



Memorandum

Company: Rigby Cooke Lawyers
Attention: Reto Hofmann **Email:** rhofmann@rigbycooke.com.au
From: Peter Clementson **Email:** pclementson@sk.com.au
Copy: Kel Twite **Email:** ktwite@sjbplanning.com.au
Project: 203-205 Normanby Road South Melbourne (Site 6) **Ref No:** 20604
Date: 12 November 2019 **Pages:** 3
Fishermans Bend Standing Advisory Committee
Subject: Amendment C163 – 203-205 Normanby Road, South Melbourne (Site 6)
Response to Amended Plans

Overview

Simpson Kotzman have reviewed the items within the Response to Amended Plans received 11/11/2019 from SJB Planning.

In response to Item 9, regarding the internal amenity of the southeast facing apartments, an additional daylight modelling assessment was undertaken. The southeast facing apartment at levels 18 and 21 was assessed for compliance against the BESS IEQ targets for daylight entry.

Assessment Targets

The BESS tool sets out the following performance standards for daylight within residential bedrooms and kitchen/living spaces:

- >0.5% daylight factor to at least 90% of the floor area within a minimum of 80% of bedrooms.
- >1.0% daylight factor to at least 90% of the floor area within a minimum of 80% of kitchen/living spaces.

Assessment

The southeast facing bedrooms at levels 18 and 21 were assessed in the BESS Daylight Analysis Report – Site 6 dated 13/08/2019.

Living areas were not previously assessed. In this assessment, living areas at both Levels 18 and 21 were modelled against the BESS targets listed above

The following daylight analysis has been performed using Autodesk Revit 2019 with Lighting Analysts Elumtools 2019.19.7.0.29 plugin.

Elumtools utilises the same daylight calculation engine as the standalone internationally recognised lighting calculation software AGi32 which has been validated against the CI-171:2006 “Test Cases to assess the Accuracy of Lighting Computer Programs” software benchmark.

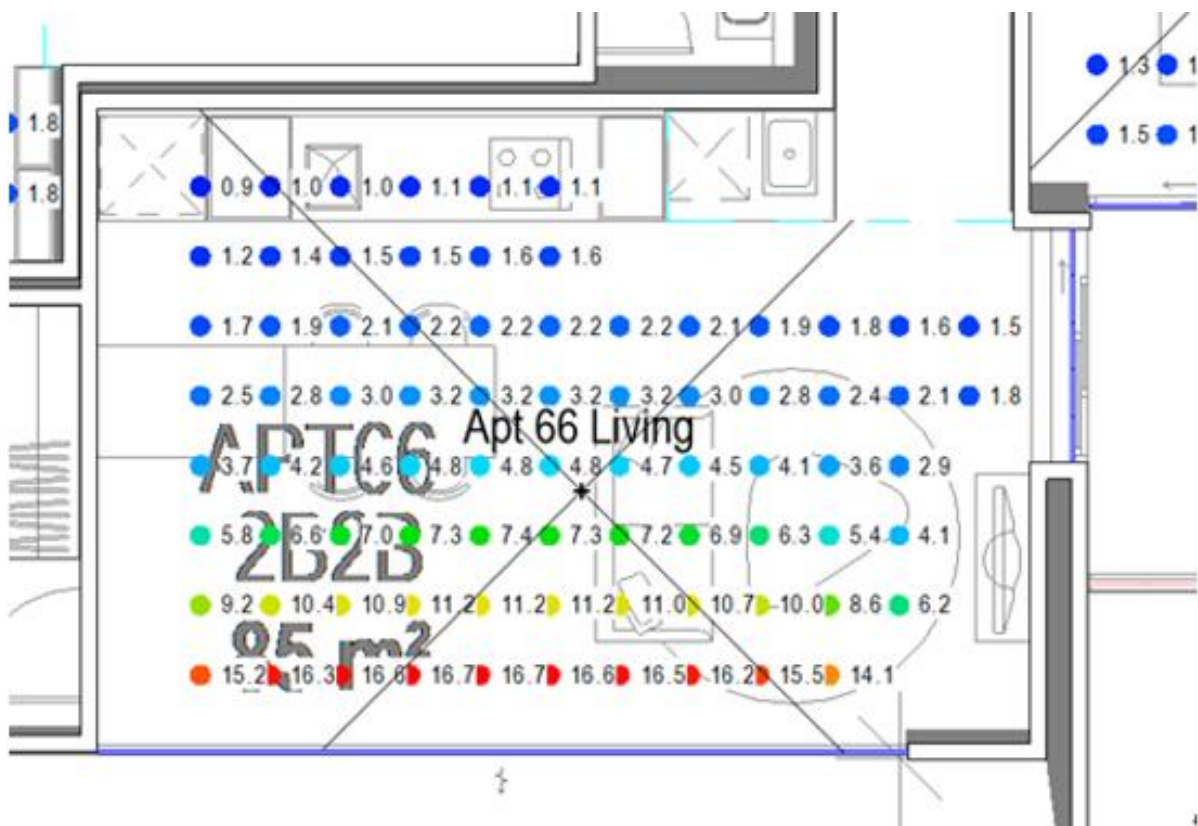
The following key parameters have been used in the calculation:

Daylight conditions	CIE Overcast Sky
Working plane height	700mm AFL
Glazing	45% VLT to louvre windows; 60% VLT to all other windows.
Glazing height	2800mm
Floor surface reflectance	20%
Wall surface reflectance	50%
Ceiling surface reflectance	80%
Ground plane reflectance	20%
Local building shading	Modelled based on Schedule 30 to Clause 43.02 (DDO30) within the Port Phillip Planning Scheme (refer Figure 4) for undeveloped sites (including sites currently at planning application without Council approval), and actual heights for approved buildings (refer Figure 3). As per DDO30, buildings (excluding those already approved) were modelled with 10m setbacks above the podium

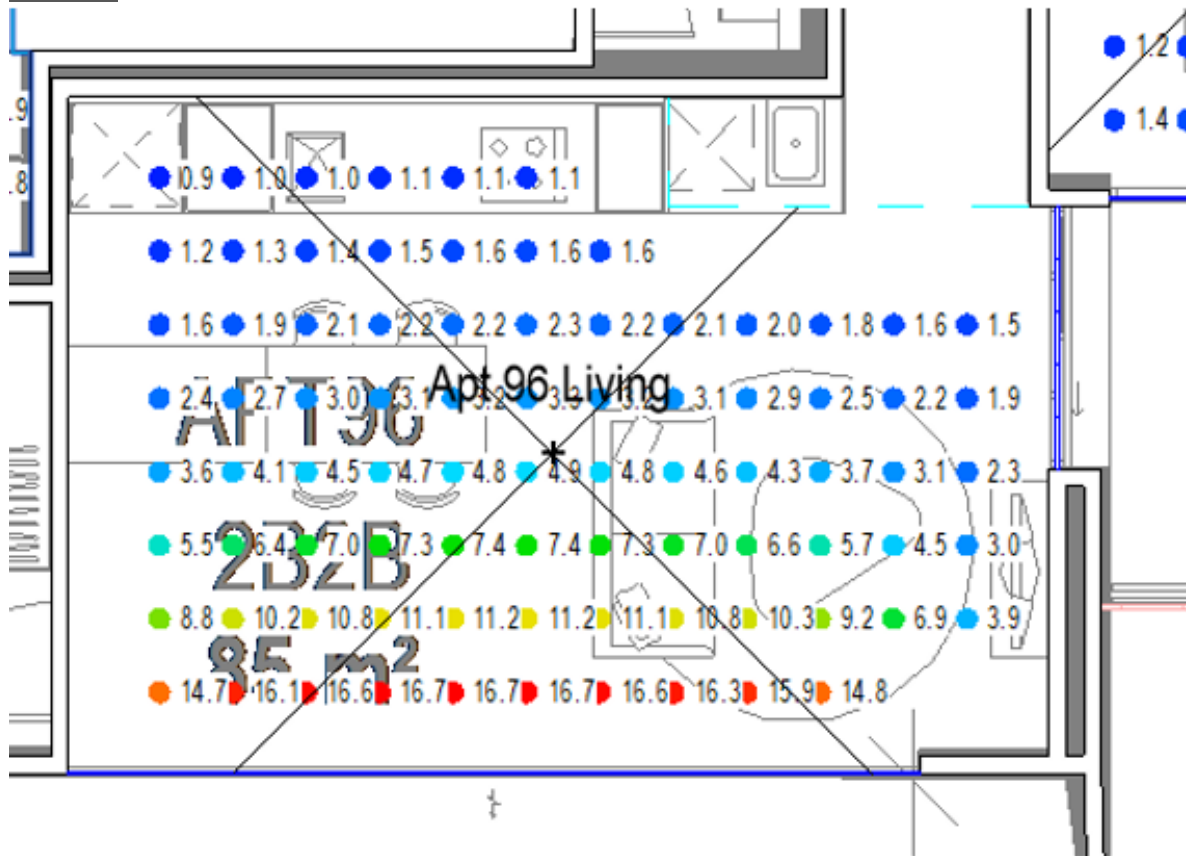
The use of an overcast sky provides a daylight access model independent of direct solar access and independent of the time of day or year. This approach is consistent with Green Building Council of Australia daylight modelling requirements.

Modelling snapshots showing the daylight factor measured at each point within the kitchen/living spaces modelled:

Level 18:



Level 21:



Results

Daylight

The southeast facing bedrooms at levels 18 and 21 as previously assessed were found to be compliant with >0.5% daylight factor to 100% of floor area. Design of these apartments has not changed since, and as such these results are still valid.

Living areas at both Levels 18 and 21 were modelled against the BESS targets. A minimum daylight factor of 1% was achieved to >98% of floor area in both of these living areas, taken to the back wall of the kitchen as per BESS modelling requirements. These living areas exceed the requirements for daylight entry.

NatHERS

NatHERS assessments have already been completed for a sample of these southeast facing apartments. Within Appendix B of the SMP (Revision H) dated 24/10/2019, the southeast facing apartment was modelled at levels 6, 7 and 17. Across these three sample apartments, star ratings of 7.2, 7.2 and 7.0, and cooling loads of 16.6, 16.9 and 18.0MJ/m² were achieved: all individually meeting compliance (and far from minimum compliance).

Conclusion

When considering daylight entry along with the NatHERS results for the southeast facing apartments, it is concluded that internal amenity is in line with the designated targets, without need for design changes.