

5. ASSESSMENT

The Department considers the key environmental issues for the project to be:

- Height
- Overshadowing
- Built form, streetscape and setbacks
- Public domain/ public benefits.

These issues are discussed in detail below.

5.1. Height

The current height control for the site is prescribed in the North Sydney LEP 2001 (LEP 2001) and states that new development should not exceed the height of the existing tallest building (Northpoint Tower), which has a maximum height of RL195 metres. The proposed building envelope complies with this control.

All new development is encouraged to transition in height from RL195 metres down towards the edges of the CBD. The degree of reduction in height is controlled by a 'Composite Shadow Diagram' (see **Figure 7** in overshadowing section below), and varies depending on the relationship between the existing shadow cast outside the CBD and the amount of new shadow cast by a proposal. This control seeks to ensure that new development should generally not cast any shadow beyond that already cast by existing development in the CBD, to minimise the impact on the amenity of residential dwellings and public open space outside the CBD (overshadowing *inside* the CBD is discussed below).

The draft North Sydney LEP 2009 would reduce the height control for the site by part 5 metres over part (southern portion) of the site and 110 metres over the remainder of the site (northern portion) to ensure that future building envelopes are well within the heights allowed by the Composite Shadow Diagrams and Special Area shadow controls (see **Figure 6**).

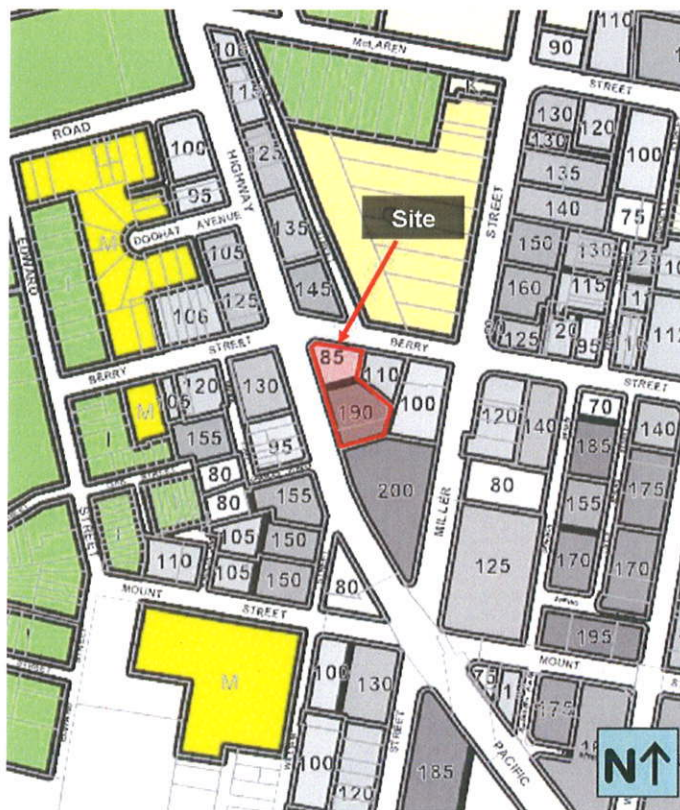


Figure 6: Draft LEP height controls for the site (source: Draft North Sydney LEP 2009).

Table 2: Numerical Height Control Compliance Summary

Provisions	Control	PPR	Compliance
LEP 2001	Maximum RL 195 metres	Maximum RL195 metres	Yes
Draft LEP 2009	RL 80 metres (northern portion of site on Berry St)	Maximum RL195 metres, with tower footprint extending onto northern portion.	No
	RL 190 metres (southern portion)		No

The proposal has been presented to Council's Design Excellence Panel. The Panel did not raise any significant issue in relation to the scale or context of the building. The Panel observed that the height of the proposed building was '*less important in urban design terms than the achievement of a high quality improved public domain and interface...*' and '*appropriate as far as visual impact is concerned in its [CBD] context*'.

Department's Assessment

The proposed height complies with current numerical controls but not the draft LEP. The effect of the draft control is a significant reduction in the permissible building height for the site over the northern portion of the site at the corner of Berry Street and the Pacific Hwy (refer **Figure 6** above). This reduction will in turn have an impact on the allowable building envelope and floor plates able to be realised on the site.

The draft control does not correlate with the strategic employment objectives for the North Sydney Centre set out in the relevant Subregional Strategy and the other (current and draft) LEP controls for the North Sydney Centre which call for larger development sites and high-grade commercial floor plates and sets a target of 250,000m² of additional non-residential floor space.

The Council's view is that the draft control should be met in order to achieve Council's objectives regarding solar access to Special Areas in the CBD. This issue is addressed in detail below.

In terms of visual appearance and contextual fit, the scale of the building is considered appropriate for the North Sydney CBD. The proposed building is generally consistent with the height and massing of surrounding commercial towers within the CBD, and will not dominate the skyline. It is also considered that the height of the proposed building reinforces the prominent street corner and adds emphasis to the northern 'gateway' to the CBD.

In addition to the achievement of strategic employment targets, the proposal contains other public benefits including significant public domain improvements. The proposed non-compliance with the draft LEP height control is considered acceptable in this respect.

A major reduction in the proposed floor plate area over the northern portion of the site to achieve compliance with the draft height control is not warranted. The draft height control is closely linked to the overshadowing issue, which is discussed in further detail in the section below.

5.2. Overshadowing

The existing and proposed controls seek to limit overshadowing both outside and inside the CBD. Outside the CBD controls are primarily concerned with impacts on residential properties and public areas, while within the CBD they relate to 'Special Areas' of public open space.

5.2.1 Overshadowing outside the CBD

Both LEP 2001 and the Draft LEP 2009 contain a height/envelope shadow control which prescribes that there should be no net increase in overshadowing to land outside the CBD between 9:00am and 3:00pm year-round beyond the footprint of the "Composite Shadow Diagram" (see **Figure 8**).

The proposed building envelope will result in some additional shadowing to land outside the Composite Shadow Area at the winter solstice. The overshadowing would affect properties to the west of the CBD between 9.00am and 10.00am. These areas are not considered sensitive land or areas of principal open space, but rather the intersection of Lord and Edward Streets, driveways, car parking and landscaped areas and a building within the Shore School (see **Figure 7**).



Figure 7: Overshadowing outside the CBD, with aerial photograph detail. The area south of Lord Street is part of the Shore School (source: EA/ Google).

5.2.2 Overshadowing inside the CBD

The other key height/envelope control in LEP 2001 is to limit the extent of additional shadowing of particular areas and sites within the CBD. The Composite Shadow Diagram identifies the 'Special Areas' relevant to the current proposal as **Miller Street** and **Don Bank Museum**. The LEP 2001 CBD shadow control generally prohibits any net increase in overshadowing of Special Areas and public open space within the CBD between 10:00am and 2:00pm year-round, but allows variations of up to 15 minutes net increase in overshadowing between 10:00am and 12:00 noon. LEP 2001 permits the minor variations generally subject to:

- the variation justified by the merits of the proposal, including building design and public benefits; and
- any increase in overshadowing not reducing the amenity of any land.

The proposed building envelope does not comply with the Composite Shadow Diagram or the controls in relation to overshadowing of Special Areas within the CBD (**Figure 7**).

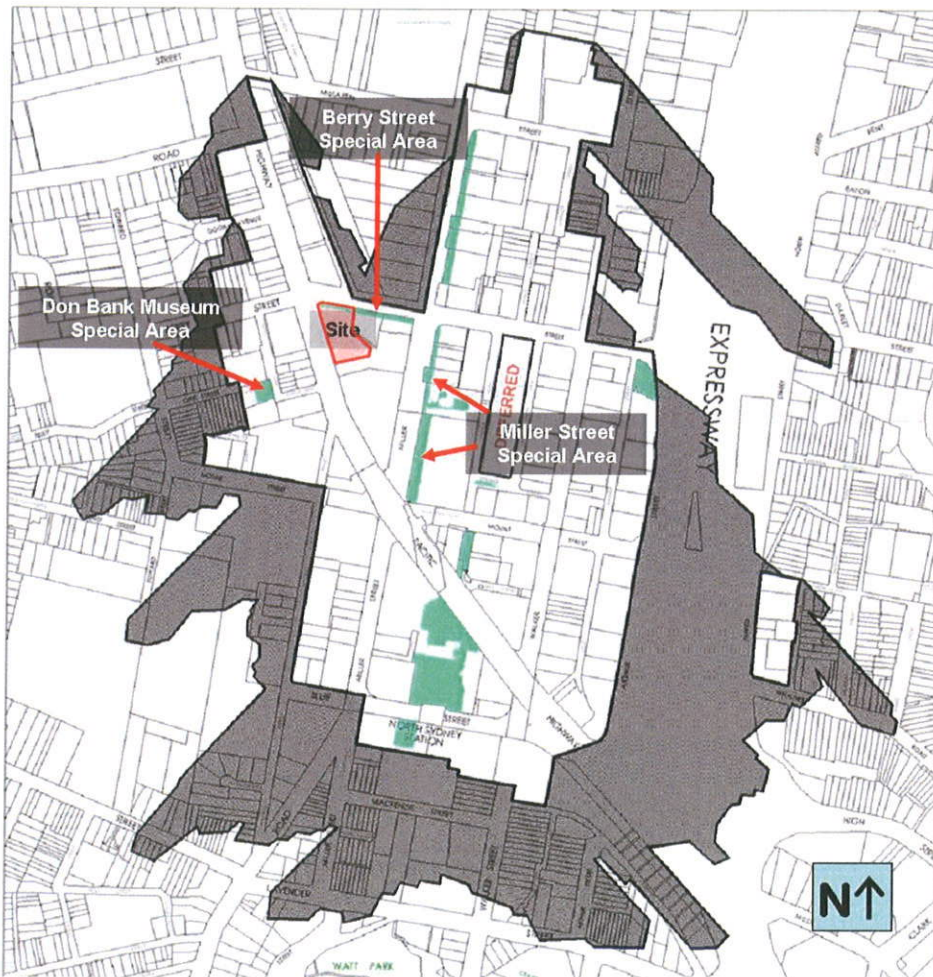


Figure 8: Composite shadow diagram, which controls overshadowing outside the CBD. Note Special Areas are also shown (source: North Sydney LEP 2001).

The draft North Sydney LEP 2009 amends the overshadowing controls for the Special Areas within the CBD. In relation to **Miller Street**, the draft LEP reduces the time range when new shadows are prohibited from 10:00am-2:00pm down to 12:00noon-2:00pm. However, for the **Don Bank Museum**, the 10:00am-2:00pm time range is maintained and the currently permissible 15 minute variation is deleted under the draft LEP.

The proposed building envelope would cast new shadows on the **Don Bank Museum** in the mid-morning period (up to 39 minutes of new shadow until 10:39am in mid-March) and to **Miller Street** during the mid-afternoon (up to 46 minutes new shadow from 1:14pm in mid-September). Although the overshadowing controls for these Special Areas are the same under the current LEP, the changes proposed by the draft LEP affect the two Special Areas differently.

An important qualification to note in consideration of the overshadowing is that the shadows described are taken from the first 'point of impact' of the shadow on the boundary of the Special Area to the last point of new shadow, so the overshadowing of either special area is only partial during each 'worst case' scenario.

Miller Street Special Area

The Miller Street Special Area is located on the eastern side of Miller Street between Berry Street and the Pacific Highway and includes the internal courtyard of the Tower Square site. The Special Area is not a contiguous space in terms of land use or public accessibility. It comprises a mix of pedestrian footpaths, ramps and paved sections, landscaped garden beds, café seating and two sections of lawn elevated above a basement car park.



Figure 9: Lawn area at southern end of Miller St Special Area (source: Google)



Figure 10: Café seating in middle section of Miller St Special Area (source: Google)



Figure 11: Walkways & landscaping at northern end of Miller St Special Area (source: Google)

The café seating area is located in the central part of the special area, with the southern section being predominantly occupied by walkways and the lawns, and the northern end predominantly occupied by walkways, bench seating and raised garden beds.

Impact of non-compliance

PPR compliance with the overshadowing controls is outlined in **Table 3**.

Table 3: Overshadowing Compliance Summary (Miller Street Special Area)

Provisions	Control	PPR	Compliance
North Sydney LEP 2001 Clause 28D(c)	No net increase in overshadowing of special areas within CBD between 10am-2pm, year-round, with 15 minute variation allowed between 10am-midday.	<ul style="list-style-type: none"> Between nil and 46 minutes. additional overshadowing Year-round average 23 minutes additional overshadowing 	No
Draft North Sydney LEP 2009 overshadowing control	No net increase in overshadowing of special areas within CBD between midday-2pm, year-round.	As above	No

The PPR shadow study indicates that the 'worst case scenario' for the Miller Street Special Area occurs on the 13 September, when 46 minutes of additional overshadowing occurs between 1:14pm and 2:00pm. The best case scenario (nil additional overshadowing) occurs throughout January.

The most affected parts consist of pedestrian areas, which would experience the most pronounced overshadowing impacts in August, September, March and April. The café seating portion would be most affected around the spring equinox (September) and into the start of October, being partly overshadowed after 1:34pm at this time of year, with a significant impact lasting for around 6 weeks.

The shadow modelling also indicates that the grassed sections of the Special Area will receive only partial impacts from the proposed building envelope, as they are already substantially overshadowed by the Northpoint Tower at the time that the additional shadows will be cast.

Proponent's justification

The Miller Street Special Area is broken down into different parts including landscaped areas (lawn and garden beds), pedestrian walkways, and café seating areas.

Based on this analysis, the Proponent argues that the additional overshadowing will have 'little material impact' as the shadows would be cast predominantly on walkways and other areas where it is not critical to maintain uninterrupted solar access. The Proponent states that the number of minutes of new overshadowing is a 'misrepresentation' of the true significance of the new shadows – for example, on the worst-case day, when 46 minutes of new overshadowing would occur, only 4% of the 'usable', high-amenity spaces are affected.

The Proponent also argues that the additional overshadowing is offset by the provision of the publicly accessible garden plaza within the proposed development, and the embellishment of the Berry Street special area. It is indicated that both of these areas receive good solar access during the lunch period and the garden plaza would provide a large, all-weather area which could be used as an alternative to outdoor areas on cold or wet days. It is also noted that the eastern façade of the building has been designed with a reduced, segmented mass to minimise overshadowing impacts to the Miller Street Special Area at the winter solstice.

Department's assessment

Any substantial development to the north or west of the Miller Street Special Area will have an impact in terms of overshadowing on this area. Solar access to the area is difficult to protect given the location of the area in the 'spine' of the North Sydney CBD. The significance of the overshadowing and the utility of the affected areas must be weighed up against the capacity for development sites to address the other requirements of the planning

framework for the North Sydney CBD in terms of providing large, high quality commercial floor plates on larger sites in close proximity to the railway station.

In contrast to other public open spaces in and around the CBD, the Miller Street Special Area contains a higher proportion of low-amenity areas of paved walkways and areas with little recreational value. It is apparent that most of the additional overshadowing would be cast on these areas. There will be a small block of shadow which has a significant impact on the café seating areas where amenity is more important to maintain, but this will be isolated to the spring equinox, and towards the end of the critical lunch period.

Also, the overshadowing impacts are somewhat offset by the provision of the garden plaza in the proposed development, which will receive good solar access during lunch times and provide a central, all-weather location to eat lunch, and the embellishment of the planned future Berry Street Special Area.

In this case, the overshadowing control applying to the Miller Street Special Area is considered to be an unreasonable constraint on the development potential of the site, particularly as the proposal can provide the amount and quality of commercial floor space specifically required by the LEP to be provided within the North Sydney CBD.

On balance, the merits of the proposal in terms of providing a significant amount of high-grade commercial floor space within an established CBD, on an underutilised site which is strategically located close to a major public transport node outweigh the impacts of additional overshadowing to the Miller Street Special Area.

Don Bank Museum

The Don Bank Museum is located a block west of the subject site on Napier Street on an isolated site surrounded by much larger buildings (as seen in **Figure 13**). The Museum is owned and operated by North Sydney Council and is accommodated within an early 19th century timber slab cottage which is listed on the State Heritage Register. The Museum has a landscaped forecourt with limited seating, accessible between 7:00am-7:00pm daily.



Figure 12: The Don Bank Museum looking west from Napier Street.

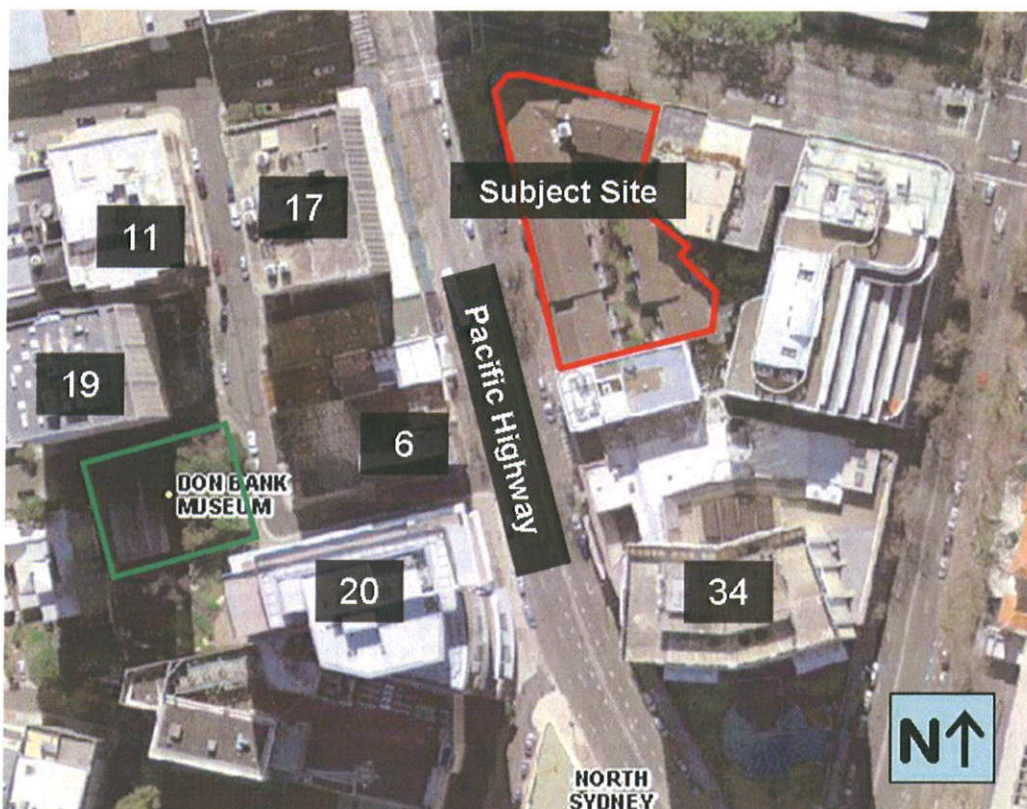


Figure 13: Aerial photograph of the Museum and surrounding buildings – height in storeys shown (source: NSW LPMA).

Impact of non-compliance

PPR compliance with the overshadowing controls is outlined in **Table 4**.

Table 4: Overshadowing Compliance Summary (Don Bank Museum Special Area)

Provisions	Control	PPR	Compliance
North Sydney LEP 2001 Clause 28D(c)	No net increase in overshadowing of special areas within CBD between 10am-2pm, year-round, with 15 minute variation allowed between 10am-midday.	Between nil and 39 minutes additional overshadowing with worst case from 10am at Autumn solstice, average 19 minutes (with 15 minute variation, additional overshadowing of nil to 24 minutes, and average 4 minutes.)	No
Draft North Sydney LEP 2009 overshadowing control	No net increase in overshadowing of Don Bank Museum between 10am-2pm, year-round, 15min variation no longer permitted.	As above	No

The draft LEP proposes to retain the existing requirement that no new overshadowing be cast on the Museum between 10:00am and 2:00pm, but would also remove the currently allowable 15 minute variation under LEP 2001.

The PPR shadow study indicates that the Museum will not be affected by additional shadows between 10:00am and 2:00pm in May, June and between October and mid-February (for 25 weeks of the year).

Applying the currently permissible 15 minute variation, the average daily new shadow to the Don Bank Special Area would be reduced to an additional 4 minutes and the number of weeks unaffected would be increased to 35 weeks of the year.

In the 'worst case scenario' on 27 March, the actual overshadowing impact of the proposed building envelope is made less significant by the fact that the tall buildings surrounding the Museum are not casting shadows on the Museum gardens. The proposed building envelope would cast an additional shadow across almost the entire landscaped area of the museum at 10:00am, but by 10:30am, the grounds would receive almost full solar access.

Proponent's justification

The Proponent argues that the additional overshadowing will have negligible impact on the amenity of the Don Bank Museum as the new shadows would be cast at a time when few people are using the area. The Proponent states that the number of minutes of new overshadowing is a 'misrepresentation' of the true significance of the new shadows, as at times the shadows only affect a very small percentage of the site.

The Proponent also indicates that virtually all of the Don Bank Museum Special Area is overshadowed by dense vegetation throughout the year. As with the Miller Street Special Area, the Proponent argues that the additional overshadowing is offset, in part, by the provision of the publicly accessible garden plaza within the proposed development, and the embellishment of the Berry Street special area.

Department's assessment

The additional overshadowing on the Don Bank Museum is more easily quantified than for the Miller Street special area, as the Museum only occupies a single, much smaller site without extensive structures and multiple land uses like those found at Miller Street.

Some areas affected by shadows within the Museum site do not require solar access to function effectively, such as within the Museum building itself, which makes up a significant portion of the site. Adjacent buildings cast most of the shadow onto the site on an 'average' day, primarily from the 19 storey commercial building which sits hard against the northern boundary of the museum site. The overshadowing impacts on the Don Bank Special Area are isolated to the earlier part of the critical 10am – 2pm range.

It is considered that, whilst the proposed building envelope will cast some new shadows on the Museum site, solar access will not be reduced to an unacceptable amount. Further, when the currently permissible 15-minute variation is taken into account, the period and degree of additional overshadowing on the Don Bank Museum Special Area is considered minimal. Whilst it is acknowledged that the Don Bank Museum building has substantial heritage significance, relatively minor new shadows cast on the site would not affect the Museum building itself and therefore would not detract from its heritage significance.

The overshadowing on the Don Bank Museum is somewhat offset by the provision of the garden plaza in the proposed development, which will receive good solar access during lunch times and provide a central, all-weather location to eat lunch, and the embellishment of the planned future Berry Street special area, which is closer to the centre of the CBD. These areas will have a far greater amenity and capacity to provide seating for residents and workers in the CBD than the relatively small museum site.

It is considered unreasonable to limit the subject site to adhere strictly to overshadowing controls in relation to an already-isolated, heavily constrained site on the periphery of the CBD, particularly as the proposed development can provide an amount and quality of commercial development which is in line with strategic targets for the North Sydney CBD.

Conclusion – Overshadowing of both Special Areas within the CBD

The proposed development will provide a significant amount of high-grade commercial floor space within an established CBD, on an underutilised site which is strategically located close to a major public transport node. The approved floor space will also result in a substantial contribution to the cost of upgrading the North Sydney railway station.

In addition, the proposal will deliver additional public space including the commencement of a new Council-planned Special Area on Berry Street. On balance, the strategic importance of large-scale commercial development within the North Sydney CBD (at the 'anchor' of Global Sydney) outweighs the impact of relatively minor increases in overshadowing to the two affected Special Areas.

5.3. Built form, Streetscape and Setbacks

Building Articulation

The Department requested that the Proponent address the bulk of the proposed building, particularly as viewed from the west. Compared to the north and south elevations, which read as a slender, asymmetrical tower above a lightweight podium, and the eastern façade, which provides visual interest with cut-in sections, the western elevation proposed in the EA presented an uninterrupted, monolithic façade which reduced the urban design quality achieved in other building elevations.

The PPR has revised the articulation of the western façade of the building by introducing a 'slipped' element to the southern side of the elevation (**Figure 14**). The massing and detail of the western elevation will effectively break up the visual bulk of the building when viewed from the western periphery of the North Sydney centre. The revised articulation exhibits a greater degree of variation and visual interest, and reduces the apparent 'breadth' of the proposed western façade. The revised articulation satisfactorily addresses the Department's concerns at this stage of the development, and it is noted that the design will be able to be further refined in future detailed applications.

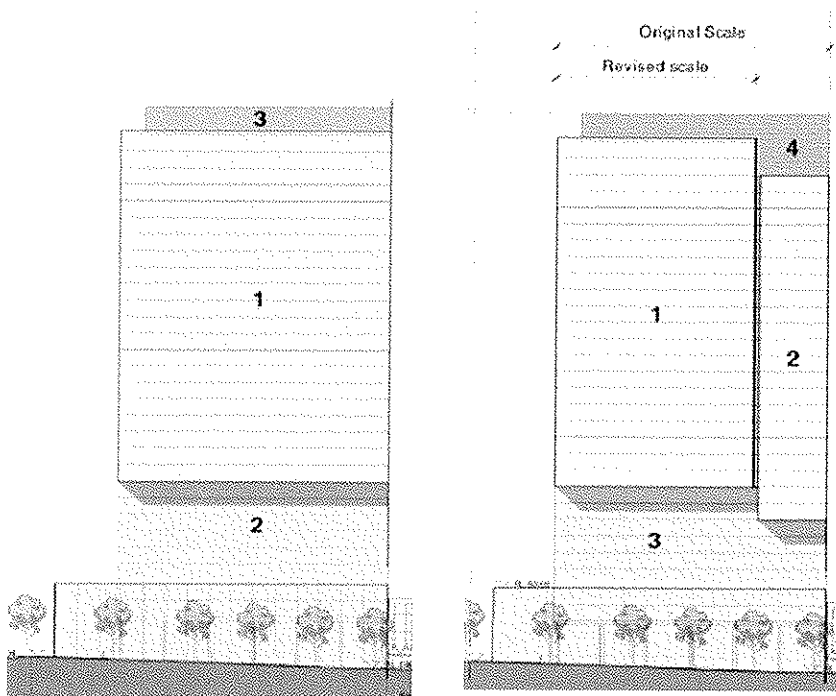


Figure 14: West elevation proposed in EA (left), with PPR revision on right (source: PPR).

Building Setback to the Pacific Highway

On the western frontage to the Pacific Highway, the proposal seeks a regular podium and set-back tower arrangement up to Level 10, where the floor plate of the tower cantilevers out again to a nil setback to the Highway. This does not comply with the North Sydney DCP 2002, which requires a minimum 5 metre 'weighted average' setback above podium level to the highway.

The cantilevered section has been introduced to redistribute floor space to the upper levels of the building, removed from the eastern side to reduce the overshadowing impact of the tower on the Miller Street special area.

The PPR demonstrates that other sites fronting the Highway do not provide a compliant setback. Most significantly, these include the neighbouring (34 storey) Northpoint Tower, which has a nil setback near the corner of the Highway and Miller Street, and 201 Pacific Highway (14 storeys) immediately to the north of the site, which has a nil setback to the Highway at the northern end of the tower component. These sites are considered to effectively 'bookend' the subject site.

Other buildings on the eastern side of the Pacific Highway also have nil setbacks, although these are smaller in scale than the proposed building. It is noted that the above-podium setback has been achieved more consistently on the opposite (western) side of the Highway. The setback relationship is illustrated at **Figures 15 and 16**.

The proposed setback will not be out-of-character with the surrounding development along the eastern side of the Pacific Highway. It is considered that the proposed tower is well resolved and proportioned and will improve the vista seen when travelling southward on the highway toward North Sydney (which is currently terminated by the North Point tower).

It is acknowledged that the setback protrusion has additional merit as it has been designed to offset reduced overshadowing to the Miller Street Special Area. In this regard, the proposed setback is considered appropriate in this location and in the context of surrounding buildings and the variation to the setback control is supported.