

Erection of Tall Buildings in Central Sydney

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1

Introduction

This paper provides the evidence base for the proposed amendments to Sydney LEP 2012 for the erection of tall buildings in Central Sydney. It provides the strategic and planning context, background to relevant controls, analysis of contemporary examples, a description of reoccurring issues, and, the amendments required in order to promote appropriate tall buildings.

Tall buildings (buildings above 55 metres in height) on small sites (sites less than 1,000 square metres in area) when poorly designed result in unattractive streetscapes with unacceptable urban outcomes. These include inappropriate tower proportions, blank side walls, secondary street walls, poor public domain amenity (daylight, sunlight, wind and air quality), poor occupant amenity and visual privacy, and, poor active street frontages with dominant vehicular access and circulation.

The loss of small sites to tall buildings where these sites could have been part of larger amalgamated sites also hinders the ability for Central Sydney to grow its internationally competitive commercial sector, contrary to the NSW Government's Eastern City District Plan.

New office towers require relatively large floorplates (800 to 2,000 square metres) on large sites. The mid-town and southern precincts of the Sydney CBD, which hold most development potential, have a profusion of relatively small sites. New sites need to be consolidated, which takes time and occurs in phases.

The more difficult it is to merge sites, the higher the likelihood that existing buildings will be converted to other uses, thus limiting Sydney CBD's capacity to accommodate future demand for office space.

Eastern City District Plan, page 57

Studies of tall building development applications since 1998 and recent development applications considered by the City and the Land and Environment Court demonstrate that a site area of 1,000 square metres is the minimum area that allows site dimensions to comfortably support appropriate setbacks above a street wall. Setbacks are necessary for a tall building to provide outlook, light and amenity to public places, separation of bulk from neighbouring buildings, a high quality urban form and a high level of amenity to public spaces.

The purpose of this paper is to support a proposed 1,000 square metre non-discretionary minimum site area for tall buildings and merit considerations for when assessing tall buildings. These changes are necessary to provide certainty to market and to promote high liveability in Central Sydney for its workers, visitors, residents, and, clean, safe and attractive public places, all of which contribute to increasing the productivity of the Harbour CBD.

The Greater Sydney Region Plan and the Eastern City District Plan

The Central Sydney Planning Framework delivers 3 million square metres of new floor space, accommodates 105,000 – 140,000 new jobs and delivers on the NSW Government's District Plan job targets without permitting sites smaller than 1,000 square metres to develop above 55 metres in height.

The proposed amendments to Sydney LEP 2012 in relation to the erection of tall buildings in Central Sydney give effect to the District Plan, specially Planning Priority E6, E7 and E16 and Actions 18, 21, 24, 25, 63 and 64.

The Greater Sydney Region Plan and the Eastern City District Plan acknowledge that the success of the Harbour CBD, of which Central Sydney is a precinct, is underpinned by competitive advantages including:

- internationally desirable premium-grade and A-grade office space supported by lower cost office spaces
- safe and high-amenity residential precincts, and
- a highly valued natural environment.

Where the District Plan requires the City to strengthen the international competitiveness of the Harbour CBD and grow its vibrancy by growing an internationally competitive commercial sector (see Action 24) it asks the City to do so using a place-based approach:

High liveability for workers and visitors and clean, safe and attractive public places and natural environments contribute to the productivity of the Harbour CBD. They generate business investment from around the world, leading to economic and jobs growth and a globally enhanced reputation. These considerations are detailed in Planning Priority E6 and Planning Priority E16.

Eastern City District Plan, page 59

Figure 1
Blank side wall
Secondary street wall



Central Sydney Planning Strategy

The Central Sydney Planning Strategy's approach to height controls is based on the key principle of creating a liveable city. Central Sydney's parks, streets and precincts together play an important role in making Sydney a highly liveable city, so protecting their amenity is of key importance.

The proposed amendments to the height control framework are in direct response to Action 3.3 of the Central Sydney Planning Strategy which seeks to limit the height of buildings to 55 metres on sites smaller than 1,000 square metres.

In Central Sydney, tall buildings are defined as those higher than 55 metres above ground. The 55 metres relates to Central Sydney's original height restriction in 1908 where buildings were restricted in height to 150 feet (45.72 metres) in height. The 55 metres accommodated additional part stories, plant and lift overruns one could achieve above 45 metres in height, setback from a sites primary street frontage.

Today, Central Sydney is characterised by buildings predominately 55 metres in height or less determining a strong street wall character (see Figure 4). These buildings include the majority of Central Sydney's heritage listed buildings and contribute to some of Central Sydney's most celebrated streets and precincts in terms of scale, form, activation and architectural detail.

Taller buildings are then dotted throughout the area, set back above the street wall, establishing a podium and tower characteristic that maximises the amount of floor space and provides the high amenity environmental outcomes.

The proposed amendments reinforce the predominant 55 metre height maximum and preferred tower and podium typology where podiums frame public space and ameliorate wind impacts and towers have appropriate setbacks and separation, maximising daylight to public places and streets (see Figures 2 and 3).

Figure 2
Historical street wall pattern of development

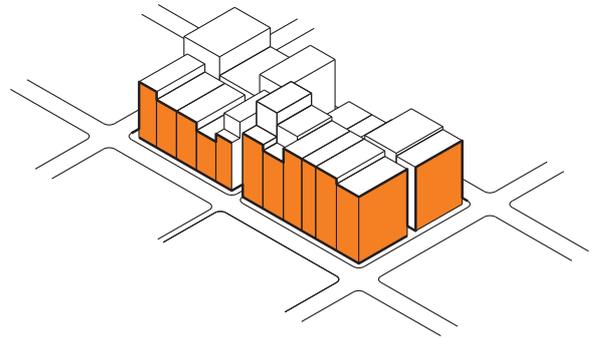


Figure 3
Preferred tower and podium typology

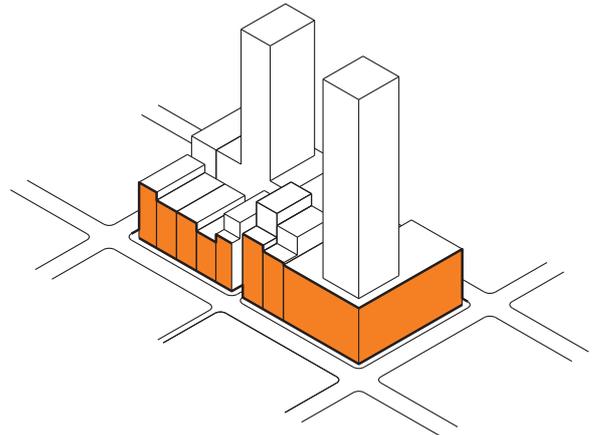
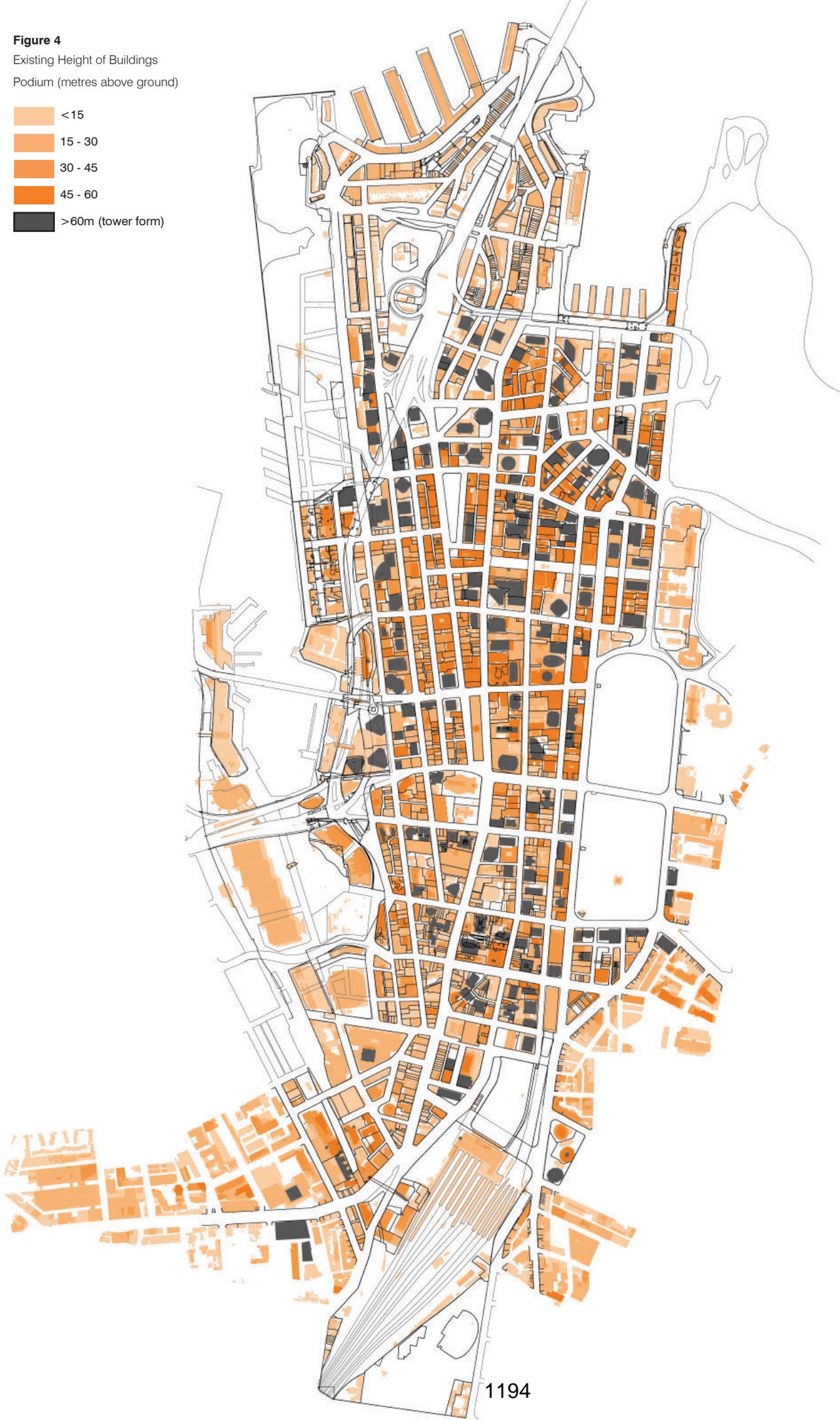


Figure 4
Existing Height of Buildings
Podium (metres above ground)

-  <15
-  15 - 30
-  30 - 45
-  45 - 60
-  >60m (tower form)



2

Background

An understanding of the evolution of the small sites-tall buildings clause demonstrates that whilst cities are always changing, the urban amenity issues created by developing a tall building on small sites are not. The issues have persisted and over the last 20 years our understanding of these issues has been furthered by an increasing number of built examples.

Central Sydney LEP 1996

When gazetted 20 December 1996, Central Sydney LEP 1996 did not contain a minimum site area for tall buildings. In relation to maximum building height it contained the following clause:

32 Height of buildings

- (1) *The height of a building on any land is not to exceed the height for the land shown on the Height Map. The achievement of any height is subject to compliance with floor space ratio controls and other provisions of this Plan as well as the provisions of Central Sydney Local Environmental Plan 1992—Conservation of Heritage Item.*

Cityplan review: Small sites in the city centre discussion paper 1998

The 1998 Discussion Paper was the product of the Central Sydney LEP 1996 at the time having no restriction in building height for smaller sites and the City dealing with reoccurring issues relating to tall buildings proposed on smaller sites (see Section 4). Envelope restrictions existed in the Central Sydney DCP 1996, however DCP considerations around street wall height, tower setbacks, active frontage etc. were routinely not enforced as they were seen to erode 'as of right' FSR and height maximums in the LEP.

The controls in the LEP also provide an expectation of what can be achieved on the site in terms of height and FSR. When the DCP is applied, the development expectation may be severely restricted. However, it is difficult to refuse a development on the basis of setback requirements in a DCP when it complies with the LEP controls.

Cityplan Review: Small Sites in the City Centre Discussion Paper 1998

The 1998 Discussion Paper was just one discussion paper part of a larger 'Cityplan' review between 1998 and 2000. Prior to 2015-16 boom, the mid to late 1990s period represented the largest period for residential, hotel and serviced apartment applications and approvals in Central Sydney. The Cityplan review sought to ensure the LEP was fit for purpose and responded to contemporary land use planning issues at the time.

Following a study of 5 recent development applications and 7 generic site tests (12 test sites in total) the 1998 Discussion Paper recommended the following LEP amendments:

Height limit

A 45 metre height limit for sites 1,000 square metres or less (plus additional floors within a 45 degree projected plane from the street wall height)

Setbacks

Side setbacks of a 6 metre minimum, or 8 metre average to be required for all sites above 45 metres (or the street wall height)

Central Sydney LEP 1996 (Amendment No 8)

The 1998 Discussion Paper recommendations were not implemented at the time, however the issues gave rise to Central Sydney LEP 1996 (Amendment No 8) and the introduction of development plans/site context planning, design excellence and competitive process for major developments.

Development plans required by Clause 32 (below) were introduced to address tower location on sites, having regard to the need to achieve an acceptable relationship with other towers (existing or proposed) on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form and environmental impacts within the public domain. It was determined at the time that the setback and separation issues identified by the 1996 Discussion Paper were best resolved on a site by site basis through development plans (Stage 1 or Concept DAs) rather than through LEP setback controls.

Clause 35 (below) limited all sites in Central Sydney to a maximum FSR of 8:1 unless the development complied with the height, urban design and development plan provisions of the LEP. This provided a strong signal to market that all any floor space above 8:1 was conditional on demonstrating compliance with the height, urban design and development plan provisions and objectives of the LEP.

When gazetted 4 March 2000 Central Sydney LEP 1996 (Amendment No 8) contained the following clauses relevant to the erection of tall buildings in Central Sydney:

32 Height of buildings

- (1) *The height of a building on any land is not to exceed 55 metres unless otherwise permitted by the consent authority in accordance with a development plan and within the heights indicated on the Height Map.*
- (1A) *The achievement of the maximum height shown on the Height Map is subject to compliance with:*
 - (a) *the floor space ratio, development plan and design excellence provisions and other provisions of this Plan*

35 Maximum floor space ratios—generally

- (1) *The floor space ratio of a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.*
- (1A) *The achievement of the floor space ratio shown on the Floor Space Ratio Map is subject to compliance with:*
 - (a) *the height, development plan and design excellence provisions and other provisions of this Plan, and*

Small sites and tower development research paper 2002

Following the gazettal of Central Sydney LEP 1996 (Amendment No 8) the City continued to receive applications for tall buildings over 55 metres in height on small sites. Applicants prepared development plans (Stage 1 or Concept DAs) in accordance with amended Clause 32 and 35 but without specific controls (as opposed to objectives) that addressed appropriate site conditions for tall buildings, the City continually found themselves in court arguing over the problems of tall buildings on small sites.

Since this time, further development applications have been received for small sites exhibiting similar problems to those identified in the 1998 report. Whilst these applications have not been supported by Council (justified by the provisions of Amendment No. 8 in relation to the achievement of design excellence), significant time, resources and money is spent by both the applicant and the Council, in dealing with these applications, both in-house and in court.

Small Sites and Tower Development Research Paper 2002

In response to these applications, the 1998 Discussion Paper and its recommendations were revisited by the 2002 Research Paper. This paper reconsidered the introduction of additional controls within the LEP and DCP to discourage development proposals for tall buildings on small sites.

The paper included a study of 3 development application sites and 6 generic testing sites (9 test sites in total) in addition to the 12 tested in 1998. The study found the same reoccurring issues relating to tall buildings proposed on smaller sites (see Section 4). In response to the 1998 Discussion Paper and taking into account the additional testing, the 2002 Research Paper recommended the following LEP controls:

Height limit

Attainment of height over 55 metres to be dependent on a site area of 800 square metres or greater

Setbacks

Design excellence controls reviewed to ensure that the notion of 'towers in the round' was enshrined in the aims and objectives of the LEP

Car parking

Car access (i.e. services, vehicular entry/exit points) to be dependent on a street frontage width of 15 metres or more

The recommendations revised from the 1996 Discussion Paper were; the reduced minimum site area requirement for tall buildings from 1,000 square metres to 800 square metres, and; the absence of setback recommendations for the LEP.

Sydney LEP 2005

The recommendations of the 2002 Research Paper were generally incorporated into Clause 50 of Sydney LEP 2005, with the exception of a minimum street frontage width control to achieve car access.

Clause 54 (right) of Sydney LEP 2005 retained the requirement for developments proposed over 8:1 to comply with the height and development plan provisions of the LEP, extending these considerations to design excellence, heritage and ESD principles. This requirement was perhaps a weaker signal than that in Central Sydney LEP 1996 given Clause 54 also dealt with Accommodation Floor Space.

When gazetted 9 December 2005 Sydney LEP 2005 contained the following clauses relevant to the erection of tall buildings in Central Sydney:

50 Height of buildings

- (1) *The height of a building on any land is not to exceed the height shown for the land indicated on the Central Sydney Height Map.*
- (2) *Despite subclause (1), consent must not be granted to a building on any land if the height of the building exceeds 55 metres unless:*
 - (a) *the site area of the development is 800 square metres or more, or*
 - (b) *the consent authority is satisfied that the proposed development achieves:*
 - (i) *appropriate height to plan width proportions that are compatible with the massing, street frontage and tower forms within the locality, and*
 - (ii) *a separation of any towers to achieve the "tower in the round" built form characteristic, and*
 - (iii) *adequate amenity and privacy for occupants, and*
 - (iv) *active street frontages, and*
 - (v) *sufficient space for vehicle circulation and access ramps*
- (3) *The achievement of the maximum height shown on the Central Sydney Height Map is subject to compliance with the floor space ratio, development plan, design excellence, heritage, ecologically sustainable development and other provisions of this plan.*

54 Maximum floor space ratios—generally

- (1) *The floor space ratio of a building on any land is not to exceed the floor space ratio shown for the land on the Central Sydney Floor Space Ratio Map.*
- (2) *Despite subclause (1), consent may be granted to development that will result in a building on a site within the City Centre zone that has a floor space ratio (additional to the ratio provided for by subclause (1)) up to the following maximum:*
 - (a) *(additional floor space allocated by use i.e. 'Accommodation Floor Space' provisions)*
- (3) *The achievement of a maximum floor space ratio set by subclause (1) and (2) is subject to compliance with:*
 - (a) *the height, development plan, design excellence, heritage, ecologically sustainable development and other provisions of this plan, and*

Sydney LEP 2012

Sydney LEP 2012 was the product of the former South Sydney Council and parts of former Leichhardt Council being amalgamated with the City of Sydney Council, the NSW Government's requirement for all new LEPs to comply with their published Standard Instrument LEP, and the requirement for the City to consolidate the numerous LEPs that applied. It was largely a translation exercise that didn't deal significantly in reviews of controls or outcomes.

Clause 6.16 (right) still applies today. How Clause 6.16 applies to development and its effect is analysed in detail in Commissioner O'Neill's judgement for Land and Environment Court case NFF at 410 Pitt Street Pty Ltd v Council of the City of Sydney [(2016) NSWLEC 1181]. Commissioner O'Neill's judgement determined that:

- the objectives of Clause 6.16 are not required to be addressed in any development application lodged. As such they have effect in influencing development outcomes
- Clause 6.16 only applies to sites less than 800 square metres. That is, the requirements of the clause only have effect on sites less than 800 square metres. The clause has no effect on sites 800 square metres or more and therefore no effect on tall buildings over 55 metres in height, and
- that 6.16(3)(a) only requires a tall building on a small site to be a 'freestanding tower' with an undefined proportion of each face visible from a public place.

An understanding of the evolution of the small sites-tall buildings clause and a consideration of development applications since January 2013 (see Section 4) demonstrates that the clause as constructed today is not fit to address the reoccurring issues relating to tall buildings proposed on small sites. When read in conjunction with Sydney LEP 2012 today as a whole, in relation to tall buildings, Clause 6.16 fails to:

- (a) provide for good amenity to public places
- (b) require appropriate setbacks that allow light and air to permeate public places
- (c) require tall buildings to be appropriately separated from surrounding tall buildings
- (d) provide for adequate outlook
- (e) require tall buildings to have an appropriate arrangement of height and floor space above 8:1 that responds to their site, surrounding development, heritage items in Special Character Areas and conservation areas and nearby Public Places
- (f) require tall buildings to be consistent in character with other tall buildings in Central Sydney that have towers set back on all sides (i.e. 'towers in the round')

- (g) encourage amalgamation of smaller contiguous sites, resulting in larger sites with appropriate tower setbacks and separation providing for outlook and the efficient use of developable land within Central Sydney.

When gazetted 14 December 2012 Sydney LEP 2012 contained the following clauses relevant to the erection of tall buildings in Central Sydney:

6.16 Erection of tall buildings in Central Sydney

- (1) *The objectives of this clause are to ensure that tower development on land in Central Sydney:*
 - (a) *provides amenity for the occupants of the tower and neighbouring buildings, and*
 - (b) *does not adversely affect the amenity of public places, and*
 - (c) *is compatible with its context, and*
 - (d) *provides for sunlight to reach the sides and rear of the tower, and*
 - (e) *promotes the ventilation of Central Sydney by allowing the free movement of air around towers, and*
 - (f) *encourages uses with active street frontages.*
- (2) *This clause applies to development involving the erection of a building with a height greater than 55 metres above ground level (existing) on land in Central Sydney.*
- (3) *Development consent must not be granted to development to which this clause applies if the building is on land having a site area of less than 800 square metres unless the consent authority is satisfied that:*
 - (a) *the building will have a freestanding tower each face of which will be able to be seen from a public place, and*
 - (b) *the development will provide adequate amenity and privacy for occupants of the building and will not significantly adversely affect the amenity and privacy of occupants of neighbouring buildings, and*
 - (c) *the ground floor of all sides of the building facing the street will be used for the purposes of business premises or retail premises.*

3

Development applications since January 2013

The analysis of the data provides an evidence base aid in determining an appropriate minimum site area and merit considerations for buildings over 55 metres in height.

Appendix A provides data for 41 development applications lodged with the City since January 2013. The development applications are limited to where the construction of a new building was proposed and a site-specific DCP did not apply. They are mix of Council/CSPC approved and refused, Court approved and refused, under assessment and withdrawn proposals. This analysis builds on that already presented in the 1998 Discussion and 2002 Research papers.

Analysis

Buildings proposed 55 metres in height or less on sites 800 square metres or less

- 15 sites and development applications analysed
- None of the applications had significant street frontage height or setback related issues
- All but 1 application was approved by Council/CSPC
- The 1 application determined by the Land and Environment Court (LEC) was resolved via amended drawings that satisfied council submitted during court proceedings
- 9 of the applications provided poor street activation (where <70% of total street frontage was active)
- 8 of the applications that rated poor activation provided car parking or loading access
- All of the applications that provided onsite car parking also provided a car stacker/lift
- 5 out of 6 of applications that rated excellent activation (>70%) provided no car parking access or loading

Buildings proposed above 55 metres in height on sites 800 square metres or less

- 8 sites and development applications analysed
- All of the applications had significant street frontage height, setback or streetscape related issues
- 4 of the applications were/will be determined by the LEC
- Of the remaining 4 not determined by the LEC; 1 was withdrawn, 1 is under assessment, and 2 related to 'island sites' (see below)
- None of the sites are in Special Character Areas
- 7 of the applications provided poor street activation
- 6 of the 7 applications that rated poor activation provided car parking or loading access
- All of the applications that provided onsite car parking also provided a car stacker/lift
- The 1 application that rated excellent activation benefited from an access easement across private land

Buildings proposed above 55 metres in height on sites 1,031 square metres or less and more than 800 square metres

- 3 sites and development applications analysed
- All of the applications had significant street frontage height, setback or streetscape related issues
- 1 application was determined by the LEC
- Of the remaining 2 not determined by the LEC, both related to island sites
- All of the applications provided poor street activation
- All of the applications that rated poor activation provided car parking or loading access

Buildings proposed above 55 metres in height on sites more than 1,031 square metres

- 12 sites and development applications analysed
- None of applications had significant street frontage height, setback or streetscape related issues
- All but 1 of the applications were approved by Council/CSPC
- The remaining 1 application is still under assessment
- All but 1 of the applications provided excellent street activation
- The 1 application that rated poorly is still the subject of a design competition and Stage 2 development application

Active street frontages

Appendix A demonstrates that sites larger than 1,000 square metres in site area are much more capable of providing appropriate street frontage activation than sites less than 1,000 square metres. Between January 2013 and today just 30% of sites developed under 1,031 square metres provided excellent street activation whereas 86% of sites over 1,031 square metres did.

A minimum site area of 1,000 square metres for tall buildings provides a clear threshold in which the City can be confident that a site can accommodate the servicing and access requirements for buildings over 55 metres in height.



Figure 5
Poor active street frontage and
dominant vehicular access and
circulation

Island sites

On 4 occasions since January 2013 the City has determined that a tall building could be accommodated on a site less than 1,000 square metres in area. On each occasion the site had 3 street/lane frontages. Access to 3 frontages permitted these tall buildings on each occasion to:

- achieve appropriate tower separation appearing as a tower in the round
- demonstrate appropriate provision of amenity and privacy for future occupants
- demonstrate acceptable impact on the amenity and privacy of surrounding properties
- not adversely affect the amenity of public places (sunlight access, daylight access and wind conditions)

The developments were also individually assessed to be consistent with their surrounding context in terms of massing and street frontage heights. Three of the 4 developments were located outside of Special Character Areas with the 4th located on the edge of the Hyde Park Special Character Area and determined to be consistent with the Special Character Area's specific local character controls. Each of the sites were isolated, being restricted in their ability to amalgamate with their adjacent site (either heritage listed or strata subdivided into more than 100 separate lots).

History shows that isolated island sites are the only situation where a site less than 1,000 square metres can appropriately accommodate a building over 55 metres in height. Even then, as Appendix A shows, any site below 1,031 square metres (closest example to 1,000 square metres) still has significant difficulty in accommodating the required street frontage heights, setbacks and street activation. These non-compliances create streetscape and public domain amenity issues and detract from the amenity and privacy of surrounding properties and future occupants.

Figure 6 shows that the number of remaining isolated island sites, less than 1,000 square metres, not recently developed, and, are outside of Special Character Area, is limited to 3. Each of the 3 have a site area significantly less than the existing minimum site area for a tall building of 800 square metres (240, 263 and 398 square metres). These sites are considered unsuitable for a buildings over 55 metres in height. A building over 55 metres in height on these site would be unable to achieve the objectives of clause 6.16.

A number of isolated capacity sites are available with 1 or 2 street frontages, predominantly within Special Character Areas. These sites are considered best developed to a maximum 55 metres in height, consistent with historical development applications proposing buildings 55 metres in height of less on sites 800 square metres or less considered by Council since January 2013.

With no remaining developable isolated island sites in Central Sydney that could appropriately accommodate a tall building, a non-discretionary minimum site area of 1,000sqm for buildings over 55 metres in height is considered appropriate. A non-discretionary minimum site area of 1,000sqm provides certainty to market and promotes good design and amenity of the built environment and the proper construction of buildings, including the protection of the health and safety of their occupants in line with the objects of the act.

Figure 6

Isolated small capacity sites
(sites <1,000 square metres)

- Buildings proposed 55 metres in height or less
- Court determined buildings proposed above 55 metres in height
- Council/CSPC determined buildings proposed above 55 metres in height
- Remaining isolated small capacity sites



4

Reoccurring issues

The 1998 Discussion Paper, the 2002 Research Paper and this paper all highlight reoccurring issues where tall buildings were proposed or approved on small sites.

Issue 1

Inappropriate tower proportions and streetscape

Small sites are usually characterised by narrow frontage(s). Narrow frontages, when coupled with the maximum floor space ratios within the LEP can lead to a very thin tower form. Where this type of tower occurs as a 'stand-alone' element within the city street the proportional relationships between the street frontage and the tower, as well as the urban form of the city, is usually unacceptable. Such towers often encroach right up to all site boundaries resulting in blank side walls and abutting tower forms.

Issue 2

Insufficient setbacks and separation (secondary street walls)

To maximise the development potential of small sites most development proposals develop right up to side boundaries. Where this occurs next to an existing tower that either abuts the boundary, or is located very close to the boundary, a secondary street wall is created. Should this continue to occur for a number of sites along a street then a high level wall (either without any separation or with narrow canyons between buildings) is created and may be up to 150 or 235 metres in height.

This type of development leads to high, blank side boundary walls, which again may be 150 or even 235 metres high. Depending on the development cycles within the city, blank side boundary walls may be exposed to the public domain for years before adjoining development occurs, and as it occurs, a secondary street wall develops.

Secondary street walls affect the urban form of the city which is characterised by low street walls and towers in the round (see Introduction). It also affects the amenity of the public domain by denying the street the benefit of daylight, sunlight, ventilation (poor air quality) and view opportunities normally associated with spacing between high rise towers. 'Canyoning' of the streets, where both sides of the street develop secondary street walls, can also result in increased wind velocities at street level for pedestrians.

Figure 7

Inappropriate tower proportions and streetscape

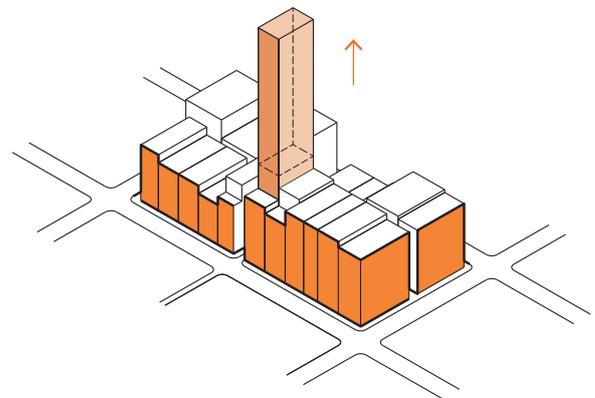


Figure 8

Insufficient setbacks and separation (secondary street walls)

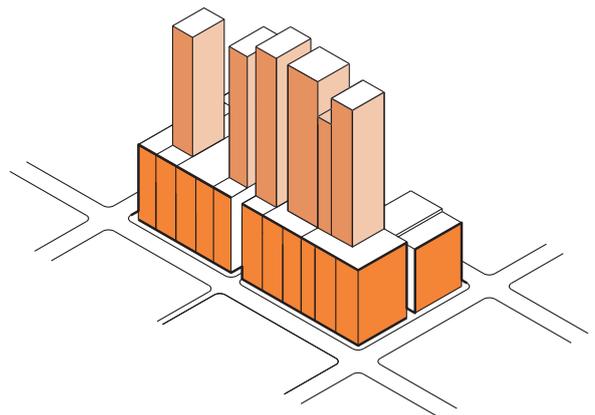




Figure 9
Insufficient setbacks and separation (secondary street walls)

Issue 3

Poor residential amenity and visual privacy (separation and outlook)

Separation through setbacks serves other purposes, including providing appropriate levels of privacy for apartments, access to daylight, ventilation, views/outlook and visual/acoustic privacy. A small site will often not have the area required to meet a diverse range of needs, such as achieving side setbacks, maximising FSR and achieving a reasonable floorplate (hence, no separation or limited separation would be provided).

Developers will usually provide minimum setbacks to the side and rear boundaries. Some developers will propose buildings with close to no side and rear setbacks, which significantly compromises residential amenity, resulting in unit designs with a single orientation, no opportunities for cross-ventilation and rooms dependant on borrowed or electric light and mechanical ventilation (see Figure 10).

Issue 4

Poor active street frontages and dominant vehicular access and circulation

Many small sites have only one street frontage and this may be limited in width. The majority of residential developments propose car parking for residents as part of the project. On narrow fronted sites this poses a significant problem regarding an active street frontage.

To accommodate vehicular access and servicing within a street frontage, in most circumstances 10 metres will be required for services and underground parking. For example:

- a vehicle crossing (4 - 6 metres)
- fire exits (minimum 4 doors required for a tower form approximately 4-6 metres)
- other servicing requirements such as fire control rooms (1 - 4 metres), and
- the lobby entrance (1 - 3 metres).

Within a narrow site frontage, the minimum length for accommodating the fire exits and vehicle crossing of 10 metres may be a half to two-thirds of the frontage. In these cases, the remaining frontage will not leave sufficient space to develop an active street frontage, or to provide a positive contribution to the public domain.

The restricted size of small sites may mean that it is not possible to provide both vehicular access/circulation ramps and economical, operational parking for the overall building. To respond to this problem, developers usually propose car lifts (in many instances only one lift), car stackers and turntables which are mechanically operated and thus imperfect in their operation. If they break down they can cause significant disruptions whilst out of order. In some instances installed turntables are not even used meaning vehicles reverse out of sites, creating significant public safety issues.

Car lifts, car stackers and turntables thus have the potential to create congestion both on the street and within the carpark, as well as causing disruption to pedestrian flow due to traffic queuing/waiting for the lift, and in the event of the lift(s) breaking down.

A poorly activated street with dominate vehicular access presents a hostile and ugly streetscape which has wider productivity and place making implications.

Figure 10
 Poor residential amenity and visual privacy (separation and outlook)



Issue 5

Dis-orderly and inefficient use of land

Maximising the efficiency of floor space within the environmental constraints of Central Sydney is the Central Sydney Planning Strategy's key move for the efficient and productive use of land. Land is Central Sydney's most important and finite asset. Sydney must make the most of it. We must ensure it is developed in a way that contributes to a productive city, a city that best utilises our space and land and is smart about the way we grow and encourage intensification of land use.

An evidence based minimum site size for tall building development promotes amalgamation, the achievement of appropriate tower setbacks and outlook and the efficient use of land. By encouraging sites to amalgamate, Central Sydney is maximising what land it does have to achieve a greater supply of productive floor space while managing out inappropriate externalities on neighbouring sites and the public domain such as loss of daylight and wind impacts. At the same time it allows sites to consolidate and activate inefficient uses of land (building services, car parking and loading), and, sites to develop precinct reduction solutions to greenhouse gas emissions, energy, water and waste consumption.

Figure 11

Encouraging the amalgamation of smaller contiguous sites results in larger self-sufficient sites that maximise their ability to accommodate productive floor space.

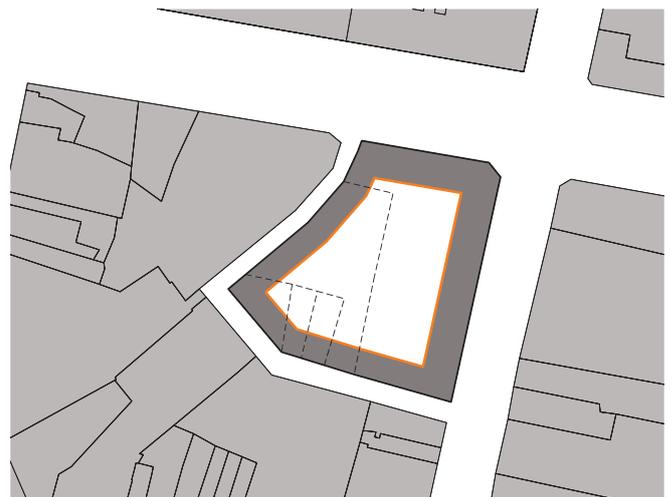
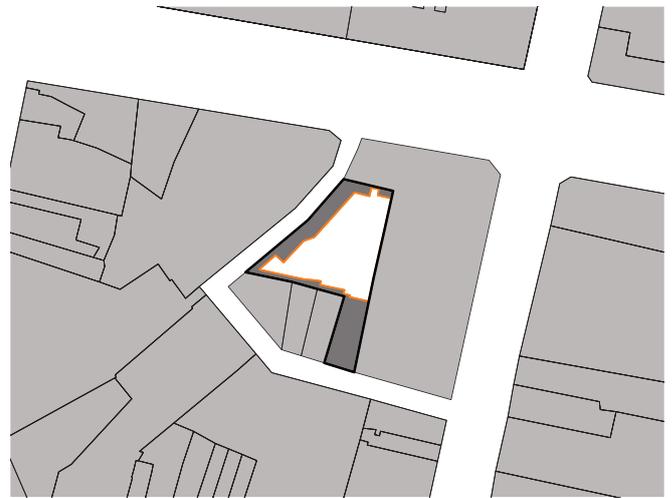


Figure 12
Dis-orderly and inefficient
use of land



5

Proposed amendments to the planning framework

The 5 reoccurring issues highlighted by studies of tall building development applications since 1998 occur in most instances for small sites. The actual dimensions and locations of the sites influenced whether or not the proportional relationship of the facade was acceptable within the street and whether an inactive street frontage is likely to occur. However potential for a secondary street wall, poor residential amenity and reduced public domain amenity (reduced daylight and increased wind impacts) occurs in almost all instances.

Each study concluded that to control development potential on small sites and give development certainty, controls were needed within the LEP, with complimentary DCP controls.

Section 3 demonstrates that the 97 remaining underdeveloped isolated sites with an area under 1,000 square metres are unable to sustain a tall building unless significant compromises are made to the amenity of nearby public spaces, new building occupants, and to adjacent buildings.

Tall buildings on small sites with zero or minimal setbacks facing all streets and boundaries also potentially contribute to a 'secondary street wall' comprising of a continuous wall of towers.

A site area of 1,000 square metres has been demonstrated to be the minimum area that allows site dimensions to comfortably support appropriate setbacks above a street wall – as is necessary for a tall building to provide outlook; light and amenity to public places; separation of bulk from neighbouring buildings; a high quality urban form and a high level of amenity to public spaces.

Previous Discussion and Research Papers considered the following amendments to the planning framework as a reasonable starting point to encourage good urban form and amenity for small sites.

Set a minimum site area and a maximum height limit

A minimum site area for tall buildings coupled with a maximum height limit is the simplest, most enforceable means to limit the potential for secondary street walls at high level. This controls should be included in the LEP to ensure developers have a realistic expectation of a site's development potential.

FSR subject to performance criteria

Since Central Sydney LEP 1996 (Amendment No 8) a site's achievement of its maximum floor space ratio has been subject to compliance with performance criteria. Through different iterations of the LEP, to today, the link between a site achieving its maximum FSR and quality and amenity performance criteria has been weakened. This link should be strengthened in any amendment.

Side setbacks above the street frontage height

The issue of residential amenity primarily relates to the rear and side setbacks under the DCP. This paper recommends that whilst development continues to be restricted in both height and floor space in the LEP, setback and street frontage height controls in the LEP are not required if the link to supporting DCP clauses is strong and direct. If uncapped height or floor space was to be permitted in the LEP then setbacks and street frontage height controls in the LEP must be considered.

Car access to be limited to sites with sufficient site dimensions to achieve active street frontages and circulation

Restricting vehicular access on sites less than 1,000 square metres is consistent with Action 23.7 of the Central Sydney Planning Strategy. Further analysis is required however on the displacement of onsite loading from smaller sites before such a restriction can be imposed. At this point in time, limiting car access to sites with sufficient site dimensions to achieve active street frontages and appropriate circulation will remain matter for consideration under any development application, but it is not recommended as an LEP prohibition.

Amendment to tall buildings controls

To strengthen clause 6.16 it is proposed to revise it as follows:

- To reflect the following objectives:
 - (a) provide for good amenity to public places;
 - (b) maximise active frontages;
 - (c) require appropriate setbacks that allow light and air to permeate public places;
 - (d) require tall buildings to be appropriately separated from surrounding tall buildings;
 - (e) provide for adequate outlook;
 - (f) require tall buildings with an FSR greater than 8:1 to have an appropriate arrangement of height and floor space that responds to their site, surrounding development, heritage items in Special Character Areas and conservation areas and nearby Public Places;
 - (g) require tall buildings to be consistent in character with other tall buildings in Central Sydney that have towers set back on all sides (i.e. 'towers in the round'); and
 - (h) encourage amalgamation of smaller contiguous sites, resulting in larger self-sufficient sites in regards to outlook and the efficient use of developable land within Central Sydney.
- Proposals for all tall buildings will need to demonstrate that they can meet a set of prescribed performance criteria
- The primary emphasis of the performance criteria is on providing for good amenity to public places and publicly accessible land, and, the provision of adequate outlook and tower in the round consistent with the objectives
- Building height is to be limited to 55 metres on sites with an area of 1,000 square metres or less, or that cannot meet the performance criteria
- The performance criteria will apply to all sites above 55m or with an FSR greater than the maximum floor space ratio shown on the Floor Space Map (i.e. 8:1).

Clause 6.16 will not be subject to variation under SLEP2012 Clause 4.6 - Exceptions to development standards. Accordingly it will be listed in Clause 4.6(8).

Suggested wording (subject to legal drafting)

6.16 Erection of tall buildings in Central Sydney

- (1) The objectives of this clause are to ensure:
 - (a) the satisfactory distribution of built form and development of floor space for tall buildings in Central Sydney;
 - (b) tall building setbacks will provide an appropriate level of amenity for Public Places and important publicly accessible places;
 - (c) tall buildings will maximise active Public Place frontages; and
 - (d) tall buildings will provide adequate outlook for occupants of new buildings.
- (2) This clause applies to development involving the erection of a building on land in Central Sydney:
 - (a) with a height greater than 55 metres above ground level (existing), or
 - (b) with a floor space ratio greater than the maximum floor space ratio shown on the Floor Space Map (i.e. 8:1).
- (3) Development consent must not be granted to a building subject to this clause unless the consent authority is satisfied that:
 - (a) the building will not adversely impact on:
 - (i) the wind conditions of Public Places and important publicly accessible places;
 - (ii) key views from Public Places;
 - (iii) the curtilage of heritage items;
 - (iv) the setting and character of buildings and heritage items in conservation areas and Special Character Areas; and
 - (v) the free movement of air that provides ventilation around tower forms.
 - (b) the building provides for high levels of:
 - (i) sun and daylight access to Public Places and important publicly accessible places;
 - (ii) outlook for the proposed development; and
 - (iii) appropriate height transitions between new development and buildings and heritage items in conservation areas and Special Character Areas.
 - (c) any building with a height greater than 55 metres is on land having a site area of more than 1,000 square metres.

Sydney DCP 2012

Amendments to Sydney Development Control Plan 2012 will support the proposed changes to the LEP. The amendments provide more detailed planning controls and guidance for proposed development within Central Sydney.

The revisions relate to built form, development outlook, heritage items, warehouses, special character areas, signage, building exteriors, sun protection of public parks and places, views from public places and managing wind impacts. Locality statements regarding the desired future character of Central Sydney's special character areas have also been revised.

The key new controls prepared for the draft DCP are outlined below.

Built Form

Proposed built form controls outline the desired future form of development in Central Sydney and provide detailed technical guidance on:

- Street Frontage Height and Setbacks;
- Street Frontage Height and Setbacks in Special Character Areas;
- Side and Rear Setbacks and Building Separations; and
- Built form massing, tapering and maximum dimensions.

Outlook and amenity

The proposed controls aim to protect and enhance daylight and winter sunlight to public places and protect public views that are of benefit to the whole community. Proposed controls aim to ensure that sunlight access is maintained to public places and that private views do not restrict new development from occurring. To achieve this:

- new developments will be required to provide adequate setbacks within their site boundaries to guarantee their own minimum outlook; and
- solar and daylight access for residential development and serviced apartments will be measured assuming neighbouring sites are fully developed in accordance with the LEP height and floor space ratio controls. This approach aligns with the Department of Planning and Environment's Apartment Design Guide.

Managing Wind Impacts

This section provides development controls specific to Central Sydney for managing wind effects for new development.

The new controls provide a framework in which future wind assessments must demonstrate the real impact of proposed developments on the public domain in terms of safety and amenity for walking, sitting and standing.

Figure 13
Blank side wall
Secondary street wall



Attachment A

Development applications

January 2013

Appendix A provides data for 41 development applications lodged with the City since January 2013. The development applications are limited to where the construction of a new building was proposed and a site-specific DCP did not apply. They are mix of Council/CSPC approved and refused, Court approved and refused, under assessment and withdrawn proposals. This analysis builds on that already presented in the 1998 Discussion and 2002 Research papers.

DA Number Address	site area (sqm)	total building height	street frontage height (SFH)	setback above SFH	lane SFH	setback above lane SFH	2ndry SFH	setback above 2ndry SFH	FSR	residential (incl. SAs)	non- residential
D/2015/1758 651 George	190.2	49.5	26.9	8	N/A	N/A	14.5	8	7	99%	1%
D/2014/1366 422 Kent	229	55	45	6	N/A	N/A	N/A	N/A	8.98	24%	76%
D/2017/1167 41 Erskine	248	54.58	45	8	N/A	N/A	51.6	0	10.86	0%	100%
D/2015/1100 206A Clarence	255.8	53.9	53.9	N/A	53.9	N/A	N/A	N/A	10.3	0%	100%
D/2017/956 98 Goulburn	326	55	55	0	55	0	55	0	12.97	0%	100%
D/2017/1037 251 Elizabeth	326.8	55	45	4	N/A	N/A	N/A	N/A	11	0%	100%
D/2015/661 410 Pitt	345	110	22.4	8	N/A	N/A	N/A	N/A	11	0%	100%
D/2013/1533 11 Alberta	386.9	72	72	0	72	0	72	0	12.26	97%	3%
D/2014/1307 273 Sussex	393.3	45	45	N/A	45	N/A	N/A	N/A	8.73	82%	18%
D/2011/1779 141 Bathurst	420.6	47.4	47.4	N/A	N/A	N/A	47.4	N/A	11.3	70%	30%
D/2011/1553 49 Dixon	430	55	20.4	8	55	0	55	0	9.5	89%	11%
D/2017/188 319 Sussex	523.9	50	45	N/A	33.7	3	N/A	N/A	9	0%	100%
D/2017/1720 55 Wentworth	557	62.92	41.3	1.9	41.3	3	N/A	N/A	12.96	0%	100%
D/2014/936 55 Wentworth	557	55	42	2	42	3	N/A	N/A	13.3	5%	95%
D/2014/1637 49 Wentworth	557.8	55	42	2	42	3	N/A	N/A	12	42%	58%
D/2016/853 422 Kent	563	55	40	6	N/A	N/A	37.8	8	10.39	25%	75%
D/2017/337 312 George	583	55	38.58	8	45	3	N/A	N/A	10.4	0%	100%
D/2015/1845 280 George	593	90.4	45	3	45	3	45	3	15.4	0%	100%
D/2017/920 371 Pitt	627	121.7	19.5	8	N/A	N/A	N/A	N/A	15.4	0%	100%
D/2015/1136 275 George	632.3	55	55	N/A	55	N/A	55	N/A	12.47	0%	100%
D/2018/600 47 Wentworth	743.7	69.68	39.63	2	39.58	3	N/A	N/A	13.74	0%	100%
D/2016/364 98 Goulburn	767.9	90.2	21.55	4	90.2	0	90.2	0	13.61	69%	31%

complies	minor non-compliance	significant non-compliance
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primary street frontage (SF) (m)	total SF (m)	active total SF	car parking (spaces)	stacker or car lift	onsite loading	tower floor plate (sqm)	units with solar access	view across side boundary	blank side walls	DA Number Address
5.61	8.6	8 (90%)	0	N	N	N/A	N/A	N	N	D/2015/1758 651 George
6.43	11.87	10 (87%)	0	N/A	N	N/A	N/A	N	N	D/2014/1366 422 Kent
17.39	31.11	16 (50%)	0	N	N	N/A	N/A	N	N	D/2017/1167 41 Erskine
11.05	22	17 (77%)	0	N/A	N	N/A	N/A	N	N	D/2015/1100 206A Clarence
15.9	53	27 (51%)	12	Y	N	N/A	N/A	N	N	D/2017/956 98 Goulburn
15.36	15.36	11 (72%)	0	N	N	N/A	N/A	N	N	D/2017/1037 251 Elizabeth
6.43	6.43	4 (68%)	0	N/A	N	235	N/A	N	Y	D/2015/661 410 Pitt
16.88	56.19	22 (39%)	30	Y	N	265	0%	N	Y	D/2013/1533 11 Alberta
17.25	31.74	14 (44%)	19	Y	Y	N/A	70%	N	N	D/2014/1307 273 Sussex
17.65	39.6	31 (78%)	0	N/A	N	N/A	86%	N	N/A	D/2011/1779 141 Bathurst
18.87	58.17	30 (51%)	6	Y	N	N/A	86%	N	N/A	D/2011/1553 49 Dixon
26.52	49.44	26 (53%)	0	N	Y	N/A	N/A	N	N	D/2017/188 319 Sussex
18.23	36.62	17 (45%)	0	N	Y	441	N/A	N	Y	D/2017/1720 55 Wentworth
18.23	36.62	15 (41%)	0	N/A	Y	N/A	100%	N	N	D/2014/936 55 Wentworth
18.14	36.3	23 (66%)	0	N/A	Y	N/A	74%	N	N	D/2014/1637 49 Wentworth
15.17	26.9	16 (59%)	18	Y	N	N/A	77%	N	N	D/2016/853 422 Kent
22.56	33.39	15 (44%)	0	N	Y	N/A	N/A	N	N	D/2017/337 312 George
18.49	67.96	35 (52%)	0	N	Y	375	N/A	Y	N	D/2015/1845 280 George
17	17	17 (100%)	12	Y	Y	414	N/A	Y	Y	D/2017/920 371 Pitt
20.1	73.24	54 (73%)	0	N	Y	N/A	N/A	N	N	D/2015/1136 275 George
24.54	49	33 (68%)	0	N	N	621	N/A	N	Y	D/2018/600 47 Wentworth
29.81	99	56 (57%)	54	Y	Y	388	70%	Y	Y	D/2016/364 98 Goulburn

DA Number Address	site area (sqm)	total building height	street frontage height (SFH)	setback above SFH	lane SFH	setback above lane SFH	2ndry SFH	setback above 2ndry SFH	FSR	residential (incl. SAs)	non- residential
D/2014/1323 9 Commonwealth	791.4	129	12.75	4	129	0	129	0	15	74%	26%
D/2014/764 262 Castlereagh	879	55	17.7	8	N/A	N/A	46	N/A	11.5	0%	100%
D/2015/750 148 King	889.8	87	45	2.4	45	3	45	3	13.54	97%	3%
D/2014/2013 130 Elizabeth	977.1	122.4	26.4	5.5	15	6	122.4	0	15.38	99%	1%
D/2015/1902 761 George	1031	73.34	12	4.5	N/A	N/A	12	3	9	0%	100%
D/2013/1819 188 Day	1147	49.9	49.6	N/A	16	3	N/A	N/A	8.9	98%	2%
D/2014/1597 65 Sussex	1180	24	19	15	N/A	N/A	N/A	N/A	5.23	0%	100%
D/2017/1787 698 George	1225	144.01	16.08	8	N/A	N/A	16.08	10	13.89	40%	60%
D/2014/755 286 Sussex	1255	80	30.7	8	30	3	26.5	6	12	49%	51%
D/2014/797 116 Bathurst	1297	117.6	29.8	6 to 10	N/A	N/A	29.8	4	14.45	66%	34%
D/2017/1750 210 George	1434	107	45	8	107	3	N/A	N/A	13.75	0%	100%
D/2013/1707 161 Clarence	1438	84.63	31-36	8	N/A	N/A	22	4	12	77%	23%
D/2013/1851 331 Kent	1518	80	16	8	N/A	N/A	N/A	N/A	11	64%	36%
D/2017/727 136 Hay	1620	60	23.4	4	N/A	N/A	60	0	9	0%	100%
D/2013/767 38 York	1785	137	22	0.5-2.3	N/A	N/A	26	18.9	12.91	66%	34%
D/2014/1575 137 Clarence	2093	79.85	31	8	N/A	N/A	32	4	11	0%	100%
D/2017/167 65 Market	2534	124.96	45	10	N/A	N/A	45	10	13.1	34%	66%
D/2017/349 201 Elizabeth	3901	172.6	45	8	N/A	N/A	45	8	15.26	47%	53%
D/2013/1822 115 Bathurst	3969	235	36	8	N/A	N/A	36	2.9-5.2	15.9	75%	25%

complies	minor non-compliance	significant non-compliance
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primary street frontage (SF) (m)	total SF (m)	active total SF	car parking (spaces)	stacker or car lift	onsite loading	tower floor plate (sqm)	units with solar access	view across side boundary	blank side walls	DA Number Address
38.45	92	51 (55%)	69	Y	Y	434	56%	N	Y	D/2014/1323 9 Commonwealth
27.39	42.08	33 (78%)	0	N/A	N	N/A	N/A	N	N	D/2014/764 262 Castlereagh
28.48	81.2	42 (52%)	83	Y	N	618	51%	N	Y	D/2015/750 148 King
35.92	85.59	50 (58%)	91	N	Y	506	79%	N	N	D/2014/2013 130 Elizabeth
19.19	60	40 (66%)	30	N	Y	600	N/A	Y	Y	D/2015/1902 761 George
55.23	112.04	27 (24%)	56	N	Y	N/A	75%	N	N	D/2013/1819 188 Day
39.42	39.8	35 (88%)	0	N/A	N	N/A	N/A	N	N	D/2014/1597 65 Sussex
20.24	69	49 (71%)	36	Y	Y	667	100%	N	N	D/2017/1787 698 George
33.77	113.7	90 (79%)	95	N	Y	550	71%	N	N	D/2014/755 286 Sussex
35.83	71.1	54 (76%)	64	Y	Y	855	59%	Y	N	D/2014/797 116 Bathurst
47.93	79	67 (85%)	32	N	Y	900	N/A	N	N	D/2017/1750 210 George
29.87	68.82	49 (71%)	105	N	Y	742.5	59%	N	N	D/2013/1707 161 Clarence
40.35	40.35	16 (39%)	69	N	Y	753	60%	Y	N	D/2013/1851 331 Kent
19.83	148	104 (70%)	21	Y	Y	840	N/A	N	N	D/2017/727 136 Hay
40.35	64.08	52 (80%)	13	Y	Y	576	85%	Y	N	D/2013/767 38 York
49.06	93.71	75 (79%)	42	N	Y	1356	N/A	Y	N	D/2014/1575 137 Clarence
63.4	120.39	98 (81%)	108	Y	Y	650	82%	N	N	D/2017/167 65 Market
86.6	221	166 (75%)	267	N	Y	974	85.50%	Y	N	D/2017/349 201 Elizabeth
50.26	176.3	130 (74%)	267	Y	Y	1175	60%	Y	N	D/2013/1822 115 Bathurst

The following tables have been used to determine 'significant' non-compliances:

- Street Frontage Height (SFH) > 55 metres
- Setbacks above SFH < 6 metres
- Lane SFH > 55 metres
- Setbacks above lane SFH < 3 metres
- Secondary (2ndry) SHF > 55 metres
- Setbacks above 2ndry SFH < 4 metres
- Active total Street Frontage (SF) < 70%
- Units with solar access < 70%

