focus on how the allowable floor area is best arranged. They have the flexibility, for example, to enhance sunlight access, respond to an adjacent heritage building, improve floorplate efficiencies, or deliver a new pedestrian connection – without any cost to development yield, since the developable floor space is simply relocated elsewhere on the site.

A FAR is used in conjunction with discretionary envelope controls, allowing parts of the building to extend beyond the envelope where this optimises the design without adverse amenity or character impacts.

The ‘fit’ between the FAR and envelope can be ‘loose’ or ‘tight’. A loose fit means there is more room within the envelope to rearrange the allowable floor space. A tight fit means there is less room to adjust the design within the envelope and the designer loses flexibility to find the best solution for the brief, the client and the site.

There is a direct correlation between building typology, height, site size and fit.

Where less design flexibility is needed to achieve contextually responsive neighbourhoods - e.g. infill, party wall buildings, a tighter fit is suitable (see Figure 5). Taller buildings and larger sites tend to have a looser fit, since taller buildings need more separation from neighbouring buildings, and larger sites need space between multiple buildings and, in some cases, room to deliver new public realm (see Figure 6). Where the aim is to support a greater mix of different typologies a looser fit is also important.

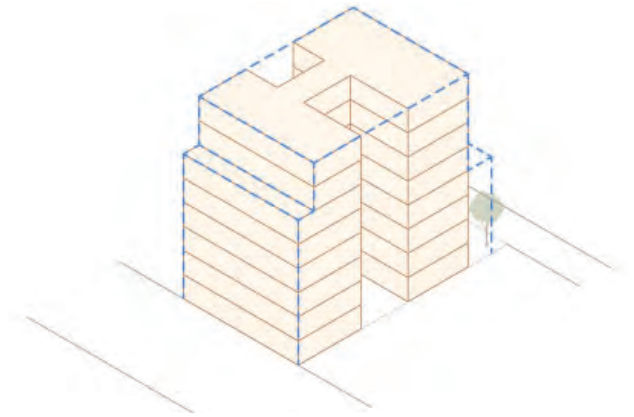


Figure 5. A tighter fit on an infill site is common. This 8 storey building has a FAR of 5:1

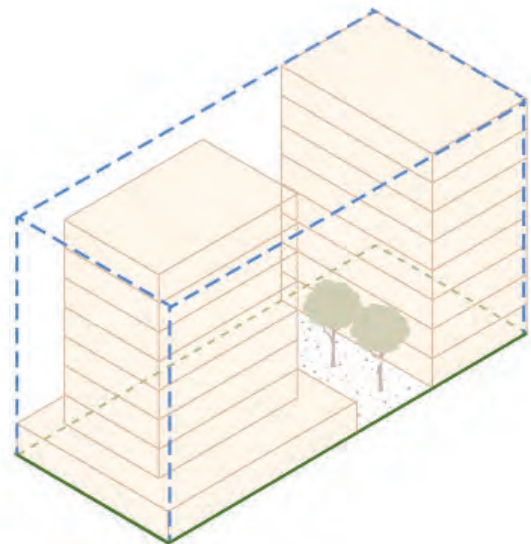


Figure 6. A looser fit on a larger site with multiple buildings. This site has two 8 storey buildings and has a FAR of 4:1

Net vs Gross FAR

On large sites with multiple buildings and new public realm, there will be a difference between the overall gross FAR which applies to the whole site and the net FAR which is calculated for individual developable plots. In this example, the Gross FAR of the whole site is 2.75:1. This is calculated by dividing all building floorspace by the whole site area. The net FAR for each development parcel is calculated by dividing the building floorspace within that parcel by the development parcel site size.

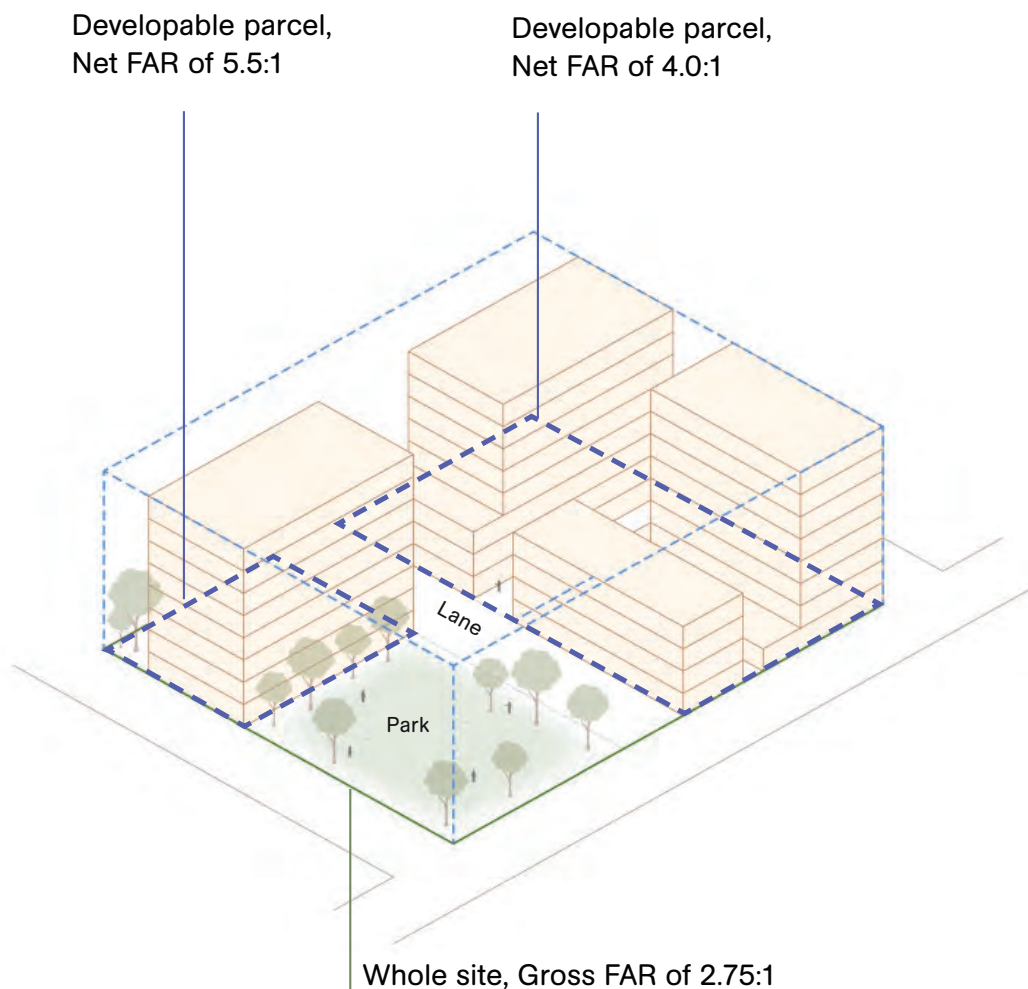


Figure 7. Example of the difference between Gross FAR and Net FAR

Floor Area Uplift (FAU)

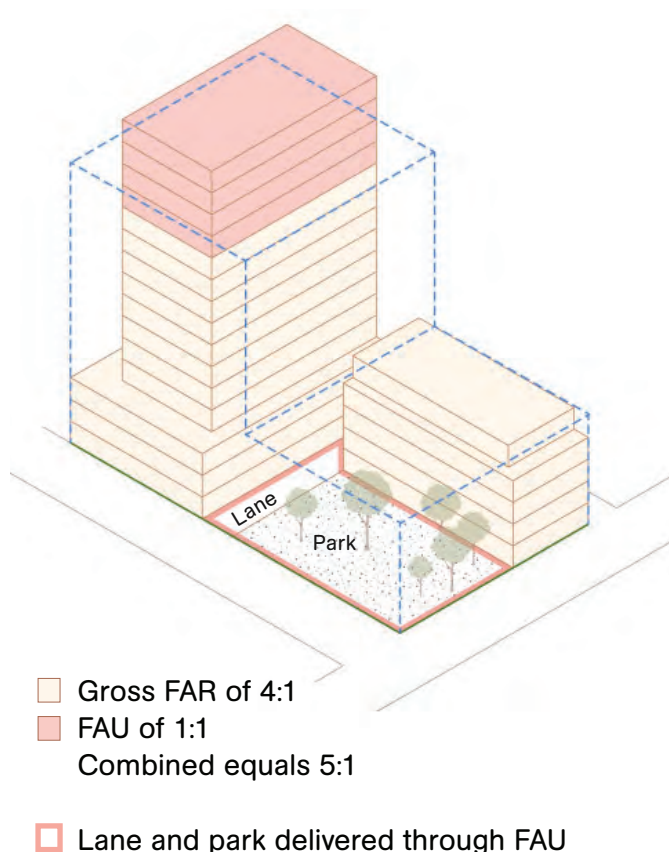


Figure 8. Example of a FAU used to deliver a public park and laneway

A Floor Area Uplift (FAU) is a type of value capture mechanism, sometimes called a bonus plot ratio. It allows a development to exceed the maximum Floor Area Ratio (FAR), typically as an incentive for delivering an enduring community benefit, such as social housing or public open space.

Uplifts can be capped (e.g. a maximum uplift of 1:1 on a site) or uncapped.

The link between the additional floor area granted and the value of the public benefit must be clear and transparent. In most urban settings, FAUs are capped to ensure the preferred scale of development isn't distorted by excessive yield increases, and to support coherent planning aligned with forecast infrastructure capacity.

An example is illustrated in Figure 8. In this example, the base FAR is 4:1. An additional 1:1 has been granted through a FAU to deliver a new public park and laneway on the developer's land.

A FAU should apply in addition to other planning scheme requirements, such as a Development Contribution or open space levy. As a first principle, it should not be used as the primary means of delivering essential infrastructure, as this would put delivery at risk if development does not proceed. It can, however, provide a complementary way to deliver additional public benefits through incremental development – and, in appropriate settings, provide acceptable flexibility for additional yield to maximise the potential of developable land.

3. The benefits of FARs



Image 4. Nightingale, Ballarat
Breathe Architecture, Openwork and
AKAS; Developer: Nightingale and
Hygge Property
Mid-rise infill
5 storeys, Net FAR: 3.2:1
Image: Derek Swalwell

Large site x 6 storeys

Harnessing the benefits of FARs

FARs are widely used in Australia and internationally for their multiple benefits, directly influencing design outcomes, property values, and development feasibility.

There are four key benefits of FARs – they provide certainty of outcomes for developers and the community, they deliver more liveable neighbourhoods, they support faster and more productive permit assessment processes, and longer-term viable development patterns by providing market efficiencies and limiting development speculation.

Together these benefits can deliver more certainty of housing supply and better places to live.

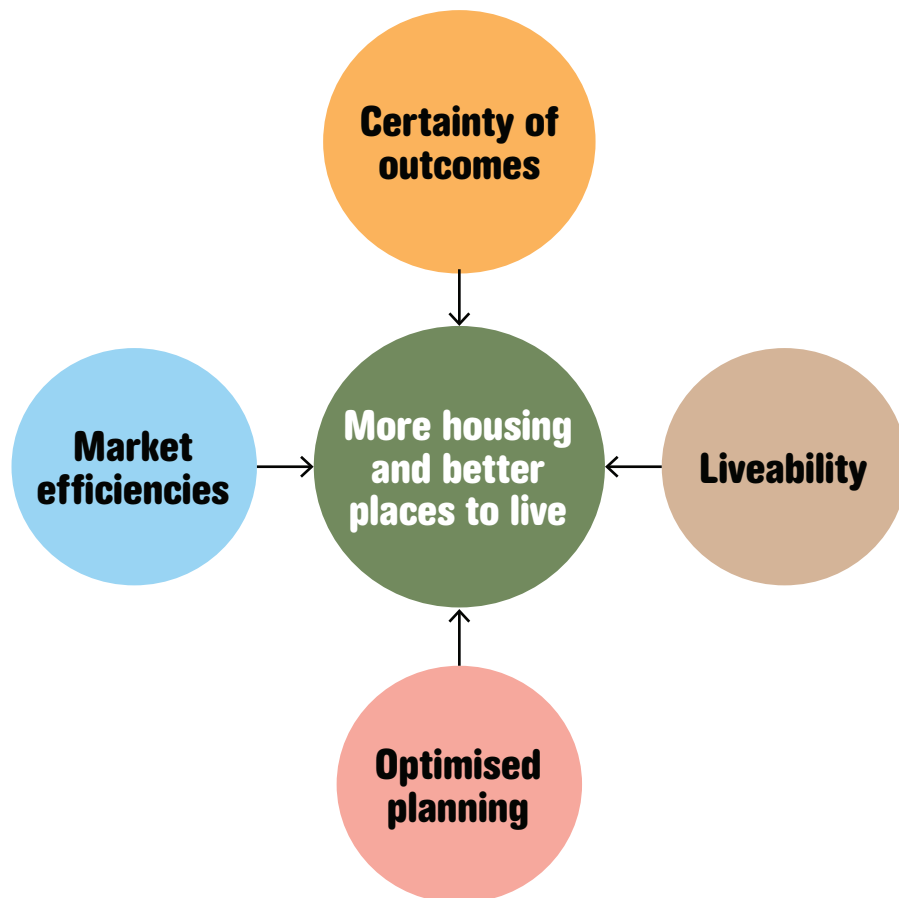
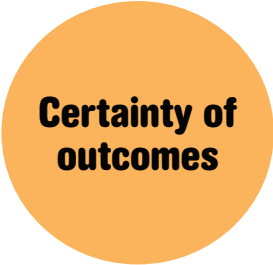


Figure 9. Floor Area Ratios, when used effectively, can deliver multiple benefits that contribute to more housing and better neighbourhoods.



Certainty of outcomes

A key benefit of FARs is the certainty they provide on how much floor area can be delivered on a site. This is why FAR controls should be mandatory rather than discretionary – a discretionary control will undermine the liveability, planning and market efficiency benefits that FARs can deliver.

At the site acquisition stage, mandatory controls give developers a clear, realistic ceiling on achievable yield, allowing site value to be assessed with confidence and reducing speculative bidding.

Without certainty on yield, good developers are forced to fill every corner of a site to compete with developers who care less about quality.

Setting a mandatory control on floor area is more effective than setting one on building envelope. While both provide certainty, a mandatory envelope control encourages developers to pack in as much floor area as possible within that fixed volume, often at the cost of design quality. By contrast, a mandatory FAR sets the floor area but leaves the developer and designer free to choose how it's arranged on site – delivering the same certainty while retaining flexibility to optimise design outcomes and best respond to the brief and site.

Mandatory FARs also support clearer infrastructure planning, since the certainty they provide on yield can be linked to current and planned population growth and infrastructure capacity. Over time, this certainty can help build community trust and social license by curbing over-development.



Liveability

The use of a FAR shifts the conversation away from maximising yield and towards good design at the building and neighbourhood scale.

More liveable, efficient & sustainable buildings

A FAR enables a designer to optimise the design response to harness positive site specific opportunities – such as views, sunlight, breezes, heritage buildings, responding to neighbours. They also provide the flexibility to respond to any local constraints – such as including a landscaped setback in proximity to adjacent low-scale housing, or to lower amenity interfaces such as roads or railway lines.

As the designer isn't locked into a particular configuration, building efficiencies, such as more regular floorplates, can be adopted. This can also support flexible design responses on irregular shaped lots.

FARs support more sustainable building typologies that include breezeways and courtyard developments. They help manage floorplate depths to deliver better daylight, sunlight and cross-ventilation while creating space for deep soil planting, trees, and communal open areas that provide an outlook to gardens.

Where a FAR is used alongside a discretionary envelope control, parts of the building can extend beyond the envelope where doing so genuinely improves the design.

Better neighbourhoods

A FAR invites more generous site responses at a neighbourhood scale. The inclusion of public amenities –such as providing a pedestrian link – does not reduce the development's potential floor area; it is simply reshaped within the site and not perceived as lost yield (revenue) for the developer.

Greater building diversity can be achieved, supporting more visually interesting streetscapes, and a diversity of housing choices and broader social mix.

Additional public infrastructure needed to support population growth, such as social housing or a new park, can also be incentivised through the use of a Floor Area Uplift.

Optimised planning

Effective regulation balances both outcomes and the processes—time and cost—needed to achieve them. By providing certainty on allowable floor space, FARs support better liveability outcomes and a more efficient and affordable planning processes through the multiple stages of development. At site acquisition, developers can value a site without extensive design or feasibility work. During design development, efforts focus on achieving the best design rather than maximising every corner of the site for yield. This supports positive working relationships between applicants and Council and state planners in permit negotiations as conflicts between maximising yield and design are reduced. While Deemed-to-Comply controls can facilitate faster processes through negotiation, however, the lack of flexibility to adapt a design to the site conditions and building program will mean that the neighbourhood design quality is likely to be lower.

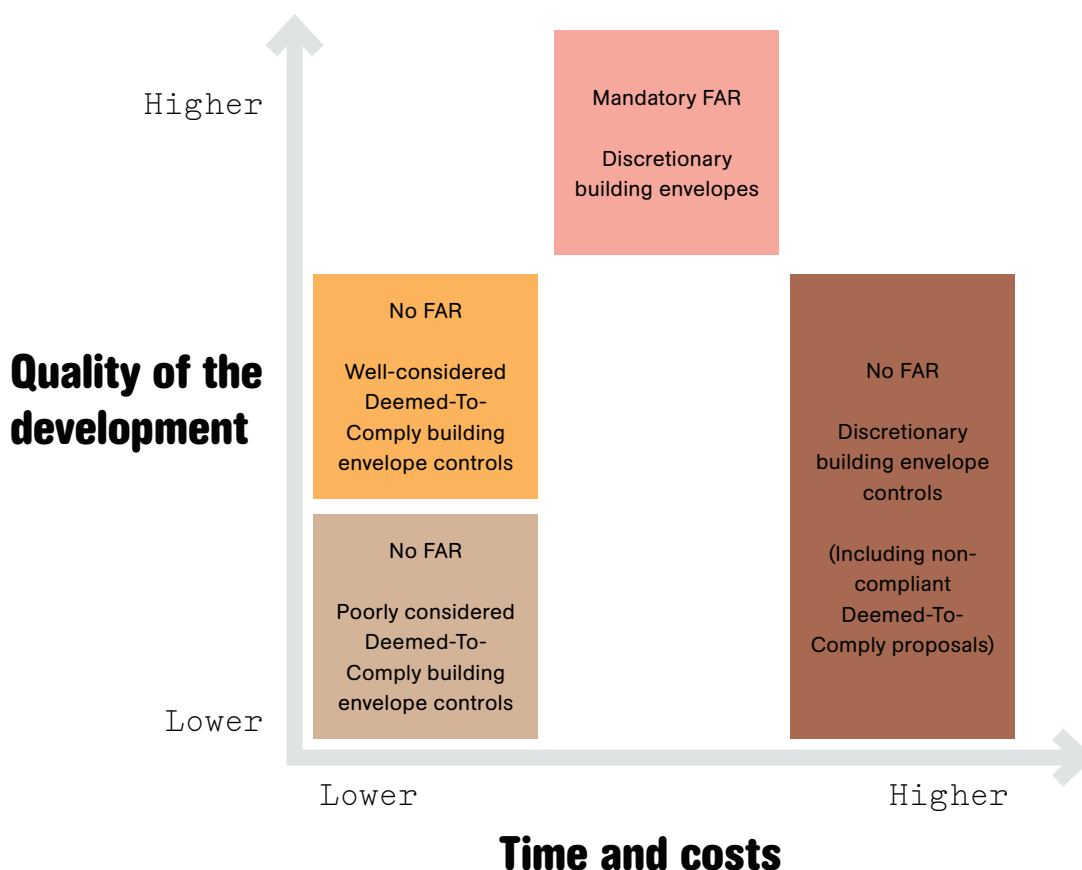


Figure 10. The relationship between quality of development and the time and cost of putting together a permit application in different regulatory settings. This figure has been adapted from earlier work developed in collaboration with Andy Fergus, Tract (Paul Lewis, Elle Harrington) and Fieldwork (Stuart Eaves and Briony Massie).



Market efficiencies

FARs support efficient land markets by providing certainty on land value. Because both buyers and sellers share a common understanding of allowable development yield, they also share a common understanding of a site's worth.

Without a FAR, this certainty disappears. In high-demand areas where discretionary envelope controls apply, speculation is rewarded: the developer willing to bet on the highest achievable yield will outbid other buyers. Unclear price signals also encourage landowners to withhold land, holding out for a more profitable sale later – an incentive FARs remove, since there is no advantage to waiting for a higher price.

This speculation compounds over time. Approved or constructed projects with higher yields raise landowner expectations for further yield increases on neighbouring sites. Each subsequent developer must then accommodate even more yield to make their project stack up, compounding design problems and constraining what's achievable next door. This locks in a cycle of rising yields and diminishing quality – one that can eventually stall development altogether once no further yield will physically fit, leaving sites sterilised.

Poor-quality development also undermines the financing of future projects nearby: lower sales prices depress general market values in the area, which can limit access to financing and diminish the development potential of future sites.

By contrast, FARs support stable land values and more coherent, coordinated development.

4. Development Outcomes



Image 5. 211 Sydney Road, Brunswick
Six Degrees
Developer: Excelon
Mid-rise infill
7 storeys, Net FAR: 5.5:1
Image: Tom Ross

The benefits of FARs are illustrated through a set of scenarios on a typical activity centre block. Three scenarios are tested:

1. A Deemed-to Comply scheme
2. Discretionary envelopes only (no FAR)
3. Discretionary envelopes with a mandatory FAR

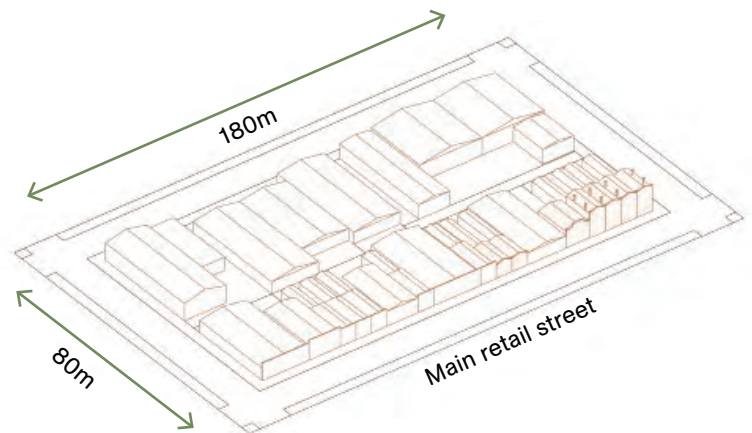


Figure 11. Existing context

Existing context

A large activity centre block with traditional fine grain retail street and larger format retail / light industrial behind. Sites range in width from 6m to 24m with one large strategic site of 2600m². Six heritage properties buildings front the main street.

Transition to higher-density development

Activity Centre Building Typologies¹ are defined for each sub-precinct in response to the site context. The standard building controls that apply to these typologies have been adopted (see Figure 17). They include heights, street wall heights, upper level street setbacks, rear and side setbacks (note that the side boundary setback areas are not shown in this model). Deemed-to-comply controls apply for all envelope controls. BADS requirements have been applied.

The FARs applied in Scenario 3 align with the site conditions and the discretionary building envelopes. These are shown in Figure 13. Corner sites have additional 0.5:1 FAR (except for the Heritage Main Street typology). Capped FAU of 1.25:1 applies to Limited Sensitivities typology and Strategic Site.

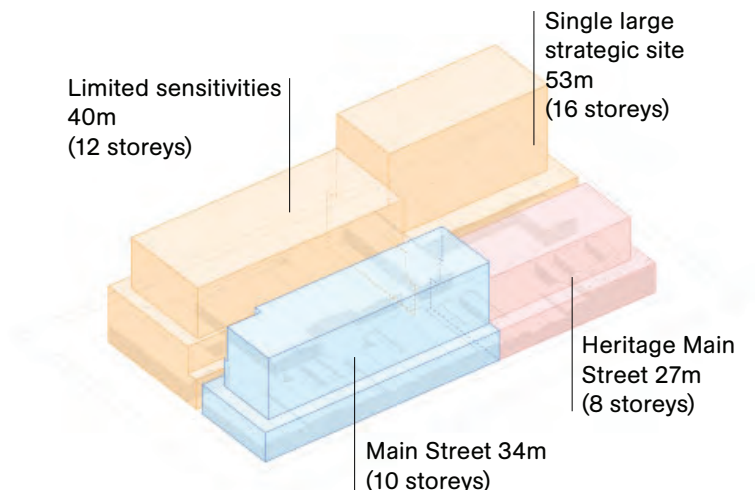


Figure 12. Assigned typologies and building heights

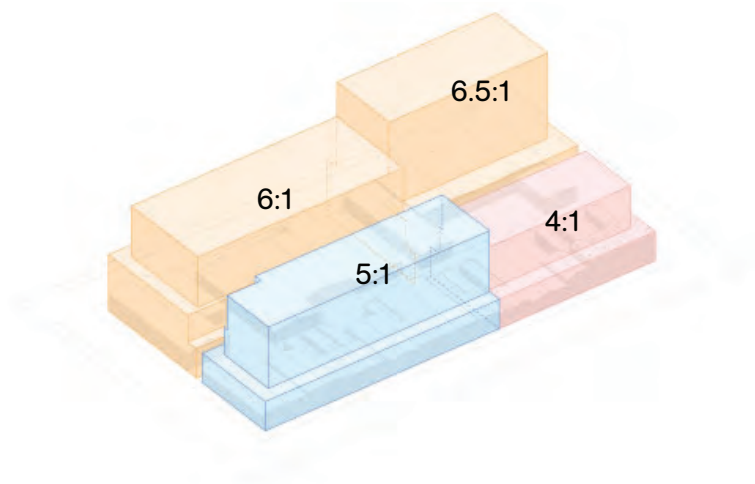
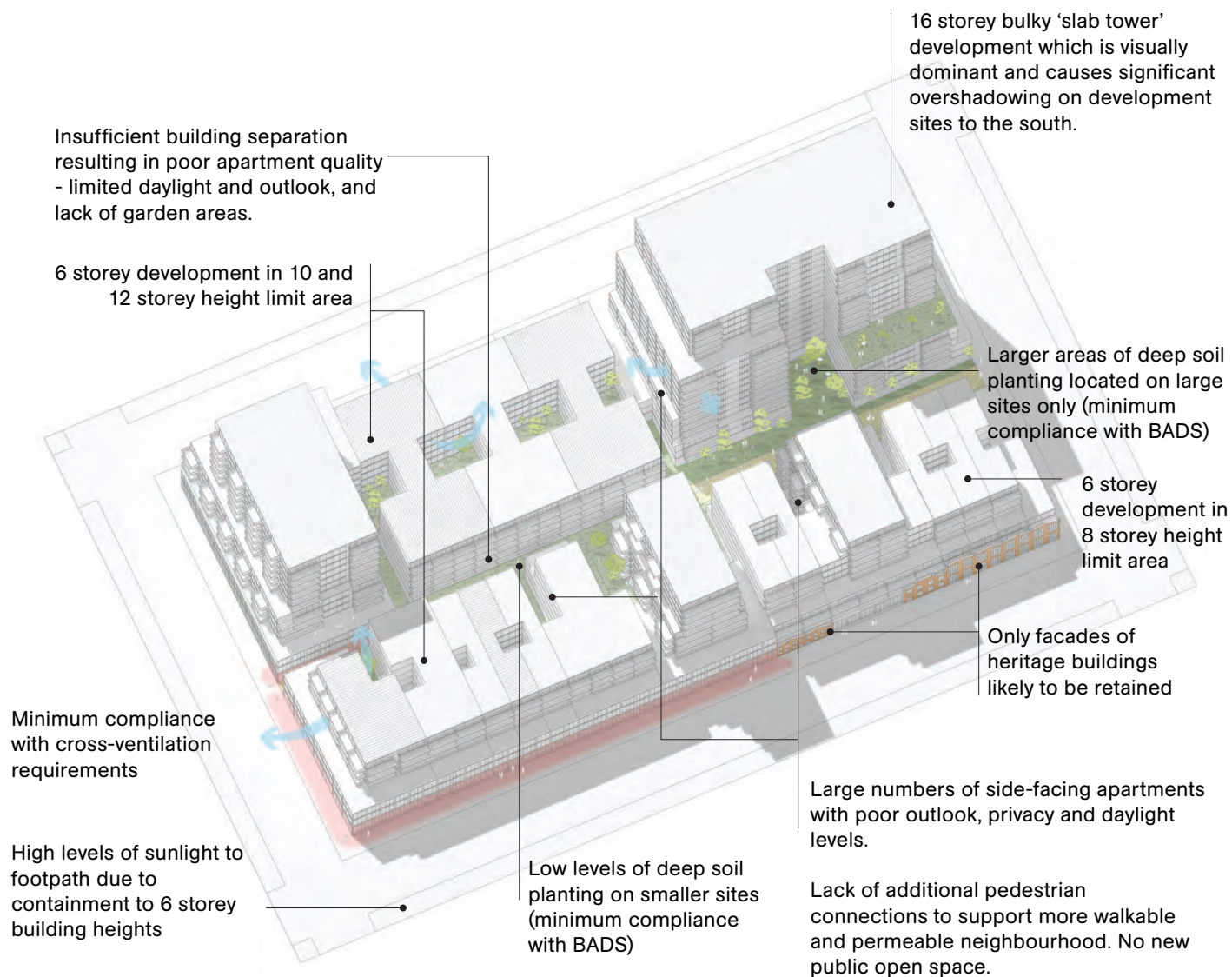


Figure 13. FARs and FAUs applied to align with assigned typologies

¹
Train and Tram Zone Activity Centres Program

1. A ‘Deemed to Comply’ compliant outcome (no FAR)

The Deemed-To-Comply scheme results in largely coherent development patterns, however no additional neighbourhood benefits are delivered. The scheme highlights some of the shortfalls of the standards (and associated lack of design flexibility), including encouragement of typologies with side-facing apartments, and minimal levels of deep soil planting. Many buildings are kept at 6 storeys as the sites are too narrow to reach the maximum discretionary height controls of 8-12 storeys while meeting minimum side and rear setbacks.

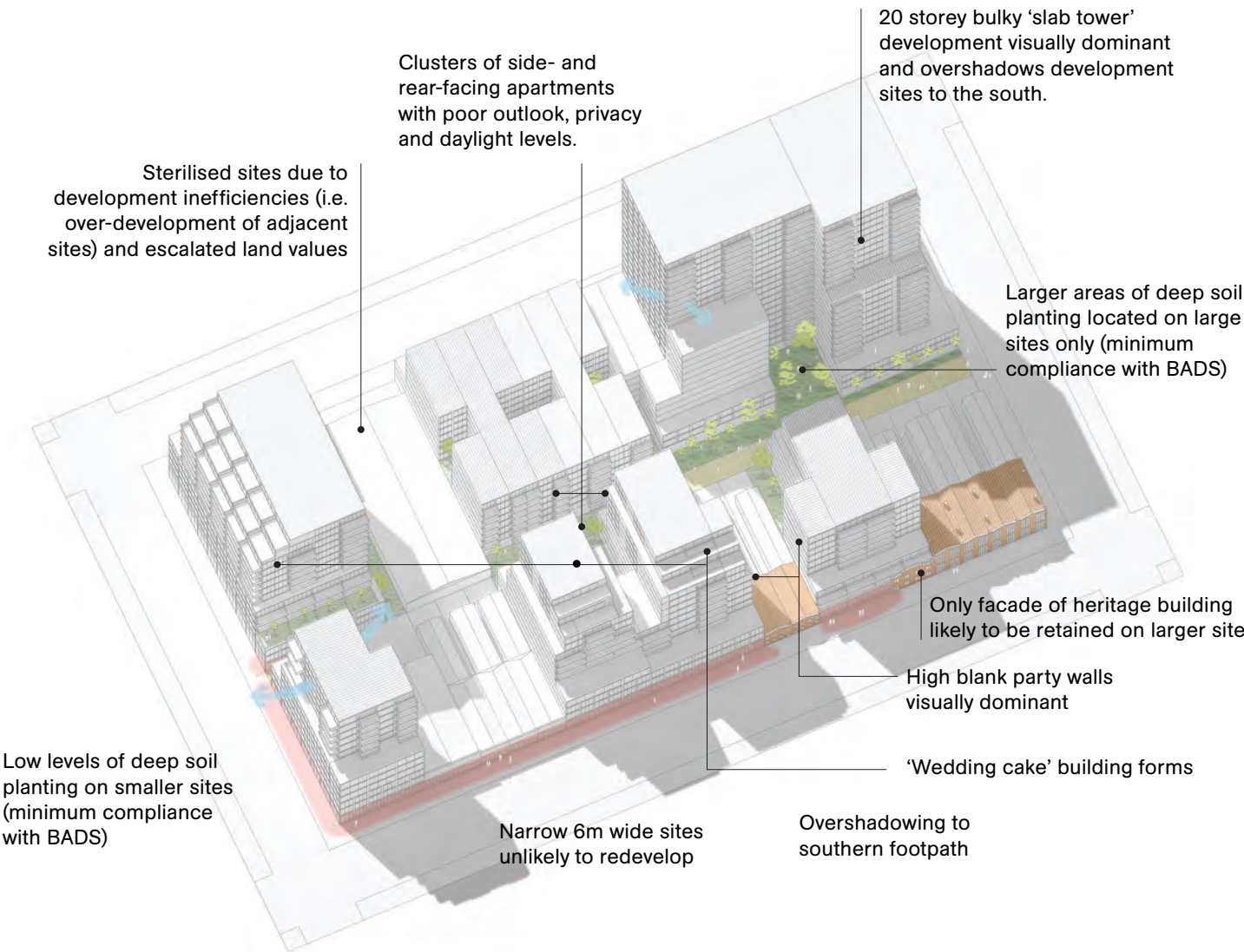


No. of apartments	387
No additional neighbourhood benefits	0
Site coverage	85% (1,800m2 unbuilt land)

Figure 14. Scenario 1 model - Deemed-To-Comply, compliant scheme. Each site maximises potential floor area while being compliant with all Deemed-to-Comply controls

2. Discretionary envelopes only (no FAR)

This scheme results in incoherent development patterns and lower amenity outcomes with no additional neighbourhood benefits delivered. It illustrates the many challenges of discretionary development controls in high-demand locations including less desirable building typologies (large bulky ‘slab tower’, ‘wedding cakes’ and ‘T-plan’ layouts with side-facing apartments). Some sites are left sterilised due to a disconnect between land values and expectations of development potential or due to the overdevelopment of adjacent sites. Narrow sites (including some heritage sites) are likely to be retained as site values are misaligned with development expectations. Across the block, if all sites were redeveloped public and private amenity would be significantly compromised.

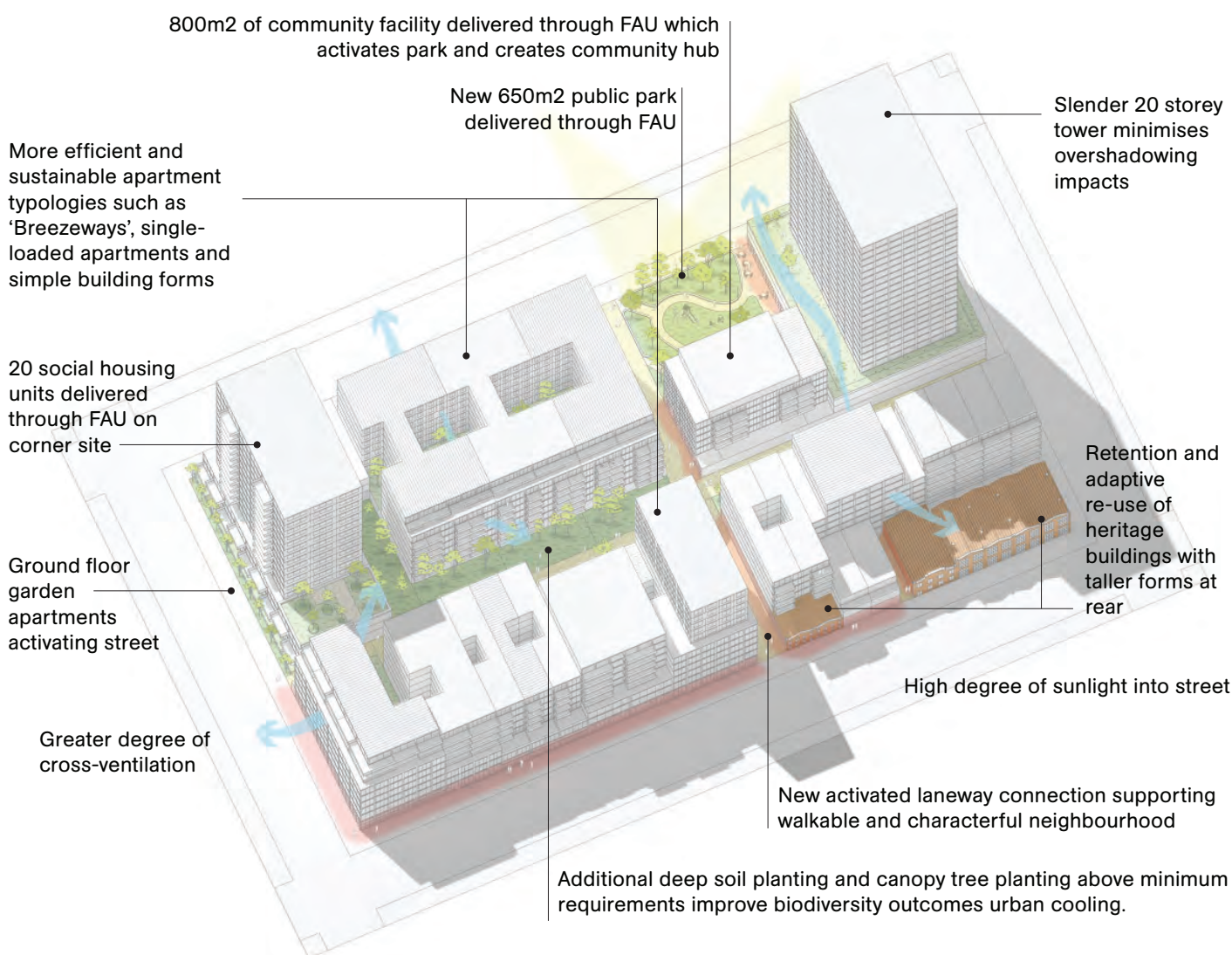


No. of apartments	432
No additional neighbourhood benefits	0
Site coverage	85% (1,800m2 unbuilt land)

Figure 15. Scenario 2 – Discretionary envelopes only (no FAR): Each site maximises potential floor area including building outside the preferred building envelopes. Exceedances are limited to 25% of the preferred height limits (e.g. 2 storeys in a 8 storey area)

3. Mandatory FAR with discretionary envelope controls - Preferred outcome

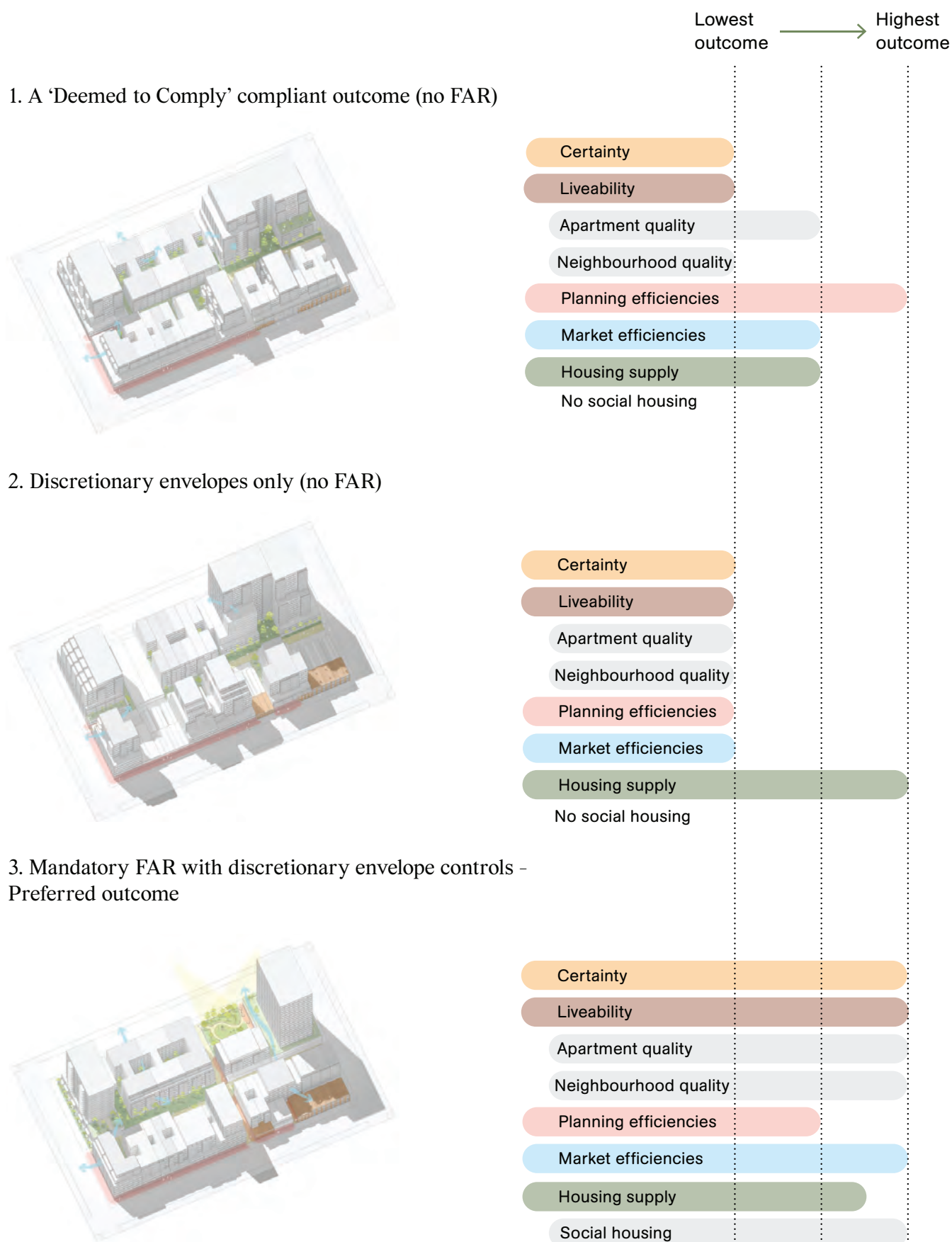
The FAR scheme balances neighbourhood benefits with coherent, high-quality development outcomes. All apartments get good daylight and outlook to public space or gardens, while simpler, more efficient building forms support feasibility and sustainability. The FAU delivers a new park and adjacent community facility as a hub for the neighbourhood, plus 20 new social housing units on a corner site where extra floor area has no amenity impact. A new laneway improves walkability with direct links to the park. Heritage buildings can be adaptively reused, with allowable floorspace aligning to taller forms at the rear so heritage fabric is retained, and there's scope for more generous deep soil planting and canopy trees.



No. of apartments	395
Social housing dwellings	20
Community centre	800m2
Public park	650m2
Public laneway	6m wide, 480m2
Site coverage	76% (2,900m2 unbuilt land)

Figure 16. Floor Area Ratios, when used effectively, can deliver multiple benefits that contribute to more housing and more liveable neighbourhoods.

The scenarios demonstrate that, used effectively, Floor Area Ratios can optimise housing supply and more liveable apartments and neighbourhoods.



5. Setting effective Floor Area Ratios



Image 6. Nightingale, Ballarat
Breathe Architecture, Openwork and AKAS;
Developer: Nightingale and Hygge Property
Mid-rise infill
5 storeys, Net FAR: 3.2:1
Image: Derek Swalwell

This chapter describes a good place-led practice process for developing FARs. It is high level in nature, focused on the key drivers to be considered and the key steps to be undertaken.

Three overarching stages are required – setting the place direction, testing and calibration. The testing stage is highly iterative as the different testing streams inform each other. This process does not specify how public engagement should be delivered which will vary between different places.

1 Setting the place direction

- 1.1 Place analysis
- 1.2 Identify key public realm enhancements & sunlight protection
- 1.3 Identify building scale and typologies (which sets initial FARs)

2 Design testing

- 2.1 Test Floor Area Ratios for local site conditions
- 2.2 Test Floor Area Uplifts if being considered
- 2.3 Capacity & feasibility testing (Parallel process)

3 Refinement and calibration

- 3.1 Finalise envelope controls, FAR and FAUs

1 Setting the place direction

A FAR control is simply a tool. It should be harnessed to deliver the overall strategic and design objectives for a place. It is critical to therefore start with establishing clear place directions that the FAR can then assist in delivering.

1.1 Place analysis

Identify the local contextual place drivers that will influence the scale of development and type of buildings that are suitable for an area. Of particular relevance to established FARs are:

- Urban structure - site size, orientation and shape, street widths and the location of public parks and key pedestrian routes.
- Emerging development patterns.
- Character - including any heritage attributes, valued rhythm and scale (height and grain) of buildings and landscape character, including key views.
- Interfaces - including to sensitive uses, such as parks, heritage buildings or precincts, and to negative interfaces such as roads and railways.
- Environmental systems - existing ecosystem including vegetation, geology, water flows and flooding and topography.

1.2 Identify key public realm enhancements & sunlight protection

Identify the local public realm improvements that will be needed to make the neighbourhood liveable at higher densities. This includes any new streets, laneways and parks, as well as landscaped setback requirements to streets or sensitive interfaces. This ensures that the FARs are set as a place-based planning response.

The quality of the public realm will be at the heart of whether a place is liveable. Providing this certainty means that developers can acquire sites with this knowledge and plan their site accordingly. The designation of defined new streets and parks will establish resultant development parcels.

Identify sunlight access requirements to streets and parks which will inform the location of preferred building typologies.

Identify any sites requiring master planning to deliver the public realm enhancements.

Determine funding and methods for public realm delivery. Identify what public realm enhancements need to go into other funding mechanisms (e.g. DCP, Open space contributions, rates) versus delivery through the use of a FAR and/or FAU.

1.3 Identify building scale and typologies

The place analysis and strategic objectives for growth should inform the preferred character and level of development intensification. This establishes an initial building envelope and FAR range for each site aligned with the preferred building scale and typology. This can also include the designation of areas for mixed or hybrid typologies to support building and housing diversity.

An indicative selection of typologies is shown in Figure 18.

The selection of typologies establishes an initial building envelope and FAR range. This range is then tested in Stage 2 to determine the appropriate FAR for each site.

Typologies that should be avoided as they typically result in poorer public and private amenity outcomes include:

- ‘Slab towers’
- ‘T-blocks’
- Repetitive tower and podium forms
- Side-facing apartments which often have poorer levels of amenity.

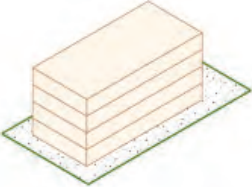
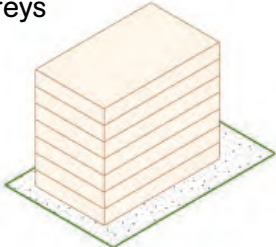
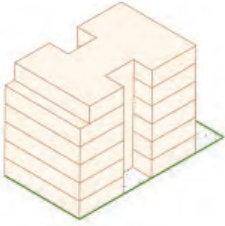
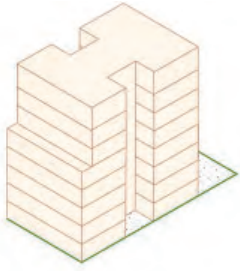
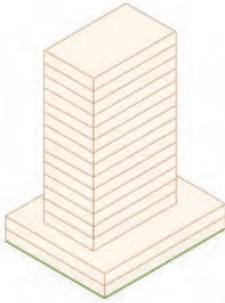
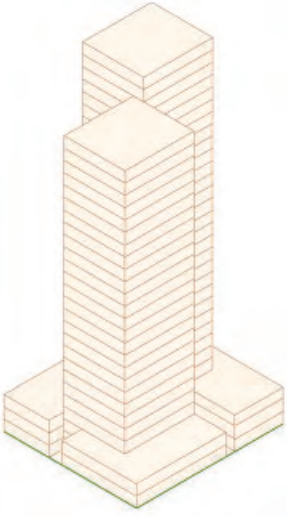
Garden apartments	4 storeys  FAR 1.5 - 2.5:1	8 storeys  FAR 2.5 - 3.5:1
Mid-rise, infill apartments	6 storeys  FAR 3.5:1 - 5:1	8 storeys  FAR 4:1 - 6.5:1
Podium & towers	16 storeys  FAR 5:1 - 7:1	30-50 storeys  FAR 8:1 - 18:1

Figure 18. The relationship between a selection of typologies and typical FAR ranges for them on standard sites. This figure has been informed by work developed in collaboration with Phil Thalís, Andy Fergus, Stuart Eaves, Ripley Callahan and Briony Massie.

2 Design testing

2.1 Test Floor Area Ratios for local site conditions

This refines the FAR ranges associated with each typology and aligns them with specific local attributes. Testing of the preferred typologies is required to assess the appropriate ‘fit’ between the FAR and the envelope. The degree of fit that is suitable is determined by three drivers:

- Site context - Local site conditions including site size, lot shape and orientation, number of street interfaces, heritage attributes (on-site or adjacent sites), overshadowing to streets and parks, interfaces to neighbouring sites and topography.
- Character diversity sought - A looser fit FAR will drive more diversity of building forms within an envelope.
- Volumetric building performance requirements - E.g. cross-ventilation, daylight, minimum building separation distances, site coverage requirements or deep soil planting zones

As designers and planners become more familiar with the fit between a FAR and the envelope for different typologies and site conditions it can become a useful shorthand way of understanding design quality and outcomes.

Site context

The preferred typology could be delivered through a range of FARs, depending on the site context. For example, Figure 18 illustrates a mid-rise, 8 storey party wall typology modelled on the same sized site but within three different sites conditions.

In example 1, an island site with 4 street frontages, the building will be able to fill the envelope completely (100% fill), taking advantages of access to daylight and outlook on all four sides.

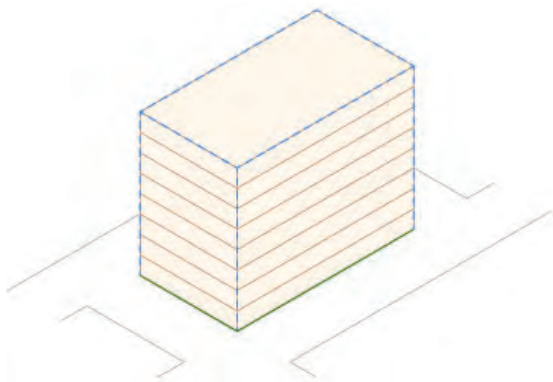
In example 2, the site has three street frontages (two streets and a laneway) and a common boundary with an adjacent property. A setback will be required from the laneway and the common boundary to provide sufficient internal amenity and development equity. This has a fit of 75%.

In example 3, a mid-block site is shown. A ‘H’ shaped building typology is adopted with the primary outlook provided to the street and the rear boundary with a generous setback. The fit for this site is 62.5%.

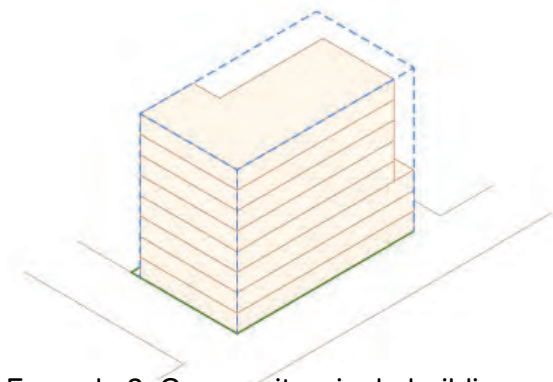
Character diversity

The fit will be lower again on larger sites with multiple buildings and a diversity of building typologies and heights. Figure 19 shows a range of building heights from 4 to 8 storeys on a corner site with a rear laneway and a fit of 50%.

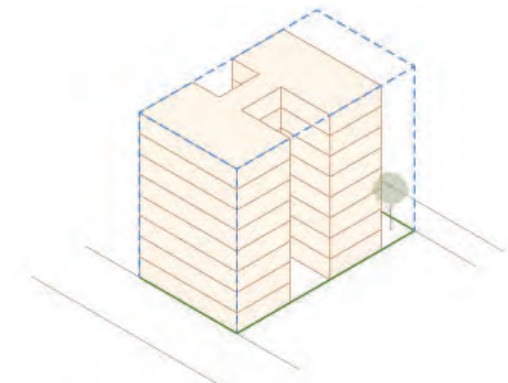
In some locations, particularly where wholesale transformation is envisaged, the adoption of a single, ‘looser-fit’ FAR across multiple blocks will be instrumental in orchestrating a diversity of built form. In this instance, the objective is less to maximise growth within a preferred building envelope, but to give the developer and designer maximum flexibility to determine the site program and include a diversity of building scales and typologies.



Example 1: Island site
8 storeys, FAR 8:1, (Fit of 100%)



Example 2: Corner site, single building
8 storeys, FAR 6.0:1, (Fit of 75%)



Example 3: Mid-block site, FAR 5.0:1, (Fit of 62.5%)

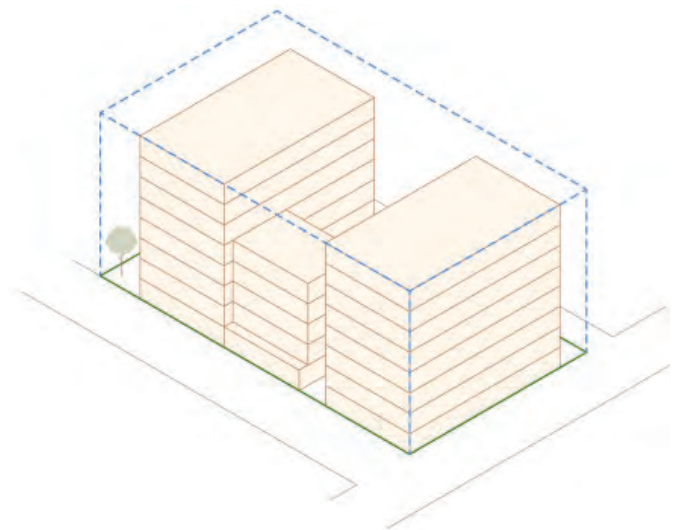


Figure 19. Large sites with multiple buildings of varying heights will have a looser fit. This example is a corner site 8 storeys high, FAR 4.0:1, (Fit of 50%)

Figure 20. The impact of site size and number of frontages on the fit between the FAR and the building envelope.

Building performance

Volumetric building performance requirements will directly influence the testing of the FARs. In Victoria, these are largely contained within the Better Apartment Design Standards and include cross-ventilation, maximum apartment depth and deep soil planting requirements. When setting workable FARs, adoption of these minimum performance standards is required in the built form testing.

A key influencer of building form is a requirement for sufficient building separation to support good levels of private and public amenity. Adequate separation will ensure good levels of daylight into lower levels of buildings, provide an outlook from within apartments and allow daylight and sunlight to reach into communal and public spaces. It also allows space for landscaping including canopy trees. As buildings get taller, they need greater separation distances to maintain good daylight access.

Adopting appropriate building separation requirements is essential when setting FARs, however, guidance on building separation varies across different urban settings in Victoria. Minimum building separation distances are not set within BADS. The Built Environment Sustainability Scorecard (BESS) sets out recommended building separation distances to achieve good daylight in buildings which are used by many Victorian Councils.

The preferred separation distance for 8 storey buildings is shown in Figure 21. Adopting this guidance in the early stages of built form testing is pragmatic because it informs the amount of yield which can reasonably be accommodated and avoids conflicts between any assumptions on the development potential when a site is purchased and later daylight testing which can only be done when designs are well advanced.

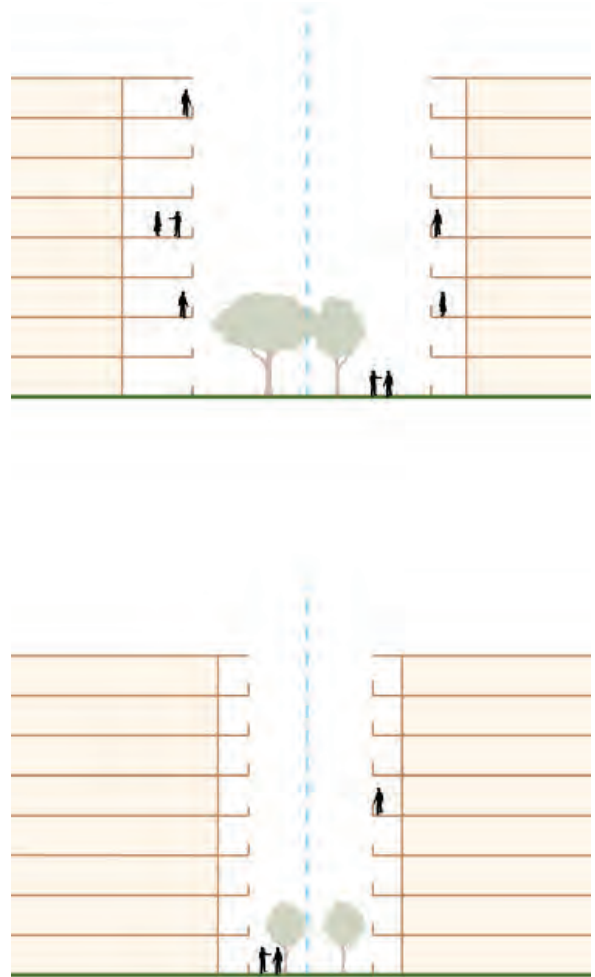


Figure 21. (Above) recommended building separation distances that align with BESS standards for primary outlook (living rooms and balconies) and (below) example of the building separation distances adopted in activity centres in Victoria.

Amount of testing required

It is generally not realistic to model all sites within an area. A representative sample of sites within a study area should be selected for testing. This should cover the range of urban conditions present in the study area and multiple examples of each proposed development typology.

In some instances, the granularity and diversity of site conditions will require a greater degree of testing.

Site consolidation

FARs can be set to incentivise amalgamation of sites to facilitate higher densities and/or improved development feasibility.

If site amalgamation is desired, then the FARs can be calibrated to encourage consolidation. This involves connecting the nominated envelope and FAR to the site size and width. For example, a smaller site may have a preferred height control of 6 storeys and a FAR of 4:1. If it amalgamates with an adjacent property to become a larger site, then the controls that apply could shift to a preferred height of 8 storeys and a FAR of 5:1.

A cautionary note – as shown in the key concepts, larger sites and taller buildings require a looser fit FAR. Using adjusted FARs to encourage site consolidation needs to be carefully tested to ensure that the preferred typologies and appropriate levels of amenity in an area can be delivered.

2.2 Test Floor Area Uplifts if being considered

FAUs can be tested to determine the extent of their use and the capped level that should apply.

Identify which sites have the flexibility to consider the use of a FAU. This is likely to be large sites and tower typologies where additional yield does not distort design outcomes, e.g. lead to an undesirable shift in typologies (from mid-rise to towers) or result in pressure to reduce building separation and other amenity outcomes.

The calculation between the FAU benefit received and the cost of delivering the public benefits needs to be known in order to undertake this testing.

2.3 Capacity & feasibility testing (Parallel process)

Capacity testing provides the opportunity to check whether the proposed development settings are delivering sufficient housing supply and employment floor area.

FARs enable the straight-forward calculation of the potential gross yield that will be delivered in an area. For each potential development site, the amount of gross yield is simply the site size multiplied by the applicable FAR.

This gross yield needs to be distributed by use (e.g. commercial, residential) and then converted to net saleable/leasable area to calculate the number of dwellings and jobs.

If targets aren't being met, adapting the preferred typologies to higher density forms where possible may be required.

Undertaking commercial feasibility testing of a sample selection of sites will assist in understanding whether the proposed FARs are aligned with current market conditions.

It is important to remember, however, that the amount of floor area allowed on a site is only one factor of development feasibility. The cost of land is a key factor and can be either elevated or lowered through the application of the FAR. Similarly, the market value of apartments will be influenced by the sales price of neighbouring developments. Poor quality developments with low amenity will depress sales values and diminish development feasibility of future developments.

This feasibility testing can also include consideration of the public domain costs to ensure that the controls all work in harmony.

3 Refinement and calibration

3.1 Finalise FAR and FAUs

The FARs should be assessed against agreed strategic planning and design objectives that are established for each place reflecting the local priorities and conditions. This requires an iterative testing approach to identify the maximum FAR that can be delivered while still meeting all objectives. Increasing or decreasing the FAR enables sensitivity testing to find the right ‘fit’ against the agreed criteria. The testing of FAUs would also be considered against the objectives if they are being considered.

An example of this is included below and in Figures 28 – 30. This demonstrates that both the FAR of 4:1 and 5:1 meet all the objectives. The preferred FAR is 5:1 as this optimises both development potential and design outcomes.

Objective (indicative examples)	FAR Test 1 4:1	FAR Test 2 5.0:1	FAR Test 3 6.0:1	Comments
Preferred character of mid-rise, party wall development	Yes	Yes	Yes	All FARs can deliver a mid-rise building
Sunlight to streets is maintained	Yes	Yes	No	The FAR of 6:1 results in a taller street wall that overshadows the street
Sufficient daylight reaches into apartments	Yes	Yes	No	The FAR of 6:1 results in a much narrower light well that does not meet minimum daylight access requirements
Minimum deep soil planting areas and canopy tree requirements are met	Yes	Yes	No	The FAR of 6:1 results in a loss of deep soil planting

Figure 22. Example of assessment criteria for sensitivity testing of proposed FARs

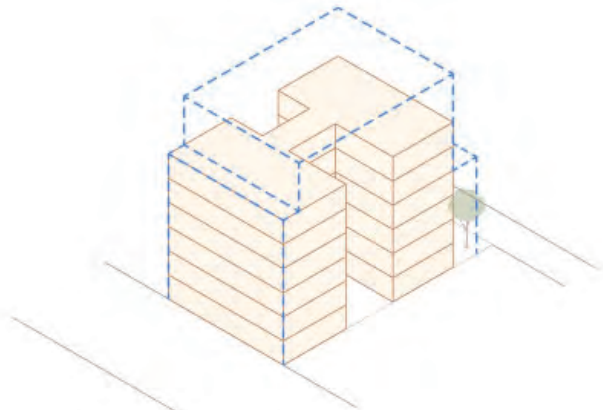


Figure 23. The FAR of 4:1 represents an under-development of this site - the fit is too loose.

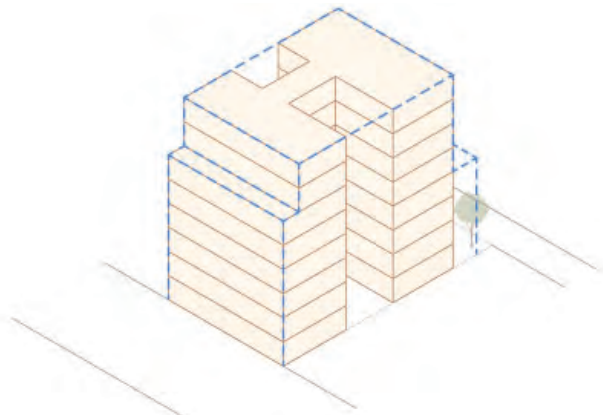


Figure 24. An optimum fit FAR of 5:1 which optimises development potential and positive design outcomes.

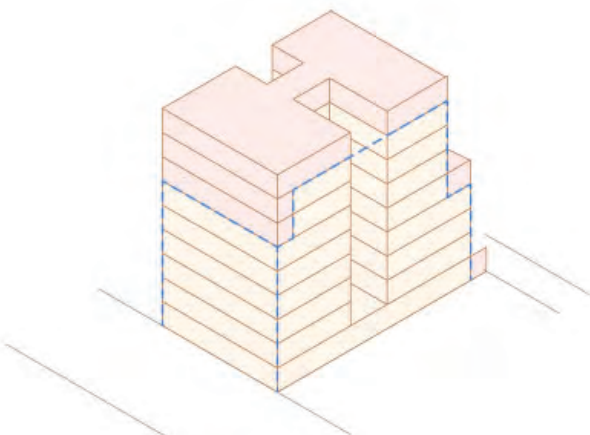


Figure 25. An overly tight 'fit' of 6:1 where design outcomes are compromised.

Image 7. 4 Ballarat Street, Brunswick
Fieldwork
Developer: Assemble
Large site, infill
8 storeys, Net FAR: 5:1
Image: Xavier Porter



Common questions about FARs

Where should FARs be used (in what contexts do FARs add the most value?)	FARs have the most value in urban settings with high market demand and in medium to high density environments. This is because of the key role they play in regulating land value (which avoids speculation and negative design outcomes resulting from over-development) and supporting design flexibility to respond to local conditions.
Are there instances where the use of FARs aren't appropriate?	FARs aren't suitable for all contexts. FARs support flexibility in responding to locally contextual drivers. In contexts where this flexibility is not desired - e.g. in a highly intact heritage precinct, the FAR may add little value. In this instance other controls that provide greater certainty, for example a mandatory height control, will be better suited.
Why use both a FAR and building envelope controls?	These controls do two different things. A building envelope controls the shape of a building, protects for solar access and guides building separation. A FAR controls the floorspace (and therefore the overall bulk and intensity of use on a site) and are an important tool in stabilising land values. They work as complementary planning tools.
What happens if the FAR controls are calibrated to be the wrong 'fit'?	Poorly calibrated FAR controls should be avoided. If the FAR is too low, then it can result in underdevelopment of an area. If the FAR is too high, then this will result in unrealistic market expectations (leading developers to overpay for sites), a divergence from the preferred character outcome (e.g. delivery of towers where mid-rise buildings are sought), and poorer development outcomes with lower private and public amenity.
Do FARs 'unnaturally' limit housing supply?	This is only true if the FAR are calibrated to be too low. If the FARs are calibrated to align with the preferred development densities then they will not limit supply of the preferred development outcome. FARs support more efficient housing markets. By regulating land values, they deter development speculation, and encourage landholders to sell now (rather than wait for potentially higher profits later).
Do FARs lock in 'underdevelopment' of land?	No. Like all controls in the planning scheme the FARs can be varied if the contextual drivers change. For example if new infrastructure is delivered that supports higher densities the FARs can be increased.

Do FARs make housing development unfeasible?	The amount of floor space that can be built on a site is only one factor in determining development feasibility. Other factors include how much the developer paid for the land, construction and financing costs and how much developer can sell the apartments for. FARs assist in development feasibility by: • Setting clear expectations of land value, avoiding the developer overpaying for land. • Supporting development equity and removing a ‘first-come, best-dressed’ approach to development where the first sites develop deliver higher yields by limiting the amenity of adjacent sites. • Enabling designers to deliver more efficient building forms (i.e. reducing multiple stepped forms) which are more cost-effective to build. • Supporting a more efficient planning assessment pathway which reduces financial holding costs. • Delivering better quality apartments which sell for higher values. Escalation in other costs, in particular construction and financing costs are causing significant headwinds for development feasibility but are not influenced by a FAR.
What happens if the introduction of a FAR results in less development yield than was previously available?	It is a challenge to introduce FAR controls in existing high-density settings that currently have only discretionary envelope controls. In some cases, a FAR may reduce yields compared to what developers expected under the existing system and this will be perceived as a loss of yield and revenue. However, this often reflects poor assumptions about achieving higher yields than a liveable development would support or maximising a site at the expense of quality or neighbouring development potential.
Does setting a mandatory FAR limit the designer’s creativity?	No, the opposite is true. While it seems contradictory, creativity is far more limited with only a discretionary control as the designer is required to push as much yield into the envelope as possible to maximise profit margins and compete against other potential purchasers of the site, removing any flexibility on design responses. Creativity is enhanced by freeing up the designer’s hand to decide how that yield is best massed on the site to respond to the site context and the proposed building program.
Do discretionary FARs work?	The benefits of FARs are significantly diminished if the FAR is discretionary. This is because the over-riding benefit of FARs – the certainty they provide – which supports efficient land markets, design flexibility and productive planning assessment processes is undermined with a discretionary FAR.

Glossary

Better Apartment Design Standards (BADS)	A set of planning policy standards introduced in Victoria in 2017 (and updated since) that set minimum requirements for apartment developments
Deemed-to-Comply	A regulatory mechanism where a proposal that satisfies a defined set of prescriptive criteria (such as height, setbacks, and other built form parameters) is automatically treated as compliant with the relevant planning requirement, removing planning authority discretion to refuse the application on those specific grounds.
Floor Area Ratio (FAR) – also called a plot ratio and Floor Space Ratio (FSR)	A development control that sets the Gross Floor Area (GFA) that can be built within a building as a multiple of its site area.
Floor Area Uplift (FAU)	An increase to the otherwise applicable FAR, usually granted in exchange for a public benefit – affordable housing contributions, public open space, heritage retention, or similar.
Gross Floor Area (GFA)	In Victoria the GFA that informs the FAR calculation includes all floorspace above ground. Across Australia different methods of calculating the GFA will lead to a different FAR result for an identical building.
Land sterilisation	A situation in which land becomes effectively undevelopable, typically because its market price (driven by inflated yield expectations) exceeds what can actually be built and sold profitably on the site. Once this gap emerges, the land may sit vacant or underutilised indefinitely, since no feasible development can recover the price paid for it.
Net Saleable Area	The portion of a building’s floor area that is actually usable or saleable, after excluding structural elements, shared circulation, vertical penetrations (lifts, stairs), and building services.

