

TURNER

BIGGE STREET

4-6 Bigge Street Warwick Farm NSW 2170

DESIGN STATEMENT

Development Application
Residential Development

Incorporating:

SEPP 65 and ADG Statement

DA 17.7.19_Rev 2



CONTENT

PART 1:	INTRODUCTION Site description Proposal Project Team
PART 2:	SEPP 65 DESIGN QUALITY PRINCIPLES
PART 3:	RESPONSE TO APARTMENT DESIGN GUIDE OBJECTIVES
APPENDICES	ARCHITECTURAL DESIGN PACKAGE SCHEDULES

VIEW FROM BIGGE STREET



PART 1

INTRODUCTION

This design statement by Turner forms part of Development Application (DA) submission for 4-6 Bigge Street Warwick Farm, NSW seeking approval for the proposed residential development on the subject land.

This report should be read in conjunction with the accompanying architectural design package, associated consultant's reports and also includes SEPP65 Design Verification and provides relevant information on how the design responds to the design principles of the SEPP and the objectives of the Apartment Design Guide (ADG).]

BIGGE STREET LOBBY ENTRY



Site description

The site, located at 4-6 Bigge Street Warwick Farm, NSW, is bounded by Bigge Street to the West and medium to high density residential developments to the North, East and South. The site comprises of two Lots; Lot 22 and Lot 23, DP 35110, with a total site area of 1757.8 sqm. The site is zoned R4 High Density Residential under Liverpool LEP 2008. The site is in close proximity to public transport, local neighbourhood shops and nearby land uses including Liverpool Hospital, Westfield Liverpool Shopping Centre and local schools such as Liverpool Girls High School and All Saints Catholic College. Warwick Farm Railway Station to the north east and Liverpool Station to the south, both link the site to the Paramatta and Sydney CBD.

4-6 Bigge Street Warwick Farm, NSW, from here on will be referred to as the Site.

Proposal

The proposal for the Site includes an 11 storey residential building with

- one level of basement car parking for 24 cars;
- residential apartments to the upper 11 floors consisting of 28 one bedroom apartments and 24 two bedroom apartments.

Project team

Turner is engaged by Land and Housing Corporation to prepare the architectural design package for the proposed development of 4-6 Bigge Street Warwick Farm, NSW,

Working closely with the consulting team for the project which includes Planning, Landscape Architects, BCA, Traffic, Civil, ESD, Acoustic, Waste Management and Services Consultants since February 2019, we have prepared the architectural design package including this design statement in support of the proposed development.



PART 2

SEPP 65

DESIGN QUALITY PRINCIPLES

We confirm that Stephen Cox of Turner is registered as an architect under the Architects Act 2003 and has directed the DA design and documentation of the development at 4-6 Bigge Street Warwick Farm, NSW and that the design quality principles set out in Part 2 of State Environmental Planning Policy No 65-Design Quality of Residential Flat Development are achieved for the residential development.

A handwritten signature in black ink, appearing to be 'S. Cox', with a stylized flourish at the end.

Stephen Cox
Registration Number: 6391

01 DESIGN QUALITY PRINCIPLE

CONTEXT AND NEIGHBORHOOD CHARACTER

Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.

Responding to context involves identifying the desirable elements of an area's existing or future character. Well-designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood.

Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

Proposal

The Warwick Farm area within the Liverpool Local Government Area is a locality undergoing significant transformation to a high density residential area. The proposal responds to the desired urban renewal that is occurring throughout the locality and forms a positive contribution to the desired future character of the area.

The immediate context is characterised by a number of multi-residential buildings at varying scales. The site is bound by Bigge Street to the west with a fifteen storey residential flat building located opposite the Site. Adjoining the Site, to the northern and southern boundaries, are two six-storey residential developments. The Site is not located within a heritage conservation area however Bigge Street is part of a street layout that represents the Hoddle Grid layout of the early town centre of Liverpool.

The proposal is designed to fit in to this context. The building set back from the street boundary and 4-5 storey lower portion contribute to defining the street edge and reinforce the Hoddle Grid street pattern.

The street address features a clearly defined building entry and a landscape strategy that offers a "green relief" zone through new street trees and high quality planting to the front set-back.

The massing of the proposal was an important consideration to ensure that the development envelope minimised impact to neighbouring properties privacy or overshadowing.

The character and materiality of the proposal is driven by simplicity, durability and low maintenance with materials designed to weather gracefully. Paint is minimised. The proposed pre-finished precast façade features a textured finish to the street elevation. The strong form and refined material palette offer a handsome architecture that the occupants and neighbourhood can be proud of.

02 DESIGN QUALITY PRINCIPLE

BUILT FORM AND SCALE

Good design achieves a scale, bulk and height appropriate to the existing or future desired character of the street and surrounding buildings.

Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements.

Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

Proposal

During the concept design phase a number of massing strategies were investigated. Starting with the movement of sun during mid-winter several massing strategies were tested against the various site controls, permissible FSR bonus (ARH SEPP) applicable to the site, the relationship to the public domain along Bigge Street, and the amenity of the internal spaces and apartments within the development.

The selected solution was a massing that aimed to minimise adverse impacts to the amenity of adjoining properties while allowing high amenity to the apartments and communal open space within the development.

The building setbacks at Level 04 and Level 06 (Storey 05 and 07) reduce the perceived scale and mass of the building. This enabled a defined base to the lower four storeys that defines the street edge and a slender upper portion that maximises solar access and natural ventilation to all units.

On each face, balconies with translucent glass combined with the horizontal precast spandrel expression are used to break down the scale both in building length and height. Textured precast to the western street elevation brings a finer level of detail close to the street.

All apartments have good outlook taking advantage of local vistas and landscaped communal areas.

Active edges are provided by the building Lobby Entry at Bigge Street and access to the individual ground floor apartments from the Communal Open Space.



03 DESIGN QUALITY PRINCIPLE

DENSITY

Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context.

Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.

Proposal

The proposed development fits within the prescribed zoning; R4 High Density Residential under Liverpool LEP 2008 and proposes a residential density that supports the future intended population density for the area. The Statement of Environmental Effects references other planning considerations such as The Greater Sydney Region Plan (GSRP) March 2018 that recognises the demand for housing supply, choice, diversity and affordability in an area with access to jobs, services and public transport.

The proposal is designed to provide 100% social housing all configured to meet the Livable Housing Australia guidelines with 12% configured for adaption.

There are existing facilities in close proximity to support the proposed densities including Warwick Farm and Liverpool train stations, local neighbourhood shops and nearby land uses including Liverpool Hospital, Westfield Liverpool Shopping Centre and local schools such as Liverpool Girls High School and All Saints Catholic College.

The proposed development:

- Reflects an FSR of 2.22:1. The site has an FSR of 2:1 under the Liverpool LEP 2008 however the development is eligible for a bonus 0.5:1 FSR given the proposal will provide more than 50% affordable housing.
- Houses a total of 52 units with a mix of 54% one bedroom, 46% two bedroom apartments, allowing a mix of typologies and living patterns required by Land and Housing Corporation. All of the apartments are livable and feature both silver and gold level design elements as outlined in the Livable Housing Australia 2017 guideline.
- Provides 27% of the site area as communal open space.

04 DESIGN QUALITY PRINCIPLE

SUSTAINABILITY

Good design combines positive environmental, social and economic outcomes.

Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials, and deep soil zones for groundwater recharge and vegetation.

Proposal

The development is designed to embrace ESD principles. The use of appropriate built form generates 67% of apartments in the first nine storeys naturally ventilated. The remaining apartments to the upper storeys are all naturally ventilated.

The massing, internal layouts and orientation have been organised so as to provide good natural daylighting and solar access into the primary living spaces, external living areas and courtyard. The massing also allows a greater proportion of apartments to have a Northern aspect. Eastern and Western aspects are then prioritised over south aspect apartments.

Photovoltaics will be included on the roofs to provide energy to common area lighting.

The development will include a tank for the retention of stormwater to be re-used for irrigation.

A BASIX report by Wood and Grieve Engineers is submitted with this development application outlining the thermal comfort, water and energy use strategy for the development.

Refer to attached architectural package in appendices which provides further details relating to the above.

05 DESIGN QUALITY PRINCIPLE

LANDSCAPE

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well-designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.

Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values, and preserving green networks.

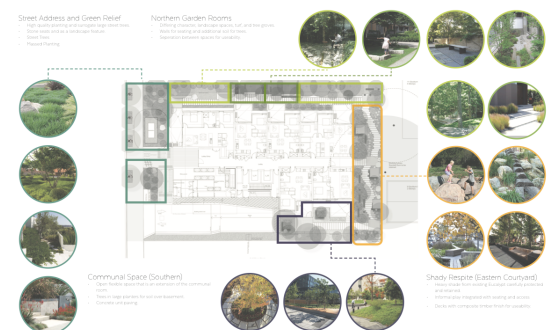
Good landscape design optimises usability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity, and provides for practical establishment and long-term management.

Proposal

An integrated approach has been adopted for the development where:

- A diversity of open spaces provide amenity and a hierarchy that responds to the need for a variety of different activities to occur within the site.
- The street frontage will benefit the wider community; the footpath upgrade, four new street trees and a green relief zone of high quality planting and stone seats as a landscape feature are located adjacent to the Main Lobby Entry.
- The Communal Open space celebrates the north eastern aspect and occupies the 6m wide deep soil zone at the eastern end of the site. A pathway connects the northern, eastern and southern gardens that are easily accessible from the Ground Floor Lobby. The northern garden offers tree groves and low wall seating for a series of quiet reflective spaces while the eastern garden offers informal play and deck seating that benefit from shade provided by the canopy of the existing Lemon Scented Gum to be retained. The south eastern garden will be a favourable respite especially in the warmer seasons.
- Apartment access provides street activation and the communal landscaped spaces dedicated to each individual ground level apartment will provide a good amenity for residents;
- Each apartment has a balcony complying with the minimum prescribed depth in the ADG, and have been designed to encourage potted plants and maximise light and views, whilst considering privacy and screening of clothes lines and balcony furniture.

Refer to Landscape drawings and report by Sydney Design Collective for further detail.



Landscape Concept Diagram By SDC



"Four New Street Trees"

06 DESIGN QUALITY PRINCIPLE

AMENITY

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well-being.

Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and services areas and ease of access for all age groups and degrees of mobility.

Proposal

The building has been organised and arranged to maximise the potential amenity of the indoor and outdoor spaces.

- The proposal complies with the amenity provisions of the ADG; solar access, natural cross-ventilation, room size and apartment areas all meet or exceed SEPP65 minimums.
- The use of appropriate built form generates 67% of apartments in the first nine storeys naturally ventilated. The remaining apartments to the upper storeys are all naturally ventilated.
- Ceiling heights are designed to facilitate light and ventilation to the habitable areas and to allow for efficient mechanical extraction and services integration. 2.7m ceilings will be provided to living and bedrooms with minimal bulkheads below 2.7m. Some kitchens will be a minimum of 2.4m to all for the reticulation of hydraulic and mechanical exhaust ducts.
- All units have primary living areas facing local district views or new communal open space.
- Room sizes adopt the Livable and adaptable design standards while making the apartment look the same as regular apartments. This offers variety to potential residents, also allowing for age-in-place.
- The privacy of the units has been maintained through appropriate setbacks, orientation, internal layouts and separation of balconies.

07 DESIGN QUALITY PRINCIPLE

SAFETY

Good design optimises safety and security within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety.

A positive relationship between public and private spaces is achieved through clearly defined secure access points and well-lit and visible areas that are easily maintained and appropriate to the location and purpose.

Proposal

Crime Prevention Through Environmental Design (CPTED) considerations are important to the delineation of public, communal and private areas of the development.

- Good passive surveillance of the street and communal areas is afforded by balconies and windows to the full building perimeter, thereby taking in all aspects. There are clear lines of sight within and adjacent to the site.
- Ground floor terraces feature low walls and palisade fencing providing appropriate separation and privacy for ground floor apartments.
- The building entry is well defined and legible with mailboxes located inside the lobby in a secured area.
- Appropriate lighting will be provided to all exterior areas, both public and communal, particularly around entry points. The entry lobby will be well-lit to accentuate the street address and continually illuminated after dark for added safety.
- The building will utilise a security system at all entry points, and within the lifts. A single point of vehicular access is secured by an automatic roller door.
- Communal open space is well delineated from the public domain and is easily accessible and overlooked from apartments.

08 DESIGN QUALITY PRINCIPLE

HOUSING DIVERSITY AND SOCIAL INTERACTION

Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.

Well-designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix.

Good design involves practical and flexible features, including different types of communal spaces for a broad range of people and providing opportunities for social interaction among residents.

Proposal

The proposal is designed to provide 100% social housing in apartments with high amenity. All apartments are configured to meet the Livable Housing Australia guidelines with 12% configured for adaption.

One and two bedroom apartments are provided, following the social housing demands of the area. Ground floor and selected upper apartments have larger outdoor spaces suitable for different demographics.

The outdoor spaces are designed to engender community spirit for residents within the development, by offering both public and private areas for congregation and activity.

Refer to the Social Impact Statement prepared by City Plan as part of the Statement of Environmental Effects for further detail.

09 DESIGN QUALITY PRINCIPLE

AESTHETICS

Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures.

The visual appearance of a well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.

Proposal

- The overall design concept has been to provide an approach that considers both the detail of the building at the scale of an individual person interacting with their immediate environment, as well as to consider the overall building form within the immediate context and how the material and treatment of the façade give character and definition in the context of Liverpool.
- The street frontage and Lobby Entry is celebrated with good quality planting and an insitu concrete marker. A deliberate play on words through the use of supergraphic signage for “Bigge” wraps around all three corners creating visual intrigue for passers by in all directions.
- The building setbacks at Level 04 and Level 06 (Storey 05 and 07) reduce the perceived scale and mass of the building. This enabled a defined base to the lower four storeys that defines the street edge and a slender upper portion that maximises solar access and natural ventilation to all units.
- On each face, balconies with translucent glass combined with the horizontal precast spandrel expression are used to break down the scale both in building length and height. Textured precast to the western street elevation brings a finer level of detail close to the street.
- The design has included consideration to external materials and finishes so that applied finishes are minimised to reduce maintenance. Interior finishes will also be selected for durability and ease of maintenance.
- The proposed precast façade provides a durable, low maintenance building with materials designed to weather gracefully. The precast skin is given definition by select areas of precast with a profiled textured finish. A high degree of standardisation is proposed through panel size and the use of standard corrugated form-liners.

- Balconies are both solid and translucent glass to allow privacy and screening of balcony furniture but still permitting openness and district views. These are designed to enable clothes lines and encourage potted plants and vegetation by residents.
- Low rendered concrete walls painted in dark earthy tones are used for the garden walls to the ground floor terraces. These walls are fronted with painted steel fencing to bring a finer detail close to the street. The base is richer in its detailing, reflecting its proximity to pedestrians.



PART 3

RESPONSE TO APARTMENT DESIGN GUIDE OBJECTIVES

The following provides a design response to the relevant objectives of the Apartment Design Guide (ADG) and describes the measures by which the proposed development meets these objects.

3A Site analysis [p.47]

Objective 3A-1

Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context

The proposal meets the objectives.

- The site analysis plan is included in the architectural drawings demonstrating the how the design has considered the site amenities.
- Site Location Plan and Aerial Photograph is submitted that illustrates the site location in relation to surrounding centres, shops, civic/community facilities and transport
- The Warwick Farm area within the Liverpool Local Government Area is a locality undergoing significant transformation to a high density residential area. The proposal responds to the desired urban renewal that is occurring throughout the locality and forms a positive contribution to the desired future character of the area.
- The immediate context is characterised by a number of multi-residential buildings at varying scales. The site is bound by Bigge Street to the west with a fifteen storey residential flat building located opposite the Site. Adjoining the Site, to the northern and southern boundaries, are two six-storey residential developments. The Site is not located within a heritage conservation area however Bigge Street is part of a street layout that represents the Hoddle Grid layout of the early town centre of Liverpool.
- The proposal is designed to fit in to this context. The building set back from the street boundary and 4-5 storey lower portion contribute to defining the street edge and reinforce the Hoddle Grid street pattern.
- The street address features a clearly defined building entry and a landscape strategy that offers a “green relief” zone through new street trees and high quality planting to the front set-back.
- The massing of the proposal was an important consideration to ensure that the development envelope minimised impact to neighbouring properties privacy or overshadowing.
- The character and materiality of the proposal is driven by simplicity, durability and low maintenance with materials designed to weather gracefully. Paint is minimised. The proposed pre-finished precast façade features a textured finish to the street elevation. The strong form and refined material palette offer a handsome architecture that the occupants and neighbourhood can be proud of.

3B Orientation [p.49]

Objective 3B-1

Building types and layouts respond to the streetscape and site while optimising solar access within the development

The proposal meets the objectives.

- During the concept design phase a number of massing strategies were investigated. Starting with the movement of sun during mid-winter several massing strategies were tested against the various site controls, permissible FSR

bonus (ARH SEPP) applicable to the site, the relationship to the public domain along Bigge Street, and the amenity of the internal spaces and apartments within the development.

- The selected solution was a massing that aimed to minimise adverse impacts to the amenity of adjoining properties while allowing high amenity to the apartments and communal open space within the development.
- The building setbacks at Level 04 and Level 06 (Storey 05 and 07) reduce the perceived scale and mass of the building. This enabled a defined base to the lower four storeys that defines the street edge and a slender upper portion that maximises solar access and natural ventilation to all units.
- The proposed development seeks to vary one development standard in relation to height as outlined in Clause 4.3 Liverpool LEP 2008 as a result of a minor breach in height relating to roof parapet and roof top structures including lift overrun and mechanical plant and does not include habitable space.

Objective 3B-2

Overshadowing of neighbouring properties is minimised during mid-winter

The proposal meets the objectives.

- Modelling indicates that the neighbouring properties receive the required sunlight.
- No collectors sighted on adjoining properties.

Refer to the shadow diagrams for further information.

3C Public domain interface [p.51]

Objective 3C-1

Transition between private and public domain is achieved without compromising safety and security

The proposal meets the objectives.

- Much of the site grading along Bigge Street is maintained to ensure a seamless junction with the Public Domain and existing neighbouring properties.
- The building entry is well defined and legible with mailboxes located inside the lobby in a secured area.
- Appropriate lighting will be provided to all exterior areas, both public and communal, particularly around entry points. The entry lobby will be well-lit to accentuate the street address and continually illuminated after dark for added safety.
- Good passive surveillance of the street and communal areas is afforded by balconies and windows to the full building perimeter, thereby taking in all aspects. There are clear lines of sight within and adjacent to the site.
- Ground floor terraces feature low walls and palisade fencing providing appropriate separation and privacy for ground floor apartments.
- The building will utilise a security system at all entry points, and within the lifts. A single point of vehicular access is secured by an automatic roller door.
- Communal open space is well delineated from the public domain and is easily accessible and overlooked from apartments.

Objective 3C-2*Amenity of the public domain is retained and enhanced*

The proposal meets the objectives.

- The street frontage will benefit the wider community; the footpath upgrade, four new street trees and a green relief zone of high quality planting and stone seats as a landscape feature are located adjacent to the Main Lobby Entry.
- The design works with a limited frontage to minimise the prominence of services and service areas to accommodate vehicular access and waste collection.

Refer to the Landscape concept plan prepared by Sydney Design Collective for further information.

3D Communal and public open space [p.55]**Objective 3D-1***An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping.***Design Criteria**

- Communal open space has a minimum area equal to 25% of the site
- Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid-winter)

The proposal meets the objectives.

- 27% of site area is classified as communal open space;
- The proposal will achieve the percentage requirements for communal open spaces receiving a minimum 2 hours of mid-winter sun.

Objective 3D-2*Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting*

The proposal meets the objectives.

- The Communal Open space celebrates the north eastern aspect and occupies the 6m wide deep soil zone at the eastern end of the site. A pathway connects the northern, eastern and southern gardens that are easily accessible from the Ground Floor Lobby. The northern garden offers tree groves and low wall seating for a series of quiet reflective spaces while the eastern garden offers informal play and deck seating that benefit from shade provided by the canopy of the existing Lemon Scented Gum to be retained. The south eastern garden will be a favourable respite especially in the warmer seasons.

Objective 3D-3*Communal open space is designed to maximise safety*

The proposal meets the objectives.

- Appropriate lighting will be provided to all exterior areas, both public and communal, particularly around entry points.
- Good passive surveillance of the communal open space is afforded by balconies and windows to the full building perimeter, thereby taking in all aspects.
- The communal open space is well delineated from the public domain and is easily accessible and overlooked from apartments.

Objective 3D-4

Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood

The proposal meets the objectives.

- The building lobby entry activates the street frontage and is well connected to Bigge Street.
- Boundaries are clearly defined between public open space and private areas.

3E Deep soil zones [p.61]

Objective 3E-1

Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality

Design criteria

Deep soil zones are to meet the following minimum requirements:

- 7% of site area
- <650sqm – no min dimension
- 650sqm-1500sqm – 3m min dimension
- >1500sqm – 6m min dimension

The proposal meets the objectives.

- Deep soil zones are provided throughout the development, offering additional privacy and setbacks to the adjacent residential dwellings;
- 19% of the site features deep soil planting.
- 11% of the site features deep soil with a minimum dimension of 6m.

Refer to the Deep soil and Communal Open Space Plan for further information.

3F Visual Privacy [P.62]

Objective 3F-1

Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy

Design criteria

1. Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum separation distances from buildings to the side and rear boundaries are as follows:

Up to 12m (4 storeys): Habitable rooms and balconies - 6m; Non-habitable rooms – 3m
Up to 25m (5-8 storeys): Habitable rooms and balconies - 9m; Non-habitable rooms – 4.5m
Over 25m (9 + storeys): Habitable rooms and balconies - 12m; Non-habitable rooms – 6m

Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room (see fig 3F.2)

Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties

The proposal meets the objectives.

- Up to 4 Storeys;
Habitable Rooms and Balconies; Minimum separation distance of 6m from the proposal to the side and rear boundaries is achieved.
Non-Habitable Rooms; Minimum separation distance of 3m from the proposal to the side and rear boundaries is achieved.
- 5 to 8 Storeys;
Habitable Rooms and Balconies; Minimum separation distance of 9m from the proposal to the side and rear boundaries is achieved.
Non-Habitable Rooms; Minimum separation distance of 4.5m from the proposal to the side and rear boundaries is achieved.
- 9 + Storeys;
Non-Habitable Rooms; Minimum separation distance of 6m from the proposal to the side and rear boundaries is achieved.
Habitable Rooms and Balconies; Minimum separation distance of 12m from the proposal to the rear boundary is achieved.
A separation distance of 9m from the proposal to the northern side boundary and portion of southern side boundary is a partial non-compliance however this does not impact the amenity of the adjoining properties as these neighbouring buildings are developed to 6 storeys. All balconies feature translucent glass and screening enabling visual privacy between neighbouring properties.

Objective 3F-2

Site and building design elements increase privacy without compromising access to light and air and balance outlook and views from habitable rooms and private open space

The proposal meets the objectives.

- Balconies are both solid and translucent glass to allow privacy and screening of balcony furniture but still permitting openness and district views. These are designed to enable clothes lines and encourage potted plants and vegetation by residents.
- The privacy of the units has been maintained through appropriate set backs, orientation, internal layouts and separation of balconies.

3G Pedestrian access and entries [p.66]

Objective 3G-1

Building entries and pedestrian access connects to and addresses the public domain

The proposal meets the objectives.

- The street frontage and Lobby Entry is clearly defined with good quality planting and an insitu concrete marker. A supergraphic signage for the street address wraps around all three corners creating visual intrigue for passers by in all directions.
- The street frontage will benefit the wider community; the footpath upgrade, four new street trees and a green relief zone of high quality planting and stone seats as a landscape feature are located adjacent to the Main Lobby Entry.

Objective 3G-2

Access, entries and pathways are accessible and easy to identify

The proposal meets the objectives.

- Pathways, ramps and stairs have been integrated with the overall landscape and building design concept for accessible and legible entries;
- The residential lobby entry is separated from the maintenance/service building entries with a separate access route different in character and materiality;
- All apartments are accessible from the Ground Floor Lobby and Basement carpark.
- Screened fences with gates will be used to secure resident private open space from the public domain and communal open space. This will also assist legibility and navigation throughout the site.

Objective 3G-3

Large sites provide pedestrian links for access to streets and connection to destinations

— N/A

3H Vehicle access [p.68]

Objective 3H-1

- *Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes*

The proposal meets the objectives.

- The car park entry point is located to allow the smooth ingress of traffic and to avoid conflicts with pedestrian routes;
- The servicing and car entry is combined due to the limited street frontage. Passing bays provided to avoid traffic clashes;

- Clear sight lines are to be provided at the carpark entry/exit point and vehicle crossings;
- Pedestrian and vehicle access points to and from the buildings are to be kept separate.

Further information about the vehicle entry, exit and traffic management can be found in the traffic report by Varga traffic engineers submitted with this proposal.

3J Bicycle and car parking [p.71]

Objective 3J-1

Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas

1. For development in the following locations:

- On sites that are within 800m of a railway station or light rail stop in the Sydney Metropolitan Area; or
- On zoned land, and sites within 400m of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre

the minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less

The car parking needs for a development must be provided off street

The proposal is consistent with the objectives.

- The proposed basement car parking is provided in accordance with the traffic engineers calculations which support concessions to rates specified under the current DCP. A total of 24 car spaces are provided off street, of which 6 are accessible. These numbers reflect the car parking rates outlined in the Affordable Rental Housing SEPP.
- The site is in close proximity to public transport. Warwick Farm Railway Station to the north east and Liverpool Station to the south, both link the site to the Paramatta and Sydney CBD.

Objective 3J-2

Parking and facilities are provided for other modes of transport

The proposal meets the objectives.

- Bicycle parking is provided at rates required under the Liverpool DCP Part 4 2008 to provide for other modes of transport;
- Motorcycle parking is provided at rates meeting the requirements of the Liverpool DCP Part 4 2008 to provide for alternate transport choice.

Objective 3J-3

Car park design and access is safe and secure

The proposal meets the objectives.

- Car park access is secured at appropriate levels for amenity and residential uses.

Objective 3J-4

Visual and environmental impacts of underground car parking are minimised

The proposal meets the objectives.

- Car parking is in the basement and accessed off Bigge Street.
- The Entry to the basement is minimised in width and appearance where possible while complying the development standards.

Objective 3J-5

Visual and environmental impacts of on-grade car parking are minimised

The proposal meets the objectives.

- There is no on-grade car parking.

Objective 3J-6

Visual and environmental impacts of aboveground enclosed car parking are minimised

The proposal meets the objectives.

- There is no above ground enclosed car parking.

4A Solar and daylight access [p.79]

Objective 4A-1

To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space

The proposal meets the objectives.

Design criteria

- Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas
- A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter

- 71% of apartments receive a minimum of 2 hours direct sunlight to the Living Rooms at mid-winter. 79% of apartments receive a minimum of 2 hours direct sunlight to the Private Open Space at mid-winter.
- Maximum of 13% of apartments receive no-direct sunlight between 9am and 3pm mid-winter.

Refer to the Amenity Diagrams or further information.

Objective 4A-2

Daylight access is maximised where sunlight is limited

The proposal meets the objectives.

- The building envelope has been developed to minimise the quantity of apartments with no direct sunlight midwinter.

Objective 4A-3

Design incorporates shading and glare control, particularly for warmer months.

The proposal meets the objectives.

- Balconies on north, east and west facades sit within the building envelope for shading in summer and weather protection.
- Horizontal ribbon windows feature projecting mullions for sun shading.
- Non-reflective, matte surfaces reduce reflectivity and glare.

4B Natural ventilation [p.83]

Objective 4B-1

All habitable rooms are naturally ventilated

The proposal meets the objectives.

- Windows and doors are provided to allow the ADG and BCA requirements for natural ventilation;
- Habitable room depths facilitate natural ventilation.

Objective 4B-2

The layout and design of single aspect apartments maximises natural ventilation

The proposal meets the objectives.

- The apartment layouts include open plan kitchen, dining and living and

- For single aspect apartments the depth of rooms from external windows is within the maximum 3x the ceiling height requirement. (ADG Fig 4D.3)

Objective 4B-3

The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents

Design criteria

- At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed
- Overall depth of a cross-over or cross through apartment does not exceed 18m, measured glass line to glass line

The proposal meets the objectives.

- 67% of apartments within the first nine storeys achieve the cross-ventilation;
- Cross-through apartments do not exceed 18m glass line to glass line;
- Natural cross-ventilation is proposed by corner or cross-through strategy to the living area and n-1 bedrooms. Refer to the definition in the ADG [Appendix p.180].
- The building includes 67% dual aspect or cross over apartments

Refer to the Amenity diagrams for further information.

4C Ceiling heights [p.87]

Objective 4C-1

Ceiling height achieves sufficient natural ventilation and daylight access

Design criteria

- Measured from finished floor level to finished ceiling level, minimum ceiling heights are:
- Habitable rooms: 2.7m
- Non-habitable: 2.4m
- For 2 storey apartments: 2.7m for main living area floor; 2.4m for second floor, where the area does not exceed 50% of the apartment area
- If located in mixed use area: 3.3m for ground and first floor to promote flexibility

The proposal meets the objectives.

- A minimum floor-to-floor height of 3.1m is used to allow the ADG recommendation of 2.7m ceiling height to be achieved in living, dining and bedroom areas.
- In some cases a reduced ceiling height or bulkhead is used in habitable rooms for mechanical services. In these cases the minimum ceiling level will be 2.4m;
- Bulkheads will be minimised in these rooms and placed at the perimeter of the space so that natural ventilation and daylight are maximised.
- Where required, ceilings in kitchen areas are proposed at a minimum of 2.4m high to allow the integration of services. The bulkhead permits the concealment services in a neat enclosure providing an appropriate proportion of spaces and a natural division between the living and dining areas from the kitchen area.
- As the kitchen is typically located at the rear of the living areas, the reduced ceiling height above the kitchen has a minimal effect on the access of daylight from the facade and natural ventilation.
- Floor to floor height of 3.3m to the Ground floor level.

Refer to Architectural Drawing Package GA Sections for further information.

Objective 4C-2

Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms

The proposal meets the objectives.

- Internal layouts have well proportioned rooms with good access to daylight and ventilation to maximise the feeling of spaciousness.

Objective 4C-3

Ceiling heights contribute to the flexibility of building use over the life of the building

A floor-to-floor height of 3.3m is used at Ground Level with 3.1m from Level 01 up therefore providing limited flexibility of building use.

4D Apartment size and layout [p.89]

Objective 4D-1

The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity

Design criteria

1. Apartments are required to have the following minimum internal areas:

- Studio: 35sqm
- 1 bedroom: 50sqm
- 2 bedrooms: 70sqm
- 3 bedrooms: 90sqm

The minimum internal areas include only one bathroom.

Additional bathrooms increase the minimum internal area by 5m each

A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m² each

2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms

The proposal meets the objectives.

- A range of apartment typologies are provided adding to the flexibility and affordability of the development;
- The proposal includes dual aspect apartments, dual aspect living areas and cross through apartments;
- Apartments have varying aspects and amenity including local district views and proximity to the communal open space.

The proposal achieves the design criteria.

- Average apartment sizes meet or exceed ADG requirements;
- Layouts are functional providing well positioned and flexible storage solutions;
- Windows are visible and within 8m from the furthest point within habitable rooms.

Objective 4D-2

Environmental performance of the apartment is maximised

Design criteria

- Habitable room depths are limited to a maximum of 2.5 x the ceiling height
- In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window

The proposal meets the objectives.

- Refer to Objective 4C-1 for ceiling heights.
- Living areas and bedrooms are all located on the external face of the building. Maximum habitable room depths from windows is 8m.

Objective 4D-3

Apartment layouts are designed to accommodate a variety of household activities and needs

Design criteria

- Master bedrooms have a minimum area of 10m² and other bedrooms 9m² (excluding wardrobe space)
- Bedrooms have a minimum dimension of 3m (excluding wardrobe space)
- Living rooms or combined living/dining rooms have a minimum width of 3.6m for studio and 1 bedroom apartments and 4m for 2 and 3 bedroom apartments

The proposal meets the objectives.

- Minimum areas and widths for habitable rooms are provided or exceeded.
- Access to bathrooms and laundries are generally separated from living areas minimising direct openings between living and service areas.
- All bedrooms allow a minimum length of 1.5m for robes
- The main bedroom of an apartment is provided with a wardrobe of a minimum 1.8m in length.
- Layouts facilitate a variety of furniture arrangements and removal.

- The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts
- Spaces for a range of activities and privacy levels between different spaces within the apartment
- Room sizes and proportions are open plans. Rectangular spaces that are more easily furnished than square spaces.
- Efficient planning of circulation by stairs, corridors and through rooms maximise the amount of usable floor space in rooms

4E Private open space and balconies [p.92]

Objective 4E-1

Apartments provide appropriately sized private open space and balconies to enhance residential amenity

Design criteria

1. All apartments are required to have primary balconies as follows:

- Studio: 4sqm
- 1 bedroom: 8sqm, 2m deep
- 2 bedrooms: 10sqm, 2m deep
- 3 bedrooms: 12sqm, 2.4m deep
- The minimum balcony depth to be counted as contributing to the balcony area is 1m

2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15sqm and a minimum depth of 3m

The proposal meets the objectives.

Minimum areas and depths of balconies and private open space meet or exceed the minimum requirements of the ADG.

Objective 4E-2

Primary private open space and balconies are appropriately located to enhance liveability for residents

The proposal meets the objectives.

- Private open spaces and balconies predominantly face north, east or west
- Primary balconies open directly from Living spaces.

Objective 4E-3

Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building

The proposal meets the objectives.

- Balconies are both solid and translucent glass to allow privacy and screening of balcony furniture but still permitting openness and district views. These are designed to enable clothes lines and encourage potted plants and vegetation by residents.
- Balconies allow passive surveillance of the street while maintaining visual privacy.
- Low rendered concrete walls fronted with painted steel fencing bring a finer detail close to the street. The base is richer in its detailing reflecting the proximity to pedestrians.
- Clothes lines and Hot Water Units integrated into the building design and are screened,
- Downpipes and balcony drainage are integrated with the overall facade and building design

Objective 4E-4*Private open space and balcony design maximises safety*

- Ceilings of apartments below terraces are insulated to avoid heat loss

The proposal meets the objectives.

- Design and detailing of balconies avoids opportunities for climbing and falls.
- Changes in ground levels are minimised.

4F Common circulation and spaces [p.97]**Objective 4F-1***Common circulation spaces achieve good amenity and properly service the number of apartments***Design criteria**

- The maximum number of apartments off a circulation core on a single level is eight
- For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40

The proposal meets the objectives.

- 2 lifts are provided to service 52 apartments.
- The proposal features one circulation core that services a maximum of 8 apartments per level.
- Each circulation corridor to each level has access to natural light increasing the amenity of the residents.
- The Main Entry Lobby and lift lobbies at each individual floor achieve a good level of amenity as they are connected to the facade to facilitate access to natural light and outdoor air.
- Lobbies are widened outside lifts and will include clear legible wayfinding signage for comfortable movement of residents and visitors.

Objective 4F-2*Common circulation spaces promote safety and provide for social interaction between residents*

The proposal meets the objectives.

- Common circulation spaces are designed to provide safe, legible spaces to foster interaction and harmony between residents;
- The ground floor Lobby entry is well defined and legible with mailboxes located inside the lobby in a secured area. Communal open space is easily accessible from the Ground Floor Lobby

4G Storage [p.101]**Objective 4G-1***Adequate, well-designed storage is provided in each apartment***Design criteria**

- In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:
- studio: 4m³
- 1 bed: 6m³
- 2 beds: 8m³
- 3 beds: 10m³

At least 50% of the required storage is to be located within the apartment

The proposal meets the objectives.

- 38% of apartments accommodate the entire storage volume within the unit. The remaining locate a minimum of 50% of the required storage within the apartment with the remainder located in secure and accessible locations within the basement;
- A variety of storage types will be provided, accessed off living rooms and circulation corridors within the apartments.

Objective 4G-2*Additional storage is conveniently located, accessible and nominated for individual apartments*

The proposal meets the objectives

- Storage locations will be allocated within the basement level as part of the proposal

4H Acoustic Privacy [p.103]

Objective 4H-1

Noise transfer is minimised through the siting of buildings and building layout

- Adequate building separation is provided from neighbouring buildings/adjacent uses.
- Walls, glazing, and roofs are designed to meet the requirements of the acoustic report for sound mitigation, particularly from the Hume Hwy.

Refer to Acoustic report for further details.

Objective 4H-2

Noise impacts are mitigated within apartments through layout and acoustic treatments

The proposal meets the objectives

- Noisy areas within the proposed development including building entries and corridors are generally located above each other and quieter areas above quieter areas;
- Where possible, bedrooms of adjacent apartments will be located next to each other and likewise with living area.
- Storage, circulation areas and non-habitable rooms will be located to buffer noise from living areas and common areas;
- The party walls (walls shared with other apartments) are designed to meet the requirements of the acoustic report.

4J Noise and Pollution [p.105]

Objective 4J-1

In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings

The proposal meets the objectives

- Private and communal landscaped spaces on ground level buffer noise from the street and public domain.
- Internal apartment layouts separate noisy spaces from quiet spaces;
- Waste collection is isolated to the south of the development.

Refer to Acoustic report for further details

Objective 4J-2

Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission

The proposal meets the objectives

- Dense materials are used in the facades, providing good noise reduction.
- Walls, glazing, and roofs are designed to meet the requirements of the acoustic report for sound mitigation;
- The party walls (walls shared with other apartments) are designed to meet the requirements of the acoustic report.

Refer to Acoustic report for further details

4K Apartment Mix [p.107]

Objective 4K-1

A range of apartment types and sizes is provided to cater for different household types now and into the future

The proposal meets the objectives:

- A variety of apartment types are provided;
- Houses a total of 52 units with a mix of 54% one bedroom, 46% two bedroom apartments, allowing a mix of typologies and living patterns. All of the apartments are livable and feature both silver and gold level design elements as outlined in the Livable Housing Australia 2017 guideline.
- One and two bedroom apartments are provided, following the social housing demands of the area. Ground floor and selected upper apartments have larger outdoor spaces suitable for different demographics.

Objective 4K-2

The apartment mix is distributed to suitable locations within the building

The proposal meets the objectives.

- Apartment types have been located to achieve successful facade composition and to optimise solar access;
- Apartment mix is distributed throughout the development providing 1 and 2 bedroom apartments of varying typology.
- Larger apartment types have been located on the top levels where there is opportunity for more open space as well as on the corners of the building and at street level, where more building frontage is available.

4L Ground floor apartments [p.109]

Objective 4L-1

Street frontage activity is maximised where ground floor apartments are located

The proposal meets the objectives.

- The ground level is designed to provide activity and vibrancy through the building lobby and an integrated landscape concept for the public domain that includes new street trees and high quality planting.

Objective 4L-2

Design of ground floor apartments delivers amenity and safety for residents

The proposal meets the objectives.

- Provision of gates and fences will be designed to offer a surveillance of the public domain and privacy for residents through a balance of permeability and opacity.

4M Facades [p.111]

Objective 4M-1

Building facades provide visual interest along the street while respecting the character of the local area

The proposal meets the objectives.

- Shadow is created on the façade throughout the day by building articulation, texture of precast, recessed balconies and portions of projecting balconies.

Objective 4M-2

Building functions are expressed by the façade

The proposal meets the objectives.

- The building façade is informed by the particular programme of the spaces within the apartments.
- Different strategies have been adopted for residential and services uses.

- Residential apartments are clearly identifiable and distinguishable from the services.

Refer to the architectural drawings for further information

4N Roof design [p.113]

Objective 4N-1

Roof treatments are integrated into the building design and positively respond to the street

The proposal meets the objectives.

- Roof treatments are integrated with the building design and materials to compliment the architectural aesthetic.

Objective 4N-2

Opportunities to use roof space for residential accommodation and open space are maximised

The proposal meets the objectives where practicable.

Objective 4N-3

Roof design incorporates sustainability features

The proposal meets the objectives.

- Roof design maximises solar access to apartments during winter and provides shade during summer via overhanging roofs to balconies and living areas.

4O Landscape design [p.115]

Objective 4O-1

Landscape design is viable and sustainable

The proposal meets the objectives.

- Building performance is enhanced by incorporating a diverse planting including appropriately planted shading trees and street trees to meet DCP requirements.

Refer to the landscape design package for further information

Objective 4O-2

Landscape design contributes to the streetscape and amenity

The proposal meets the objectives.

- The proposal involves a significant improvement to the public domain with four new street trees proposed to Bigge Street and high quality green relief to the streetscape.

4P Planting on structures [p.116]

Objective 4P-1

Appropriate soil profiles are provided

The proposal meets the objectives.

Refer to the landscape design package.

Objective 4P-2

Plant growth is optimised with appropriate selection and maintenance

The proposal meets the objectives.

- Diverse planting that is low in maintenance and suited to the site are incorporated to enhance the performance of the landscaped areas.

Refer to the landscape design package.

Objective 4P-3

Planting on structures contributes to the quality and amenity of communal and public open spaces

The proposal meets the objectives.

Refer to the landscape design package.

4Q Universal Design [p.118]

Objective 4Q-1

Universal design features are included in apartment design to promote flexible housing for all community members

The proposal exceeds the objectives.

100% of the total apartments incorporate the Livable Housing Guideline's silver level universal design features.

Objective 4Q-2

A variety of apartments with adaptable designs are provided

Adaptable housing should be provided in accordance with the relevant council policy

The proposal meets the objectives.

12% of the total number of apartments are adaptable in accordance with the Liverpool DCP

Design solutions for adaptable apartments include:

- convenient access to communal and public areas
- high level of solar access
- minimal structural change and residential amenity loss when adapted
- larger car parking spaces for accessibility

Objective 4Q-3

Apartment layouts are flexible and accommodate a range of lifestyle needs

The proposal meets the objectives.

Apartment design incorporates flexible design solutions which include:

- a mix of north facing and dual aspect apartments
- a variety of internal layouts

4R Adaptive Reuse [p.120]

Objective 4R-1

New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place

This objective is not applicable.

Objective 4R-2

Adapted buildings provide residential amenity while not precluding future adaptive reuse

This objective is not applicable.

4S Mixed use [p.122]

Objective 4S-1

This objective is not applicable.

Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement

This objective is not applicable.

Objective 4S-2

Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents

4T Awnings and signage [p.125]

Objective 4T-1

Awnings are well located and complement and integrate with the building design

The proposal meets the objectives.

- Awnings are not proposed as the Lobby Entry and ground floor apartments have sufficient coverage and weather protection due to the building over

Objective 4T-2

Signage responds to the context and desired streetscape character

The proposal meets the objectives.

- Signage will be limited to building identification, navigation and statutory signs. It will be designed to fit harmoniously in the architecture and to contribute positively to the precinct.

4U Energy efficiency [p.127]

Objective 4U-1

Development incorporates passive environmental design

The proposal meets the objectives.

- Natural light will be provided to all habitable rooms.
- The building massing maximises the
- Outdoor communal open space areas are designed to provide residents with a range of spaces offering flexibility and choice demonstrating a high level of passive environmental design.

Refer to ESD and BASIX report for more information.

Objective 4U-2

Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer

The proposal meets the objectives.

- The massing, internal layouts and orientation have been organised so as to provide good natural daylighting and solar access into the primary living spaces, external living areas and courtyard.
- The massing also allows a greater proportion of apartments to have a Northern aspect. Eastern and Western aspects are then prioritised over south aspect apartments.
- Photovoltaics will be included on the roofs to provide energy to common area lighting.

Objective 4U-3

Adequate natural ventilation minimises the need for mechanical ventilation

The proposal meets the objectives.

- The use of appropriate built form generates 67% of apartments in the first nine storeys naturally ventilated. The remaining apartments to the upper storeys are all naturally ventilated.

4V Water management and conservation [p.129]

Objective 4V-1

Potable water use is minimized

The proposal meets the objectives.

- The development will incorporate water efficient fittings, and rain-water re-use.
- Plant selections are designed for the microclimate and are typically low-water use.
- Further details about the proposed planting and landscape concept is detailed in the accompanying Landscape Concept Plan submitted as part of the development application.

Objective 4V-2

Urban storm water is treated on site before being discharged to receiving waters

The proposal meets the objectives.

- WSUD principles are incorporated; on site detention tank is located at the basement level.

Refer to Civil and Hydraulic Engineers documents for further information.

Objective 4V-3

Flood management systems are integrated into site design

N/A The development is not located in a flood affected area.

4W Waste management [p.131]

Objective 4W-1

Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents

The proposal meets the objectives.

- A bulk-waste area for residents is provided at Ground Level.
- Garbage collection will be on site via the driveway access.

Refer to the Waste Management and Traffic report for more detail.

Objective 4W-2

Domestic waste is minimised by providing safe and convenient source separation and recycling

The proposal meets the objectives.

- Communal waste room is provided at Ground Level for residents. This is located in a convenient accessible location adjacent to the Lift core.
- Waste and recycling storage areas will be well ventilated and have durable and washable finishes
- All dwellings will be designed to have sufficient internal space for the holding of waste and recycling as required under DCP.

Refer to the Waste Management and Traffic report for more detail.

4X Building Maintenance [p.133]

Objective 4X-1

Building design detail provides protection from weathering

The proposal meets the objectives.

- Building materials are selected to weather gracefully.
- Painted and applied finishes are minimised.

Objective 4X-2

Systems and access enable ease of maintenance

The proposal meets the objectives.

- Suitable access for cleaning will be provided by appropriately controlled roof access.
- The majority of windows can be cleaned from inside or from balconies.

Objective 4X-3

Material selection reduces ongoing maintenance costs

The proposal meets the objectives.

- The proposed precast façade provides a durable, low maintenance building with materials designed to weather gracefully and withstand the demands of the environment and to weather gracefully. The use of applied finishes is minimised.

