Urban Design Review

Planning Proposal: 30-46 Auburn Road, Regents Park

Introduction

The Urban Design team has conducted a review of Planning Proposal 30-46 Auburn Road, Regents Park with the aim of addressing the questions listed below:

Scope of the review

	Issue
1	Is the site capable of accommodating a development with good amenity under the proposed heights and FSR (noting that the main amenity concerns at this time are solar access and ventilation)? (for example: fewer south facing dwellings, reorienting apartments)
2	Comments on best practice regarding accessing solar access under ADG, on a whole of site basis or building by building?
3	Advice on Council's proposed setbacks (to be included in the site specific DCP) and their likely impact on FSR.

Supporting documentation

Date	Document	Prepared by
15 September 2020	Expert Opinion: Solar Access	Walsh² Analysis
August 2020	Amended Architectural Plans	Studio MRA
15 June 2020	Council response to Gateway Review request	City of Canterbury-Bankstown

Review

Part IA – Solar access on the proposed scheme.

- The proposed development includes 6 towers accommodating a total 600 dwellings. As an initial task the Urban Design Branch identified those apartments which, due to their southern orientation, would not be able to receive direct sunlight throughout the day and therefore would not have an opportunity to meet the ADG requirements outlined in Section 4A of the ADG.
- The Urban Design Branch reviewed solar access compliance on a building-by-building approach. In this test, buildings **A-B**, **C-D** and **E-F** fail to comply individually with the maximum 15% requirement of Objective 4A-1.3 of the Apartment Design Guide.
- Across the entire development the review identified that 130 dwellings are currently oriented to the south, representing 22% of the overall yield of the development. On a precinct approach, a 22 per cent of the yield would fail to meet **Objective 4A-1.3:** *A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.*

- We have identified that south-oriented units are located across buildings **A-B**, **C-D** and **E-F**. this is described in **Table** 1.

Table 1 Breakdown of solar compliance per building

No.	Building	Total No. Units	No. of south-facing units	Remaining percentage of units
1	A-B	189	54	71 %
2	C-D	101	32	68 %
3	E-F	126	44	65 %
4	G	60	0	100 %
5	H	45	0	100 %
6	I	79	0	100 %

- Solar access on buildings **C-D** and **E-F** was also identified to perform below a 70% threshold as per **Objective 4A-1.1:** *Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter.*
- The two approaches of analysis conclude that the proposed scheme fails to comply with the Solar and Daylight access requirements of the ADG, in both the precinct scale and the building-by-building scenario.
- We note this outcome results from the current spatial arrangement and overall yield of development on the subject site.

Part IB – A review of an Expert Opinion on Solar Access.

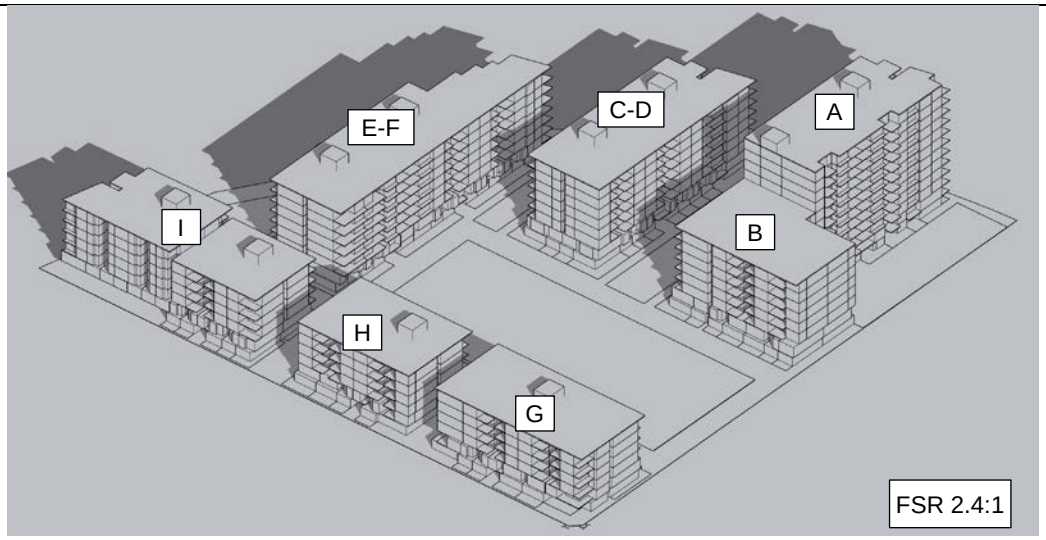
- In addition to the tests outlined in **Part I,** the Urban Design Branch has reviewed and considered the external information provided by **Walsh² Analysis,** namely **Expert Opinion: Solar Access.**
- The Walsh report claim that 444 dwellings or 74% of the total development yield, complies with minimum solar access requirement described in the ADG.
- The Urban Design Branch notes these figures are based on the overall development yield and not on the performance of individual buildings. A building-by-building estimation of solar access would confirm that towers **C-D** (53% compliance) and **E-F** (61% compliance) perform well below the 70% threshold of solar access prescribed in the ADG.
- The Walsh report indicates a 'Minor departure from full compliance with **Objective 4A-1.3:** *A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.*
- We note the report claims a 16% compliance under the above criteria. However, our analysis on an individual building basis shows that Towers **A-B (19%), C-D (27%)** and **E-F (27%)** exceed the maximum allowable threshold for - **no sun category**– and therefore fail to comply with the ADG criteria.

Part IC – Internal test of an alternative orientation of buildings.

- The Urban Design Branch conducted a massing test to synthesis some of the outcomes from the reviews described in Parts IA and IB of this document. A test was conducted using the Amended Architectural Plans submitted to the Department prepared by Studio MRA.
- The massing test (see **Figure 1**) further confirmed that towers **A-B**, **C-D** and **E-F** fail to comply with adequate solar access requirements. This is limited due to cumulative impacts of:

    a) a great portion of south-facing units not receiving direct sunlight;
    b) the proposed layout of buildings which results in internal overshadowing of units, and
    c) the bulk and height of buildings resulting from the target FSR of 2.4:1

Figure 1 - Massing of proponent's scheme

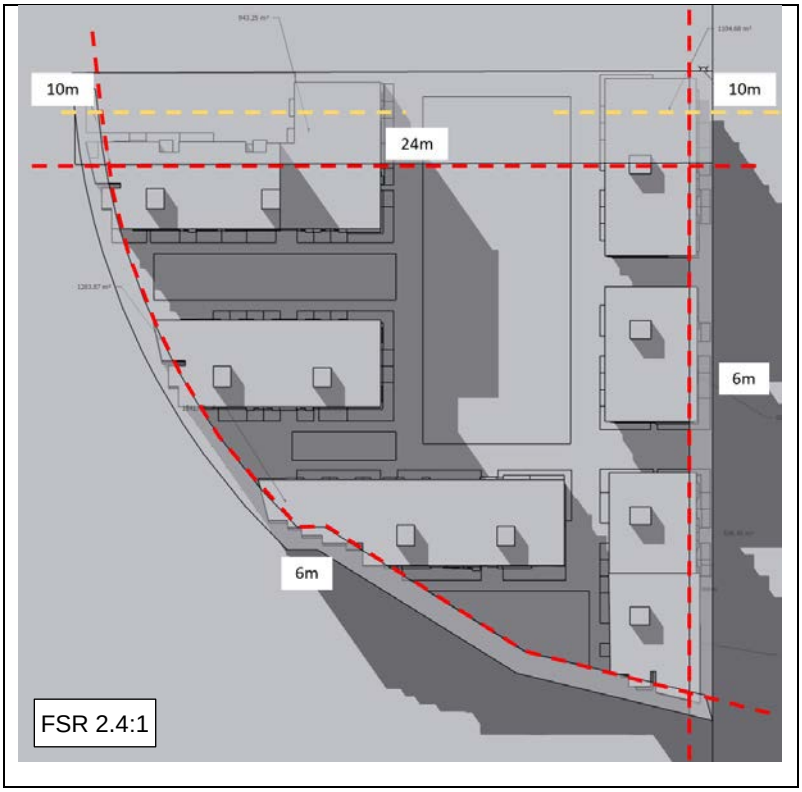


- This exercise was followed by the test of an alternative design scheme by the Urban Design Branch which explored the opportunity to deliver improved solar access while retaining an FSR of 2.4:1
- The alternative scheme (**Alternative Design 1**) was developed by relocating and reorienting the proposed built form on the subject site.
- Alternative design 1 showed that while an east-west orientation of the apartments would significantly improve solar access, the change in footprints with the sought FSR of 2.4:1 would prevent compliance with building separation requirements from the ADG and the delivery of a single consolidated Green space. This outcome would therefore present a significant reduction of amenity on the subject site.
- The Urban Design Branch conducted one additional massing test described as **Alternative Design 2,** which explored minor variations to building footprints, mirrored floor plates and a re-distribution of towers and height.
- The purpose of this test was to investigate a likely FSR which could retain both adequate solar access to the residential units and the proposed central green space.
- The outcome of this test delivered an FSR of 2.1:1

Part III – A test of Council's proposed setback controls.

- The final line of investigation conducted by the Urban Design Branch, responded to Canterbury-Bankstown Council response to Gateway Review request: "*the setbacks demonstrated in the latest proponent design are inconsistent with those proposed by Council and will likely create poor interfaces with Auburn Road, the railway corridor and neighbouring industrial land.*"
- The Urban Design Branch Integrated Council's proposed setbacks into the proponent's scheme to test the impacts upon the current layout.
- The exercise confirmed that the proponent's scheme is not compliant with none of Council's proposed setbacks and showed a significant portion of GFA is currently located outside these boundaries. (**refer to Figure 2**)

Figure 2 - Council's proposed setbacks on proponent's scheme



- The Urban Design Branch conducted an additional opinion being **Alternative Design 3** which:
  a) Assessed council's proposed setbacks and contained the built form within these boundaries,
  b) built upon Alternative Design 2 for improved solar access,
  c) allowed tower separation of 18m to respond to ADG requirements for buildings up to 8 storeys,
  d) retained the proposed central green open space and its perimeter road.

- The purpose of this test was to explore a likely FSR of a development scheme which: retains adequate solar access, retains amenity provisions such as and central green open space; and enables the setback controls proposed by Canterbury-Bankstown Council and utilises the proponents building typologies.
- The outcome of Alternative Design 3 delivered an FSR of 1.9:1

Outcomes of the Urban Design Review.

In response to issue 1: *Is the site capable of accommodating a development with good amenity under the proposed heights and FSR (noting that the main amenity concerns at this time are solar access and ventilation)? (for example: fewer south facing dwellings, reorienting apartments)*

- In its current form, the proposed scheme fails to comply with Section 4A of the ADG relating to solar and daylight access, both at a precinct and at a building scale.
- While solar access may be improved through fewer south facing dwellings the reorientation of towers; such variations under an FSR of 2.4:1 would trigger additional issues compromising the delivery of the proposed central green open space and the minimum tower separation requirements prescribed in the ADG.
- It is considered that under the current heights and FSR, the site is unlikely to accommodate both development and good amenity, and a reduction of bulk and scale is recommended.
- Our tested variations to the proposed scheme have shown that a reduced FSR of 2.1:1 may improve the amenity concerns of the site regarding complying solar access ADG and the retention of consolidated green open space proposed in the original scheme but does not respect the Councils setback controls.

In response to issue 2*: Comments on best practice regarding accessing solar access under ADG, on a whole of site basis or building by building?*

It is clear within the ADG that solar access is to be measured on a building to building level, rather than on an aggregated site analysis:

- *Large sites or Precinct ADG considerations*
    - *Some design criteria may be best applied to the entire precinct area or to stages within the site, for example deep soil and communal open space may be consolidated and accessed by a number of buildings.*
    - *Other* ***design criteria associated with the amenity of individual apartments, such as visual privacy, sunlight access and ventilation, are typically applied to each building within the precinct plan.***

(Apartment Design Guide Part 1C p 25)

- Section 4 of the ADG defines Solar access as:
    - *the ability of a building to receive direct sunlight without the obstruction from other buildings or impediments, not including trees.*

- In addition, the design criteria from **Objective 4A-1** states:
    - *A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm*
    - *Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter.*

- We note that the team has tested the compliance of the proposed design with the ADG in an aggregated unit basis as well as in an individual building case. We have identified that both approaches fail to comply with ADG requirements.

In response to issue 3: *Advice on Council's proposed setbacks (to be included in the site specific DCP) and their likely impact on FSR.*

- The investigation described in Part III of this document shows that the proponent's scheme fails to comply with council's proposed setbacks and a significant portion of built area is located beyond the setback boundaries. This indicates that a reduction in FSR will be required to contain the built form within the building lines.

- The test of Alternative Design 3 has provided a reference scheme which provides opportunity for adequate solar access, adequate tower separations, retention of central green open space and perimeter road; within height limits, and council's proposed setbacks.

- The test has identified that a reduction of **FSR to 1.9:1** for the site may be required to address all the above requirements in a comprehensive approach.