Preliminary
Urban Design Assessment

Council Ref. N/A
GMU Ref. 12032

Proposed Mixed Use Development at
27-31 Belmore Street, Burwood

September 2012

GMU

Contents

1.0 Introduction

GM Urban Design & Architecture (GMU) has been appointed by Burwood Council to undertake a SEPP 65 assessment and urban design review of the proposed mixed use development for 27-31 Belmore Street, Burwood. These sites are legally described as Lot 3 in DP816606 and Lot 1 in DP817913 respectively.

The purpose of this report is to evaluate the development proposal and provide a preliminary assessment with regards to its performance against applicable controls, SEPP 65 and the principles of the Residential Flat Design Code (RFDC), as well as its likely impacts on adjoining existing and future development.

1.1 Proposed Development

The proposed development will be located at the south western part of the block bounded by Railway Parade to the north, Belmore Street to the south, Burwood Road to the east and Wynne Avenue to the west. The south western corner of the block is occupied by a 7-storey mixed use development located at 33-35 Belmore Street. The subject site comprises the amalgamation of 2 lots. As a result, the amalgamated site is L-shaped and has two street frontages, i.e Wynne Avenue to the west and Belmore Street to the south which are approx. 21m and 29.4m in length respectively. There are currently an existing 2-storey public car park in the northern part and an on-grade surface car park to the southern part of the site.

To the north of the subject site is Burwood Plaza, which has developed hard along the northern common boundary of the subject site. The northern common boundary is approx. 50.8m in length. To the east, the northern half of the eastern boundary is bounded by Clarendon Place and the southern half of the eastern boundary is bounded by an existing 2 storey commercial/retail development located at 25 Belmore Street. The eastern boundary of the site is approx. 37.8m in length. The site area is 6,399sqm and has a cross fall of approx. 6.5m from the south-east corner to north-west corner of the site.

The proposal consists of three residential towers of each 12, 13 and 14-storey on top of a 3-storey podium containing commercial/retail tenancies. A 6-storey underground basement car park (basement levels 1 to 4 having full site coverage and basement levels 5 and 6 having partial site coverage) contains 560 car parking spaces. The three residential towers consist of 222 residential units. The proposed maximum height of the development is approx. 61m which occurs around the north-east corner of the site. The proposal has a commercial FSR of 1.36:1 and residential FSR of 3.14:1, with a total FSR of 4.5:1.

1.2 Documents Reviewed

In preparing this report, GMU has reviewed the following documents describing the development proposal:

- Architectural drawings by Allen Jack+Cottier, dated 23 July 2012 (received on 30 July 2012)
- Planning Agreement by HWL Ebsworth Lawyers, dated 30 March 2012 (received on 30 July 2012)
- Statement of Environmental Effects by Urbis Pty Ltd, dated July 2012 (received on n/a)
- Appendices include (received on n/a):
    - Survey Plan by Lockley Land Title Solutions, dated 15 August 2011
    - Design Report by Allen Jack+Cottier, dated 23 July 2012
    - Landscape Report by Oculus, dated June 2012
    - Traffic Flow Diagram by James Taylor Associates, dated 23 July 2012
    - Site Contamination Assessment by Douglas Partners Pty Ltd, dated March 2012
    - SEPP 65 Compliance Table (provided with the application)
    - Heritage Impact Statement by Urbis Pty Ltd, dated July 2012
    - DCP Compliance Table (provided with the application)
    - DA Noise Assessment by Acoustic Logic Consultancy Pty Ltd, dated 26 March 2012
    - Traffic Assessment by Transport and Traffic Planning Associates (Rev B), dated July 2012

- Crime Prevention Through Environmental Design by Urbis Pty Ltd, dated July 2012
- Accessibility Report by Morris-Goding Accessibility Consulting (Final v3), dated 20 July 2012
- BCA Capability Statement by Vic Lilli and Partners, dated 23 July 2012
- Waste Management Plan by Elephant Foot Waste Compactors Pty Ltd, dated 12 June 2012
- Demolition Report by James Taylor and Associates (Rev1), dated July 2012
- BASIX Certificates (428058M, 424652M, 426921M), dated 9 July 2012
- Geotechnical Investigation Report by Douglas Partners Pty Ltd, dated March 2012
- Electrical Services Concept by Ausgrid, dated 27 April 2012
- Quantity Surveyor's Report by Altus Group Cost Management Pty Ltd, dated 23 July 2012

GMU has reviewed the following controls relevant to the development proposal:

- Burwood Town Centre LEP 2010
- Burwood Town Centre DCP Part No. 36, 2010
- SEPP 65 and the Residential Flat Design Code (RFDC).

Existing subject site's condition looking from the south east corner of the site towards the north-west.

Existing subject site's condition looking from the public car park across Wynne Avenue towards the east.

2.0 Preliminary analysis

2.1 Local Context

2.1.1 Relating to Local Context

Prior to this assessment, GMU has already completed a preliminary review of the Pre-DA drawings submitted to Council in April 2012. As per previous report (April 2012), GMU has analysed the existing context and while the amended plans are discussed in more detail on the subsequent sections, the proposal's overall context does not change and therefore we are generally including this section again for reference only.

The subject site is located in Burwood Town Centre within the 'Middle Ring Area' as defined in Burwood Town Centre DCP Part 36. This is an area undergoing significant transition; therefore, it is important for any proposed development to respond not only to the existing surrounding context but most importantly to Council's vision and desired future character for the area in which it is proposed. The proposed development responds to the desired future character by introducing higher built form within the area intended for growth as envisaged by the DCP. However, the proposal presents issues with regards to bulk, scale and response to the public domain interface.

The future desired character of the 'Middle Ring Area' as stated in the DCP envisages *"that much of the commercial and retail development will be concentrated in these Areas."* The proposed development appears to satisfy the intent of the controls, which is to provide flexibility for future development to be used for retail/commercial purposes at ground level and at the street frontage, and to provide opportunity for street front activities along Belmore Street. However, the proposal does not achieve a desirable outcome for the streetscape along Wynne Avenue.

In terms of existing context, the existing streetscape character of Belmore Street is considered to be low to medium scale, with 3-4-storey residential to the south. To the south of the site across Belmore Street, the lots are classified as 'Transition Area' under the DCP with a height limit of 15m. This suggests that the proposal needs to recognise its location at the southern edge of the 'Middle Ring Area' and provide a proper interface and transition to the south. This is particularly important as there is a difference in the height controls between the developments to the north and south of Belmore Street. It is vital that the proposal improves the existing streetscape along Belmore Street for the benefit of pedestrians walking to Burwood Road from the west.

To the north of the subject site is currently occupied by Burwood Plaza. This site is located in the 'Commercial Core Area' and has the potential to redevelop up to 70m in height. Any view across the top of Burwood Plaza in the interim will be subjected to views of the roof top car park which is undesirable. The proposal's lower built form to the northern part of the site is effective for solar access in the existing context. However, if Burwood Plaza is to redevelop up to 70m in height resulting in overshadowing to the proposal's northern area. Therefore, careful design considerations are required for the proposal's massing in the northern part of the site. Maintaining the required separation distance to the property to the north is critical in order to adequately anticipate the development potential of that site.

To the west is Wynne Avenue, which runs in a north-south direction linking Railway Parade and Belmore Street as well as providing vehicular access to the existing car park on site. The existing streetscape of Wynne Avenue is undesirable, where the street frontages to the east are mainly occupied by blank walls, service/loading entrances and vehicular car park entrances. The subject site's Wynne Avenue frontage is occupied by a 2-lane car park entrance into Burwood Plaza's car park and Council's car park. The access ramp to Burwood Plaza is setback 2.2m from the boundary and occupies the entire frontage width. To the west of Wynne Avenue across the site is an existing on-grade car park. This on-grade car park is classified as part of the 'Middle Ring Area' and therefore has the potential to redevelop up to 60m in height.

The subject site is bounded to the east by Clarendon Place, which is characterized as a service laneway for the shops along the western side of Burwood Road. This lane is accessed from Railway Parade to the north. According to the DCP's Public Domain Strategy, Clarendon Place is to be transformed into a shared zone for pedestrian and vehicular access. The north of the subject site is required to be dedicated for a minimum 9.5m wide pedestrian way that links Wynne Avenue and Clarendon Place, as part of the pedestrian connection between Civic Square and Elizabeth Street Square under the DCP's Public Domain Strategy.

2.1.2 Building Types

The applicable zoning for the site is Zone B4 – Mixed Use as per the Burwood LEP 2010. The proposal is a mixed use development with 3 storeys of retail/commercial podium and three residential towers on top – a 13-storey northern tower (Tower C) and 14-storey eastern tower (Tower B) and a 12-storey southern tower (Tower A). Therefore, the proposal meets this requirement.

2.1.3 Amalgamation and Subdivision

The proposal involves amalgamation of two lots; 29-31 Belmore Street and existing Council car park, and is currently under single ownership.

2.1.4 Building Envelopes

In order to assess the merits of this project and its performance with regards to building envelopes, GMU has relied on urban design analysis, review of applicable controls and their objectives as well as the RFDC. The RFDC determines the following Primary Controls, when assessing the building envelope:

Building Height

The maximum allowable building height as per the LEP is 60m. The proposal presents a maximum height of approx. 61m and therefore fails to fully comply with the building height requirement. The minor encroachment occurs along the northern edge of the eastern tower in the form of an architectural blade wall feature on the roof.

Building Depth

According to the RFDC, the appropriate building depth for an apartment building is 10 to 18m to ensure that the bulk of development is in scale with its context and to provide adequate solar access and natural ventilation for building occupants. Each of the proposal's towers has a rectilinear footprint with two towers having the long-axis running in the east-west direction and one tower in the north-south direction.

The building depths for the northern and southern towers are approx. 22m and 24.7m respectively from glass line to glass line which exceed the maximum RFDC recommended building depth. The 18m building depth for the eastern tower complies with the RFDC's recommendation. The building depths, bulk and scale of the northern and southern towers is excessive and visually prominent from the public domain, especially due to the use of blade walls framing the corners of the towers.

Building Separation and Street Setbacks

The objectives of the RFDC with regards to Building Separation that are most relevant to this proposal are as follows:

- To ensure that new development is scaled to support the desired area character with appropriate massing and spaces between buildings.
- To provide visual and acoustic privacy for existing and new residents.
- To control overshadowing of adjacent properties and private or shared open space.
- To allow for the provision of open space with appropriate size and proportion for recreational activities for building occupants.
- To provide deep soil zones for stormwater management and tree planting, where contextual and site conditions allow.

The relevant building separation distances applicable to this proposal are:

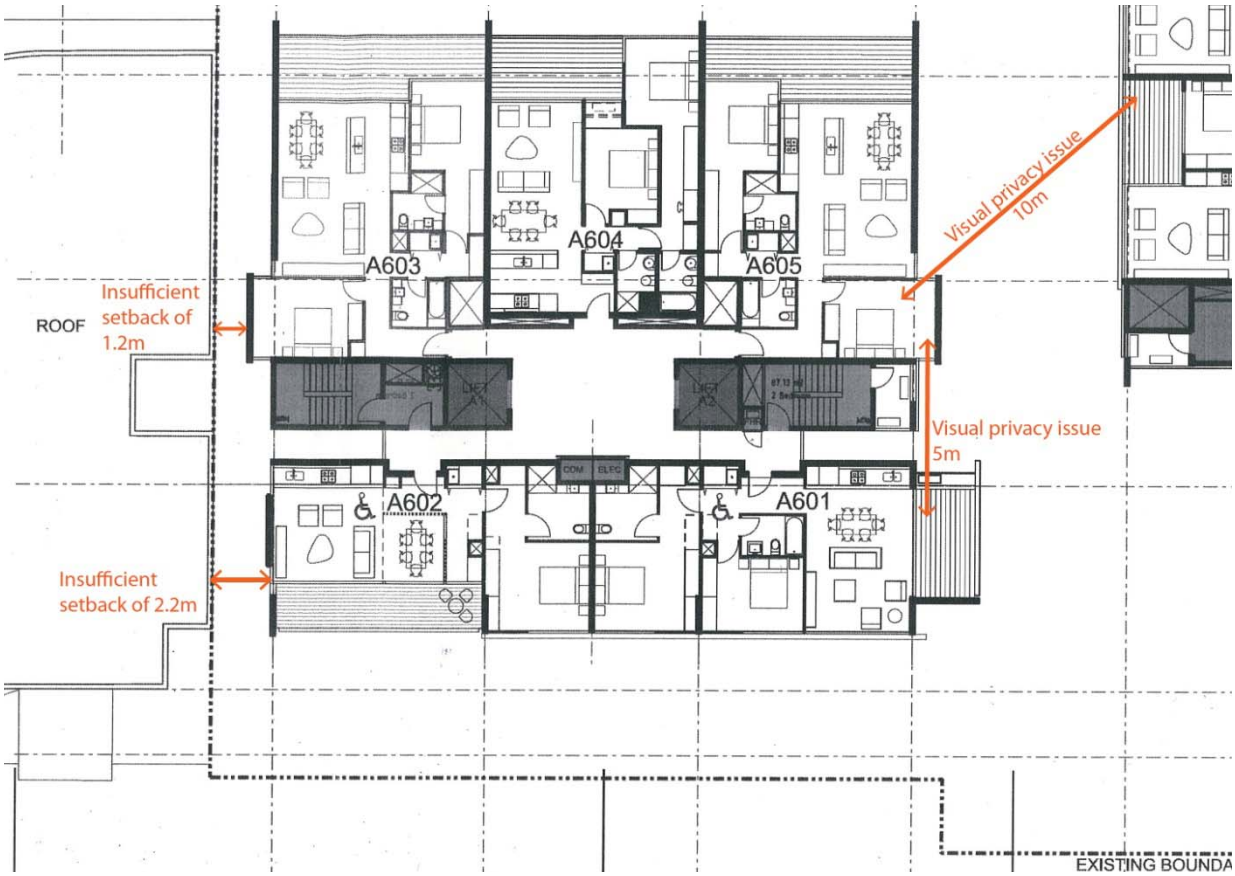
- Five to eight storeys/up to 25 metres
  - 18 metres between habitable rooms/balconies
  - 13 metres between habitable rooms/balconies and non-habitable rooms
  - 9 metres between non-habitable rooms
- Nine storeys and above/ over 25 metres
  - 24 metres between habitable rooms/balconies
  - 18 metres between habitable rooms/balconies and non-habitable rooms
  - 12 metres between non-habitable rooms

To the west fronting Wynne Avenue, the proposal's street front setback is 4m which fails to comply with the DCP's zero street front setback. As a result, the proposal presents an uneven streetscape by recessing its frontage from the rest of the streetscape. The ramp into Burwood Plaza's car park therefore dominates the frontage area together with other services such as substations which deactivate the frontage. Landscaping is proposed along the services frontage to Wynne Avenue. Although this is not an ideal outcome, it is GMU's understanding that due to existing site constraints, the proposal has improved its response to Wynne Avenue frontage. However, this presents a lost opportunity, where no contribution to the overall public domain is achieved. The other none compliance is the podium levels 3 and 4 exceed the 15m height as per the DCP Clause 2.2.1.1 Provision P1. The proposed development has a secondary setback of approx. 8.2m to the boundary on levels 5 to 16 which complies with the minimum required 6m secondary setback along Wynne Avenue.

To the north, the proposal's level-5 residential uses run parallel with the northern boundary with a length of approx. 87m and is setback approx. 7.6m from the common boundary on level 5. This fails to comply with the minimum RFDC's equal sharing of the separation distance (9m) to the boundary to achieve a total of 18m building separation distance with the potential future redevelopment of Burwood Plaza. This setback distance results in an encroachment of approx. 1.9m into the 9.5m wide easement for the pedestrian way as mentioned in the DCP's Public Domain Strategy. This encroachment does not comply with the DCP Clause 4.1.3 Provision P2 where the pedestrian way must be unobstructed by buildings and open to the sky for all of their width. Although it is mentioned that Burwood Plaza is unlikely to redevelop, the site's potential for future redevelopment shall not be ignored. A similar situation occurs for levels 6 to 16 of the northern tower where the facade is setback approx. 7.6m to the northern boundary.

To the east, the proposal's eastern residential tower is setback between 5m and 5.4m to the eastern boundary. The podium levels are setback between 5m and 5.6m for an easement of a vehicular ramp except for level 4 which have a setback of 3m. The southern half of the eastern boundary is abutted by a 2 storey commercial building (25 Belmore Street) which is approx. 10m in width along two thirds of its length. This lot may have limited ability to redevelop and could remain in the existing condition in the short to medium term. However, one of the RFDC's building separation objectives is to control overshadowing of adjacent properties and private or shared open space. A setback of 5.4m to the common boundary line for residential levels 5-17 falls short of the RFDC's minimum required setbacks of 6m (up to level 3/ 12m), 9m (for levels 4-7/ up to 25m) and 12m (for levels 8-17/ over 25m) in order to achieve corresponding building separation distances of 12m, 18m and 24m between balconies/habitable rooms. This non-compliance is evident due to further encroachment by the balconies along the southern part of the eastern facade, where the setback to the common boundary is further reduced to 4.6m.

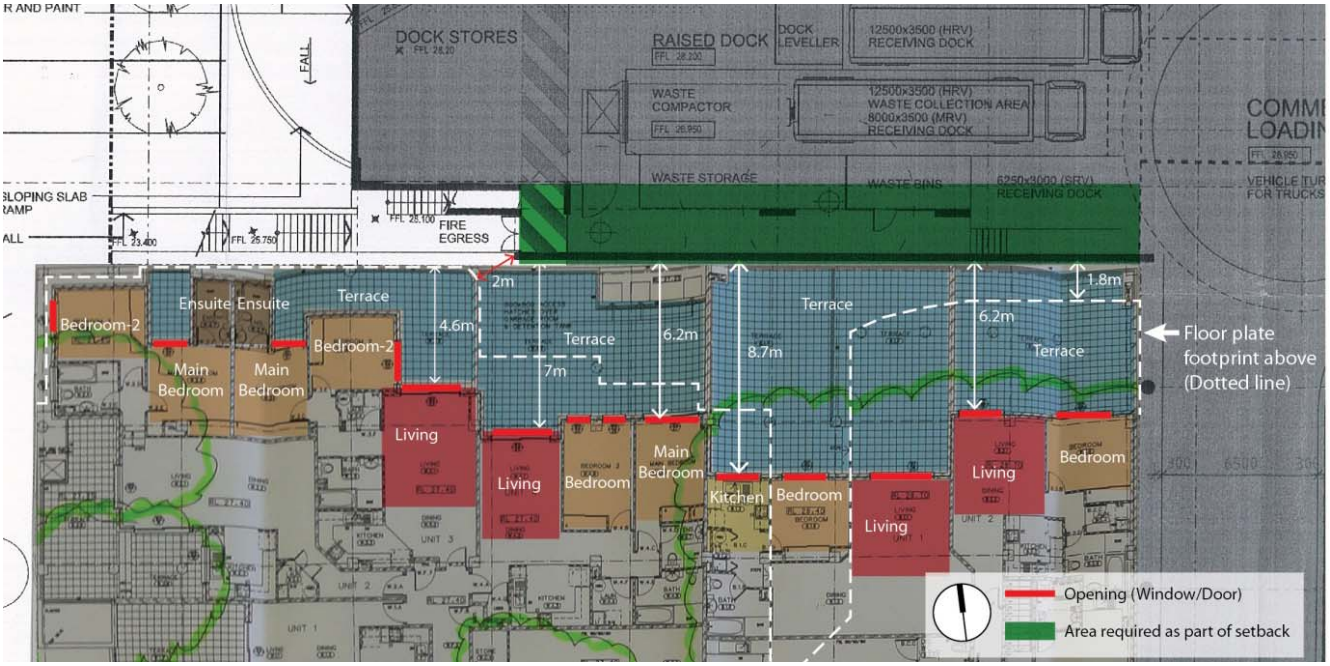
A similar extent of encroachment into the setback zone occurs on levels 4 to 17 to the western boundary against 33-35 Belmore Street. Although the southern tower's north-western units have bedrooms oriented with outlooks in the north-south direction, the setback of approx. 1.3m to the western common boundary is insufficient. The windows along the western facade of the southern tower are setback approx. 2.2m to the common boundary. Given that these windows are screened, the RFDC's building separation distances required are 9m (for levels 4-7/ up to 25m) and 12m (for levels 8-17/ over 25m) between non-habitable rooms. The tower encroaches into the minimum setback required to achieve equal sharing of separation distances. Furthermore, the lack of setbacks at higher levels results in excessive bulk and scale issues. The western apertures within the blade walls of the northern and southern balconies look into existing blank walls which is an undesirable outlook and it limits the redevelopment potential of 33-35 Belmore Street.



Visual privacy issues and insufficient western boundary setback for the southern tower. This condition is typical for levels 6-8.
(Adapted from Drawing DA2106 by AJ+C Architects)

According to the RFDC's building separation distances, the minimum separation distances required between balconies/habitable rooms is 24m for levels 8-17/ over 25m. For levels 10 to 15, the balconies of units 1002, 1102, 1202, 1302, 1402 and 1502 have zero setback to the western boundary. This fails to provide any setback and therefore, it does not comply with the building separation distances. This is unacceptable as the proposal relies on borrowed amenity and hinders the opportunity of 33-35 Belmore Street to redevelop up to its 60m allowable LEP height.

To the southern boundary of the subject site adjacent to 33-35 Belmore Street, the proposal's podium has zero setback on level 1 and 10.8m setback to the boundary for levels 2 and 3. The north facade of the existing 7-storey mixed use development at 33-35 Belmore Street is setback approx. 1.5m to the common boundary. Level 1's zero setback to the common boundary results in no separation distance to the northern units' living areas and private open spaces on the ground level of 33-35 Belmore Street, causing serious amenity impacts. For a discussion on the overshadowing concerns, please refer to Section 2.1.6 Overshadowing of this report.



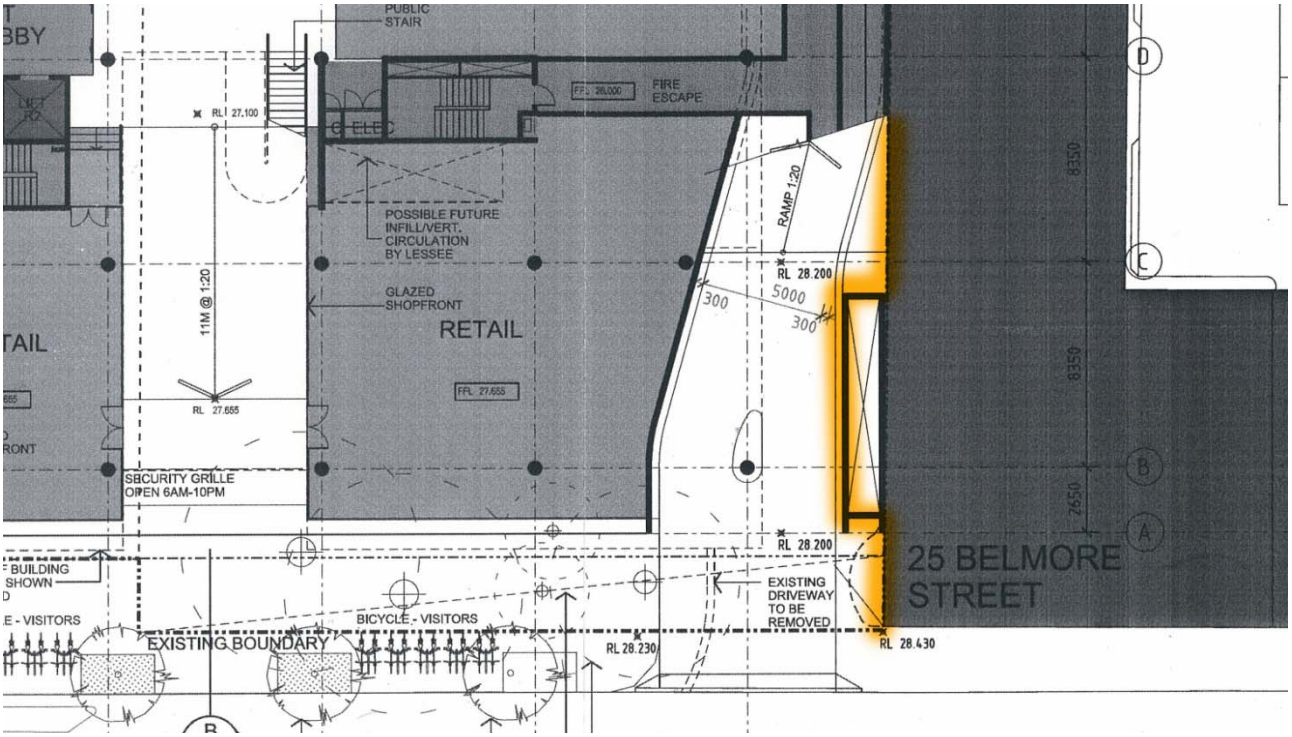
Interface between level 1 of the proposal and ground level of the existing development at 33-35 Belmore Street
(Plan of the proposal adapted from AJ+C Architects; Plan of 33-35 Belmore Street adapted from Kimi Associates)

According to architectural drawings by Kimi Associates (dated 9 May 2000), there are 5 units on the ground level of 33-35 Belmore Street which will be affected by the proposal's interface design, in particular units no.1, 2 and 4.

Although a roof garden is proposed on level 2 of the proposal's podium to the north of 33-35 Belmore Street, the blank wall on level 3 facing the existing northern residential units on levels 3-5 of 33-35 Belmore Street is considered to be unacceptable. The roof garden is not visible particularly when viewed from the living areas of those existing residential units. The proximity of the proposed podium results in the lost of outlook for the existing residential units on levels 2-5 of 33-35 Belmore Street. Visual and acoustic privacy as well as daylight access and outlook have been compromised for those existing residential units.

This report acknowledges that 33-35 Belmore Street fails to provide 50% of the required separation distance as this development pre-dates the RFDC. However, the proposal is expected to provide a reasonable interface between its loading area and the private open space of the affected residential units. The proposal should provide its 50% of the required RFDC separation distance at this level or at least step back for the zone marked in the above diagram.

To the south fronting Belmore Street, the proposal observes the 3m setback requirement at ground level which aligns the street edge with the building line of the existing elevation at 33-35 Belmore Street. However, the 3m setback occurs to the eastern half of the frontage and, results in the western half of the frontage being set back approx. 1.5m. Furthermore, the western half of the frontage presents an awning that encroaches over the lot boundary into the public domain. This fails to comply with the DCP Clause 2.2.1.2 Provision P2 where setback areas must be free of any projections or encroachments. The proposal has achieved a distinct separation between the entrance to the retail and residential uses, which is a positive outcome. As no. 25 Belmore Street has zero street front setback, the Burwood Plaza vehicular exit along the existing access easement can potentially result in a perceivable blank wall along the 2-storey commercial building at 25 Belmore Street. Articulation or material treatment is required in order to ensure that no visual impacts will derive from the exposure of blank wall conditions.



Blank wall of 25 Belmore Street exposed to the public domain (Highlighted in orange).
(Adapted from Drawing DA2101 by AJ+C Architects)

The proposed secondary setback above the podium line for the southern facade of the southern tower on levels 6-15 is approx. 5.4m which slightly encroaches into the DCP's minimum requirement of 6m. The southern balconies for level 5 are setback 3.6m from the southern boundary which result in non-compliance to the DCP's secondary setback requirement by approx. 2.4m.

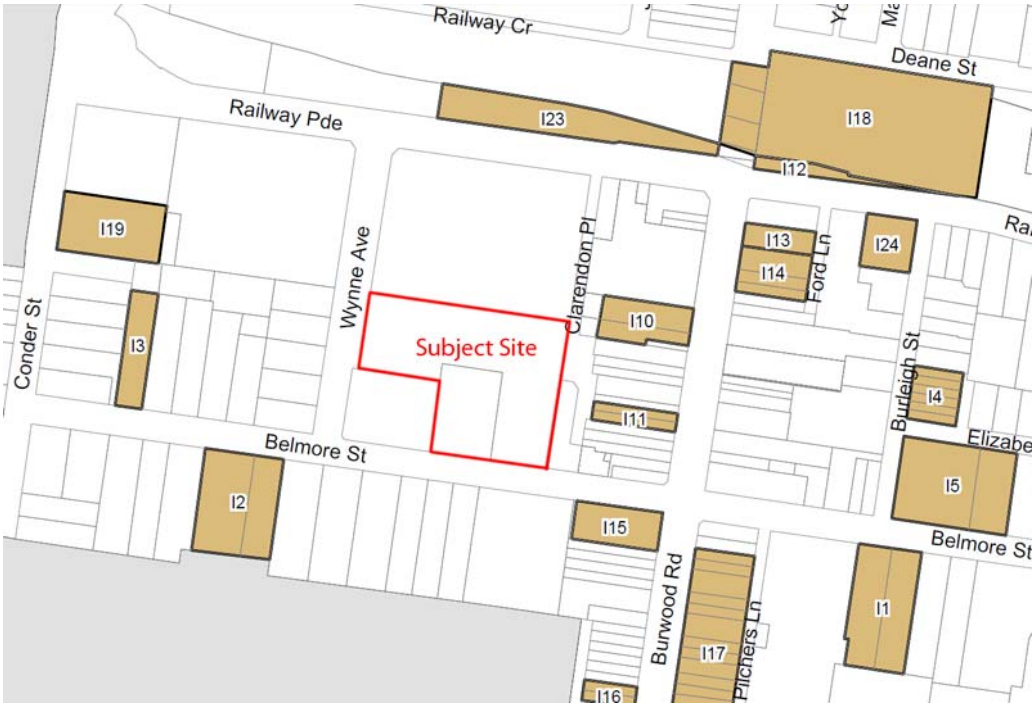
Although with minor encroachments into the setback zone, the proposal results in a potentially overwhelming bulk to the streetscape and therefore fails to meet the objectives of the DCP's secondary setbacks which aim to establish adequate spatial proportions and enhance the urban quality of the street.

Floor Space Ratio (FSR)

The site's allowable total FSR is 4.5:1, with 1.5:1 for commercial FSR and 3:1 for residential FSR. The proposal's total FSR is 4.5:1, with the residential FSR of 3.14:1 and therefore exceeds the maximum allowable by 0.14:1. In terms of the commercial FSR, the proposal achieves 1.36:1 which is within the allowable 1.5:1 FSR.

2.1.5 Heritage

According to LEP 2010-Heritage Map, the heritage items within proximity of the proposal are I2, I10, I11 and I15, which correspond to Saint James Church and Hall, Federation shops—First floor facades only, Shops—First floor facades only and Shop facades only. These heritage items are located in areas which will be potentially overshadowed by the proposal.



Heritage Map indicating heritage items in proximity to the proposal
(Extract from Burwood LEP (Burwood Town Centre) 2010)

2.1.6 Overshadowing

It is noted that the shadow diagrams provided in architectural drawings DA3600 and 3601 (for June 21) are identical to the diagrams in DA3602 and 3603 (for December 21). Therefore, further clarification is required as to the accuracy of the drawings.

With a significant bulk, the proposal has a potential to overshadow large areas of the public domain to the south and across Belmore Street. This will also seriously compromise the northern solar access of the residential flat buildings to the south of Belmore Street located at 32, 40, and 42 Belmore Street. The proposal's site is located on the southern edge of the 'Middle Ring Area' with a height limit of 60m where the area to the south is the 'Transition Area' with a height limit of 15m. According to the architectural drawing DA3600 and 3601, the residential units in the western part of the existing mixed use development at 28A-32 Belmore Street will be overshadowed by the proposal, in particular by the southern tower. The solar access of these units is approx. an hour during winter solstice (as per sun eye diagrams in page 61-63 of Design Report). This is due to the excessive bulk of all building envelopes combined with the narrow separation distances between towers along Belmore Street frontage.

Given the proposal's overall tower bulk and streetfront coverage above podium may potentially result in significant overshadowing even if the sites to the south across Belmore Street are to redevelop to their maximum height. This issue could be minimised through adjusting the proposal's tower form to increase the southern setback and also introducing setbacks and built form transition on the roof and top levels (as outlined in previous GMU's assessment report).

According to the sun-eye diagrams in the Design Report (P61-63), the proposal's eastern and southern towers are perceived as a single L-shaped mass due to their proximity to each other with no setback towards upper levels. As a result, a larger shadow footprint covers the public domain and existing residential units across the street along Belmore Street. It is suggested that reducing the width of the proposal's tower form in an east-west direction will encourage fast moving shadows and therefore reduce the overshadowing impact to its immediate surrounding to the south.

As discussed in the previous section, the proposal has a detrimental impact to the lower units facing north at 33-35 Belmore Street. Insufficient information has been provided in order to assess the total or percentage of daylight that will be lost for those units. A detailed overshadowing study is required to assess the impact to those units.

2.2 Site Design

2.2.1 Site Configuration

Street Address

The proposal presents three street addresses, to Wynne Avenue to the west, Belmore Street to the south and Clarendon Place to the east. Potentially the proposal may also present a frontage to the pedestrian way to the north. The proposal has allocated the podium and residential lobby entrances to Belmore Street and the pedestrian way. The street frontage to Wynne Avenue is considered to be inactive and undesirable at street level due to the presence of a 10m wide car parking entry point. Although this is not a positive outcome with regards to activation of the public domain, it is noted that landscaping has been proposed in an effort to improve the streetscape. However, the lack of active uses on the levels above ground level and level 1 compromise any overlooking or natural surveillance on that part of the street. This is a poor outcome.

Open Space

In terms of the RFDC's guidelines, a minimum requirement of 25-30% of the site area (1600sqm) is required to be dedicated as communal open space. The proposal achieves a total private communal open space area of approx. 1330sqm (approx. 20.7%) and therefore fails to meet the minimum requirement as per RFDC. The communal open space area for the residential units includes the podium garden and playground on level 4.

The proposal claims to include the publically accessible open space of 1045sqm (pedestrian way and Wynne Avenue Landscape) into the total communal open space area. This is inappropriate as the RFDC's minimum requirement of the 25-30% communal open space shall only be accessible by the residential use. According to the RFDC's rules of thumb, the minimum recommended area of private open space for each apartment on a podium is 25sqm with minimum preferred dimension in one direction to be 4m. The Design Report (p74) claims that all apartments at level 4 that open to the podium roof garden have a minimum 25sqm of private open space with a minimum dimension of 4m. However units A403, A404, B401 and B402 have private open spaces with areas of approx. 13sqm, 13sqm, 22sqm and 22sqm respectively, based on GMU's calculation. They also fail to provide a minimum dimension of 4m in all directions. This does not meet the RFDC's recommended areas as mentioned.

In terms of quality of open space on level 4, the playground located at the south east corner of the podium is overshadowed by the eastern and southern towers after 10am (during winter) and 11am (during spring/autumn). This compromises the intended amenity for the recreational activity to occur in that area.

According to architectural drawing DA2104, the communal podium garden has the same floor finish level as the residential units A403, A404, B401 and B402 at FFL40.400. This results in potential visual privacy issues between the private open spaces of these units and the communal podium garden area.

Deep Soil Zones

The RFDC states that a minimum 25% of the open space area of a site should be a deep soil zone which will be approx. 400sqm for this proposal. The proposal has provided 113sqm of deep soil zone (7% of open space area). There is no deep soil provision on ground level except for the 65sqm Wynne Avenue frontage, as the entire site footprint area is dedicated for car parking. Although the proposal claims to have incorporated stormwater treatment measures, it is up to Council's discretion whether the measures proposed are sufficient to achieve the RFDC's objectives for a site of such scale in the Burwood Town Centre.

Fences and Walls

The entrance into the pedestrian way from Wynne Avenue is greeted by a flight of stairs of 4.8m in width, linking a level difference of approx. 4.4m. There is no direct visual connection from this point to Clarendon Place. As a result, there is potential safety issue during afterhours particularly where the landscape elements and pockets result in potential concealment areas for residents intending to access the residential lift lobby adjacent to the pedestrian way. The stair layout may be perceived as a 'blank wall' due to its angle of rise which blocks off all the visual connection beyond this point.

The proposal provides two residential lobby entrances off the public area associated with the pedestrian link. The area and overall presentation of the residential lobby between retail facilities does not sufficiently make the entrance stand out enough from the rest of the facade as seen on the elevation drawing. This particular entrance lacks street address, therefore it results in poor way-finding. The continuous blank wall along Wynne Avenue frontage is proposed to be landscaped which is a better outcome. However, the sense of address to pedestrian domain on street level is inadequate, particularly to the eastern side of Wynne Avenue, given the 'active frontage occurs at approx. 9.5m above street level.

Landscape Design

The landscape design on level 1 (as per Oculus drawing L-100) indicated planter boxes and mature trees to the western two-thirds of the pedestrian way and at the entrance into the proposal's podium. The eastern one-third of the pedestrian way consists of only hardscape surface treatments.

According to the landscape plans by Oculus, a majority of the podium areas will be landscaped with grass and vegetation. This is a positive outcome which adds value to residents' quality of life in the form of privacy, outlook and views. Although the Landscape Design Report has provided the types and details of the proposed vegetation, further information is required in terms the tree locations in order to understand the performance of the vegetation and the impacts in controlling solar access into some residential units on level 4. Careful consideration is also required in coordinating the different vegetation types in any overshadowed areas in order to ensure that vegetation thrives.

Orientation

The proposal has two north-south aspect residential towers with a generally squared footprint and an east-west aspect residential tower with a rectangular footprint. The northern tower is parallel to the northern boundary and has a length of approx. 80m. The northern facade is rectilinear without any articulation or breaks to reduce its bulk and scale. A similar situation occurs to the eastern tower which is parallel to Clarendon Place. From the eastern elevation, the residential tower is perceived to be approx. 60m in length and 17 storeys in height, with a rectilinear facade in a single plane with insufficient articulation of form which leads to overwhelming bulk.

The 17-storey eastern tower's lack of setbacks to the north results in overshadowing of the central communal open space on level 4 during the morning hours. This eastern tower also result in self over shadowing to the southern tower during the first half of the day, due to its height and lack of upper level's setbacks.

2.2.2 Site Amenity

Safety

The submission of the proposed development has provided *Crime Prevention & Safety Plan* as requested by the DCP. There is a potential security issue for the circulation of residents between the northern and eastern tower. In order to enter or exit the proposal at street level, the residents of the northern tower are required to transfer via the lift lobby of the eastern tower located on level 4 within the secured area. Therefore, the residents in the northern tower will have the access into the eastern tower which potentially disturbs the safety and comfort an acoustic privacy of the residents in the eastern tower, in particular units B403 and B404.

As mentioned in the CPTED Statement under section 6.2.1, it is recommended that "Lift doors should not open directly onto vehicular thoroughfares. Pedestrian safety should be considered at access points to lifts on all levels." According to the drawing DA 2003 and DA 2004, the lift doors for all the residential towers open directly into either vehicular thoroughfares or car parking space, with inadequate spatial provision for residents to wait for the lift and exit safely. Specially, the northern and eastern towers' lift doors on basement levels 3 and 4 may require a layout reconfiguration of the lift core in order to avoid this pedestrian and vehicular conflict.

According to the DCP Clause 4.1.3 Pedestrian Ways - Provision P7, passive surveillance from the upper levels of balconies and living areas must be provided along the southern edge of the pedestrian way. However, the proposal's northern tower is slightly cantilevered over the pedestrian way and therefore passive surveillance from the upper levels is not as effective. It is noted that a similar situation occurs to the overhang on the retail and commercial floors which eliminate visibility of the Belmore Street entrance points.

Visual Privacy

There are visual privacy issues due to the encroachment into the RFDC's building separation distances, which occurs along the eastern facade of the southern tower and the units facing the podium garden area on level 4. According to drawing DA 2106, there is overlooking between the balcony of unit A601 and the southern bedroom of unit A605, where the separation distance is 5m and therefore falls short of the RFDC's minimum required 18m between balconies/habitable rooms. A similar situation occurs on levels 7 and 8.

Another visual privacy issue occurs between the southern bedroom of unit A605 and the balcony of unit B601. This similar situation occurs on levels 7 and 8. Both areas are located within a 45 degrees view cone that has the potential to result in overlooking issues. Moreover, the building separation distance is approx. 10.4m which falls short of the RFDC's minimum required separation distance of 18m between balconies/habitable rooms.

On level 5, there is potential overlooking from the northern communal circulation corridor into the balcony of unit B503, as the building separation distance is approx. 10m which falls short of the RFDC's minimum required 18m.

2.2.3 Site Access

Building Entry

The proposal has 2 retail entries and 2 residential lobbies accessible from the public domain. The retail entries into the podium are located to the north and south at the centre of the podium, accessed from the pedestrian way and Belmore Street respectively. One of the residential lobbies is located to the south-west part of the site and is accessed from Belmore Street and the other is located to the north-east part of the podium accessible from garden plaza and the pedestrian way. Around the garden plaza, the retail entry has a more significant frontage than the residential lobby which is approx. 2.4m. The residential lobby is sandwiched between a blank wall and a retail shopfront. There is a lack of distinction of the residential lobby's entry from the overall retail frontage towards Garden Plaza. It is recommended that the residential entry is widen and with materials articulation to improve the amenity of the entrance.

According to the RFDC's Better Design Practice for residential building entries, it is recommended to provide an adequate size for the circulation space to allow easier movement of furniture between public and private spaces. The proposal's northern residential lobby has a size of approx. 6.6m by 2.45m, which is smaller in area than the southern residential lobby. The width of 2.45m complies with the DDA Premise Standards for wheelchair manoeuvrability in accordance to the Access Report. However, the northern residential lobby has the potential to serve a higher volume of residents' access from street level to the northern and eastern towers. The number of residents accessing the towers from the southern residential lobby on street level is considered to be lower in comparison to the northern residential lobby due to their relative proximity to Burwood Railway Station. Therefore, it is suggested that the area of the northern residential lobby on street level to be increased to accommodate the potential volume of residents' access.

Pedestrian Access

The pedestrian way across the subject site does not fulfil the RFDC's objectives to promote development that is well connected to the street and contributes to the accessibility of the public domain. The elevated pedestrian way from Wynne Avenue side does not promote a smooth pedestrian movement into or across the subject site to Clarendon Place. According to architectural drawing DA2101, the pedestrian connectivity in the north-south direction across the site is restricted to the proposal's retail opening hours (6am to 10pm). This limits the pedestrian movement particularly between the pedestrian way and Belmore Street's residential lift lobby after hours.

Vehicle Access

The proposal has dedicated the majority of its Wynne Avenue frontage for vehicular access. According to architectural drawing DA2006, the approx. 12.4m wide 4-lane car parking access point is located immediately adjacent to the DCP's dedicated pedestrian way. This may result in potential pedestrian and vehicular conflicts.

The DCP Clause 3.1.2 Vehicular Access and Footpath Crossings – Provision P7 states that openings in buildings that provide vehicular access must have automatic closing doors to conceal the opening from any public place. According to the architectural drawing DA2006, there is no indication of a roller shutter door for all three vehicular access lanes from Wynne Avenue. As a result, a 'black hole' of approx. 12.4m in width by 2m in height occurs along Wynne Avenue which does not compliment the streetscape.

Parking

According to the DCP Clause 3.1.3 Provision P1, development involving the construction of gross floor area in excess of 400 sqm or three dwellings must include facilities for parking of bicycles (racks and lockers) and showers/change rooms for use by bicycle riders. The proposal has provided bicycle parking and shower facilities to the north-west corner of the site on basement levels 1 and 2. Therefore, the proposal meets the requirement.

Council is advised to seek for independent traffic and parking consultant to comment on issues regarding parking count and distribution of parking spaces in the proposal.

2.3 Building Design

2.3.1 Building Configuration

The proposal consists of corner units, single aspect and dual aspect units for all three residential towers. The DCP Clause 2.3.1-Apartment Mix requires that residential development in excess of 20 dwellings must provide a mix of dwellings. The proposal's has 222 residential units, consisting of 16 one bedroom units, 28 one bedroom plus study units, 163 two bedroom units and 7 three bedroom units. Therefore, the proposal complies with the DCP's apartment mix requirement.

Most of the residential units in the northern and southern towers are corner units, with one single aspect unit per floor oriented to the north. The depth of single aspect unit is approx. 11m, which exceeds the RFDC's recommended depth of 8m. A similar situation occurs to the western single aspect residential units of the eastern tower where these units have a depth of 8.6m, which slightly exceeds the RFDC's maximum recommended distance of 8m. Daylight and ventilation may be an issue especially if the distance to the back of kitchen slightly exceeds the distance of 8m from a window.

In terms of the distance from the back of kitchens to the nearest window, unit 2 for levels 5 to 15 of the northern and southern towers has a distance of 8.4m which slightly exceeds the RFDC recommended maximum 8m to a window. A similar situation occurs to the residential units on levels 4 and 5 of the northern tower. Although mitigation steps such as kitchen ventilation has been allocated to these units, daylight access remains unresolved. Moreover, the windows/openings of these single aspect units (on level 4) are recessed 3m from the building facade line, resulting in a further reduction of daylight and natural ventilation from the window/openings.

In the western single aspect residential units of the eastern tower, the study rooms are located 8.4m away from the closest window in separate room which is undesirable in terms of amenity.

For the retail tenancies to the eastern part of the podium on levels 1 to 3, there is no indication of a direct route between the retail tenancies and the garbage store. It is presumed that this access will need to occur through shopfront areas.

In terms of the residential units' balconies, units 6, 7 and 8 located to the eastern side of the eastern tower on levels 5 to 16 have primary balconies with a width of less than the RFDC's minimum recommended 2m. This is particularly evident as these units consist of 2 bedrooms where a width of 2.4m is more suitable to accommodate a more appropriate furniture layout (e.g. a table and four chairs). Furthermore, these eastern balconies are recessed with a depth of 4m and 1.8m of opening, and therefore may appear to be too narrow to contribute positively to the amenity of the units.

In terms of ceiling height, the proposal's minimum ceiling height for the ground floor retail level is approx. 4.3m (according to drawing DA3201). For the retail on levels 2 and 3 in the podium, the ceiling height is 3.7m and 3.9m respectively (according to the measurement on drawing DA3201). The ceiling height for residential floors is 2.7m. Therefore, the proposal complies with the minimum ceiling heights as per the DCP and RFDC.

According to RFDC's Flexibility guidelines, robust building configurations are encouraged, which utilise multiple entries and circulation cores especially in large buildings over 15m long. On levels 4 and 5, the double loaded corridors serve to link the northern and eastern towers whereas the southern tower is separated without any weather protected linkage along the link. As a result, the northern and eastern towers' residents entering the proposal from Belmore Street will need to travel across level 4 without weather protection to access their corresponding units during inclement weather.

The DCP refers to the RFDC provisions for the minimum storage requirement for residential units. A number of 1, 2 and 3-bedroom units fail to comply with the minimum storage requirement of $6m^3$, $8m^3$ and $10m^3$ respectively (where 50% of the storage must be within each unit). According to the architectural drawings and Design Report, the proposal has provided storage details within each unit types and storage locations in the basement car park. Therefore, the proposal complies with this requirement.

2.3.2 Building Amenity

In terms of acoustic privacy, the RFDC's better design practice suggests clustering noise generating areas next to each other and allowing quieter areas to have maximum acoustic privacy. For instance, unit 2 for levels 5 to 16 of the eastern tower can be mirrored along east-west axis to allow clustering of bathroom areas with unit 1, instead of having the study area next to the bathroom of the adjacent unit.

In terms of daylight access, the RFDC requires a minimum 70 percent of living room/private open spaces receiving a minimum of three hours direct sunlight between 9am and 3pm in mid winter. According to the Design Report, 63% of the apartments meet the requirement. This falls short of RFDC's requirement by 7% where at least 156 units are required to achieve a minimum of three hours direct sunlight between 9am and 3pm in mid winter. The Design Report considers the proposal to be located in a dense urban area and has taken into account an additional 25% of apartments which receive at least two hours of sun light in mid-winter to the private open spaces and living areas. It is to Council's discretion of whether Burwood Town Centre is classified to be dense urban area in order to allow for this concession.

In terms of natural ventilation, the RFDC requires a minimum of 60 percent of residential units to be naturally cross ventilated. The statement claims to have a total of 62% of naturally cross-ventilated units, where 58% of the residential units achieve cross ventilation through corner apartments, dual aspects or operable skylight windows and 4% of the residential units utilise resident controlled damper associated with ventilation louvres. However, the availability of natural cross ventilation for the 4% of the residential units relies upon user control, which may be ineffective and is dependent on the convenience and ease of operating those ventilation louvres.

According to the BCA Capability Report, there is a number of non-compliances in terms of exit travel distances. However, the applicant has mentioned that fire engineering will be utilised in the CC stage to assess the departure from DTS. Therefore, Council is advised to take note of this issue.

Adaptable Units and Mobility Impaired Access

The DCP Clause 2.3.12 Access and Mobility - Provision P6 states at least 5% of dwellings (12 out of total 222 units) in the development must be provided with access for people with disability in accordance with AS 1428.2. According to the architectural drawings, the proposed development does not indicate any accessible units. Therefore, it fails to comply with the DCP. According to section 6.1 of the Access Report, the proposal claims that this requirement is 'unsuitable and excessive as BCA 2011 does not require accessible dwellings for Class 2 developments.' However, the RFDC recommends residential buildings to provide barrier free access to at least 20% of dwellings in the development. It is up to Council's discretion to accept proposal's arguments with regards to accessible units.

According to the DCP Clause 2.3.12 Access and Mobility - Provision P7 states at least 10% of dwellings (23 out of total 222 units) in the development must be provided as adaptable housing to cater for ageing in place and mobility impaired residents, in accordance with AS 4299. Section 6 of the Access Report indicates that 8, 14 and 2 units are 1-bedroom adaptable, 2-bedroom adaptable and 3-bedroom adaptable units respectively, for a total of 24 adaptable units. This meets the required 23 units as per the DCP requirement. However, there is no detailed plan provided to show how each adaptable unit type will function according to the recommendations in the Access Report.

In terms of accessible car parking, according to DCP Clause 2.3.12 Provision P8, at least one car parking space must be provided and allocated to each adaptable dwelling under this Section and the car parking space must be accessible in accordance with the provisions of *AS 1428.2* which facilitates automatic vehicular wheelchair loading and unloading. It is presumed that the proposal must comply with the DCP's number of adaptable units and therefore will need to provide 23 resident's accessible car spaces and 4 visitor's accessible car spaces for the residential component. The proposal has provided 13 and 10 accessible car spaces on basement level 4 and 5 respectively therefore complies with the required 23 accessible car spaces as well as 4 visitor's car spaces for the residential use.

2.3.3 Building Form

According to the architectural plans, the proposal adopts a blade wall expression in the north-south direction. This involves the treatment to the edges of the tower where blade walls of approx. 2.4m and 4.4m in depth are provided. This blade walls appear to be solid and oversized which increase the residential tower's perception of bulk and scale. The facade articulation depends heavily on the repetitive nature of horizontal banding on each of the lourve's levels, where the balconies and windows are uniformly repeated on each floor. As a result, the overall tower form lacks visual interest.

The eastern and western elevations of the proposal's eastern tower lack articulation, with planar facades wrapping by around in the form of horizontal bands. This tower has a building length of approx. 50m along the Clarendon the Place frontage, which exceeds the DCP's maximum recommended building length. Although Clarendon Place does not go the full stretch of the building length, this elevation of the eastern tower lacks a vertical break which contributes to a 'massive wall' effect.

The proposal's towers appear to be overwhelming in scale and bulk along all elevations. This is primarily due to a lack of setbacks and articulation in the vertical direction (levels 5 to 15 have similar shaped floor plates). Furthermore, the uppermost level of each residential tower has balconies protruding out from the general facade lines, below in almost any distinction. This one is seen as a 'bulky crowning' at the top of the tower. This aesthetic solution seems reminiscent of outdated stylistic convention of decades past.

Furthermore, the northern elevation of the proposal encroaches into the pedestrian way setback zone by 1.6m which also contributes to the excessive bulk of the proposal when perceived from Belmore Street. This is particularly evident in the montage shown on the cover page of the Design Report, where the podium height is perceived to be approx. 21m with level 6 overhanging into the pedestrian way. It is necessary to investigate the street scale relationship of the proposal and the pedestrian way. In the event that Burwood Plaza redevelops, the pedestrian way should be able to maintain quality amenity and solar access.

The roof design of the proposal's tower has insufficient articulation as the thickness of the blade walls does not help to break the overall rectilinear and unarticulated flat roof form. The absence of setbacks on the upper most level also contributes to its overall bulk and scale.

Along the Belmore Street frontage, the retail entrance has a strong legibility with the articulation of material with a glazed entry signage on levels 2 and 3. However, the residential lobby entry in comparison has lesser legibility with little articulation along the podium facade.

2.3.4 Building Performance

A Building Sustainability Index Certificate (BASIX) has been provided. According to the Certificate, all the proposal's three residential towers achieve the minimum requirement in terms of water, thermal comfort and energy.

2.3.5 Flexibility

In the previous assessment, GMU noted a positive outcome that allows for future adaptation where the design of the eastern tower enables the residential units at the southern end to adopt to dual key access. This positive feature is no longer present in the latest plans reviewed by GMU.

3.0 Responses to LEP, DCP and RFDC

The following is a summary of the proposal's performance against the LEP, DCP and RFDC.

3.1 Responses to the LEP

The objectives of the B4 Mixed use zone under Burwood Town Centre LEP 2010 are as follows:

- To provide a mixture of compatible land uses
- To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.

The proposed development's performance measured against the numerical controls of the LEP is as follows:

- The proposed building height is within the maximum permitted height of 60m.
- The proposed total Floor Space Ratio (FSR) is 4.5:1 which complies with the maximum permitted FSR of 4.5:1. However, the allowable commercial FSR is 1.5:1 and 3:1 for residential. The proposal complies with the commercial FSR, but exceeds the residential FSR by 0.14:1 at 3.14:1.
- The use as a mixed use development is permitted within the B4 mixed use zone.

3.2 Responses to the DCP

From an initial review of the proposal, GMU has identified the following issues with regard to compliance with the DCP:

- The proposed development does not meet the minimum RFDC's building separation requirements to the west (common boundary with 33-35 Belmore Street) for the southern tower and to the east for the eastern tower. The proposal encroaches into the required building separation distances and therefore fails to achieve equal sharing of building separation distance to the common boundary. This result in some visual and acoustic privacy, solar access and outlook issues to the adjacent site.
- The secondary setback for the southern elevation encroaches into the 6m setback zone, resulting in an overwhelming bulk when perceived along Belmore Street.
- Inadequate setback/separation to the northern side boundary of 33-35 Belmore Street resulting in compromised amenity to the existing units along that facade especially on level 1.
- The communal open space dedicated for residential use on level 4 fails to meet the minimum required area as per RFDC. The playground located to the south of eastern tower has poor amenity during the afternoon throughout most of the year.
- There is no indication of accessible units in the proposal and no indication of detailed drawings of adaptable units to demonstrate functionality of spaces.
- There is insufficient number of accessible car parking spaces for visitors and retail as per the DCP.
- The exit travel distances for the basement levels fail to comply with the minimum requirement as per the BCA.

3.3 Responses to the Residential Flat Design Code

From an initial review of the proposed development and its response to the objectives of SEPP 65, GMU has identified the following issues:

3.3.1 Building design & configuration

- The pedestrian way to the north of the proposal has poor visibility from Wynne Avenue. There is no direct visual connection to encourage pedestrian movement. Lack of gradual transition results in a 'blank wall' effect.

- Insufficient deep soil zone. According to the Design Report, the proposal does not provide deep soil zone due to full site coverage. However, other mitigation measures are proposed up to Council's discretion.
- Overlooking issues between balconies and bedroom of units in the southern tower as well as between the western balconies of the eastern tower and the bedrooms in the eastern part of the southern tower, which also contribute to overlooking from upper to lower units.
- Overlooking issues from the communal open space on the garden podium into the residential units on level 4 due to a lack of level difference or buffering to control visual privacy.
- No passive surveillance for the forecourt on ground level due to overhanging podium elements.
- Residents in the northern tower entering from the pedestrian way are required to transfer between lift cores on level 4. This result in privacy and security issues to residents on level 4.

3.3.2 Internal amenity

- Some dual aspect units exceed the recommended maximum width to maintain access to daylight and natural ventilation.
- Recessed balconies to the east of the eastern tower appear to be too narrow to contribute positively to the amenity of the single aspect units.
- The distance to the back of kitchens for some residential units exceeds the RFDC's recommended depth of 8m from a window.
- The percentage of residential units achieving daylight access and natural cross ventilation does not meet the RFDC's minimum requirements.

3.3.3 Aesthetics

- The overall massing of the proposal is box-like with an overwhelming scale due to insufficient setback distances. There is no setback towards the upper levels and this results in inappropriate bulk and scale. Protrusion of balconies crowing the top of the towers increases the perceived bulk of the proposal.
- The eastern tower employs planar facades of up to 50m in length resulting in unattractive long walls. This is further accentuated with long horizontal bands that link the residential balconies together along the facades. Lack of vertical breaks results in continuous wall expression which is undesirable.
- The facades of the podium for three of the elevations do not present distinct treatments to address their corresponding orientations and aspects.
- Roof design lacks visual interest as the blade walls are only perceivable from north and south elevations. The east and west elevations present sides of the blade walls and therefore do not achieve any further articulation.
- Limited assessment can be done in terms of material palettes due to insufficient information provided in terms of external materials finishing and colours. According to the montage, it is presumed that the balustrades of the residential units' balconies are predominantly grey and white.

4.0 Preliminary recommendation

GMU considers the proposal as an overdevelopment which compromises internal amenity including communal open space, privacy and internal way finding. It also has compromised significantly the amenity and redevelopment potential of adjacent sites in particular 33-35 Belmore Street and the Burwood Plaza to the north. This is mainly due to the encroachment into the required separation above podium levels in a number of different locations. It is paramount that this is rectified, especially in areas where amenity is compromised. Therefore, this proposal could set a very poor precedent for future development under the new LEP and DCP. The proposed development requires a number of issues to be addressed as detailed throughout Sections 2 and 3 of this report. These can be generally summarized as follows:

- Inadequate building separation distances to adjacent property and setbacks towards upper levels resulting in significant bulk and scale issues.
- Undesirable access at the western end of the pedestrian way from Wynne Avenue.
- Vertical circulation issues for the residents of the northern tower where level 4 becomes a transfer level.
- Long circulation corridors may result in potential safety issues and lack of communal sense and orientation.
- Insufficient area of communal open space on the garden podium area.
- Insufficient deep soil zones.
- Lack of building articulation for the eastern tower's facades and roof design.
- Internal amenity issues such as overlooking between balconies and bedrooms as well as common spaces.
- No indication of accessible units within the proposal.
- Treatment to units along the northern facade of 33-35 Belmore Street.

It is the preliminary recommendation by GMU that the proposed development be amended to address all of above issues prior to any further consideration for approval. There is insufficient information provided with regards to:

- Detailed accessible unit plan(s)
- Detailed material palette with samples
- Accurate solar diagrams for winter and summer