MERITON
SUPERIOR QUALITY AND VALUE
SINCE 1963

Meriton Tower
L11, 528 Kent St
Sydney NSW 2000
Tel: (02) 9287 2888
Fax: (02) 9287 2777
meriton.com.au

25 October 2013

Ms Heather Warton
Director – Metropolitan and Regional Projects, South
NSW Department of Planning and Infrastructure
23-33 Bridge Street
SYDNEY NSW 2000

Dear Ms Warton

78-90 OLD CANTERNBURY ROAD, LEWISHAM
SECTION 75W – AMENDMENT TO CONDITION B3 (MP08-0195)

In accordance with Section 75W of the Environmental Planning and Assessment Act 1979 (as amended from time to time), a modification is sought to amend Condition B3 of Concept Approval MP08_0195. The proposed amendment seeks to reduce the requirement for 50% of the central open space to receive a minimum of 2hrs of direct sunlight during midwinter to 30% as outlined in this submission.

An independent solar access consultant has reviewed the documentation that formed part of the compliance requirements for Condition B3. The resulting loss of floor space resulting from the provision of 2 hours of sunlight in midwinter to the park is significant and has a serious effect on the commercial viability of the project. The solar access report is attached to ***Annexure 1*** of this submission. The available floor space has dropped from 38,986sqm that was available in the approved Concept Plan (subject to conditions) to 27,876sqm. This is outlined in the table below:

	GFA	GFA Reduction	% of Max. GFA	% Solar Access in midwinter*
Maximum Permitted GFA	39,896m^2	0m^2	100%	N/A
Maximum Achievable GFA – of Condition B3	27,876m^2	12,020m^2	69.87%	50-59%

*the percentages demonstrate the best % of solar access on 21 June 2013.Refer to Annexure 1 for further explanation

Whilst we recognise that Condition A6 of the Concept Plan states the maximum Gross Floor Area may not be achievable, the significant reduction in GFA from 39,896m2 to 27,876m2 (30.1%) is unlikely to have been in the range of expectations by the PAC. Consequently, we would assume the same with regard to the significant reduction in units from 430 to 327 (24%).

The PAC however did recognise on page 2 of the Assessment Report that the building separation is "*likely to reduce the residential floor area by about 12% (53 units) with a corresponding reduction of FSR from 3.04:1 to about 2.67:1 and the total dwellings from 430 to 377*". However, the floor space ratio has fallen to 2.13:1, yielding only 327 units when also taking into account the solar access requirement for the central open space.

We therefore seek that Condition B3 of the Concept Approval be amended to permit a minimum 30% of the park having 2 hours sunlight for the additional reasons outlined below that was not originally presented to the PAC.

The 30% figure of sunlight for 2 hours in midwinter is not arbitrary. The figure of 30% has been calculated by SLR Consulting to be the area of central open space that receives 2 hours of sunlight in midwinter of the approved Concept Plan. 30% is justifiable based on the central open space being predominately used as a thoroughfare and for other reasons set out below. It is also not inconsistent with the views of the Department of Planning and Infrastructures views as outlined on pages 35-37 of their Assessment Report which states "*significant reductions in building height in accordance with the Masterplan would be required to achieve adequate solar access to 50% of the open space area in mid-winter. The department does not consider that such reductions are justified, given the ability of the site to accommodate a high density transit oriented development.*" (refer to ***Annexure 2***).

Statement Environmental Planning Policy No. (SEPP 65)

SEPP 65 and the associated Residential Flat Design Code (RFDC) are the guiding controls for the proposed development, which should therefore apply to the central open space as there are no other SEPPs that govern sunlight to open space areas.

Solar access provisions for "communal open space" (which also may be public) under the (RFDC) are performance based rather than prescriptive and seek to maximise solar access rather than provide a prescriptive standard. In fact the "primary function" and objectives for open space under Part 2 of the RFDC do not actually identify solar access to the communal open space as a key element and there is no respective "rule of thumb". Achieving solar access is considered as "Better Design Practice" and we believe this has been achieved in the Concept Plan where building separation along the northern edge of the central open space comprises distinctive stepping of approved Building C. Council's McGill Precinct Masterplan, actually provides a solid building for the entire northern edge of the central open space.

Figure 1 – Comparison of approved Concept Plan and Council's Masterplan

Based on SEPP 65 alone, there is no reasonable justification or 50% of sunlight to the central open space. We seek to provide solar access to the central open space that is available from the approved Concept envelopes.

Open Space Function

The function and primary use of the central open space has been governed by Council's DCP for pedestrian connection to the Lewisham Light Railway station that is to commence operation in February 2014. Accordingly, the central open space only has a limited function for use by residents for visual relief and minimal passive interaction.

Notwithstanding the limited opportunities of the central open space for community use, a playground is being provided and is located to maximise midwinter solar access. In this regard, it is also important to note that more than likely the playground will be permanently covered to protect children for the summer sun, so the effectiveness of 2 hours of sunlight in midwinter is somewhat pointless.

Given the limits of the central open space we consider the reduction in floor space to be unreasonable for an open space area that will be used predominately for the existing community to access the light railway station.

A more reasonable approach would be to provide 30% of sunlight to the park in midwinter for 2 hours. This can be achieved with the current Concept Approval envelopes.

McGill Street Precinct

The McGill Street Precinct of the Marrickville Development Control Plan 2011 (DCP) recognises throughout the document that the central open space has a primary function of providing physical and visual connections between the northern and southern portions of the precinct to the light railway station. Importantly, the DCP does not provide any solar access requirements for the central open space and a comparative shadow analysis with the McGill Street Precinct Masterplan in the Director Generals Report to the PAC concludes that the shadow impacts are acceptable and that "*the proposed public open space will receive good solar access during most of the year (other than midwinter)*".

The ultimate design for the proposed central open space will be designed in accordance with the DCP as shown in the diagram above. Importantly the central open space will also include:

- Bike racks, public art etc. to create a functional space for the local community.
- Providing an adjoining café and retail uses to support and activate the central open space.
- Providing a dedicated link on the northern and southern edge of the central open space to facilitate access to the light railway station.
- Committing to the upgrade and costs of additional existing pedestrian links to Lewisham Station and surrounding area.
- Upgrading, widening and increasing on-street parking for Hudson Street including the provision of new footpaths to facilitate access for existing residents to the adjoining future light railway station.
- Grassed area for local markets.

Accordingly, the central open space satisfies the requirements and underlying intent of the DCP and will enhance the public infrastructure offering to existing residents in the local neighbourhood, future residents of the development in the southern portion of the McGill Street Precinct and future residents of the subject site.

Proposed Modification to Condition B3:

For the reasons outlined above, we propose Condition B3 be modified as follows:

"Central Open Space"

B3 The "central open space" must have a total area not less than 3000m2 and the area north of Hudson Road must have a minimum width of 20m (excluding on-street parking and adjacent footpath). At least ~~50%~~ **30%** of the "central open space" must receive a minimum of 2 hours solar access in midwinter.

Conclusion

For all intent and purposes, the central open space area is not large enough to be a full multi-purpose facility. Were the central open space more of the size of regional open space with at least 1ha, then it could be justified to provide a minimum of 50% for 2 hours in midwinter. The primary purpose of the central open space is to provide a thoroughfare predominately for existing residents/workers and future residents of the development.

The central open space that is available is small and is maximised for its future potential use and the amount of solar access in midwinter provided at 30% for 2 hours is well balanced from an economic and environmental perspective.

Yours faithfully
MERITON GROUP

Walter Gordon
Director of Planning and Development

ANNEXURE 1

25 October 2013

610.11592 L05 20131025

Meriton Apartments Pty Ltd
Level 11, Meriton Tower
528 Kent Street
SYDNEY NSW 2000

Attention: Mr Mathew Lennartz

Dear Matthew

Old Canterbury Road, Lewisham
Solar Access to Central Open Space

1 Introduction

SLR Consulting Pty Ltd (SLR) has been commissioned by Meriton Apartments Pty Ltd (Meriton) to assess the environmental impact of the approved concept plan of the proposed development at Old Canterbury Road, Lewisham with respect to solar access to the Central Open Space (COS) to the south.

1.1 Site Description

The development site is bounded to the north by Longport Street, to the west by Old Canterbury Road and to the south by Hudson Street. There is also a rail line along the western boundary. Low-rise residential premises are located to the east of the site and there are some commercial buildings to the south.

Figure 1 shows the aerial view of the development site location.

Figure 1 Site location

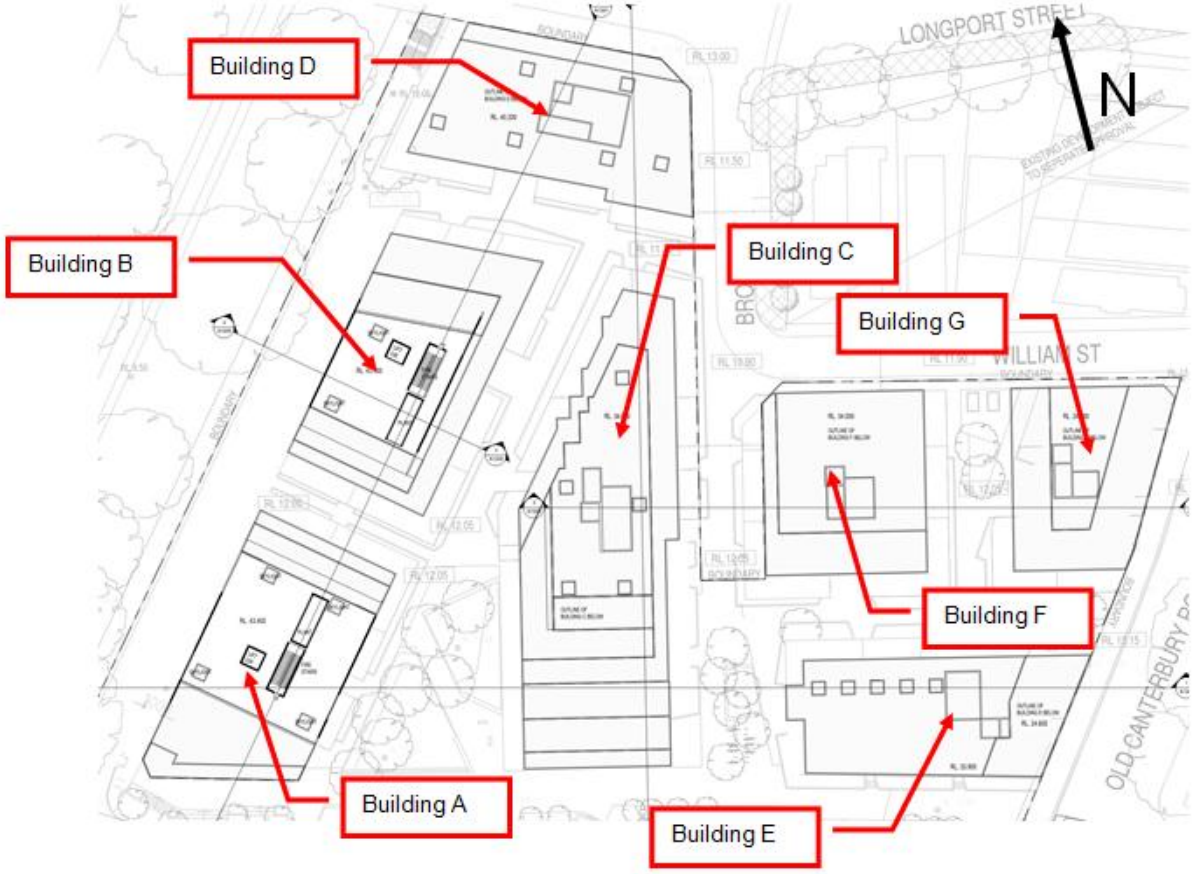
Image: Google

SLR Consulting Australia Pty Ltd 2 Lincoln Street Lane Cove NSW 2066 Australia
(PO Box 176 Lane Cove NSW 1595 Australia)
T: 61 2 9428 8100 F: 61 2 9427 8200 E: sydney@slrconsulting.com www.slrconsulting.com
ABN 29 001 584 612

1.2 Development Description

The proposed development consists of 7 residential blocks, labelled as Building A to G. with some commercial tenancies in buildings A and C

Figure 2 Development Site Layout



1.3 Solar Access Results and Analysis

Using the approved concept floor plans MP08_0195, elevations (DWG files) and a 3D DWG model provided by Tony Owen Partners, a solar access model was developed for the COS.

The total area for the COS highlighted in green in **Figure 3 to Figure 5** is approximately 3000 m^2.

SLR has assessed a number of scenarios to comply with the solar access requirements under the Condition B1. The following modifications to the approved concept floor plans MP08_0195 are required to achieve 2 hours solar access for 50% of open space on June 21st.

- Following changes to Building C
  - Cut 3 m from LG
  - Cut 5.2 m from G and L1
  - Cut 5.0 m from L2
  - Cut 6.5 m from L3
  - Cut 8 m from L4

    - Cut 8.5 m from L5
- The stairwell was removed from building E
- Move west façade of Building E by 16 m to the east
- Cut back south façade of top floor (L5) of Building F by 4m

Shadow from the proposed developed were calculated at the best 2 hours of solar access on the 21st of June.

Shadow diagrams were shown in **Figure 6** to **Figure 8.**

Figure 3 Shadow Diagram at 09:45 pm - Plan View

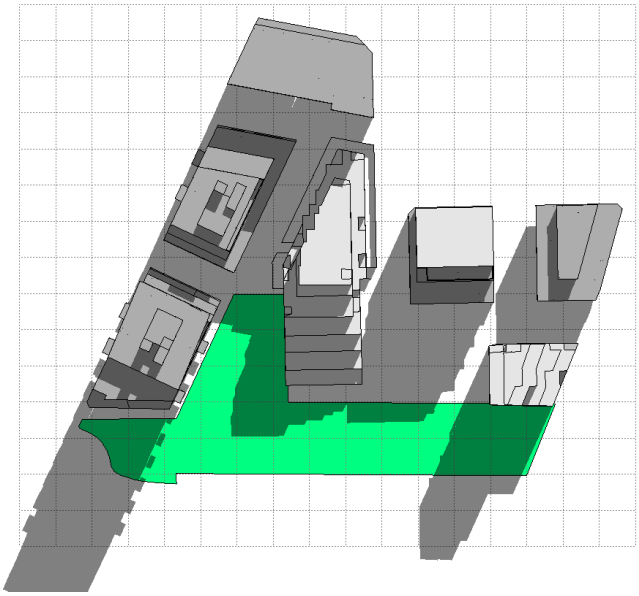


Figure 4 Shadow Diagram at 10:45pm - Plan View

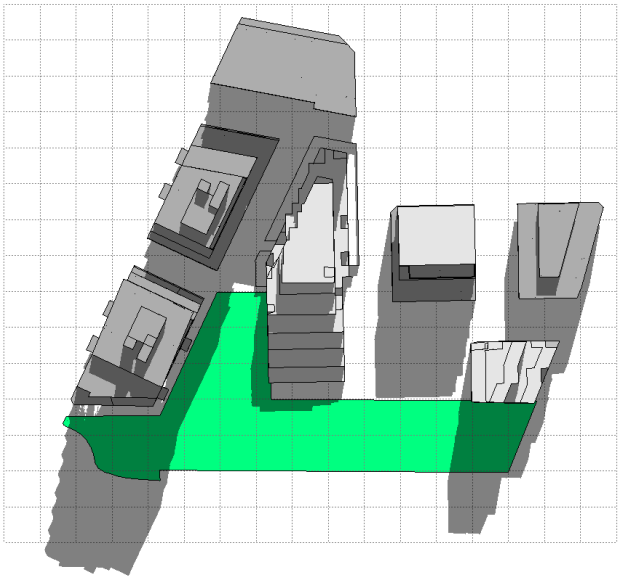


Figure 5 Shadow Diagram at 11:45pm - Plan View

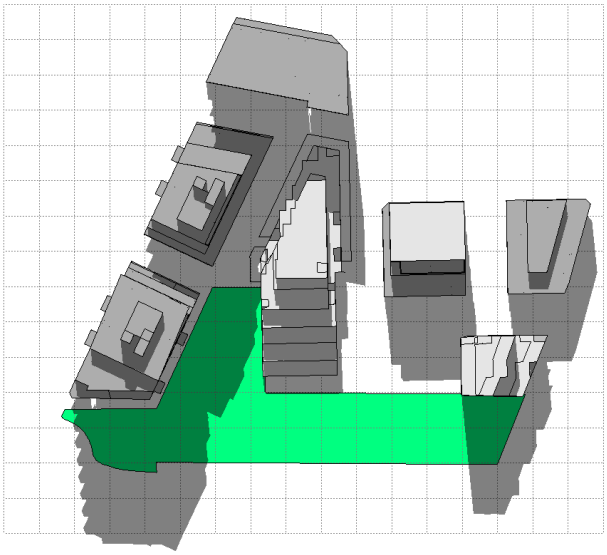


Table 1 below shows the areas of the COS with direct sunlight on June 21 from 10.00am to 12.00pm and their percentage area of the communal open spaces

Table 1 Area of COS with Direct Sunlight on June 21

Concept Approval which Complies with 50% Solar Access to Open Space		
Time	**un-shaded area (m²)**	**%**
9:45 am	1491	~50%
10:45 am	1773.3	~59%
11:45 am	1498.3	~50%

Note 1: The total area of the Central Open Space (COS) is 3000 m²

2 Conclusions

The following modifications to the approved concept floor plans MP08_0195 are required to achieve 2 hours solar access for 50% of open space on June 21st.

- Following changes to Building C
  - Cut 3 m from LG
  - Cut 5.2 m from G and L1
  - Cut 5.0 m from L2
  - Cut 6.5 m from L3
  - Cut 8 m from L4
  - Cut 8.5 m from L5
- The stairwell was removed from building E
- Move west façade of Building E by 16 m to the east
- Cut back south façade of top floor (L5) of Building F by 4m

The Central Open Space (CoS) with a total area of 3000m^2 receives 2 contiguous hours solar access in mid-winter (June 21st), as follows:

- 9.45am (~50% solar access over the surface of the park);
- 10.45am (~59 % solar access over the surface of the park); and
- 11.45pm (~50% solar access over the surface of the park).

Please do not hesitate to call if require any further information.

Yours sincerely

Neihad Al-Khalidy
Technical Director
Contact: 0401 416 274

ANNEXURE 2

Building E is 6 storeys in height and is generally consistent with the Masterplan which shows a 6 storey envelope in this location. However, the southern portion of Buildings A and C are 7 and 5 storeys in height respectively, where as the Masterplan nominates heights of 3 to 4 storeys for this location (Refer to **Figure 13**).

The department considers that the 5 storey height of Building C is appropriate as the 7 storey components of the building are setback 13 metres from the levels below. The department also supports a higher building height adjacent to the light rail stop and considers that Building A provides an appropriate height of 7 storeys in this location with the upper 3 levels setback between 7.5 metres and 16 metres from the levels below. Further, given the raised plaza provided adjacent to this building the building will read as 6 storeys from the main area of open space. Refer to **Figure 16.**

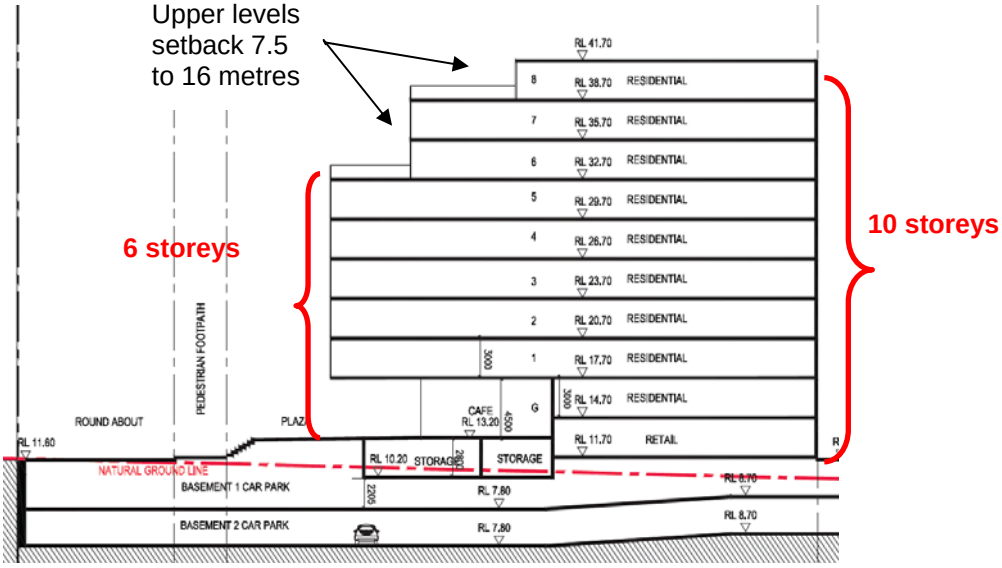


Figure 16: The height relationship of Building A with proposed plaza and with open space (Base image source: Proponent's PPR)

The department considers that heights of 5 and 6 storeys provide an appropriate scale and defined edge to the open space. Overshadowing impacts of the additional height are discussed in the following section.

Central locations of the site

The proposed building heights within the central parts of the site are generally 7 storeys in height. The Masterplan proposes heights of 4 to 6 storeys in this location.

The department considers that increased heights can be accommodated in the central parts of the site without any adverse visual impacts on the surrounding area. The increase in height in the centre of the site is also consistent with the principle of stepping up of building heights from the Old Canterbury Road frontage up to the light rail corridor. This transition is shown in the East-West Section in **Figure 6**.

Overshadowing

Council is concerned that the increased building heights to the north of the proposed open space will result in significant shadowing of this space, thereby reducing the amenity and usability of this area compared to the Masterplan which proposes 3 and 6 storey elements in this location.

The proponent submitted a shadow analysis which demonstrated that the 30 metre separation between Buildings A and C will allow sunlight to reach the open space to the

south (refer to **Figure 17**). The proponent considers that this is superior to the Masterplan which provides for a solid building envelope with no gaps along the northern boundary of the open space.

The department has reviewed the proponent's shadow analysis compared to the shadow analysis prepared by Hassell for the McGill Street Masterplan (refer to **Figure 18**).

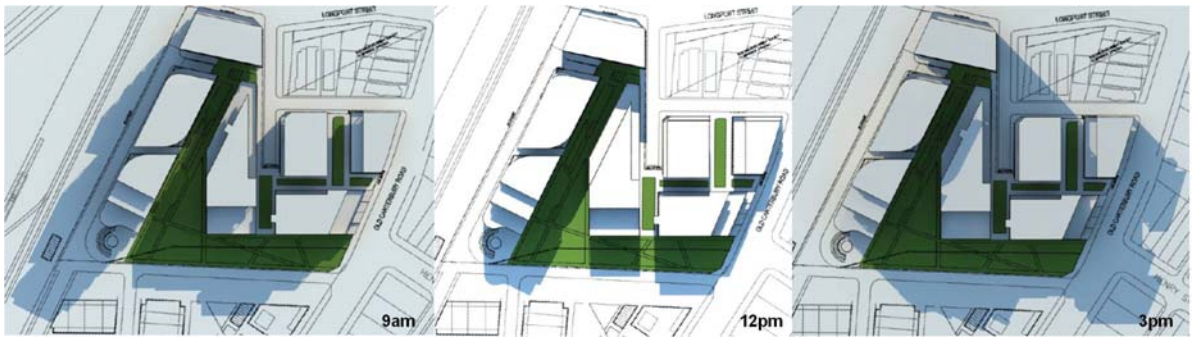


Figure 17: Overshadowing caused by the proposed building envelopes in the Concept Plan (Source: Proponent's PPR)

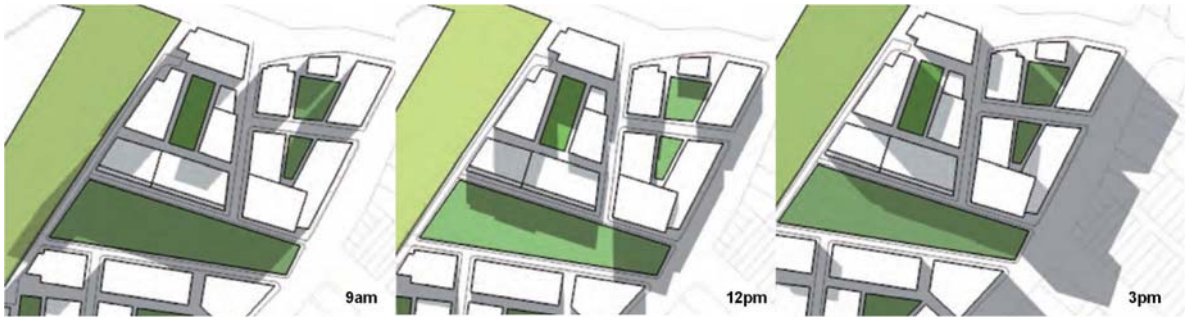


Figure 18: Overshadowing caused by the indicative building envelopes within the Masterplan (Source: Hassell, 2009)

As demonstrated in **Figure 17** and **18**, above, the extent of shadow created by the proposed building envelopes, although greater than the shadows caused by the Masterplan envelopes, will have minimal adverse impacts on surrounding properties to the south of the proposed open space or to the east of Old Canterbury Road. Shadows will be increased to the light rail corridor in the morning, but this area will not be shadowed by the proposal from about 10am onwards.

The main area of increased impact is on the proposed public open space area, which will be significantly overshadowed between 9am and 3pm, midwinter. While the separation between buildings A, C and E allows some sunlight to reach the open space in the middle of the day (primarily between 10am and 1pm), the open space area will be largely overshadowed during the morning and afternoon in mid winter. The shadow diagrams prepared by Hassell (**Figure 18**), however demonstrate that the Masterplan building envelopes will afford increased solar access to the open space.

While it is desirable to maximise solar access in mid winter, the department notes that this is the worst case scenario, and at all other times of the year the proposed public open space will receive greater solar access. The area will receive full solar access in summer, and more than 50% of the open space area will receive solar access at all times between 9am and 3pm at the autumn and spring equinox.

The department has recommended that increased building separation (from 9.5 metres to 12-18 metres) be provided between Buildings C and E directly to the north of the public open space (refer to **Section 5.5.1**). Increased separation in this location would provide improved solar access to the public open space.

The department also notes that increased setbacks to the upper levels of Buildings A, C and E would afford minor improvements to solar access. However, significant reductions in building height in accordance with the Masterplan would be required to achieve adequate solar access to 50% of the open space area in mid winter. The department does not consider that such reductions are justified, given the ability of the site to accommodate a high density transit oriented development.

Conclusion
The department notes that the site has been identified by Council as a key urban renewal area for high density residential development and that any increase in building height on this site will alter the character of the area. However, the site is considered appropriate for increased heights given its physical separation from surrounding low scale residential properties by Old Canterbury Road and two rail corridors. The increased heights also capitalise on the opportunity for transit oriented development given the sites location immediately adjacent to public transport.

The department is satisfied that the proposed building heights are acceptable given that:
- the proposal generally complies with the Masterplan in terms of the transition in heights from Old Canterbury Road up to the light rail corridor;
- proposed building heights of 4 to 5 storeys at Old Canterbury Road and 6 to 8 storeys at Longport Street adopt an appropriate scale at the edges of the site;
- areas of increased height (above the Masterplan) are limited to central locations on the site and adjacent to the light rail corridor;
- the proposed public open space will receive good solar access during most of the year (other than mid winter);
- future development applications will be required to demonstrate articulation and quality materials and finishes to provide attractive streetscapes.

5.4. Public Benefits

5.4.1 Public open space and through site links

The Masterplan provides for a central area of public open space on the site with a total area of approximately 3,140m^2. In addition, indicative building envelopes and private open space areas are provided with a total of 1,400m^2. A total open space of 4,540m^2 is provided under the Masterplan (approximately 34% of the total site area).

The PPR proposes approximately 4,397m^2 of open space across the site which represents 33% of the total site area. This includes 3,097m^2 of publicly accessible open space and through site links and 1,300m^2 of private open space. The main area of open space to the north of Hudson Street is proposed to be dedicated to Council as public open space. The proponent has advised that this area is 2,748m^2 in area, however as this includes the paved plaza, some of which is located within the footprint of Building A, the final area of this open space is to be negotiated with Council through a Voluntary Planning Agreement (as discussed in **Section 5.4.2**).

A comparison between the distribution of open space and through site links between the proposal and the Masterplan is demonstrated in **Figure 19**.

The key differences between the proposal and the Masterplan are:
- the proposal does not provide for the extension of Brown Street or a new east-west road to the north of the main area of open space;
- the proposed main area of open space is narrower, but opens up to a larger more functional space in the western portion of the site, including a large area between Buildings A and C and paved plaza (which is partially covered by the building above); and
- the proposal involves narrower areas of private open space in the same general location as the Masterplan.