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Council Reference: 342/2010
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20 August, 2010

Application No.: 342/2010
Property: LOTS 101 AND 102, and part of 107 in DP 1134195
52 Walker Street, Rhodes NSW

Proposal: Development of four new apartment buildings with basement car parking.

Dear Ms Butler,

GMU has been appointed by Canada Bay Council to review a Part 3A Development Application (DA) for the site located at 52 Walker Street, Rhodes – Lots 101-102, and part of 107. GMU will review the DA and provide preliminary advice on the proposal's performance against the State Environmental Planning Policy for multi-unit residential dwellings (SEPP 65) as well as best practice Urban Design Principles and Council's objectives and vision for the site and precinct as a whole.

In preparing this preliminary advice report, the following documents have been reviewed:

Environmental Assessment Report - July 2010
Development Application drawings (31.05.10)
Site visit and photographic analysis
NSW State Plan 2010
Draft Inner West Sub Regional Strategy
Metropolitan Transport Plan
Sydney Regional Environmental Plan No. 29 - Rhodes Peninsula (SREP 29)
SEPP 65 – Design Quality of Residential Flat Development and the Residential Flat Design Code (RFDC)
Rhodes West Draft Development Control Plan
Rhodes West Master Plan 2009 – DRAFT
Renewing Rhodes Development Control Plan
Commentary on Meriton proposal – John Toon 17 March, 2010
Canada bay Local Environmental Plan 2008
Draft zoning amendments to Canada Bay Local Environmental Plan 2008 – Amendment No. 1 (Rhodes West)

Please find below our preliminary findings for your review and comment:

PART 1 – LOCAL CONTEXT

Relating to Local Context

The proposal generally complies with the objectives of the Rhodes West Master Plan 2009 and the character and place making principles set out for Precinct C in the Rhodes Draft Development Control Plan 2010. However, GMU would like to note the following issues:

Overall site plan (DA-01) should include the footprint of the existing buildings to the south and locate the proposal in relation to the Railway Station, shopping centre, and main points of access, especially to the pedestrian connections and pathways to surrounding amenities and open space in the West Rhodes Peninsula.

The proposal does not clearly specify any public domain improvements to the streets surrounding the development. A portion at the western end of Walker Street along the rail line currently characterized by a poor landscape character and amenity which will be visible all the way from Homebush Bay as it is in axis with the proposed open space. GMU strongly recommends that consideration is given to the public domain improvements for the streets surrounding the proposal.

Building Types

The applicable zoning for the site is Residential as per the Sydney Regional Environmental Plan No 29 and high-rise residential towers are allowed as per Rhodes West Master Plan 2009. Therefore, this proposal complies with the planning instruments.

Amalgamation and Subdivision

N/A - The proposal comprises of Lots 101, 102 and part of Lot 107 amalgamated to form a full block.

Building Envelopes and Building Depth

GMU has reviewed the proposal's building envelopes and depths taking into consideration the requirements laid out in the West Rhodes DCP 2010 (Section 5.6 - Figure 83) as well as the general requirements of the Residential Flat Design Code:

- Building A and C (Towers) depth non-compliance is not constant due to the tower's oval footprint, it becomes critical for the units located at the widest portion of the tower in terms of adequate provision of natural light and ventilation to the deeper rooms located farther away from the building glass line.
- Developments that propose wider than 18 meters must demonstrate how satisfactory daylight and natural ventilation are to be achieved as per SEPP 65.
- The single non-compliance for building B in terms of building height is not considered to be critical
- Building C's non-compliance in terms of height is critical due to the overshadowing impacts onto the public open space as shown on Shadow Diagrams in Appendix 27 of the Environmental Assessment Report (EAR).
- Buildings B and D depths are mostly compliant with SEPP 65 glass line to glass line requirements (18m), however they are not compliant with the draft DCP which requires the depth of the articulation zone to be included within the building depth.

The proposal's performance with regards to building envelopes and depth against both sets of controls is summarized in the following table:

Block/ Building	Applicable Control Rhodes West Draft Development Control Plan 2010 (DCP 2010) / Residential Flat Design Code (SEPP 65)		Development Application	Proposal's performance against requirements
Block/Building A (Residential High rise Tower) (south-east corner)	DCP 2010	Max storeys = 25	Max storeys = 25 storey	Compliant
		Max Roof RL = 89.65	Roof RL = 91.20	Non-compliant 1.55m higher
		Max height of plant = 3.5m	Plant height = 2.8m + masonry feature above plant = 5.4m	Non-compliant Overall height above roof structure = 4.7m
			Total height above roof structure = 8.2m	
		Max building depth including articulation zone = 23m	Max building depth = 23m	Non - compliant (doesn't include articulation zone)
SEPP 65	Max building depth = 18m	Max building depth = 23m	Non-compliant 5m difference	
Block/Building B (Residential Mid-rise building) (south-west corner)	DCP 2010	Max storeys = 7	Residential building storeys = 7	Compliant
		Max Roof RL = 29.05	Roof RL = 30.1	Non-compliant 1.05m higher
		Max height of plant above roof = 3.5m	Plant height = 3m	Compliant
		Max building depth including articulation zone = 18m	Max building depth = 18m	Non - Compliant (doesn't include articulation zone)
	SEPP 65	Max building depth = 18m	Max building depth = 18m	Compliant
Block/Building C (Residential High rise Tower) (north-west corner)	DCP 2010	Max storeys = 25	Building storeys = 25 storey	Compliant
		Max Roof RL = 77.5	Roof RL = 85.2	Non-compliant 7.7m higher
		Max height of plant above roof = 3.5m	Plant height = 2.8m Plus masonry feature above plant = 5.4m Total height of roof above structure height = 8.2m	Non-compliant Overall height of roof above structure = 4.7m higher
		Max building depth including articulation zone = 23m	Max depth of building = 23m	Non - Compliant (doesn't include articulation zone)
	SEPP 65	Max building depth = 18m	Max depth of building = 23m	Non-compliant 5m difference
Block/Building D (Residential Mid-rise building) (north-east corner)	DCP 2010	Max storeys = 7	Building storeys = 6	Compliant
		Max Roof RL = 27.1	Roof RL = 26.95	Compliant
		Max height of plant above roof = 3.5m	Plant height = 2.6	Compliant
		Max building depth including articulation zone = 18m	Max building depth = 18m	Non-compliant (doesn't include articulation zone)
	SEPP 65	Max building depth = 18m	Max building depth = 18m	Compliant

Building Separation

- While the proposal does not face any structures to the East (Railway line), it faces residential buildings to the North, West and South. Plans do not show the existing buildings to the south, and while distances appear to comply the separations cannot be confirmed on the basis of the material provided. GMU recommends that the Site Analysis Plan (DA-02) be modified to include separation distances from balcony to balcony and glass line to glass line between buildings on the subject site and those on the existing surrounding lots for at least the ground and first level.
- Separation distances between the proposed buildings on site (A, B, C and D) seem to comply; however there are privacy issues between the balconies and habitable rooms of buildings B and D due to their L-shape footprint. Please see the Privacy section below for a more detail discussion on privacy issues

Street setbacks

Block/Building A - Required 10m setback to Walker St and 5m setback to Nina Grey Avenue - **Compliant**

Block/Building B - Required 5m setback to Nina Grey Avenue – **Minor non-compliance (0.3m)**
Required 5m setback to Shoreline Drive - **Minor non-compliance (0.3m)**

Block/Building C - Required 10m setback to Shoreline Drive - **Compliant**
Required 15m setback to Meredith Street - **Non compliant (2m)**

Block/Building D - Required 5m setback to Meredith Avenue - **minor non-compliance (0.5m)**
Required 5m setback to Walker Street - **non compliant (1m)**

GMU notes that the 10m setback line for Buildings A and C to Shoreline Drive and Walker Street is allowed as per the Draft DCP 2010; however, in our opinion, this breaks the continuity of street frontage and promotes the dependency on canopy structures for wind mitigation and weather protection. This is not in character with the rest of the precinct and deactivates the street edge. Nevertheless, the proposal as presented is generally compliant with the setback requirements as per the Draft DCP.

It is recommended that 10m setback be applicable to the towers only above the street frontage height and that a smaller setback (5m) for podium or skirts to the towers be allowed to come closer to the street edge to promote continuity of the built form and better activation to the street edge.

Side and Rear Setbacks

N/A – The proposal develops the entire block, therefore rear or side setbacks are not applicable.

Floor Space Ratio

Allowable FSR (Local Environmental Plan 2008 – Amendment 1 – Zone V) = 3.3:1

Site area = 15,091sqm X FSR= 3.3:1 = 49, 800.3 sqm

Proposed GFA = 49,377sqm

Proposed FSR = 3.27:1

Development complies with Floor Space Ratio requirements.

PART 2 – SITE DESIGN

Deep Soil Zones

The deep soil provision was determined based on the following calculations:

Required Minimum Open Space as per SEPP 65 = 30% of the site area = 4527.3 sqm

Required Minimum Open Space as per draft DCP = 4,600sqm

Provided open space = 4,600sqm

Required Minimum Deep Soil area as per SEPP 65 = 25% of the open space area = 1131.8sqm

Required Minimum Deep Soil area as per Draft DCP = Not specified

Provided deep soil area = 3,573sqm

The proposal meets the numerical deep soil provision as per the Draft DCP and far exceeds that of the Residential Flat Design Code. However, the Pedestrian Wind Environment Study, Appendix 12 suggests that a number of trees (density foliated and evergreen 5m and 8m high trees with 4m and - 6m wide canopies) are required for wind mitigation (see Figure 7a: Recommended Minimum Tree Planting Layout for Ground Level pg.35).

None of the DA or Landscape Plans show a provision of deep soil, planters or boxes to accommodate these trees beyond the deep soil area concentrated towards Shoreline Drive, which results in approximately 17 required trees and 2 shrubs as shown on the Pedestrian Wind Environment Study without a proper soil provision.

Required trees for wind mitigation need to be addressed and coordinated within the Landscape Plans.

Fences and walls

The proposal's provision of fences and walls generally helps to differentiate between the public domain and the ground floor units' private open space which is directly accessible from the street. However, the height of fences to the street needs to provide privacy for the residents without compromising the ability to overlook the street from within the units to promote natural surveillance.

The following is a summary of the proposal's fence heights as shown on elevation drawings (DA-60 to DA-69):

- Building B – varies from 2.25 - 1.6m and 1.2 - 0.8m along Nina Gray Avenue
2m above 80cm high 15° slope along Shoreline Drive
- Building C – 2m along Shoreline Drive
2m along the internal communal open space
(Please note that the high step along this fence may be a tripping hazard)
2.4m along Meredith Avenue
- Building D – 1.8m along Walker Street
1.8m along the internal communal open space
2m along the public open space
1.8 – 2.4m along Meredith Avenue
- The recommended height for fence is between 1.5 -1.8m high. Heights above 1.8 m begin to compromise the activation and natural surveillance to the street. Therefore, applicant must demonstrate how natural surveillance is achieved through the design of the fence.

- The communal open space between the buildings is located directly above the car parking structures and elevated above the ground floor with no direct access from the public open space at the centre of the site. This results in a number of very high inactive walls surrounding the public open space featuring ventilation grills haphazardly placed along on the elevation. This is a poor outcome and needs to be addressed by sleaving the parking area with active uses overlooking the public open space. The following is a summary of the apparent height of the walls as shown on the elevation drawings Elevation drawings DA-60 to DA-65:
 - Building A –1.8 - 2.8m wall + 1.2m guard rail
 - Building B –2.2 - 3m m wall + 1.2m guard rail
 - Building C –1.4 - 3.2m wall + 1.2m guard rail
- Large feature masonry walls near main entries compromise passive surveillance and promote loss of visibility.

Landscape design

The proposed landscape design provides a through site pedestrian link potentially connecting the site with the landscaped pedestrian area along the foreshore and creating view lines towards Homebush Bay. This is a positive outcome; however there are a few areas of concern as outlined below:

- We note John Toon's comments dated 17 of March 2010 where he suggests the creation of three separate spaces for the public open space where the area closest to Walker Street is envisioned as a hard paved area. Perhaps, this needs to be given further consideration due to the overshadowing impacts from Building C on to the public open space throughout the day as shown on the Shadow Diagrams in Appendix 27 of the EAR. The landscape plan currently shows a lack of vegetation nor the ability to accommodate the required trees for wind mitigation as discussed in the previous Deep Soil section.
- A hard paved area with substantial overshadowing and adverse wind impacts will not be attractive or inviting at any time. This is a poor outcome, especially for this area which is envisioned as a high trafficked area with a more civic character. This area as a point of entry to the site should provide more interest and amenity.
- Proposed trees on the eastern part of the open space (Walker St) as suggested in the Pedestrian Wind Environment Study – appendix 12 would provide the necessary break for adverse winds created by the location of tower buildings. Please see, Environment Assessment Report- see Figure 7a: Recommended Minimum Tree Planting Layout for Ground Level p.35.
- GMU recommends a different approach to the distribution of the deep soil area from a concentrated area to the west to a more elongated spine running parallel to the length of the open space to ensure that a deep soil provision to support mature planting can be allocated along the entire public open space. This will require a redesign of the car parking layout.

Open Space

The proposal includes 4,600sqm of open space, as required by the Draft DCP 2010 and generally follows the site specific requirements set out for the space in the DCP. However, the edge of the public open space is lined with blank walls, due in part to the parking structure being raised above the ground floor looking onto a passive lawn with concrete benches. There are overshadowing and adverse wind impacts to a generally vast open space with rather few landscape features. This design requires further development with better landscape features and active uses along the perimeter of the open space to offer enough interest for the community to activate the space.

Orientation

- Orientation of the buildings complies with SEPP 65 Residential Flat Design Code. The lower buildings and podiums are aligned with the streets on the west and east side. The tower buildings are orientated due north which minimizes the negative south exposure.
- A repositioning or further rotation of the towers' longitudinal axis for Building C could be investigated to try to ameliorate the overshadowing impacts to the public open space especially during the mid-day hours.

Planting on Structures

- Where a deep soil provision is not possible for areas such as communal open spaces above the podium directly on top of the carparking structure, details and sections of the proposed planter boxes need to be provided. At present, drawings suggest that trees are planted directly above the concrete slab (Please see section drawings DA-67 to DA-69).
- No planting or landscape is shown as features on building elevations.
- Flat roofs above Buildings B and D will be exposed and viewed from the towers above. It is recommended that these structures be treated as green roofs populated with succulent species for amenity and good outlook for the units above.

Stormwater Management

- The drawings provided in the Water Sensitive Urban Design Measures - appendix 28 of the EAR illustrate engineering plans of the Rhodes Peninsula bio-retention basin located north of the subject site on the foreshore at Point Park. Plans do not clearly indicate the link or connection between the subject site and this area.
- No Stormwater Management Plan has been submitted at this stage.
- Catchment plan and pipe trench detail L05092-CC-801 seems outdated and does not reflect the correct boundary for the subject site.

Safety

- Open Space: -Passive surveillance to the public open space is compromised due to inactive blank walls facing the public open space as a result of the partly raised car park above the ground floor level.
- Building Entrances:
- The entries to the east and north elevations for Building A are accentuated by wide feature masonry walls which create visual obstructions and a potential hiding place.
 - Paved paths leading to the entrance of ground floor units on Building C are very long due to the 10m setback; this deactivates the street edge and compromises the natural surveillance of the street.
 - Exit stair cases leading from car park levels to the ground floor are located randomly, taking over part of the Ground floor units' private open space or the childcare outdoor play area and their stair cap or weather enclosures, especially for Building C are located so that they create dead corners and block visibility.
 - These stair enclosures are not included in the landscape design. Details and sections need to be provided as to how their visual appearance and bulk will be treated as well as their footpath access to the streets.

Visual Privacy

- Elevations of street units present adequate fencing along the street edge for visual privacy but details of their height and material are not provided.
- Proponent/Applicant should be required to submit details or sections showing the height relationship between the private terraces and the street level for units with direct access from the ground floor.
- There are balcony-to-balcony privacy issues for units located to the inner side of the L-shaped for Buildings B and D as they do not meet separation distances and screening devices are not shown.
- Similarly, there are balcony- to-habitable room privacy issues for the same buildings. A few examples where the use of screening devices is needed are as follows: Unit 245 to Unit 244, Unit 230 to Unit 241 and Unit 220 to Unit 221 in Building/Block D. These conditions are typical for every floor on that building and will be the case as well for Building B.

Building Entry

- Lobby Entrances for corner buildings B and D are segregated to one entrance from each, the main road and the side street without through connection at the lobby which effectively creates two addresses for what appears to be a single building; this can result in a lack of legibility and poor "way-finding".
- Entry to Building D from Meredith Avenue to the north is too close to the car park entry. It is less than the required 6m separation distance along the street required by the Draft DCP 2010 (See Chapter 4.3.28 – C8).
- Lobby entrances are set back from the footpath – approximately 7-11m for lower buildings and 15 -17m for tower buildings; this may result in a poor address and casual surveillance to the street.
- The use of a porte-cochere leading to the towers' main entries is not in keeping with the streetscape character for the rest of the Rhodes Peninsula and it creates pedestrian/vehicular conflicts as vehicles interrupt the pedestrian flow along the footpath. This is not a desirable outcome.

Parking

- The proposed parking layouts (they do not connect internally) can be improved to allow better deep soil distribution along the public open space.
- The parking circulation layout is not efficient with many 'dead ends'.
- Not enough bicycle parking is provided. The West Rhodes Draft DCP 2010 Section 4.3.29 – C10 (Bicycle Parking Rates table) requires 1 bicycle parking per every 3 apartments and 1 visitor's bicycle parking per every 12 apartments. The proposal shows a provision for Buildings A and B, but none for Buildings C and D.
- Bicycle parking should also be provided within the public open space.
- There is no apparent motorcycle parking provision on any of the parking layouts. As per West Rhodes Draft DCP 2010 - 4.3.29 – C3 – Motorcycle parking should be equivalent to the area of one car parking space per 100 parking spaces.

Pedestrian Access

Pedestrian access to the public open space is directly from Walker Street and Shoreline Drive as a through-site pedestrian access way with an outlook towards the water. The buildings are accessed via lobby entrances and ground floor units have direct access from the street. In general, this is a positive outcome; however there are a few areas of concern as outlined below:

- Access to ground floor apartments for Building C along Shoreline Drive is in some cases almost 20m from the street edge (see Unit G28 on DA-30); this reduces visibility from the street and creates a poor address onto the street.
- Pedestrian access to the internal communal open spaces is well provided directly from the tower lobbies, unlike Building B where the access is more indirect via the fire stair or garbage room for a portion of the building and no access at all is shown from the lobby areas of Building D.
- Buildings/Blocks B and D lack legibility and street address because of the two separate entries with unconnected internal lobbies at the ground floor. This can result in lack of legibility and poor "way-finding".
- The use of porte-cochere promotes vehicle/pedestrian conflicts. Easy pedestrian access to residential buildings encourages residents to use public transport and discourages car usage promoting a sustainable community.

Vehicle Access

Two separate vehicular entries are located along the secondary streets (Nina Grey and Meredith Avenues) on the opposite sides of the block which limits vehicular and pedestrian conflicts along the footpath of the main roads. This is a positive outcome; however there are a few areas of concern which are outlined below:

- The proposed width of the vehicular entries is 7.6m. Only 6m are allowed as the maximum width for the car park entry/driveway as per the West Rhodes Draft DCP 2010.
- The heights for both vehicle entries vary from 5m for Block B to 7m for Block D. These heights combined with the excessive width give the effect of 'a black hole' on the building façade. This is not a positive outcome.
- No screening or shutter device is shown on plan or elevation which will aid to ameliorate the effect of the 'black hole' along with the reduction of the size of the opening.
- The use of porte-cochere for the towers' main entry points is not recommended. It is not in keeping with the streetscape character of the rest of the precinct.
- Driveway entrance to Building B from Nina Grey Avenue does not have an adequate separation distance from the main pedestrian entry.

PART 3 – BUILDING DESIGN

Apartment Layout

- Most units are single aspect facing west or east. Less than 10 percent of them are south facing. This is a positive outcome.
- The recommended distance from glass line to back of kitchen (8m) is met for most units, but in many cases the access to the daylight is obstructed by poor unit design, closets or other built-in furniture. Please see Units G and H or Unit 234 in Buildings A or C.
- Kitchens are accessed, in some cases, directly off the main entry or corridor which is not a good outcome.
- The majority of kitchens have an inadequate provision of counter space.
- The media room for Unit 450 in Building D has an insufficient area as well as an inefficient layout. This condition is typical for that unit on all floors.
- Corner Studio (i.e. Unit no. 430) in Building C does not have an efficient layout. Due to its location in the building, this unit will have a very deficient solar access and no provision of natural ventilation is possible due to the absence of windows in the bedroom, should privacy be desired from the living room by the use of the sliding partition. This condition is typical for that unit up to Level 6 of Building C This is a poor outcome and the unit needs to be reconfigured.
- Unit C in buildings A and C have no linen closets. This condition is typical for that unit on all floors on both towers.
- Storage for Unit F is inside the bedroom. This is not a good outcome as storage other than closets needs to be directly accessible from entries or hallways.

Apartment mix

There are 5 units types proposed:

- Studios,
- 1 bedroom Units,
- 2 bedroom – medium and large, and
- 3 bedroom units.

The scheme proposes a majority of 2 bedroom units, with 3 bedroom units located mainly on Buildings B and D.

Balconies

- Most balconies for Buildings B and D present issues of privacy as they do not meet horizontal separation distances and screening devices are not shown.
- Tower balconies on Buildings A and C do not appear to have sufficient depth to accommodate a minimum of 8sqm area with a minimum of 2m depth to meet the requirements of the Residential Flat Design Code. It is required scaled unit plans showing the furniture layouts for each balcony to confirm adequate usable space is provided whenever an alternate balcony depth and unusual shape is proposed.
- For Buildings A and C a minimum constant balcony depth of 2m is not met for most of the tower units due to their irregular shape.

Ceiling Heights

The Residential Flat Design Code recommends ceiling heights of 3.3m across all ground floor apartments in Mixed Used areas for future flexibility. The proposal is located within a residential zone, so a 2.7m height is applicable to all residential floors, but 3.3m will be applicable to non residential uses on the ground floor. The following is a summary of the proposal in terms of ceiling heights (as shown on the section drawings DA-66 to DA-69):

- Ground Floor retail uses (childcare centre, gym and pool) = 3.6m - **compliant**
- Corner shop and open space = 6m including a 3m mezzanine level – **compliant**
- Residential floors = at least 2.7m proposed – **compliant.**

West Rhodes DCP 2010 requires the parking to satisfy AS2890.1, where the height between the floor and the overhead obstruction should be a minimum of 2.2m (note that the AS/NZS 2890.6 requires a clearance of 2.3m for paths from or to the parking for people with disabilities).

- Car park levels = at least 2.4m proposed – **compliant.**

Flexibility

In general, the unit layouts seem to allow for future flexibility with 6 adaptable units. DA drawings do not show wall sections and materials, which could help to determine any further flexibility within the unit layouts. The Residential Flat Design Code suggests 3.3m height for ground level for residential developments in mixed-use areas to promote future flexibility of use, but this is not applicable to this scheme.

Ground Floor Apartments

- Most ground floor apartments are accessible from the street and have a private open space or terrace on the front garden. A number of pathways leading to ground floor apartments as is the case for Ground Floor units in building C are up to 20m away from the street. This is not a positive outcome.
- Ground floor apartments facing the internal communal open spaces are accessed from the corridor.

Internal circulation

- Units arranged off a double-loaded corridor should be limited to eight. The proposed layout includes up to 12 units off a single core for levels 1- 4 in Building C which results in long dark corridors.
- Building A has 8 units per floor for levels 1-25 as well as for Building C from levels 5 and above.
- There are up to 9 units per floor in building B for Levels 1- 4.
- The capping or weather enclosures for the fire stairs running from the parking levels to the ground floor are not shown on Level 1 Plan or the Landscape Plan. They are also not included in any of the elevation drawings.

Mixed Use

The proposal is located within a residential zone as per Sydney Regional Environmental Plan No 29. It is advisable; however, to allow some flexibility to introduce some active uses to improve casual surveillance to the main public open space. A shop is proposed on the corner of Building A facing the public open space directly accessible from Walker Street in addition to a childcare centre facing Nina Grey Avenue.

Storage

Storage provision within units should be equivalent to 50% of the total storage requirement as follows:

Studio apartment and 1 bedroom apartment = 6m³
2 bedroom apartment = 8 m³;
3 bedroom apartment = 10m³.

GMU estimates that every unit is underprovided in terms of internal storage with some units showing no storage at all. This is a poor outcome and should be revised.

Acoustic Privacy

Bedrooms next to the car park entry in Building B – Unit G12, 114 and Building C – Unit G39, 143, can be affected by noise generated from the adjacent car park entry. It is recommendable to move any habitable rooms away from lifts, stairways and car park entries. Non-habitable rooms should be placed in these locations to increase the acoustic privacy of affected units.

Daylight access

As per the Residential Flat Design Code a minimum of 3 hours of daylight access for at least 70% of units between 9am and 3pm is required. 2hrs of daylight to 70% of the units is only acceptable for developments in dense urban areas such as the CBD.

- The proposed development is located on the West Rhodes Peninsula, which is not considered a dense urban area, therefore the proposed 2hours daylight access is not an acceptable outcome for this development. The proposed urban form of the peninsula illustrated in Rhodes West Masterplan 2009 is medium rise residential and mixed use with towers of up to 25 storeys scattered with big separation distances to ensure sufficient solar access.
- Two hours of daylight access for 70.3% of the units and 3 hours for only 42.9% of units are not acceptable outcomes for a development of this scale and location.
- A number of units on the lower levels of Building C facing the internal communal open space may receive no direct solar access at any point of the day this is an unacceptable outcome.
- Less than 10% of the apartments are south facing, but most units are single aspect.
- The corridors also have limited access to daylight: Elevator lobbies for Buildings A and C have access to a common balcony on each floor, but there is no indication of the wall/door material between lobby and the balcony, therefore, it is not sure if there is any daylight access to the towers' corridors on Levels 2-23.

Natural Ventilation

- Cross ventilation for single aspect units on Building B is dependent on small windows to a common shaft off the elevator lobby. The efficiency of this system is questionable and should be further tested.
- Cross ventilation for single aspect units in the towers seems deficient.
- Cross ventilation for end units on Building C's levels 5 and above and Building A's Level 17 and above seems to go thru the internal partitions. This is not an accurate representation of air flows.

Awnings and Signage

Not enough information regarding signage is provided.

Facades

- Materials proposed are gold laminate and grey tint glass, but drawings do not specify where each color will be used. Please specify.
- The majority of the finishes are specified to be a palette of different colours: Dulox P15148, P15C3, PG1A1, P15A7, P35H9, P07F8, and PG2C9 which indicates that façade expression is mainly dependent on painted render to create visual interest.
- No information is provided about the interior finishes for lobbies and internal corridors.

Based on the precedent established by other buildings done by the same developer in the area, we conclude that the materials proposed are not long life or low maintenance with little emphasis of masonry expression.

Roof design

- The height of the masonry feature above the plant for Building C is equivalent to about 5.4m which contributes to Building C's non-compliance in terms of height which contributes to the overshadowing impacts onto the public open space as shown on Shadow Diagrams in Appendix 27 of the Environmental Assessment Report (EAR).
- While Building C presents a similar condition, it is not as critical due to the location of the tower with respect to the public open space.

Waste Management

- As per West Rhodes Draft DCP 2010 - chapter 4.3.25 – C9 – garbage chutes are required for 'all buildings more than 3 storeys in height'.
- Garbage chutes are not shown on any of the DA plans although the Waste Management Plan - Appendix 8 of the Environmental Assessment Report talks about garbage chute usage and management. Please modify the plans.

In summary, the proposal generally complies with the objectives of the Rhodes West Master Plan 2009 and the vision for the precinct as set out in the various planning instruments applicable to the site. This proposal should be therefore considered for its overall merits pending the resolution of the various issues discussed in this report.