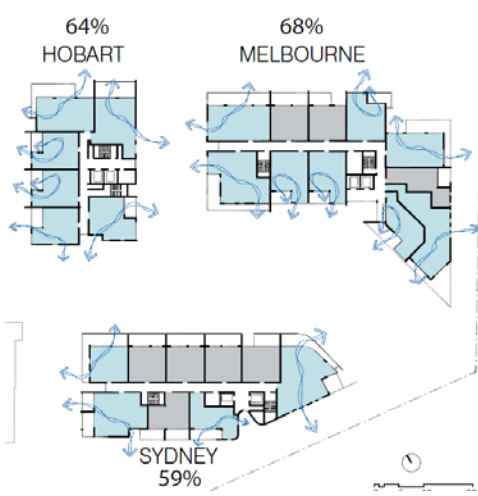


Attachment 2– Residential Flat Design Code.

Part 01 – Local Context		
	Comments	Consistent
<p>Building Height Where there is an existing floor space ratio (FSR), test height controls against it to ensure a good fit.</p>	<p>The height control under Ryde LEP 2014 is set aside by the Concept Plan Approval MP10_0112. The proposed building height is consistent with that approval, as modified.</p>	<p>Yes</p>
<p>Building Depth In general, an apartment building depth of 10-18 metres is appropriate. Developments that propose wider than 18m must demonstrate how satisfactory day lighting and natural ventilation are to be achieved. (60% of residential units should be naturally cross ventilated).</p>	<p>The buildings depths are wider than 18m, however they are consistent with Concept Plan Approval MP10_0112.</p> <p>Notwithstanding the depths proposed the following breakdown for cross ventilation and solar access for each of the buildings are as follows: <u>Cross Ventilation:</u> Melbourne Building: 68% Hobart Building: 64% Sydney Building 59%.</p>  <p>The Sydney Building has a building depth of 20.6m with non compliance to cross ventilation by 1% for the Sydney Building, however overall, 62% of units (186/297) achieve cross ventilation, which complies</p>	<p>No – variation acceptable.</p>

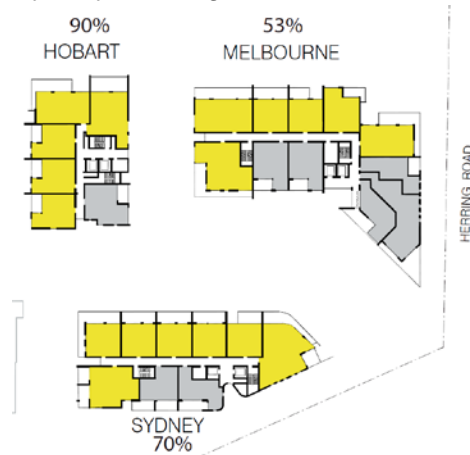
with the requirement of SEPP No. 65. The majority of the units which are non compliant are single aspect north facing units which have habitable rooms with access/windows to outdoor air, as such will have access to fresh air. Given that overall, the proposal complies with SEPP 65 requirement, the variation is considered acceptable.

Solar Access: (3 hours to private open space and 2 hours to living areas)

Melbourne Building: 53%

Hobart Building: 90%

Sydney Building 70%.



The Melbourne Building does not comply with the solar access due to the single southern aspect apartments located along the southern side of the building. The Urban Design Review Panel notes that the level of compliance is a direct result of the orientation of the building and that amalgamation of apartments would not improve the solar access even if it might numerically improve the performance of the building. On this basis the Panel was prepared to accept the lower performance of this building. Note: The units without solar access benefit either from an outlook into the courtyard or are dual

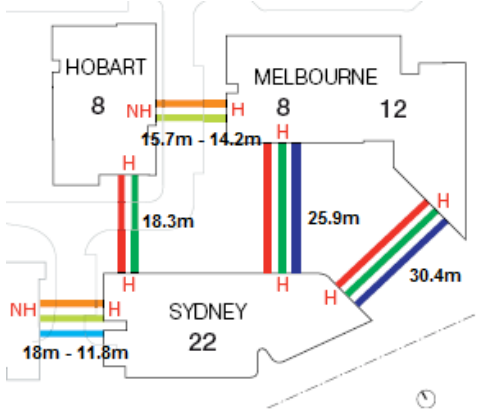
aspect with views to the east and south. The building orientations have already been approved and given that across the whole site, the proposal will comply with the solar access requirement, the proposed variation can be supported.

Building Separation

Building separation for buildings up to 8 storeys or up to 25 metres should be:
 -18m between habitable rooms/balconies
 -13m between habitable/balconies and non-habitable rooms
 -9m between non-habitable rooms.
 Developments that propose less distance must demonstrate that adequate daylight access, urban form and visual and acoustic privacy has been achieved.

Building separation distances consistent with Concept Approval. The boundary setbacks and building footprints are consistent with Concept Plan Approval MP10_0112 as modified.

Building Separation:



8	building heights in storeys				
H / NH	habitable / non-habitable area				
H / H	habitable / habitable area				
LEVELS 1- 4	<table border="0"> <tr> <td></td> <td>min. 9 m bldg separation (NH - H)</td> </tr> <tr> <td></td> <td>min. 12 m bldg separation (H - H)</td> </tr> </table>		min. 9 m bldg separation (NH - H)		min. 12 m bldg separation (H - H)
	min. 9 m bldg separation (NH - H)				
	min. 12 m bldg separation (H - H)				
LEVELS 5-8	<table border="0"> <tr> <td></td> <td>min. 13 m bldg separation (NH - H)</td> </tr> <tr> <td></td> <td>min. 18 m bldg separation (H - H)</td> </tr> </table>		min. 13 m bldg separation (NH - H)		min. 18 m bldg separation (H - H)
	min. 13 m bldg separation (NH - H)				
	min. 18 m bldg separation (H - H)				
LEVELS 9 storeys +	<table border="0"> <tr> <td></td> <td>min. 18 m bldg separation (NH - H)</td> </tr> <tr> <td></td> <td>min. 24 m bldg separation (H - H)</td> </tr> </table>		min. 18 m bldg separation (NH - H)		min. 24 m bldg separation (H - H)
	min. 18 m bldg separation (NH - H)				
	min. 24 m bldg separation (H - H)				

Where separation distances are less than the distances prescribed ie between Hobart and Melbourne Buildings and Sydney and Brisbane (Stage 1) Buildings have been reviewed by URDP and privacy screens have been provided - adequate daylight access, urban form and visual and acoustic privacy

No – but consistent with approved Concept Plan. Areas of non compliances

	<p>has been achieved.</p> <ul style="list-style-type: none"> • Privacy screens provided on the eastern elevation of Hobart Building which faces the western elevation of Melbourne Building. • Privacy screens on the eastern elevation of Brisbane Building to minimise impact to the western side balconies of Sydney Building. 	
<p>Street Setbacks Identify the desired streetscape character. In general, no part of the building should encroach into a setback area.</p>	<p>Consistent with Concept Plan Approval MP10_0112. Concept Approval Report: <u>Eastern boundary (Melbourne)</u> – 5m. Proposed: 5m <u>Southern boundary (Sydney)</u> 10m & 7m. Proposed: 10m and 7m. <u>Northern boundary (Hobart & Melbourne)</u> 16.1m Proposed: 16.7m Hobart. 19m Melbourne.</p>	Yes
<p>Side and Rear Setbacks Relate side setbacks to existing streetscape patterns. These controls should be developed in conjunction with building separation, open space and deep soil zone controls. In general, no part of the building should encroach into a setback area.</p>	<p>Consistent with Concept Plan Approval MP10_0112 as modified.</p>	Yes
<p>Floor Space Ratio Test the desired built form outcome against the proposed floor space ratio to ensure consistency with building height, building footprint, the three dimensional building envelope and open space requirements.</p>	<p>Building setbacks, footprints, heights and floor space ratio are consistent with Concept Plan Approval MP10_0112 as modified.</p>	Yes
Part 02 – Site Design		
	Comments	Consistent
<p>Deep Soil Zones A minimum of 25% of the open space area of a site should be deep soil zone. Exceptions may be made in urban areas where sites are built out and there is no capacity for water infiltration.</p>	<p>The landscaping component/deep soil is consistent with the Concept Approval.</p>	Yes

<p>Landscape Design Landscaping is to improve the amenity of open spaces as well as contribute to the streetscape character.</p>	<p>Council's Consultant Landscape Architect has confirmed that the landscape treatment is satisfactory.</p>	<p>Yes</p>
<p>Open Space The area of communal open space required should generally be at least between 25% and 30% of the site area. Where developments are unable to achieve the recommended communal open space, they must demonstrate that residential amenity is provided in the form of increased private open space and/or in a contribution to public open space.</p> <p>Minimum recommended area of private open space for each apartment at ground level or on a structure such as podium or carpark is 25m² minimum preferred dimension in one direction is 4m.</p>	<p>The distribution of communal open space is consistent with site planning arrangements via the Concept Plan Approval (MP10_0112) and complies with the minimum requirement.</p> <p>Private open spaces are provided for in each unit in the form of a balcony and terrace areas. All courtyards and balconies are of a useable size and all balconies have a minimum depth of approximately 2m.</p> <p>Units S202 & S201 (Sydney Building) located on level 2 addressing Epping Road ground level have small courtyards (approximately 6m² for Unit S202 and 13m² for Unit S201) which does not comply with this requirement. Whilst the smaller POS is not ideal, this is only for 2 units x 1 bedroom apartments. These apartments will have a minimum balcony width of 2m and as it is only for 2 units, the proposal is considered acceptable.</p>	<p>Yes</p> <p>No – variation acceptable.</p>
<p>Orientation Optimise solar access to living areas and associated private open spaces by orientating them to the north and contribute positively to the streetscape character.</p>	<p>The building envelopes are consistent with the Concept Plan Approval (MP10_0112). Communal open space and balconies have been orientated north where possible with the design optimising solar access and cross ventilation by maximising provision of dual access units. The Urban Review Design Panel supported the design.</p>	<p>Yes</p>
<p>Planting on Structures In terms of soil provision there is no minimum standard that can be applied to all situations as the</p>	<p>Deep soil planting has been provided to the street frontages. Council's Consultant Landscape Architect is satisfied with</p>	<p>Yes</p>

<p>requirements vary with the size of plants and trees at maturity. The following are recommended as minimum standards for a range of plant sizes:</p> <ul style="list-style-type: none"> • Shrubs - minimum soil depths 500 - 600mm 	<p>arrangements for landscaping in those areas of the development and Condition 24 has been imposed for minimum soil depth for planting on structures.</p>	
<p>Stormwater Management Reduce the volume impact of stormwater on infrastructure by retaining it on site.</p>	<p>Council's Senior Development Engineer is satisfied with arrangements for the collection and disposal of stormwater as it was dealt with in Stage 1.</p>	<p>Yes</p>
<p>Safety Optimise the visibility, functionality and safety of building entrances. Improve the opportunities for casual surveillance and minimise opportunities for concealment.</p>	<p>The proposal was referred to NSW Police who has advised: "<i>the factors of Crime Prevention through Environmental Design within this development have been considered, such as surveillance, lighting; territorial reinforcement, environmental maintenance, space/activity management and access control. However there does not appear to be any mention of CCTV. It is therefore recommended that CCTV cameras be installed</i>".</p> <p>Conditions of consent have been included to reflect appropriate safety and security measures. (See Condition 80 to 85).</p>	<p>Yes</p>
<p>Visual Privacy The building separation requirements should be adopted.</p>	<p>Noting the building envelopes are consistent with the Concept Plan Approval (MP10_0112) separation distances are generally satisfactory. Where there is a non compliance with building separation under SEPP 65, balconies have been reorientated and privacy screens provided. Given the street separation and distances involved, there will be no unreasonable privacy impacts to neighbouring properties. Internal overlooking has been addressed by way of privacy screens and louvers.</p>	<p>Yes</p>
<p>Building Entry Ensure equal access to all.</p>	<p>Equitable and secure access is</p>	

<p>Developments are required to provide safe and secure access. The development should achieve clear lines of transition between the public street and shared private, circulation space and the apartment.</p>	<p>available onto the site and within the development. The Access Report prepared by Accessible Building solutions, conclude that the development will provide:</p> <ul style="list-style-type: none"> • access for people with a disability from the street to all the proposed buildings via accessible pathways • access to all communal facilities • the provision of lifts allow access to the front door of all dwelling units. • 10% of the units are designed to be adaptable in accordance with AS 4299, so that they can be easily modified to suit people with a disability. • The adaptable units provide a variety of plan types, orientation and location <p>The proposal complies with the obligations under the Disability Discrimination Act.</p>	<p>Yes</p>
<p>Parking Determine the appropriate car parking numbers. Where possible underground car parking should be provided.</p>	<p>The proposal complies with the parking numbers as modified by MP10_0112 Mod 3 & Mod 5.</p>	<p>Yes</p>
<p>Pedestrian Access Provide high quality accessible routes to public and semi-public areas of the building and the site. Maximise the number of accessible, visitable and adaptable apartments in the building.</p>	<p>The development provides accessible paths of travel within the buildings and to public areas.</p> <p>30 (10%) adaptable apartments are provided as required by the Concept Plan Approval (MP10_0112).</p>	<p>Yes</p>
<p>Vehicle Access To ensure that the potential for pedestrian / vehicle conflicts is minimised. The width of driveways should be limited to 6 metres. Vehicular entries should be located away from main pedestrian entries and on secondary streets.</p>	<p>All residential vehicle access to the site is via a new private road off Herring Road. This is consistent with the Concept Plan Approval (MP10_0112).</p> <p>Council's Public Works Team and Senior Development Engineer are satisfied with access arrangements for cars and service vehicles.</p>	<p>Yes</p>
<p>Part 03 – Building Design</p>		

	Comments	Consistent
<p>Apartment Layout Single aspect apartments should be limited in depth to 8m from a window.</p> <p>The back of kitchen should be no more than 8m from a window</p> <p>The minimum sizes of the apartments should achieve the following; 1 bedroom – 50m² 2 bedroom – 70m² 3 bedroom – 95m²</p>	<p>Single aspect apartments do not exceed 8m in depth. The overall proposed apartment layout is considered reasonable and responds satisfactorily to the orientation and location of the approved building envelopes.</p> <p>The majority of apartments are compliant except for H101 and above in the Hobart Building. The non compliant is relatively minor (8.7m) and only for a small percentage of the whole development.</p> <p>Units H102, H202, H302 and H502 in the Hobart Building are 2 bedroom apartments and are 67m² in size. This is short of the required 70m² size by 3m². The proposed variation can be supported as the departure is relatively minor, with only 4 apartments out of 297 not complying with the minimum size requirement. The apartments have a living area flowing onto a north west facing balcony with a good outlook. The balconies comply with the minimum depth requirement, accordingly the amenities of the apartments are not compromised and the variation can be supported.</p>	<p>Yes</p> <p>No – variation acceptable.</p> <p>No – variation acceptable.</p>
<p>Apartment Mix The development should provide a variety of types.</p>	<p>Apartments mix is:</p> <ul style="list-style-type: none"> • 178 (59%) x 1 bedroom apartments; • 102 (34%) x 2 bedroom • 17 (5.7%) x 3 bedroom apartments. <p>30 apartments (10%) will be adaptable. Overall the proposed mix is considered reasonable.</p>	<p>Yes</p>
<p>Balconies Where private open space is not provided, primary balconies with a minimum depth of 2m should be</p>	<p>Each unit is provided with a primary balcony that is accessed from the main living areas. All balconies have a minimum depth of 2 metres.</p>	<p>Yes</p>

provided.		
<p>Ceiling Heights</p> <p>The following recommended dimensions are measured from finished floor level (FFL) to finished ceiling level FCL).</p> <ul style="list-style-type: none"> in general, 2.7m minimum for all habitable rooms on all floors, 2.4m is the preferred minimum for all non-habitable rooms, however 2.25m is permitted. 	Floor to ceiling heights are at least 2.7m for habitable rooms and 2.4m for non-habitable rooms.	Yes
<p>Flexibility</p> <p>Provide apartment layouts which accommodate the changing use of rooms.</p>	Floor plates are considered satisfactory.	Yes
<p>Ground Floor Apartments</p> <p>Optimise the number of ground floor apartments with separate entries and consider requiring an appropriate percentage of accessible units. This relates to the desired streetscape and topography of the site.</p>	The ground floor is commercial/retail use.	N/a
<p>Internal Circulation</p> <p>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.</p> <p>Increase amenity and safety of circulation spaces by providing generous corridor widths and ceiling heights, appropriate levels of lighting including the use of natural daylight.</p>	Hobart Building - Achieved. Melbourne Building – Achieved. Sydney Building – Achieved.	Yes
<p>Storage</p> <p>Internal storage areas for each residential unit are to be provided generally in accordance with the Internal Storage Schedule submitted with the development application (drawing number S.DA940A dated 29/5/14). Details demonstrating</p>	Each apartment will be allocated storage cage (4m ³) in basement plus storage area within the apartments. One bedroom will have 3m ³ , 2 bedroom will have 4m ³ and 3 bedroom with 6m ³ . This together with the basement storage complies with storage requirement. Condition 38 is recommended to	Yes

<p>compliance is to be submitted on the Construction Certificate plans.</p> <p>Options including providing at least 50% within each respective apartment, dedicated storage rooms on each floor or dedicated storage in the basement.</p>	<p>ensure sufficient storage is provided.</p>	
<p>Acoustic Privacy Apartments to be arranged to minimise noise transitions.</p>	<p>Subject to the recommendations of the submitted Acoustic Report, satisfactory acoustic privacy will be provided for each apartment. Condition no.33 requires compliance with the recommendations of the report.</p>	<p>Yes</p>
<p>Daylight Access Living rooms and private open spaces for at least 70% of apartments in a development should receive a minimum of three hours direct sunlight between 9.00am and 3.00pm in mid-winter. In dense urban areas a minimum of two hours may be acceptable.</p> <p>Limit the number of single aspect apartments with a southerly aspect to a maximum of 10%</p>	<p>The buildings achieves the following outcomes: <u>Hobart:</u></p> <ul style="list-style-type: none"> • 90% of units achieve 3hrs solar access <p><u>Sydney:</u></p> <ul style="list-style-type: none"> • 70% of units achieve 3 hrs solar access. <p><u>Melbourne:</u></p> <ul style="list-style-type: none"> • 53% of units achieve 3hrs solar access. <p>This is consistent with the indicative plans considered by the Department for MP10_0112 and reviewed by Urban Design Review Panel and was considered a reasonable outcome for a development of this size with regard to the site orientation and form of development proposed. The overall compliance for the three buildings is 68% with the total development (Stage 1 & 2) having 70%. The majority of the non compliant units are provided with dual aspect openings for natural ventilation and it is considered the units will achieve satisfactory levels of residential amenity and energy efficiency.</p> <p>Stage 2 will have 11%, 33 out of 297 apartments with a single southerly</p>	<p>No – variation to the Melbourne Building. Variation is acceptable by Urban Design Review Panel and location and orientation of buildings approved by Concept Approval.</p>

	<p>aspect. The single aspect apartments, particularly in the Sydney Building, have views to the north and south. In the Melbourne Buildings the single aspect apartments are the larger 1 bedroom apartments with sufficient sized balcony off the living area. These units will receive acceptable amenity.</p>	
<p>Natural Ventilation Building depths which support natural ventilation typically range from 10 to 18 metres.</p> <p>60% of residential units should be naturally cross ventilated.</p>	<p>The proposed building depths and apartment layouts support natural ventilation.</p> <p>62% – Achieved.</p>	<p>Yes</p> <p>Yes</p>
<p>Awnings Contribute to the legibility of the residential flat development and amenity of the public domain by locating awnings over building entries.</p>	<p>Hobart Building has an awning at the building entry point. The Melbourne and Sydney Buildings will have the upper floors overhang to provide amenity for pedestrians.</p>	<p>Yes</p>
<p>Facades Facades are to be of appropriate scale, rhythm and proportion which respond to the building's use and the desired contextual character.</p>	<p>The facade composition and mix of materials is satisfactory.</p>	<p>Yes</p>
<p>Roof Design Roof design is to relate to the desired built form as well as the size and scale of the building.</p>	<p>Satisfactory – review by Urban Design Review Panel.</p>	<p>Yes</p>
<p>Energy Efficiency Incorporate passive solar design techniques to optimize heat storage in winter and heat transfer in summer. Improve the control of mechanical space heating and cooling.</p>	<p>The energy efficiency of the buildings is consistent with the requirements under BASIX. The development will achieve a 4 star green rating.</p>	<p>Yes</p>
<p>Maintenance The design of the development is to ensure long life and ease of maintenance.</p>	<p>Satisfactory.</p>	<p>Yes</p>
<p>Waste Management A waste management plan is to be submitted with the</p>	<p>A Waste Management Plan has been submitted with the application and is considered satisfactory.</p>	<p>Yes</p>

development application.		
Water Conservation Reduce mains consumption of potable water. Reduce quantity of urban stormwater runoff.	The water conservation methods of the buildings are consistent with the requirements under BASIX.	Yes