Shepherds Bay Stages 2 & 3

Rothesay and Nancarrow Avenue Meadowbank

Design Report
S96 Submission

11 December 2015

Part 1 : Project Summary

Project Overview

The SEPP65 Design verification, response to the 10 Design Quality Principles and RFDC 'Rules of Thumb' have been prepared by Turner on behalf of Holdmark in support of a Section 96 Application (S96) submission for the residential development known as 'Shepherds Bay Stages 2 & 3'.

The S96 submission and Design Report represents a considered approach to the development of the site. The proposed design has been prepared in collaboration with a comprehensive consultant team to address both strategic and detailed issues associated with both the site and precinct. Council have been consulted during the development of the design to ensure consistency with planning objectives and infrastructure matters.

This report is intended to be read in conjunction with architectural drawings prepared by Turner, landscape drawings prepared by Black Beetle and the Statement of Environmental Effects with appendices prepared by City Plan Services.

The building form and character have been developed with consideration to the contextual relationships of Shepherds Bay - historical, existing and the desired future character of the precinct.

The endorsed Concept Plan MP09_216 (Concept Approval Masterplan) and amendments has carriage through the design and documentation of the DA submission.

Through site link from South

Part 2 : Design Overview

Design

A clear and legible approach has been adopted in the re-planning of the site and amendments to the design of the two individual buildings. Each building has a unique identity, responding to Council's desire for a collection of building forms that vary in height and scale rather than a single building entity for the site.

Reinforcing the objectives of the Concept Approval Masterplan the development maintains significant street setbacks whilst the publicly accessible through-site links improve the permeability and activation of buildings within the precinct allowing residents and the broader community access north/south from Nancarrow Avenue to Shepherds Bay waterfront and west/east within Stages 2 & 3 and then to the waterfront.

The proposal includes two main aspects. The first is the removal of the Community Facility and the addition of 17 extra apartments which fall under a deed of agreement between our client Holdmark and Council. The second is to modify areas of the design to improve accessibility, activate void space and to include additional apartments at some of the upper levels within the building envelope controls. The original design had a series of largely unusable stepped terraces within the internal courtyards of each building. These have been replaced with a largely "on grade" landscaping zone which reduces the amount of hard landscaping and increases the soft landscaping areas. The former multi-tiered stepped courtyards have been reduced to a single change in level for both stages.

The proposal is both visually and physically open. Generous building separation distances permit views into and from within the site. The masterplan establishes a number of through-site links that traverse the site providing great permeability and connectivity. These links have been integrated into the landscape design allowing public enjoyment of seating areas, plazas, artworks, water features etc within the site.

Significant amendments have been made to the stepped terraces between the Stage 2 & Stage 3 buildings. The approved scheme proposed two separate lifts to enable people to traverse from Nancarrow Avenue to Rothesay Avenue. The second lift stopped approximately 4m above the landscaped paving toward Rothesay Avenue and then people traversed a series of ramps and/or stairs to access the lower part of the site. Our proposal has one lift that takes people from Nancarrow Avenue to the Upper Basement level. The large curved stairs at Upper Basement and the series of steps between the multiple levels have been deleted. This improves accessibility throughout the site significantly.

The proposed Café which was formerly located at Lower Ground Level (or over 4m above Rothesay Avenue) has been relocated to the Upper Basement level. The resultant communal landscaped terrace area provides a variety of spaces and functions for residents to choose from including outdoor dining, lawn and terrace areas for quiet reflection or children to play.

People now have the advantage of being able to access the internal courtyards of both buildings at the Upper Basement levels via generous links through both Stages 2 & 3 buildings. This enables connectivity between the buildings that was not previously available.

The approved DA has three storeys of very large unusable space against the cliff. These spaces have been activated by adjusting the carparking areas and apartments as shown. This activates the unusable space by using it as car parking, a potential gym one storey below Nancarrow Avenue and Services spaces.

SEPP65 Design Verification

We confirm that Tony Stodart has directed the S96 design and documentation of the 'Shepherds Bay Stages 2 and 3.

The design has been prepared in accordance with the design quality principles set out in Part 2 of State Environmental Planning Policy No 65-Design Quality of Residential Flat Development.

Tony Stodart is a registered architect under the NSW Architects Act 2003, registration number 6948.

Stage 2_West from South

Part 3 : Design Quality Principles

Design Quality Principle 1

Context

Good design responds and contributes to its context. Context can be defined as the key natural and built features of an area.

Responding to context involves identifying the desirable elements of a location's current character or in the case of precincts undergoing a transition, the desired future character as stated in planning and design policies. New buildings will thereby contribute to the quality and identity of the area.

Proposal

This site is bounded by Nancarrow Avenue to the north, Rothesay Avenue to the south the completed Stage 1 building to the east and the future Shepherds Bay Stages 8 & 9 to the west and is part of the endorsed Concept Plan MP09_216.

Formerly used for industrial and commercial functions, Shepherds Bay is being revitalised into a higher density residential and mixed use Urban Village, with a significant portion of contributory public domain spaces including public parks, through-site-links and public domain improvements.

The site is within the Waterfront precinct (DCP 2011). The existing industrial sites to the west and north are also to be redeveloped as part of the Concept Plan buildings as Stages 8-9 and Stages 6-7 respectively.

The site is located on a south facing sloping land looking down toward a public foreshore park edging the Parramatta River. It is flanked by two major transport routes with Church St to the east and the railway line and Meadowbank Station to the west. The north is defined by Nancarrow Avenue and south by Rothesay Avenue which is a no through road.

Detail of the context and surrounding character was provided with the DA in:

- PPR Revised.
- Department of Planning Report and recommendation.
- PAC approval.

Design Quality Principle 2

Scale

Good design provides an appropriate scale in terms of bulk and height that suits the scale of the street and the surrounding buildings.

Establishing an appropriate scale requires a considered response to the scale of existing development.
In precincts undergoing a transition, proposed bulk and height needs to achieve the scale identified for the desired future character of the area.

Proposal

The proposal meets the objectives of the height controls established for the site and the Masterplan building envelopes.

The development consists of two main apartment buildings, Stage 2 and 3 which are separate buildings sharing a common parking podium. The proposal also includes a proposed Gym for residents use at Level 1. The proposed amendments to the design add apartments at various levels and these additions are generally wholly within the previously approved envelopes. The existing DA approval included many elements such as blades, skylights, privacy screens and lift over-runs that were not within the envelope controls. Our proposal seeks to modify the established envelopes and adjust them in one area alone. The area where we seek approval for modification to the Masterplan envelope controls is the western wing of Stage 2 at the roof of Level 8. The current DA approval had an open roof area at Level 8 with a height control at RL 41.900 in this part of the site. The floor level at Level 8 is RL 39.135. Under the Deed of Agreement Council agreed to allow this wing of the building to add or modify apartments. If these apartments were added and the maximum height plane was maintained at RL 41.900 then these apartments would have a ceiling height that would not allow a 2.7m ceiling for habitable spaces as per SEPP65 requirements.

We are seeking this minor adjustment to the height plane so we can simply continue the Level 9 floor slab out as a roof which is at RL 42.185. As such the drawings indicate that we would like council to consider raising the RL of this part of the envelope by 300mm to RL 42.200. This will enable a level of amenity that is required and will also allow the client to add these apartments as part of the deed of agreement.

In addition to the established envelopes noted above, the building forms respond to the street edge and through site link conditions. Setbacks to upper levels and localised pop-up zones reinforce the Masterplan objectives to reduce bulk and scale.

The other area where we seek to modify the Masterplan controls is with regard to the maximum number of storeys above finished ground. Because of the removal of the needlessly stepping coutyards both within each Stage and between the two stages the storey count largely on the "inside" of each Stage increase by "adding" storeys at lower levels. Since the site is excavated to the Lower Basement level, all levels above are built up above the excavated level. As noted earlier this resulted in massive unusable voids and a site that was very difficult to traverse in a north south direction and impossible in an east west direction or between the two stages.

Design Quality Principle 3

Built Form

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

Stage 2 & 3 built forms respond to Council's desire for a collection of building forms that vary in height and scale rather than a single building entity for the site.

Consistent with the Concept Approval Masterplan Stage 2 & 3 building forms maintain the previously approved scheme in terms of definition of street edge, rhythm of built form, height and scale.

The proposed additional levels have been designed to match the previous approval and include elements such as wrap around balconies, use of strong horizontal and vertical bands and will seamlessly merge into the previous approval.

Design Quality Principle 4

Density

Good design has a density appropriate for a site and its context, in terms of floor space yields (or number of units or residents).

Appropriate densities are sustainable and consistent with the existing density in an area or, in precincts undergoing a transition, are consistent with the stated desired future density. Sustainable densities respond to the regional context, availability of infrastructure, public transport, community facilities and environmental quality.

Proposal

The proposed density and uses are a direct response to the desired future character of the area and proximity to public transport including both bus, train and ferry routes.

The number of apartments and associated car parking are in accordance with the Concept Approval Masterplan. The mix of apartment types provides further diversification and consistency with the future desired density of the precinct.

Whilst the development is consistent with the future desired density of the precinct the proposed building forms provide an appropriate balance between building footprint and landscaped area. The building forms have been set back in some areas in response to the rhythm of streets and landscape interfaces whilst in other areas recessed facades, setbacks to upper levels have been provided to improve solar amenity, access to daylight and ventilation, views and consolidated public and communal open space.

With consideration to the design objectives it is important to note that the proposal only slightly varies the maximum building envelope or number of stories defined under the Concept Approval Masterplan. The changes proposed to these controls are largely in response to the current approval which as previously noted has many elements outside the envelope controls. This was also the case with the completed Stage 1.

Design Quality Principle 5

Resource, Energy and Water Efficiency

Good design makes efficient use of natural resources, energy and water throughout its full life cycle, including construction.

Sustainability is integral to the design process. Aspects include demolition of existing structures, recycling of materials, selection of appropriate and sustainable materials, adaptability and reuse of buildings, layouts and built form, passive solar design principles, efficient appliances and mechanical services, soil zones for vegetation and reuse of water.

Proposal

The built form and landscape elements have been designed to embrace ESD principles, both passive and active.

The massing and articulation of the building forms ensures that apartment design achieves adequate ventilation and daylight access into primary living areas. Apartment layouts have been designed so that solar access is maximised. In addition, external screens, overhangs and performance glazing further enhance the passive design features of the development.

Consistent with the intentions of the Concept Approval Masterplan the development provides apartments with 'extra amenity'. This includes amenity initiatives such as extensive glazing, increased floor to ceiling heights and natural ventilation.

Integrated into the design of buildings are roof terraces, retention tanks for rainwater reuse, landscape design that assists in mitigating and managing stormwater runoff.

The BASIX assessment and certificate confirms the developments resource, energy and water efficiency credentials.

Design Quality Principle 6

Landscape

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both occupants and the adjoining public domain.

Landscape design builds on the existing site's natural and cultural features in responsible and creative ways. It enhances the development's natural environmental performance by coordinating water and soil management, solar access, microclimate, tree canopy and habitat values. It contributes to the positive image and contextual fit of development through respect for streetscape and neighbourhood character, or desired future character.

Landscape design should optimise useability, privacy and social opportunity, equitable access and respect for neighbours' amenity, and provide for practical establishment and long-term management.

Proposal

Extensive landscaping within the proposed development is provided as part of the overall precinct masterplan, including public through site links, accessible pathways, cycle ways, communal areas and improvements to the biodiversity and water management of the precinct.

Turner have worked with Black Beetle to give the landscaping for these stages areas a unique character. The current approval had many varied levels and terraces and large expanses of paved areas linked by large numbers of stairs. The proposal makes far better use of the open areas both within each Stage, between the Stages and particularly at the southern side of the site.

The main advantages of the changes can be summarised as follows:

- rationalised stair locations and accessibility
- greater green areas (lawn areas) level usable space not just thoroughfare created between buildings.
- removal of unnecessary walling.
- a reduction and refinement in the number of water features
- a reduction in the amount of hard paving .
- effective use of amenity and connectivity between spaces

Within the both the public domain and communal areas consolidated deep soil zones extensive planting and large trees can be accommodated. Outdoor spaces are both functional and visually interesting, including when viewed from above. Furthermore tree planting assists in providing privacy to adjacent residential developments.

At ground level tree planting to street edges reinforce Council's desired character for the public domain. Within the site pathways for pedestrians and bicycles provide a green connection from Nancarrow Avenue through to Shepherds Bay beyond. Integrated within the landscape site specific public art installations respond to the historical and social context of the site.

Various landscaped private and communal spaces are provided. At ground level apartments with street access incorporate landscaped elements to terraces for both privacy and improved amenity. The communal courtyard space has direct access from both the building and primary through site links. The communal courtyard provides both passive and active uses for residents and a transition to the surrounding private garden terraces of ground level apartments.

Further information is provided by Black Beetle as part of the landscape design and public art plan.

Design Quality Principle 7

Amenity

Good design provides amenity through the physical, spatial and environmental quality of a development.

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

Proposal

Apartments maintain the current mix of unit typologies, providing a high level of daylight access and natural ventilation.

The additional apartments have been designed to conform with the previous approval and generally have primary living areas facing water views or into well defined landscape courtyards

Where necessary apartments have been provided with improved amenity by increasing area and ceiling heights by 20% and increasing glazing to living areas.

The proposal is for a total of 498 apartments consisting of :

- 2 studio apartments – no change
- 256 One bed apartments or 28 additional.
- 12 Loft apartments – no change.
- 210 Two bed apartments or 15 additional.
- 18 Three bed apartments or 1 additional.

Design Quality Principle 8

Safety and Security

Good design optimises safety and security, both internal to the development and for the public domain.

This is achieved by maximising overlooking of public and communal spaces whilst maintaining internal privacy, avoiding dark and non visible areas, maximising activity on streets, providing clear, safe access points, providing quality public spaces that cater for desired recreational uses, providing lighting appropriate to the location and desired activities, and clear definition between public and private open space.

Proposal

Clear pedestrian routes enable safe access to and from the site. The approved layout provided a challenge in terms of street access and within the site. It was felt important that all residents and visitors could enter the building from the street, and easily traverse down to Rothesay Avenue and then at Upper Basement level traverse from the individual Stages across the site in an east/west direction. At ground level corridors connect from the street lobbies to the furthermost lift cores. All foyers include clear lines of sight to street frontages/through site links and will be fully glazed. Both active and passive surveillance will be afforded by the residential apartments over and publicly accessible pedestrian pathways adjacent.

The building will utilise a security system at all entry points and within lifts.

There will be appropriate lighting to all exterior areas, both public and communal.

Design Quality Principle 9

Social Dimension

Good design responds to the social context and needs of the local community in terms of lifestyles, affordability, and access to social facilities.

New developments should optimise the provision of housing to suit the social mix and needs in the neighbourhood, or in the case of precincts undergoing transition, provide for the desired future community.

Proposal

The development will provide a mix of 1 bed, 2 bed and 3 bed apartments. Within this mix is a range of different typologies – studies, mezzanines, 2 storey - and sizes adding to a range of choice and affordability.

10% of apartments have been provided to meet the objectives for adaptable housing.

Communal spaces have been designed to engender community spirit for residents within the development by offering both public and private areas for congregation and activities. Common areas have been designed for equitable access.

Design Quality Principle 10

Aesthetic

Quality aesthetics require the appropriate composition of building elements, textures, materials and colours and reflect the use, internal design and structure of the development.
Aesthetics should also relate to the context, particularly responding to desirable elements of the existing streetscape or, in precincts undergoing transition, contribute to the desired future character of the area.

Proposal

The proposed modifications of the development will continue the approved colour palette which was designed to be thematic to the industrial past and water's edge coastal development with a range of blues, recycled timber and metal cladding.

At the lower levels, we propose to maintain the approved urban edge and human scale with sandstone base, rhythmic vertical fins, deep horizontal slabs, operable metal privacy screens etc.

The mid section will again continue the approved scheme so that additional apartments fit seamlessly into the complete design with highly articulated horizontal and vertical metal cladding, glazed ribbon balconies, punch windows etc.

The top part of the development aims to continue the approved design by maximising views to the water through strong horizontal lines, continuous patterned screens and folded edges.

Part 4 : Residential Flat Design Code [RFDC] Rules-of-Thumb

	Page	Recommendation	Current
SITE DESIGN			
Local Context	7	Good design responds and contributes to its context.	**Yes, meets the objectives** The proposal reflects the urban renewal of the Shepherds Bay precinct and is consistent with the intent of the Concept Approval Masterplan. The building and integrated landscape design achieve the Masterplan objectives to provide public and communal access, views and amenity. The building form and character references the natural topography.
Building Height	24	Test heights against the number of storeys and the minimum ceiling heights required for the desired building use.	**Yes, meets the objectives** The building heights are consistent with the Concept Approval Masterplan building envelopes. As noted previously the approved design has many elements that extend beyond the building envelope controls. The S75W application that accompanies this application seeks to rationalise these controls so that elements that are not within the current controls will be with the proposed amendments. The additional levels (Level 3 in Stage 2 as per the deed of agreement and Level 8 in Stage 3) are within the existing envelope controls. Within the building envelope RFDC minimum ceiling heights are achieved. Furthermore, the proposed articulation of the building form has provided the opportunity for 'improved amenity' apartments with a 20% increase in the floor to ceiling height, apartment size and increased glazing as per the approved DA.
Building Depth	27	In general a depth of building 10-18m (glass-to-glass) wide is appropriate. Developments that propose wider than 18 metres must demonstrate how satisfactory daylighting and natural ventilation are to be achieved.	**Yes, meets the objectives** With the exception of items previously noted, the buildings have been designed within the Concept Approval Masterplan building envelope. Building depths vary between 18 and 22m in response to the various apartment typologies including dual aspect, 2 storey and mezzanine apartments. Whilst the building depth in some areas varies from the 18m the mix of apartment types and adequate levels of daylight, solar access and natural ventilation reinforces the amenity credentials of the development.
Building Separation	28	Building separation is proportionate to building height to facilitate better urban form and improved residential amenity.	**Yes, meets the objectives** The proposed buildings are consistent with the Concept Approval Masterplan separation between buildings reinforcing through site links and landscaped areas, both public and communal. Separations range from 18-22m as per the approved DA. The proposed separation allows for adequate levels of daylight, solar access to apartments and landscaped areas, visual and acoustic privacy. View corridors are maintained between Nancarrow and Rothesay Avenues as per the DA.

	Page	Recommendation	Current
Street Setbacks	30	Street setbacks establish the front building line. Identify the desired streetscape character, the common setback of buildings in the street, the accommodation of street tree planting and the height of buildings and daylight access controls.	**Yes, meets the objectives** The proposed street setbacks are consistent with the Concept Approval Masterplan and provide a variety of landscaped areas for apartments with direct street access, main building foyers and through site links. Where buildings are elevated above the street terraced landscaping provides a balance between privacy for the apartment and a pleasant streetscape.
Side & Rear Setbacks	33	Relate side and rear setbacks to existing streetscape patterns.	**Yes, meets the objectives** The proposed side and rear setbacks are consistent with the Concept Approval Masterplan.
Floor Space Ratio	35		Yes, the proposal meets the objectives of the approved Master Plan. The proposed building form has been designed within the approved Concept Approval Masterplan envelope for the site. Within the approved building envelope a highly articulated building form is achieved that varies in building depth and roof form. The proposed increase in GFA for stages 2 & 3 is only a modest 3875 sq.m. which will only marginally increase the FSR above the current approved scheme. .

	Page	Recommendation	Current
SITE CONFIGURATION			
Deep Soil Zones	44	A minimum of 25% of the open space area of a site should be a deep soil zone, more is desirable.	**Yes, achieves the rules of thumb** Within the open space area a minimum of 25% is provided as deep soil. The amended landscaping design has far more areas of soft landscaping to enhance the amenity of the area. Consistent with the RFDC rules of thumb the deep soil zones have been provided to promote a variety of tree planting and to assist in the management of stormwater and site permeability matters.
Fences & Walls	45	To define the edges between public and private land. To define the boundaries between areas within the development having different functions or owners. To provide privacy and security. To contribute positively to the public domain.	**Yes, meets the objectives** The proposed development incorporates are variety of fences and walls to assist with defining the private and public realm. Landscaping is incorporated into the design to soften the edges and to contribute to the amenity and usability of outdoor private and communal spaces. For privacy between apartments solid walls are finished in sandstone whilst to the street for improved permeability and visual surveillance an open style decorative metal fence and gate is also used.
Landscape Design	46	Landscape design builds on the existing site's natural and cultural features to contribute to a development's positive relationship to its context and site. Landscape design should optimize usability, privacy and social opportunity, equitable access and respect for neighbour's amenity. It should also take into account practical establishment and long-term management.	**Yes, meets the objectives** The landscape design for Stages 2 and 3 has been integral to the development of the overall precinct and establishment of appropriate public and private realms. The detailed amended design included as part of the Development Application further refines the Concept Approval Masterplan and includes publicly accessible through site links, consolidated communal areas at ground, significant planting with deep soil zones for large trees and planting that responds to both Council's intention for street edges and low water use. Detailed information is provided as part of Black Beetle's S96 submission documentation
Open Space	49	The area of communal open space required should generally be at least 25 and 30% of site area.	**Yes, achieves the rules of thumb** The buildings and private courtyard occupy the same site area as the approved DA with the remainder being given over to communal open space that is a combination of publicly accessible through-site links and private communal open space. For further information refer to Black Beetle's S96 submission documentation.

	Page	Recommendation	Current
Private Open Space	49	Minimum recommended area of private open space for each apartment at ground level or similar space on a structure, such as podium or car park, is 25m2; the minimum preferred dimension in one direction is 4m.	**Yes, achieves the rule of thumb** Street frontages to Nancarrow Avenue combined with the various through site links permit a number of apartments to have direct access from the street and large private open spaces. The proposed S96 continues the approved design concepts in terms of Private Open Space and by having less stepped areas in the internal courtyards and between the two stages, there are more opportunities for useable areas than exist in the current DA.
Orientation	50-51	To optimize solar access to residential apartments within the development and adjacent developments. To contribute positively to desired streetscape character. To support landscape design of consolidated open space areas. To protect the amenity of existing developments. To improve the thermal efficiency of new buildings.	**Yes, meets the objectives** As with the DA, the envelope configuration, orientation and height are largely as per the approved Concept Approval MP 09-216 and subsequent Mod 1 approval. For further information refer to the Solar Access and Natural ventilation assessment.
Planting on structures	52-53	Design planters to support the appropriate soil depth and plant selection.	**Yes, meets the objectives** Together with Black Beetle the public domain and communal landscaped outdoor spaces have been designed to ensure soil depths provide a variety of planting opportunities. The large deep soil area in the south western part of the site has been increased substantially from the approved DA and water features have been rationalised. For further information refer to Black Beetle's S96 submission documentation.
Stormwater Management	54-55	To minimise the impacts of residential flat development and associated infrastructure on the health and amenity of natural waterways. To preserve existing topographic and natural features, including watercourses and wetlands. To minimise the discharge of sediment and other pollutants to the urban stormwater drainage system during construction activity.	**Yes, meets the objectives** Together with BG&E, Harris Page, Integreco and Black Beetle the infrastructure and landscaped outdoor spaces have been designed to mitigate the impact of existing stormwater issues. Consistent with Concept Approval commitments overland flow paths, drainage systems and free board levels have been designed to reduce the impact on both the site and the broader Shepherds Bay precinct. Further measures including optimal deep soil, permeable landscape zones and sediment filters assist with reducing and treating stormwater. For further information refer to BG&E, Harris Page, Integreco and Place Design Group documentation.

	Page	Recommendation	Current
SITE AMENITY			
Safety	56-57	To ensure residential flat developments are safe and secure for residents and visitors. To contribute to the safety of the public domain.	**Yes, meets the objectives** The public domain and street level interface to apartments has been designed to provide secure access, passive surveillance and a clear definition between the public and private realm. Building entries are oriented to the street whilst individual apartment street entries are defined with fences and gates. Landscaping is used to further reinforce boundaries. Lighting is used in the public domain spaces and common areas to provide to provide safe access to and from the building at night.
Visual Privacy	58-59	To provide reasonable levels of visual privacy externally and internally, during the day and night. To maximise outlook and views from principal rooms and private open space without compromising visual privacy.	**Yes, meets the objectives** Building separation, front and side setbacks are consistent with the Concept Approval Masterplan. In detail ground level apartments are raised above street level and include planting for screening. Recessed balconies are provided to the majority of apartments to minimise overlooking. Vertical fins and external screens integrated into the building design provide additional privacy.
SITE ACCESS			
Building Entry	60-61	To create entrances which provide a desirable residential identity for the development. To orientate the visitor. To contribute positively to the streetscape and building façade design.	**Yes, meets the objectives** Building entries are located on prominent corner positions of site accessible from street frontages and publicly accessible through site links. To improve legibility of entries foyers are double height, include a covered area for improved amenity and have mailboxes / building signage integrated into forecourt areas.
Parking	62-63	To minimise car dependency for commuting and recreational transport use and to promote alternative means of transport-public transport, bicycling and walking. To provide adequate car parking for the building's users and visitors, depending on building type and proximity to public transport. To integrate the location and design of car parking with the design of the site and the building.	**Yes, meets the objectives** Parking and parking rates are provided in accordance with the City of Ryde Council DCP Part 9.3 Parking Control requirements. Resident and visitor parking are provided below grade within the building fabric. Visitor parking is grouped close to carpark entries whilst accessible car spaces are located in close proximity to lifts. Further information regarding parking rates and the strategy for management of vehicles associated with the development are provided in the Assessment of Traffic & Parking Implications Report and included as part of the Statement of Environmental effects.

	Page	Recommendation	Current
Bicycle Parking	62-63		**Yes, meets the objectives** Secure bicycle parking is provided for both visitors and residents in accordance with the City of Ryde Council DCP Part 9.3 Parking Control requirements. Visitor parking is located close to the building entry points and is separated from the resident parking areas. Together with Black Beetle and Road Delay Solutions the roads and public domain have been designed to encourage the use of sustainable transport including bus, train, ferry, and cycling.
Pedestrian Access	64	Identify the access requirements from the street or car parking area to the apartment entrance. Follow the accessibility standard set out in Australian Standard AS 1428 (parts 1 & 2), as a minimum. Provide barrier free access to at least 20% of dwellings in the development.	**Yes, meets the objectives** The public domain and through site links have been designed to be meet the objectives and design guidelines set out in Australian Standards AS 1428. From the public domain residents and visitors are provided with accessible entry points. Where ramp access is required to mitigate the changes in levels to external areas due to free board requirements for flood management, ramps are integrated into the main building entry foyers. Within the building lifts provide access to all common corridors and outside common areas.. Consistent with Council controls 10% of apartments are designed as adaptable apartments for future modifications specific to the requirements of individual residents.
Vehicle Access	65	Generally limit the width of driveways to a maximum of 6m. Locate vehicle entries away from main pedestrian entries and on secondary frontages.	**Yes, meets the objectives** The driveway entry for both stages is maintained off Rothesay Avenue as per the DA approval A shared waste collection point for both stages is provided in the Basement level below Stage 2 as per the DA. Eight parking spaces have been allocated to the Café and seven spaces have been allocated as shared parking as per the DA conditions of approval.

	Page	Recommendation	Current
BUILDING DESIGN			
Apartment Layout	67-69	To ensure the spatial arrangement of apartments is functional and well organized. To ensure that apartment layouts provide high standards of residential amenity. To maximise the environmental performance of apartments.	Yes, meets the objectives Apartments have been designed to maximise the potential of the local context and amenity to maintain the approved design. Many of the additional apartments use the same design as per the original approval.
	69	Single aspect apartments should be limited in depth to 8 metres from a window.	Yes, meets the objectives Generally all apartment living, dining, bedrooms and kitchens (with minor exceptions as noted below) are within 8m of a window for natural light and ventilation. Where there are minor variations: › The distance does not exceed 9m, occurring in dual aspect apartments, apartments with 20% increased area (to satisfy Condition 21 of Mod 1 approval) and in mezzanine apartments with double storey ceiling heights to the living areas. › Spaces within the apartment that are greater than 8m from a window are limited to the non-habitable rooms such as bathrooms, laundries and / or entry foyers of the apartments.
	69	The back of a kitchen should be no more than 8 metres from a window.	Yes, meets the objectives Kitchens have been designed as part of an open plan layout with living and dining areas located close external glazing for improved access to natural daylight and where permissible solar access. Where the functional depth of the living arrangement results in a departure from the numerical requirements of the RFDC rules of thumb the back of kitchens are no more than 9m from a window.
	69	The width of crossover or cross-through apartments over 15 metres deep should be 4 metres or greater to avoid deep narrow apartment layouts.	Yes, achieves the rules of thumb Cross over or cross through apartments are 4 to 6m wide, and have a typical depth of 16m.
Apartment Sizes	69	Minimum unit sizes: 1 bed: 50sqm 2 bed: 70sqm 3 bed: 95sqm	Yes, achieves the rules of thumb Apartments have been designed to provide flexibility in use and layout. This is reflected in the range of apartments sizes provided, all of which meet or exceed the minimum RFDC rules of thumb: - 1 bed: 50 to 61m^2 - 2 bed: 70 to 86m^2 - 3 bed: 96 to 138m^2 Consistent with the intentions of the Concept Approval Masterplan to further improve apartment amenity (Condition 21) specific apartments are provided with 20% additional floor area, ceiling height and additional glazing.
Apartment Mix	70	Provide a diversity of apartment types, which cater for different household requirements now and in the future.	Yes, meets the objectives A mix of Studio, 1 bed, 1 bed mezzanine ,2 bed and 3 bed apartments have been provided to accommodate a range of household types. Within this mix a variety of typologies have been designed to provide variety. This includes apartments with separate utility spaces, study alcoves, mezzanine, street level access and adaptable layout apartments.

	Page	Recommendation	Current
Balconies	72	Provide primary balconies for all apartments with a minimum depth of 2m.	**Yes, achieves the rules of thumb** Generally all balconies have a minimum depth of 2m to the primary balcony.
Ceiling Heights, in Residential Flat Buildings	74	In general, 2.7m minimum for all habitable rooms on all floors	**Yes, achieves the rules of thumb** The provision of a typical 3.05m floor to floor height ensures that the minimum clear ceiling height of 2.7m can be achieved. Two storey mezzanine apartments are provided at some lower levels and have double height voids to Living areas. Furthermore, 'improved amenity' apartments are provided with 20% additional ceiling height in accordance with Concept Plan S75W approval Condition 21. There are many areas of the building where the floor to floor height is 3.5m as per the approved DA.
	74	2.4m is the preferred minimum for all non-habitable rooms, however 2.25m is permitted.	**Yes, achieves the rules of thumb** As noted above the 3.05m floor to floor height ensures that the minimum internal clear ceiling height of 2.25 – 2.4m can be achieved. Wet areas are typically stacked to ensure that service zones do not interfere with achieving minimum ceiling heights.
	74	For 2 storey units, 2.4m for second storey if 50% or more of the apartment has 2.7m minimum ceiling heights.	**Yes, achieves the rules of thumb** Typically this rule of thumb has not been used. 2 storey units are provided with 2.7m ceiling heights to all habitable rooms.
	74	For 2 storey units with a 2 storey void space, 2.4m minimum ceiling heights.	**Yes, achieves the rules of thumb** Typically this rule of thumb has not been used. 2 storey units are provided with 2.7m ceiling heights to all habitable rooms.
Flexibility	75	To encourage housing designs which meet the broadest range of the occupants' needs possible. To promote 'long life loose fit' buildings, which can accommodate whole or partial changes in use. To encourage adaptive re-use. To save the embodied energy expended in building demolition.	**Yes, meets the objectives** The variety of apartments types within the development inherently provide flexibility in use. 'Long life loose fit' apartment types including mezzanine and 2 storey apartments with voids encourage adaptive use. Ground floor apartments encourage a variety of work / live opportunities. Within the various apartment typologies, studies and utility spaces provide flexibility of use.
Ground Floor Apartments	78	Optimise the number of ground level units with separate entries and consider requiring an appropriate percentage of accessible units. Provide ground floor apartments with access to private open space, preferably as a terrace or garden.	**Yes, achieves the rules of thumb** Ground floor apartments have been designed to contribute to provide an activated street edge condition. Together with landscaping and decorative fences adequate privacy is provided to terrace areas associated with apartments whilst still permitting surveillance and direct street access.

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Internal Circulation	79	In general, where units are arranged off a double-loaded corridor, the number of units accessible from a single core/corridor should be limited to eight. Exceptions may be allowed where developments can demonstrate a high level of amenity for common lobbies, corridors and units amenity (crossover, dual aspect apartments).	**Yes, achieves the objectives** Apartments are arranged around multiple lift cores that are accessed from the primary street frontages or from adjoining sites to the east and west. Each lift core provides a legible entry point to and from the public domain, communal areas and basement parking levels. Typically there are between 6 and 8 apartments off a common corridor. Corridors are typically provided with windows for natural light. Where the number of apartments exceed the above numbers it is generated by the stepping of the envelope down the slope as per the approved DA. Circulation through the site at the Upper Basement level has been improved immeasurably over the approved DA by reducing the numbers of stairs and changes in level. There is also a generous through link between both Stages 2 & 3 so internal circulation is now possible. Also, the multiple lifts within the through site link between the stages have been consolidated into one lift to ensure easy access from Nancarrow Avenue through to Rothesay Avenue.
Mixed Use	80	To support the integration of appropriate retail and commercial uses with housing. To create more active streets and urban areas. To ensure that the design of mixed use developments maintains residential amenities and preserves compatibility between uses.	**Meets the objectives** Consistent with the Concept Approval Masterplan, within the precinct, predominantly residential uses with a small portion of commercial space are provided for these particular stages within the development. The Café area has been lowered to provide a direct connection to Rothesay Avenue rather than the previous location of 4m above the street and accessed via multiple stairs. The application also proposes a Gym for the residents use in the former void space.
Storage	82	In addition to kitchen cupboards and bedroom wardrobes provide accessible storage facilities at the following rates: 1 bed: $6m^3$ 2 bed: $6m^3$ 3 bed: $10m^3$ A minimum of 50% within the unit.	**Yes, achieves the rules of thumb** Apartments have been designed to provide a variety of storage opportunities. This includes linen cupboards, storage within laundries, alcoves for personalised storage strategies, utility spaces for flexibility of uses including storage. Typically apartments are provided with the minimum amount of storage requirements within the apartment. Additional storage is provided in the basement for some apartments.
BUILDING AMENITY			
Acoustic Privacy	83	Utilise the site and building layout to maximise the potential for acoustic privacy by providing adequate building separation within the development and from neighbouring buildings.	**Yes, meets the objectives** Apartments have been designed within the approved envelopes to maximise the potential for acoustic privacy. Within each apartment living areas are separated from the quieter sleeping spaces. The proposed design objectives are supported with appropriate wall types, acoustic seals to windows and doors, separation / performance requirements for plant and equipment as demonstrated in the accompanying Acoustic report prepared by Acouras Consultancy.

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Daylight Access	84-85	Living rooms and private open spaces for at least 70% of apartments in a development should receive a minimum of 3 hours direct sunlight between 9am and 3pm in mid winter. In dense urban areas a minimum of 2 hours may be acceptable.	**Yes, meets the objectives** Consistent with the Concept Approval Masterplan the site is considered a dense urban area. Through the amendment to the Concept Approval Masterplan, in particular Condition 21, it has been acknowledged that the orientation of built form including the alignment with street edges and through site links will result in less than 70% solar access to apartments. Adopting Condition 21 15 of the 17 additional or modified apartments agreed under the deed within Stage 2 and 19 of the additional 28 apartments have been provided with 'improved' amenity to mitigate the shortfall. This includes substantial (70%) glazing, increased floor to ceiling height and natural ventilation to specific apartments via the use of ventilation shafts in order to meet the 70% rule of thumb.
	85	Limit the number of single aspect apartments with a southerly aspect to a maximum of 10% of the total units proposed. Developments which seek to vary from the minimum standards must demonstrate how site constraints and orientation prohibit the achievement of these standards and how energy efficiency is addressed.	**Yes, achieves the rules of thumb** The buildings have been designed with consideration to the Concept Approval Masterplan. Consistency with the building envelopes and providing apartments that are orientated towards the street edges and public landscaped through site links have been fundamental in the development of an appropriate collection of building forms. Both of which reinforces active frontages and respond to the site context of the site. Although some apartments have limited solar access, typically these apartments are provided with extensive glazing, the depth of apartments are less than the maximum 8.0m permissible and the internal amenity – size / layout- exceeds minimum requirements. It is also noted that the best views from the site are across the Parramatta river which is located to the south of the site. A high proportion of the south facing units can avail of water and district views, which offsets their limited solar aspect.
Natural Ventilation	87	Building depths, which support natural ventilation range from 10 to 18m.	**Meets the objectives** Whilst the building depths vary from the 10 to 18m (glass line to glass line) rule of thumb, the departure is minor and when considered against other RFDC 'rules of thumb' the high level of amenity achieved, in particular natural cross ventilation, confirms that the minor departure does not impact on the overall amenity of the development.

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	87	60% of units to be naturally cross-ventilated.	**Yes, achieves the rules of thumb** Detailed consideration has been given to the building design to ensure a high proportion of apartments achieve natural ventilation including a varying the height and introducing re-entrant facades into the building forms to increase the amount of corner apartments, mezzanine apartments, through-apartments and using operable skylights on roof levels. Further to the above, consistent with Concept Approval Masterplan amended Condition 21 additional apartments are provided with 'improved amenity' features to achieve a high level of apartment amenity across the development.
	87	25% of kitchens within a development should have access to natural ventilation.	**Meets the objectives** A mix of apartment typologies ensures that a variety of internal layouts are provided across the development. The various kitchen types include: kitchen with island benches, galley kitchen, 'L' shape kitchens and kitchens designed to accommodate future adaption for accessibility needs. Furthermore, the placement of kitchens within apartments have been designed with consideration to the overall amenity and internal planning of apartments.
BUILDING FORM			
Awnings & Signage	88	Awnings encourage pedestrian activity on streets. Signage should be carefully considered and integrated into the development.	**Yes, meets the objectives** The various street edges and publicly accessible through site links provides various opportunities for pedestrian activity. Fundamental to the development of the design has been the desire to encourage pedestrian activity and provide legible entry points. Each building entry foyer is double height and provided with a significant overhang for weather protection, individual apartments with entries off the street or through site link are provided with decorative entry gates. Signage is integrated into the building entry points and is typically designed as part of the mailbox and seating installation. Whilst on a smaller scale, signage is provided on decorative gates for individual apartments.

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Facades	89	Compose facades with appropriate scale, rhythm and proportion, which respond to building uses and contextual character. Design facades to reflect the orientation of the site using elements such as sun shading depending on orientation.	**Yes, meets the objectives** The approach to designing building facades has been both a programmatic and referential response to the proposed building uses and character of Shepherds Bay. Apartments have been planned to maximise amenity including solar access, district views and orientation to public open space including street edge conditions. There is a consistent coherent approach to the facades with a distinctive approach in the treatment of 'outer' (street) facades and internal (courtyard) facades to continue the design aesthetic of the approved DA. Each building has as distinctive individual appearance. A number of common elements: screens, opening treatments, roof elements help connect the buildings with a common language. The design of the facades has been informed by the natural topography, which also connects the facades to the landscape design. The approach to the colour scheme is consistent with earthy tones contrasting with with brighter warm tones. Vertical fins, projecting roof elements, recessed entry alcoves, screens and recessed covered balconies assist in providing shade. Reentrant façades, mezzanine and 2 storey apartments maximise the opportunity for natural ventilation. The specificity of these elements to various facades ensures a variety in building facades whilst being familial to the overall development.
Roof Design	91	Relate roof design to the desired built form. Design the roof to relate to the size and scale of the building.	**Yes, meets the objectives** The various roof elements have been designed in response to maximising the amenity and providing a varied roof profile across the development. The roof profile is varied in profile with frequent steps in level and slots breaking up its bulk. In a number of areas upper level roofs have been designed to accommodate 2-storey and mezzanine apartments. The 2-storey units are expressed on the façade in a number of treatments including double-height balcony boxes and awning. The variety of treatments, indentation and stepping at roof-level provides a highly articulated roof form that is consistent with the intent of the Concept Approval Masterplan 'pop ups'.

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BUILDING PERFORMANCE			
Energy Efficiency	93	Incorporate passive solar design techniques to optimize heat storage in winter and heat transfer in summer. Improve control of mechanical space heating and cooling. Provide or plan for future installation of photovoltaic panels. Improve efficiency of hot water systems. Reduce reliance on artificial lighting.	**Yes, meets the objectives** The proposed design incorporates both passive and active techniques to manage and minimise energy use in the development. Passive techniques include apartment orientation, thermal insulation, natural light to common corridors, maximising apartments with natural light, solar access and natural ventilation, deep soil planting to for large shade trees, external shading devices to apartments. Active techniques include water conservation methods, common lighting on motion sensors and timers, basement ventilation system activation based on sensors, centralised hot water systems, localised meter cupboards to avoid electric heat trace, efficient fittings and fixtures. Detailed information regarding the efficiency of the development and proposed commitments are provided in the BASIX assessment and report.
Maintenance	95	To ensure long life and ease of maintenance for the development. Select manually operated systems such as blinds, sunshades, pergolas and curtains in preference to mechanical systems. Select durable materials which are easily cleaned and are graffiti resistant.	**Yes, meets the objectives** A robust selection materials and finishes have been used in the design of buildings, both internal and external. External screens and sun shading devices are typically fixed but where operable they are manually controlled. Motorised systems in the development - such as garage doors and lifts – are provided in pairs to ensure continued access whilst maintenance occurs. The landscape design incorporates indigenous species, irrigation systems and hardscape materials and finishes that a suitable for the public realm to minimise the effects of graffiti.
Waste Management	96	To avoid the generation of waste through design, material selection and building practices. Supply waste management plans as part of the development application submission	**Yes, meets the objectives and achieves the rules of thumb** The buildings have been designed to integrate waste management practices at each stage of the project delivery. At the construction stage a comprehensive approach to waste management and minimisation has been considered consistent with Council's approach and requirements. When the building is occupied the building has been designed to ensure an efficient storage and collection process can occur. Each apartment is provided with a waste cupboard that accommodates source separation. Each common corridor is provided with a garbage chute that is designed to separate waste in collection bins within the basement rather than providing an excessive number of mobile garbage bins on each floor. In the basements a caretaker will transfer waste and recyclables to a centralised garbage holding room located in close proximity to a single waste collection point. The service zone, as reviewed by Council, is designed to minimise the impact the service zone has on the public domain, building uses and traffic management of the precinct. Detailed information is provided in the Construction Management Plan and Waste Management Plan for the proposed building use.

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Water Conservation	97	To reduce mains consumption of potable water. To reduce the quantity of urban stormwater run off. Rainwater is not to be collected from roofs coated with lead or bitumen based paints or from asbestos cement roofs. Normal guttering is sufficient for water collections provided that it is kept clear of leaves and debris.	**Yes, meets the objectives and achieves the rules of thumb** A comprehensive approach to water conservation has been made throughout the development integrating civil, landscape, hydraulic, architectural design and the selection of fittings and fixtures. Detailed information is provided in the BASIX assessment, civil design for stormwater management and landscape design for planting and impervious zones.


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