



**TOWER 2, LEVEL 23
DARLING PARK, 201 SUSSEX ST
SYDNEY NSW 2000**

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18 October 2016

Ms Rebecka Groth
Senior Planner
Lane Cove Council
48 Longueville Road
Lane Cove NSW

Dear Rebecka,

DA 212/2015 - RESPONSE TO AMA SUBMISSION, SHADOW IMPACT AND BASEMENT DESIGN FOR WASTE COLLECTION

This letter has been prepared on behalf of New Hope VIMG, the applicant for DA 212/2015, in response to:

- the submission received from Atlas Urban on behalf of the owners of 69 Christie Street St Leonards dated 10 October 2016 (**Atlas Submission**);
- Council's concern regarding shadow impact onto adjoining residential apartments; and
- Council's concern regarding the basement design in respect to waste collection.

ATLAS URBAN SUBMISSION REGARDING BUILDING SEPARATION

The Atlas Submission raises concern with the application of the ADG objective 3F-1 in respect to building separation. This objective states that:

"Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy."

Relevantly, the ADG being the "Apartment Design Guide" is a tool that provides general guidance about how development proposals can achieve compliance with SEPP 65.

Critically, there are site specific DCP objectives in Part D, Commercial Development and Mixed Use Localities titled "Locality 5 472-504 Pacific Highway, St Leonards" (**DCP Site Specific Controls**) formulated by Council that apply to the subject development site, 500-550 Pacific Highway St Leonards (**the subject development**). The Atlas Submission fails to take the DCP Site Specific Controls into account.

The DCP Site Specific Controls were adopted post the introduction of SEPP 65 Residential Flat Design Code (RFDC) which included site setback and building separation controls for new residential apartments. These setback controls were numerical guidelines aimed to ensure privacy to residential dwellings. These building separation controls and objectives have since been transcribed into the more recent ADG. No material change to the objectives or numerical guideline was made under the ADG. The ADG does, however, clarify that the building separation guidelines apply to neighbouring

commercial buildings, where this was ambiguous under the RFDC. Notwithstanding this, both the RFDC and ADG are generic documents. The DCP's Site Specific Controls have been prepared specifically for the site and its particular context in light of the RFDC/ADG building separation guidelines. Accordingly, in our view, it is preferable that Council to apply the DCP Site Specific Controls to address any amenity concerns arising in respect of the subject development and in order to achieve those specific planning aims and objectives that the DCP controls were designed to accomplish.

Notwithstanding this, we address Atlas' concerns in respect of purported non-compliance with ADG and we also consider the DCP Site Specific Controls below.

1. The proposal achieves 'reasonable' levels of internal and external privacy from existing neighbouring buildings (which is the test for this objective) despite not achieving the numeric criteria building separation in objective ADG 3F-1

- The proposal achieves the 24m separation from the Mirvac residential development (under the ADG).
- 69 Christie Street (AMA building) is already setback 12m from the shared southern boundary.
- Due to the topographic level difference, the lowest residential level on the site (level 4) will provide sight lines over the top of the existing commercial building at 69 Christie Street. The separation distance achieved is 12.8m at this location, which is below the ADG guideline of 18m however the *objective to achieve visual privacy to the residential apartments is achieved*. The building relationship is shown on the attached diagram prepared by A+ Design Group. The window locations along the northern façade of 69 Christie Street will not result in overlooking up to the balconies of the lowest residential apartment levels, due to the solid balustrade design to the balconies.

As such, no overlooking will occur from the neighbouring commercial building into the proposed residential building and therefore the objective to ensure visual privacy to the proposed residential apartments is achieved.

- A distance of 13.5-13.7m is achieved from the existing commercial building and the commercial floors of the proposed tower, which is significant. It is noted that the DCP Site Specific Controls allows for a zero setback along this entire site boundary, and the Lane Cove DCP generic requirement for commercial building rear setbacks is 3m for 1-2 storeys and 6m for 3+ storeys, providing for a separation of 6m and 12m respectively. This separation is achieved in this instance.
- It is noted that the subject site is guided by the site specific development controls which have been formulated in respect to the site conditions and are more recent than the ADG which underpins SEPP 65. Accordingly, in our view, it is open to Council to apply the DCP Site Specific Controls to address any amenity concerns arising in respect of the subject development whilst still satisfying the overall objectives of SEPP 65 and notwithstanding any future redevelopment of 69 Christie Street.
- Council's specific controls for the subject site would have been carefully formulated, taking into account all relevant planning considerations, including the potential redevelopment of 69 Christie Street.

- In respect to the western boundary, the existing neighbouring building presents a blank side wall (a Telstra Telephone exchange) so the proposal will not result in a visual privacy issue.
- All residential levels are setback the required 7m from the western boundary, consistent with the site specific DCP requirement.
- The two commercial floors within the podium structure also comply with the site specific DCP requirement for 0m setback to all site boundaries. We further note that there is no building separation requirement in the site specific DCP for setbacks to commercial buildings.

2. The proposed design complies with the DCP Site Specific Controls setback provision

- The DCP Site Specific Controls specify a 0m setback at all levels from the rear lane. The proposal in fact provides a 1m-3m setback from the rear lane.
- The JRPP approved the setbacks for the neighbouring Mirvac project (472-496 Pacific Hwy) which were based on the tailored side setbacks from Council's DCP (being a zero-lot setback to the Friedlander Place boundary, which is less than ADG guidelines). The same tailored setback provisions have been complied with in the subject proposal as they apply to the site. As such, this consideration should therefore equally apply to the rear setback condition with 69 Christie Street.
- Further, the JRPP approved an internal building separation within the Mirvac site of 22m, consistent with the site specific DCP.

3. There is precedent in Consent authorities applying discretion to this new ADG provision

- Two recent projects in the City of Sydney have been approved despite components of their design not strictly meeting the numeric building separation controls. These approvals were for:
 - AMP Quay Quarter Project at Young and Loftus Streets – a building separation ranging from 6.2 – 12.3m between habitable rooms at the upper levels was approved; and
 - Dalian Wanda redevelopment at Circular Quay – a building separation of 3m for the lower levels and 10-19m for upper levels was approved.
- Components of each of these projects did not meet the ADG separation. The consent authority accepted the reduced separation between residential and commercial or hotel buildings on the grounds that:
 - It was not practical to achieve the recommended separation to its fullest extent;
 - The proposals were consistent with the Stage 1 Envelopes, which are akin to a site specific DCP that set the arrangement and setbacks of building forms.

4. The proposal achieves a high level of compliance for a complex infill site in a dense urban environment

- The proposal meets the LEP height and FSR controls;
- The proposal meets the tower building length provision;
- The proposal meets the DCP Site Specific Controls for building setback along its southern and western boundaries; and

- A high level of apartment amenity is provided across the scheme.

Summary

The above has demonstrated that the ADG Objective 3F-1 can be achieved for the subject development, through providing reasonable levels of visual privacy to the residential apartments on the subject site despite not meeting the numerical separation distances nominated.

In the present scenario, no visual overlooking will occur between 69 Christie Street and the proposed rear apartments on 500 Pacific Highway due to the topographic level change and relative height of the two uses. The residential apartments on Level 4 (the lowest residential level) will overlook the top of the existing building at 69 Christie Street. The solid balustrade to the lowest residential apartment balconies would negate any upwards overlooking from the windows on the northern façade of 69 Christie Street. As such it can be assessed that the proposal achieves the objective 3F-1 of the ADG, providing visual privacy to the dwellings despite not meeting the numerical setback guideline.

Development of the subject site is guided by the site specific development controls which have been formulated in respect to the site conditions. Council would have been cognisant of the RFDC separation guidelines when it developed the site specific controls, which have since been transcribed into the ADG. As the separation guidelines are consistent between the RFDC and ADG, and the DCP was adopted post RFDC, it is open to Council to apply the DCP Site Specific Controls to address any amenity concerns arising in respect of the subject development notwithstanding any future redevelopment of 69 Christie Street.

The proposal is consistent with the DCP Site Specific setback controls that apply along its southern and western boundaries, controls that have been tailored to the site conditions and adopted more recently than the building separation guidelines under the RFDC and transcribed into the ADG. It is therefore considered that the proposal appropriately responds to the DCP Site Specific Controls, whilst achieving the objectives of ADG 3F-1 and SEPP 65 generally.

SOLAR ACCESS

Council has sought further clarification on the extent of shadow impact on surrounding residential dwellings, such that solar access to those dwellings not be reduced to below 2 hours at midwinter as a result of the proposed building.

The only residential apartments affected by the proposal are those directly across Friedlander Place at 472&486 Pacific Highway (known as the Mirvac Site) which have been recently approved by the JRPP.

The assessment of solar access available to the apartments within the Mirvac Development (as part of DA 222/2014) considered the potential shadow impact on that building from the allowable building envelope applicable to 500-520 Pacific Highway St Leonards stipulated in the site specific DCP. In his solar access assessment report for the Mirvac DA, Steve King noted that consideration of solar access has accounted for the *'potential effect of future high rise building known as the 'Charter Hall site' to the north west of the subject site. My analysis includes the overshadowing effect to this hypothetical building envelope, which can be assumed to be a worst case implementation of the allowable building envelope on the site'*.

Mr King's assessment found that 282 of the proposed Mirvac apartments (or 52.7%) achieved 2 hours or more of sunlight to habitable rooms between 8am and 4pm at midwinter. This 52.7% compliance was deemed acceptable by the JRPP and the development was approved on this basis.

In response to council's concern on this matter, a comparison of the anticipated envelope used in the assessment of the Mirvac DA, and the presently proposed building envelope has been undertaken, to understand if there is any difference in the shadow impact. Steve King's report is attached to this letter, and concludes as follows:

My full 3D digital model analysis demonstrates that there are small, if not negligible differences in the projected overshadowing impact, between that of the originally assumed hypothetical building envelope, and the now proposed DA.

On each typical floor, impacts are confined to four apartments in Building B / Tower 1 of the Mirvac development:

- *For the one 'stack' of apartments which were not achieving a complying minimum of two hours solar access at 21 June, there is actually a small improvement in the late afternoon.*
- *For the three 'stacks' of apartments which were reported as complying, there is a small loss of sun (approximately 15 minutes), which does not affect their compliance status.*

As such, Steve King's report demonstrates that there is a negligible difference in shadow impact generated by the proposed development envelope when compared to the accepted hypothetical shadow impact assessed as part of the Mirvac DA. The proposed shadow impact is therefore within the realm of what has already been assessed as an acceptable impact on the Mirvac development.

BASEMENT DESIGN FOR WASTE COLLECTION

It is understood that Council will not accept a private contractor for on site waste collection. Currently the basement design does not adequately address Council's DCP Part Q which stipulates the required height clearances for travel paths and collection areas for Council's garbage vehicles.

Council has been provided with sketch plans showing how the basement design can achieve the required 4.3m height clearances for waste truck movement path and collection points, and has advised via email it is happy to condition the detailed design of the basement to provide for on site waste collection. As such, it is requested that a condition of consent be placed on any approval issued, requiring a finalised drawing reflecting this arrangement as follows:

Prior to issue of a Construction Certificate, the proponent shall provide to Council a revised basement plan demonstrating a design that complies with Council's DCP Part Q in respect to travel paths and collection areas for on site waste collection.

The sketch plans previously provided to Council are attached to this letter for reference.



CONCLUSION

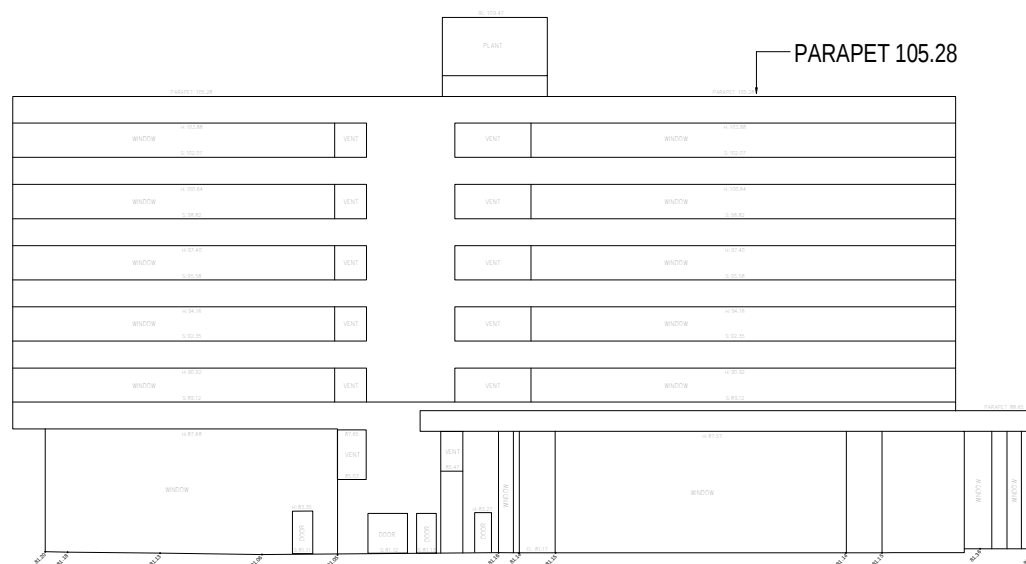
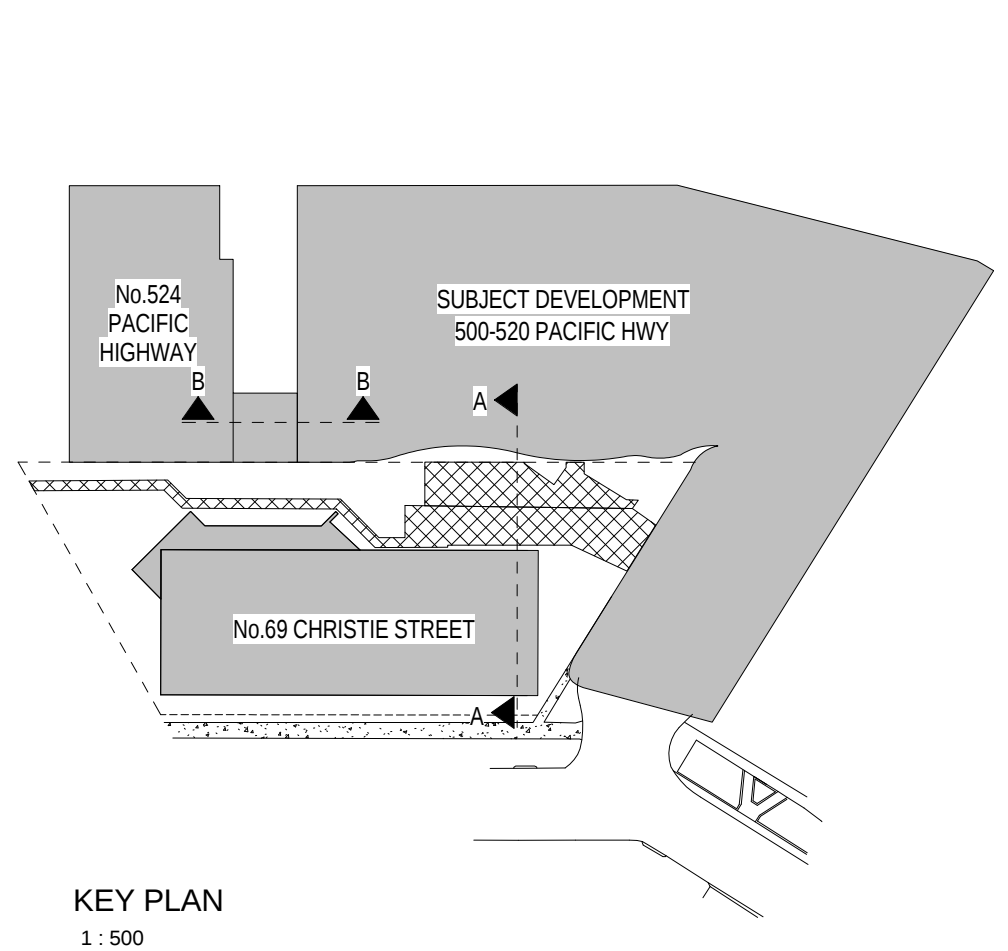
I trust that this addresses the AMA submission and issues raised by Council in respect to shadow impact and basement waste collection.

Should you require any further detail in this regard, please contact me on 8233 996 or jparker@urbis.com.au.

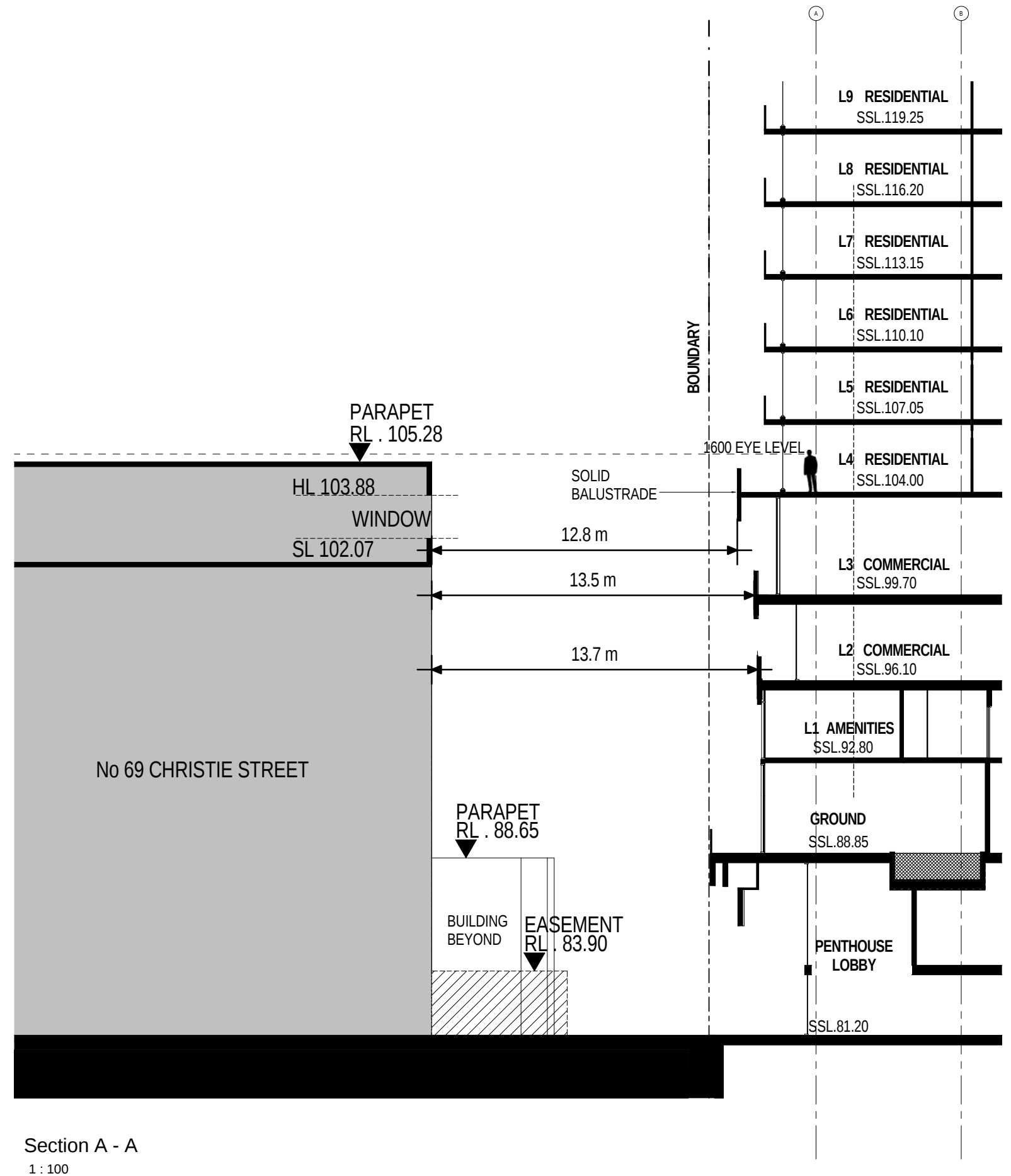
Yours sincerely,

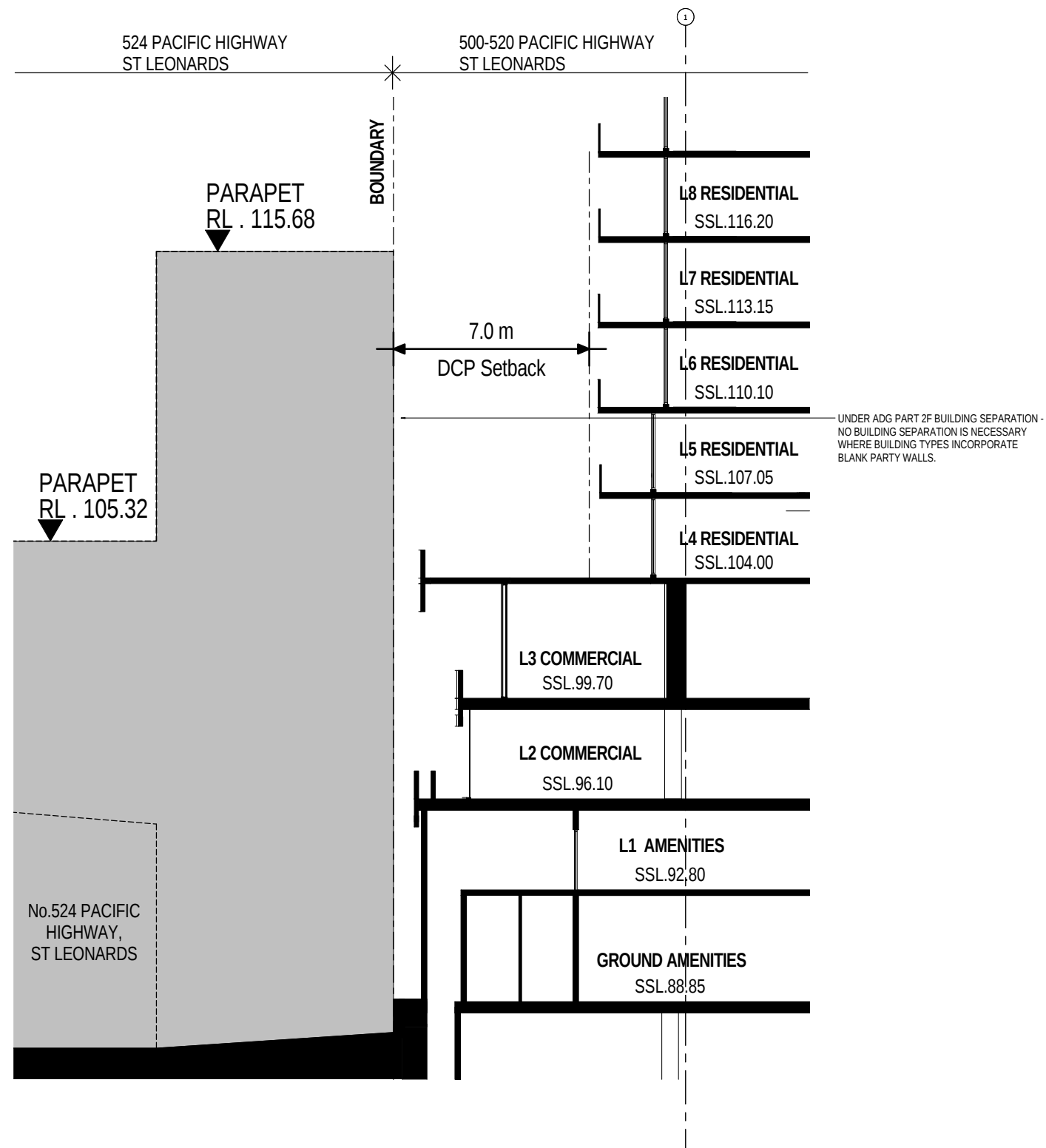
A handwritten signature in black ink, appearing to read "JParker", written in a cursive style.

Jacqueline Parker
Associate Director

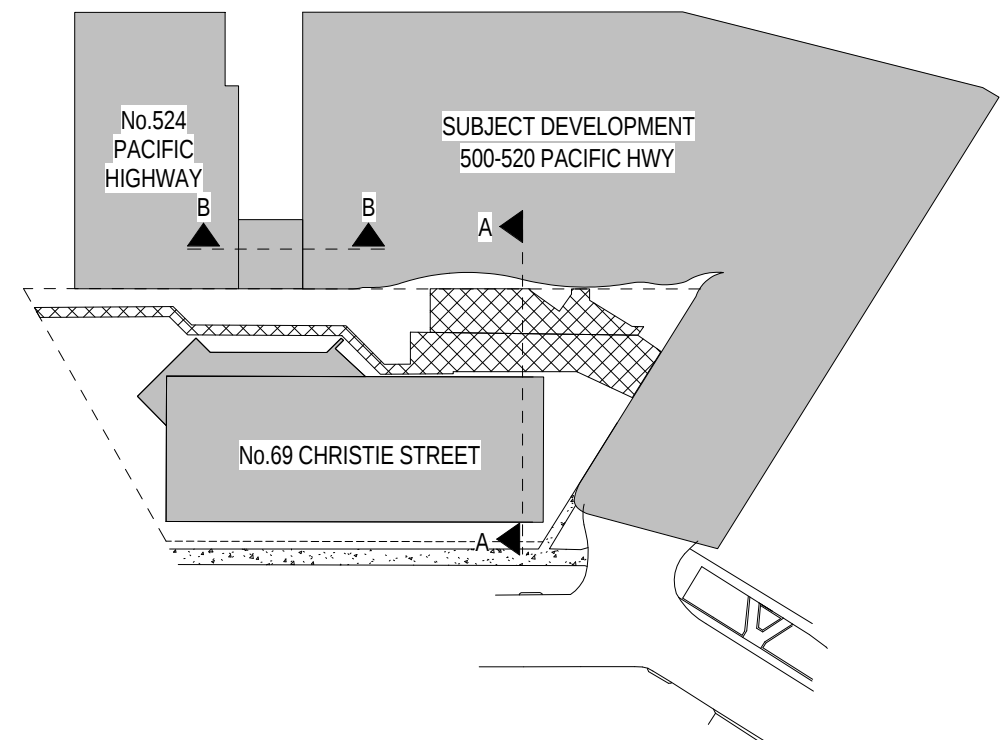


EXTRACT FROM SURVEY DRAWING SHEET 10(REF No. 42579DT B)





SECTION B - B
1 : 100



KEY PLAN
1 : 500

11 CLOVELLY ROAD RANDWICK NSW 2031
Mob. 0414 385485 Phone / Fax 02 93986376

EXPERT OPINION
OVERSHADOWING IMPACT
500-520 Pacific Hwy St Leonards
17 October 2016

1.0 PRELIMINARIES AND SUMMARY

1.1 I provide this opinion relating to projected overshadowing impact of the proposed building at the above location, specifically on the approved neighbouring building at 472-494 Pacific Hwy St Leonards (the 'Mirvac development').

1.2 My qualifications and experience are included as Attachment B.

1.3 ***My full 3D digital model analysis demonstrates that there are small, if not negligible differences in the projected overshadowing impact, between that of the originally assumed hypothetical building envelope, and the now proposed DA.***

On each typical floor, impacts are confined to four apartments in Building B / Tower 1 of the Mirvac development:

- For the one 'stack' of apartments which were not achieving a complying minimum of two hours solar access at 21 June, there is actually a small improvement in the late afternoon.
- For the three 'stacks' of apartments which were reported as complying, there is a small loss of sun (approximately 15 minutes), which does not affect their compliance status.

At Appendix A I attach a comprehensive comparison of half-hourly views from the sun on June 21.

2.0 METHODOLOGY

2.1 Provenance of the 3D digital model

2.1.1 Base model

I carried out the original solar access reporting for the 472-494 Pacific Hwy proposal DA, and subsequently supplied summary opinions relating to additional solar access and sun control issues.

For that purpose, I used a 3D digital model of the development itself, set in a wide 'block' model of the surroundings as context. Those models were prepared originally by the architects from survey data, to an accuracy sufficient for design development and compliance reporting for planning approval.

The architects' 3D CAD model was exported to a SketchUp file format for my analysis, and subsequently modified by my office to incorporate the building model based on the CC drawings.

2.1.2 Assumed building envelope for 500-520 Pacific Hwy

Importantly, the compliance reporting for the 'Mirvac development' at all times took into account the potential redevelopment of the 500-520 Pacific Hwy site, by way of inclusion of an approvable building envelope. Figure 1 illustrates the model showing the assumed building envelope in the centre foreground.

The overshadowing impact of this prospective development (now known as 'The Landmark') was critical in assessment of solar access for all apartments which rely on the north-west façade of 'Building B / Tower 2' of the Mirvac development.

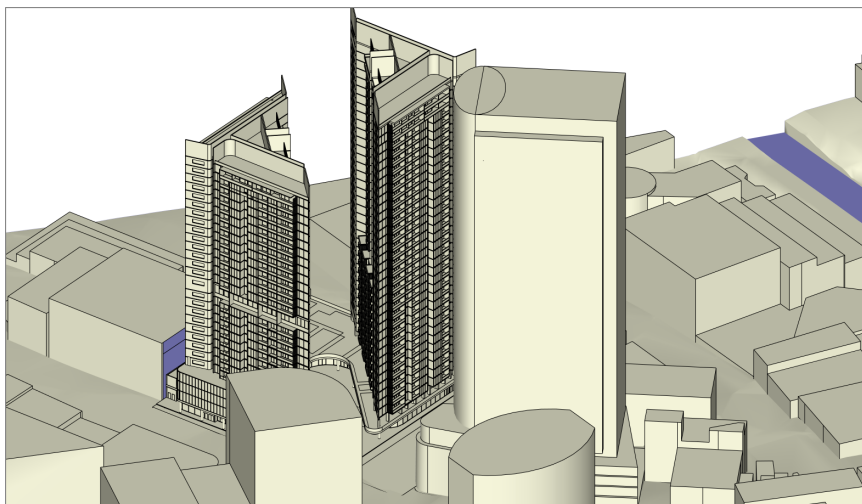


Figure 1: View from the sun at 11am, June 21

2.1.2 Building model for 500-520 Pacific Hwy

I have now been supplied with a detailed building model of the DA proposal for 'The Landmark'. The model has been exported by the architects from their CAD model, into SketchUp 2015 .skp file format.

2.1.3 The combined model

We have created a combined model incorporating the amended DA building for the 'Mirvac development', and the detailed building model of the DA for 'The Landmark'.

To calibrate the models, we rely on the latest DA plans for 'The Landmark'. We have located the 'Landmark' model by rotating it so that the faces of Mirvac building and Landmark meet along Friedlander Place, then positioned the rear of the carpark to meet the rear corner of Mirvac building.

There is a discrepancy in the nominated RL for Friedlander Place in the two models. Relevant figured RLs are 89.50 for Mirvac and 88.85 for Landmark. We have resolved this by lowering Friedlander Place by 650mm from Mirvac's ground level.

Figure 2 illustrates the combined model. I note that while the small RL anomaly may need checking for other coordination purposes, the relative heights of the two building models are actually not critical to my present analysis.

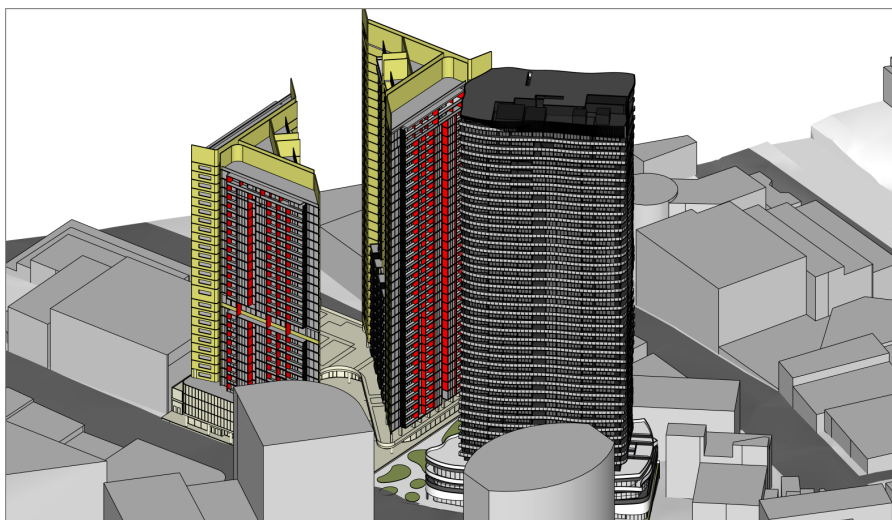


Figure 2: Combined model. View from the sun at 11am, June 21

I consider the combined model to be sufficiently accurate for the purpose.

2.2 Analysis

2.2.1 Views from the sun

As is my usual practice, I examine the solar access/overshadowing impact by use of 'views from the sun'. As it has been repeatedly described in my previous reports, I do not set out here the detailed explanation of this preferred technique.

In Appendix A I provide a table that compares views from the sun on a half hourly basis on June 21. The comparison is between:

- The latest such analysis carried out for the Mirvac building using the hypothetical building envelope for 'The Landmark' site, and
- A newly generated analysis using the DA model for 'The Landmark'.

3.0 ANALYSIS OUTCOMES

3.1 Potentially impacted units

The potentially impacted apartments in the Mirvac development are those that rely on solar access to glazing or POS on the northwest elevation of Building B (Tower 2) of that development.

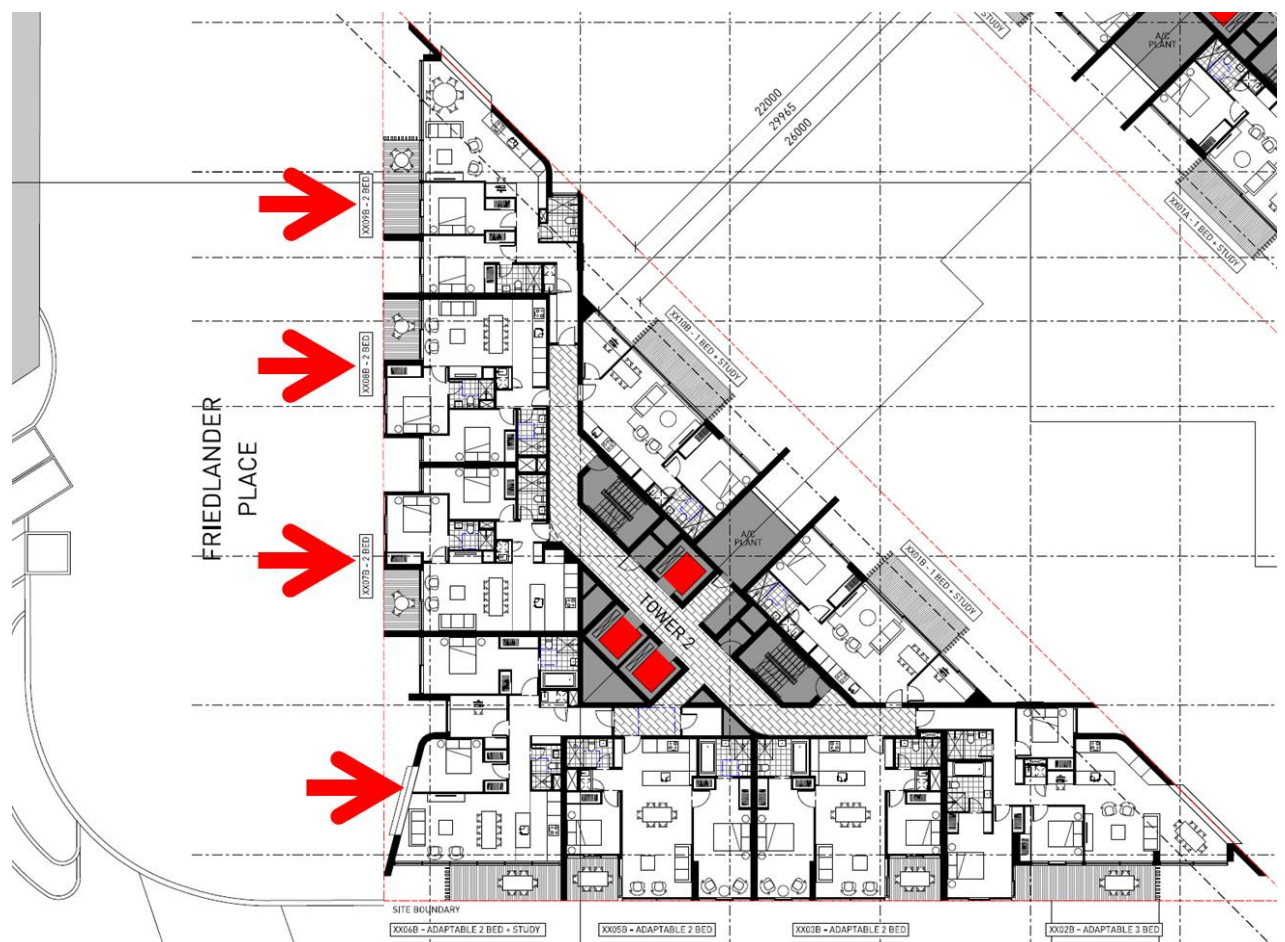


Figure 3 is a partial plan of a typical floor of that building, identifying the key units:

- Unit XX06 is previously reported as non-complying for minimum 2 hours under the ADG.
- Unit XX07 is reported previously as complying under the ADG with direct sun to glazing and POS for over 3 hours.
- Units XX08 and XX09B are reported previously as complying under the ADG with direct sun to glazing and POS for over 2 hours.

3.2 Comparison of overshadowing

3.2.1 Refer to view from the sun at 10:30am.

First overshadowing impact. Because projected envelope for #500-520 assumed a curved east elevation, the impact of the subject scheme is very slightly greater on the glazing of the SW corner apartments (Units XX06B) in the Mirvac development.

3.2.2 Refer to view from the sun at say 12:00 noon and 12:30pm.

Typical comparison of advance of the shadow across the façade of the Mirvac development. Because of the difference in shape of the end of 'The Landmark' building, each half hourly shadow appears to be more 'advanced' by approximately one 'bay' of glazing.

However, by comparing successive half hourly images, we may infer more accurately the actual difference in durations of sun exposure. It would be a reasonable estimate that any particular bay of glazing loses its complying sun patch approximately 15 minutes earlier due to the now proposed DA building, compared to the hypothetical envelope previously assumed.

3.2.3 Refer to views from the sun at 14:30pm and subsequently.

Late afternoon sun. The otherwise non-complying Unit XX09B 'emerges' from shadow slightly earlier and more completely with the now proposed DA envelope for 'The Landmark' than was the case with the hypothetical envelope previously assumed.

4.0 CONCLUSION

I have compared the projected overshadowing impacts on the 'Mircac development' due to:

- The hypothetical approvable building envelope for 500-520 Pacific Hwy St Leonards assumed at the time of the amended DA for the Mirvac scheme; and
- The detailed DA building envelope for the proposed 'Landmark' project on the same site.

I note that the applicable solar access control for the Mirvac scheme was the Apartment Design Guide under SEPP65, not the DCP. It would seem inappropriate to burden any prospective neighbouring development with protecting solar access to a standard higher than the compliance for which the development was actually designed.

Differences in overshadowing impacts are confined to four apartments on each typical floor plate, which rely on sun to the north-west elevation of 'Building B / Tower 2'. The differences in impacts are summarized below.

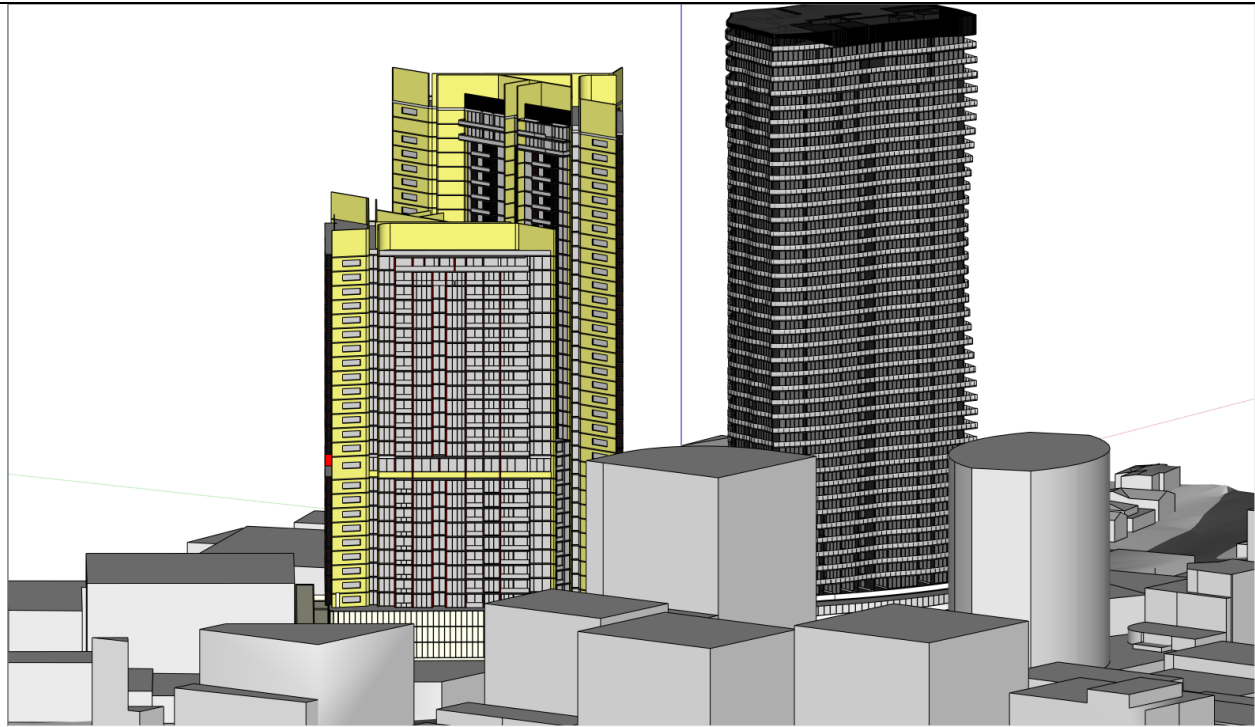
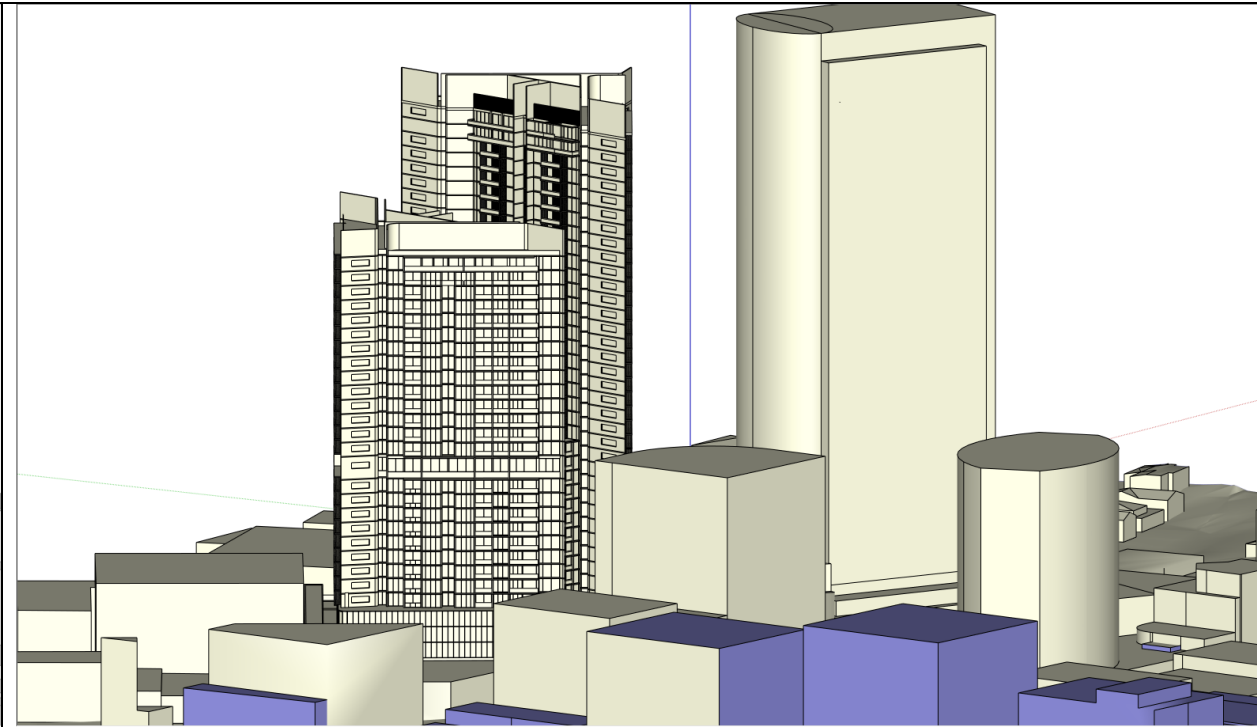
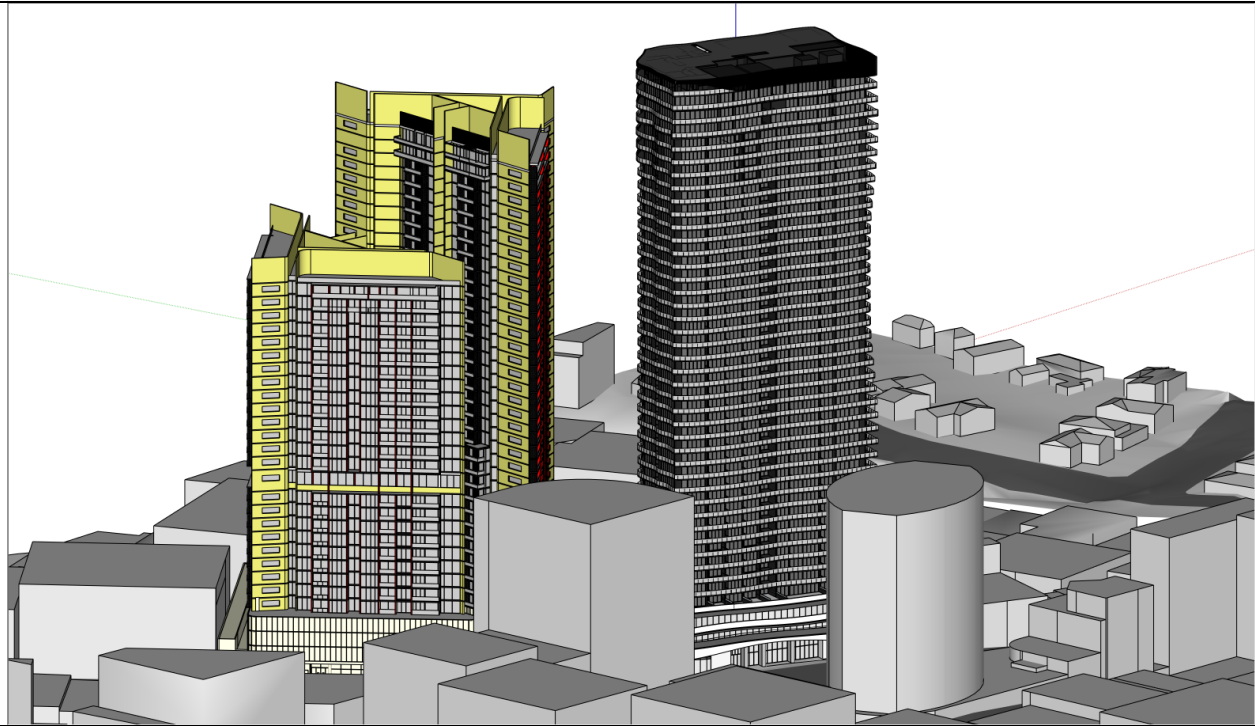
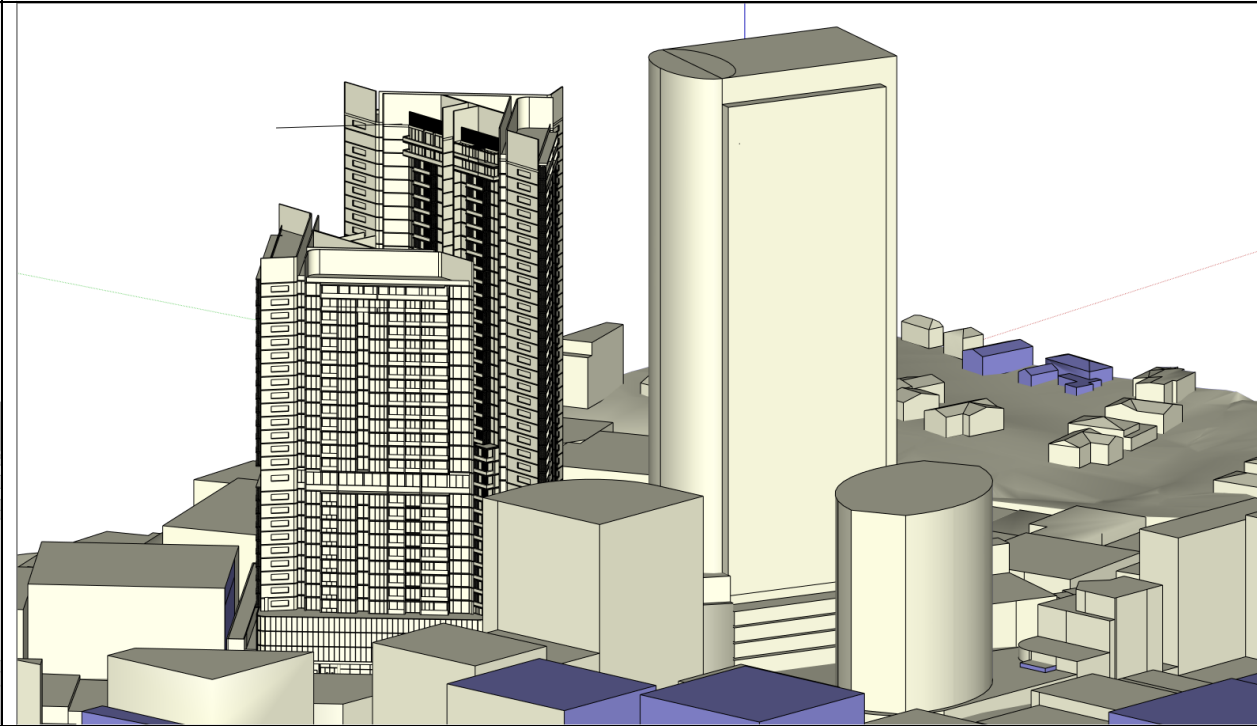
		Impact	ADG Compliance status
Presently complying units	XX06B XX07B XX08B	Sun access finishes approximately 15 minutes earlier in the afternoon	Unaffected
Presently non- complying unit	XX09B	Benefits from approximately 15 minutes additional sun in late afternoon	Unaffected

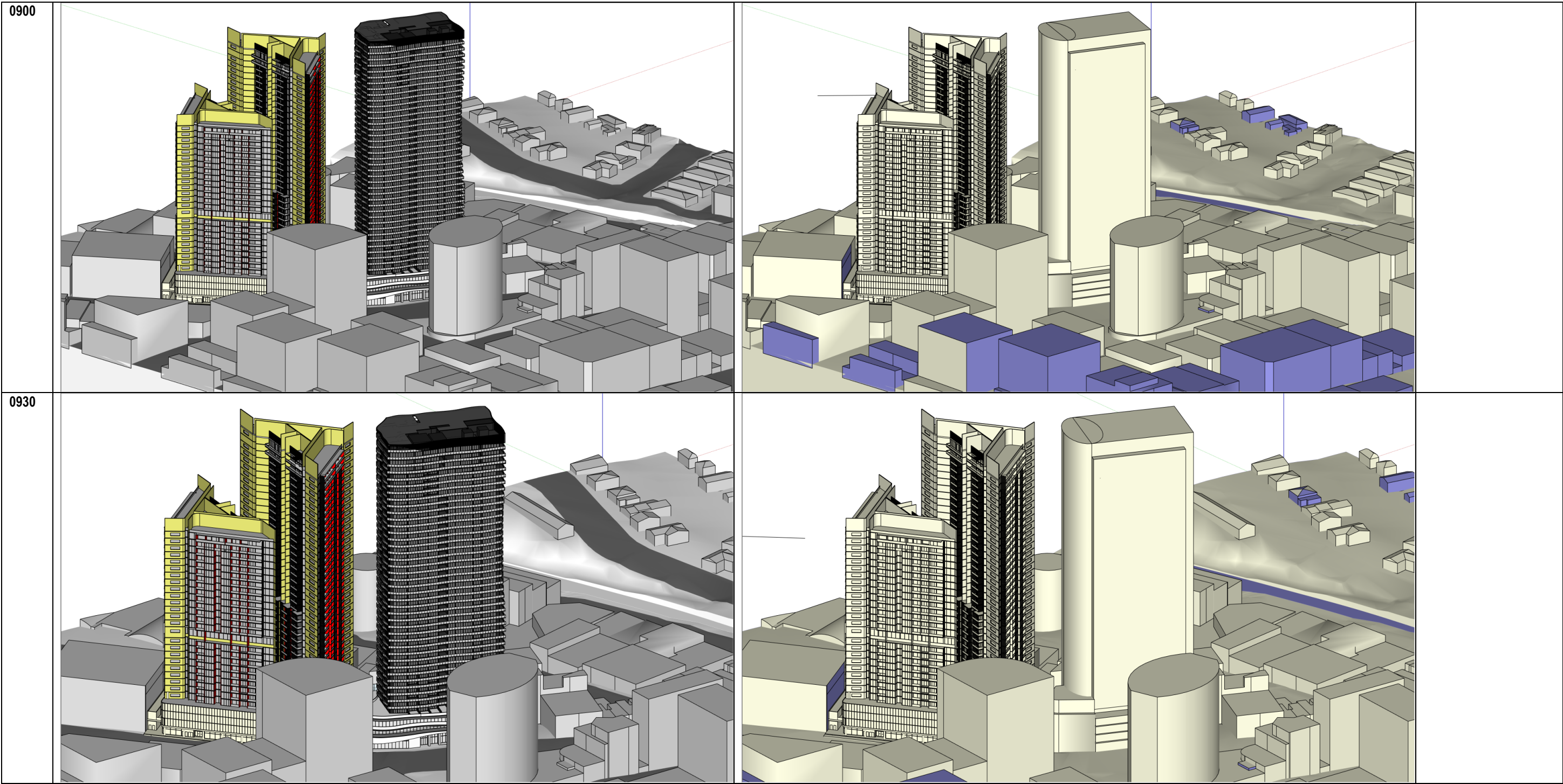
It is fair to conclude that the hypothetical building envelope for 500-520 Pacific Hwy employed in compliance reporting for the Mirvac DA was remarkably close to that now proposed for the DA for 'The Landmark' development on the same site.

My full 3D digital model analysis demonstrates that there are small, if not negligible differences in the now projected overshadowing impact:

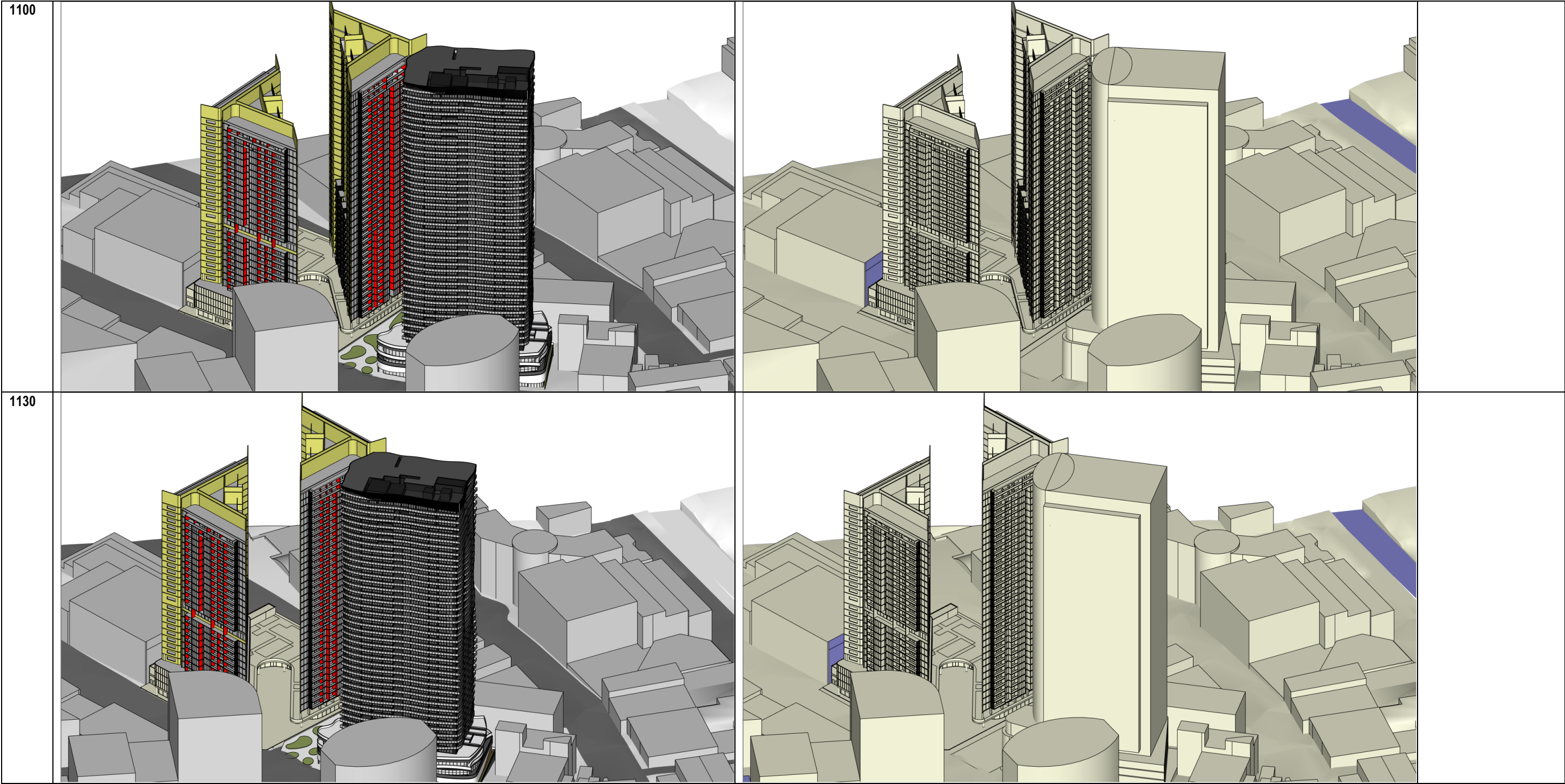
- ***For the one 'stack' of apartments which were not achieving a complying minimum of two hours solar access at 21 June, there is actually a small improvement.***
- ***For the three 'stacks' of apartments which were reported as complying, there is a small loss of sun, which does not affect their compliance status.***

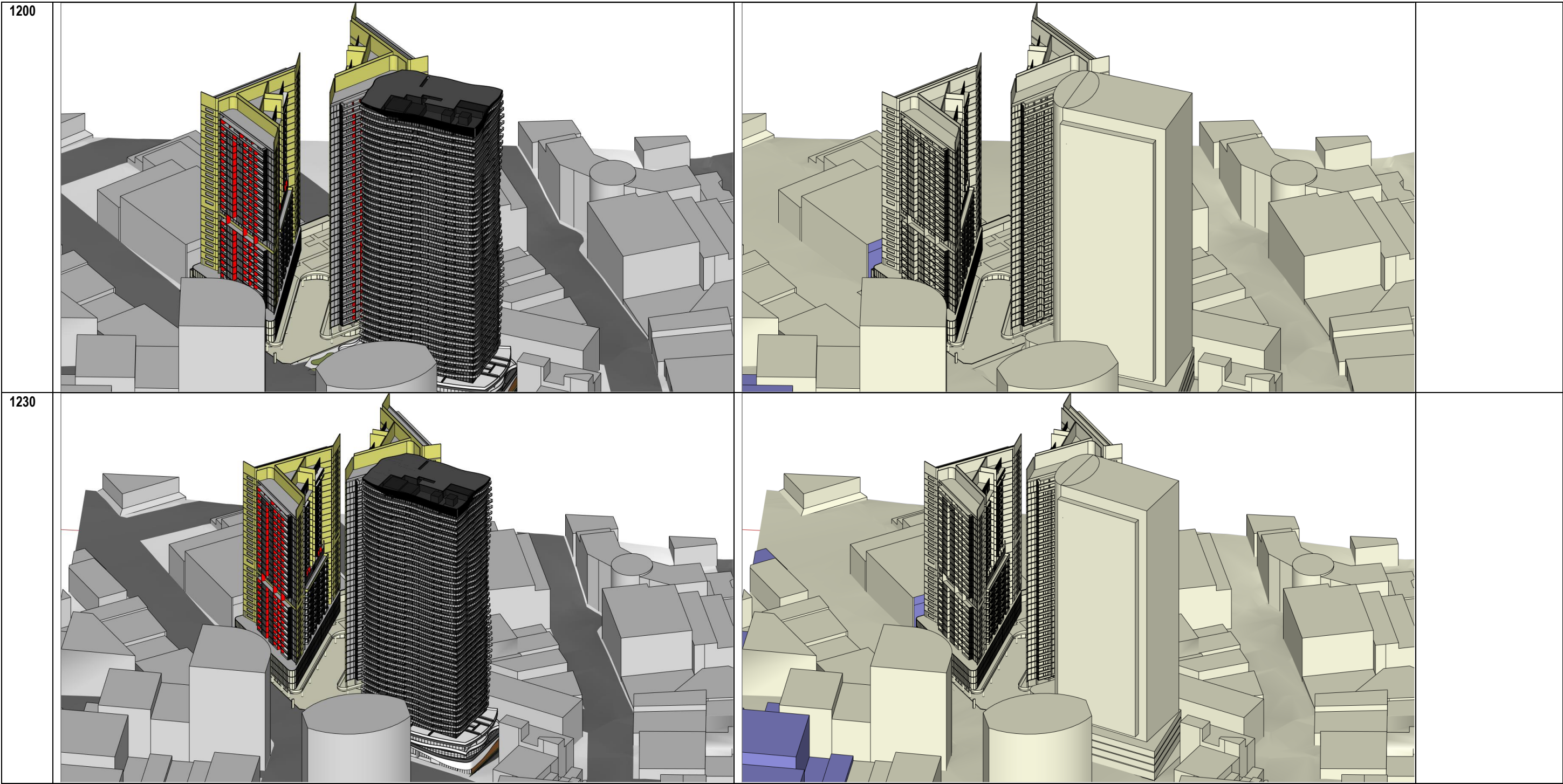
APPENDIX A: COMPARISON OF VIEWS FROM THE SUN

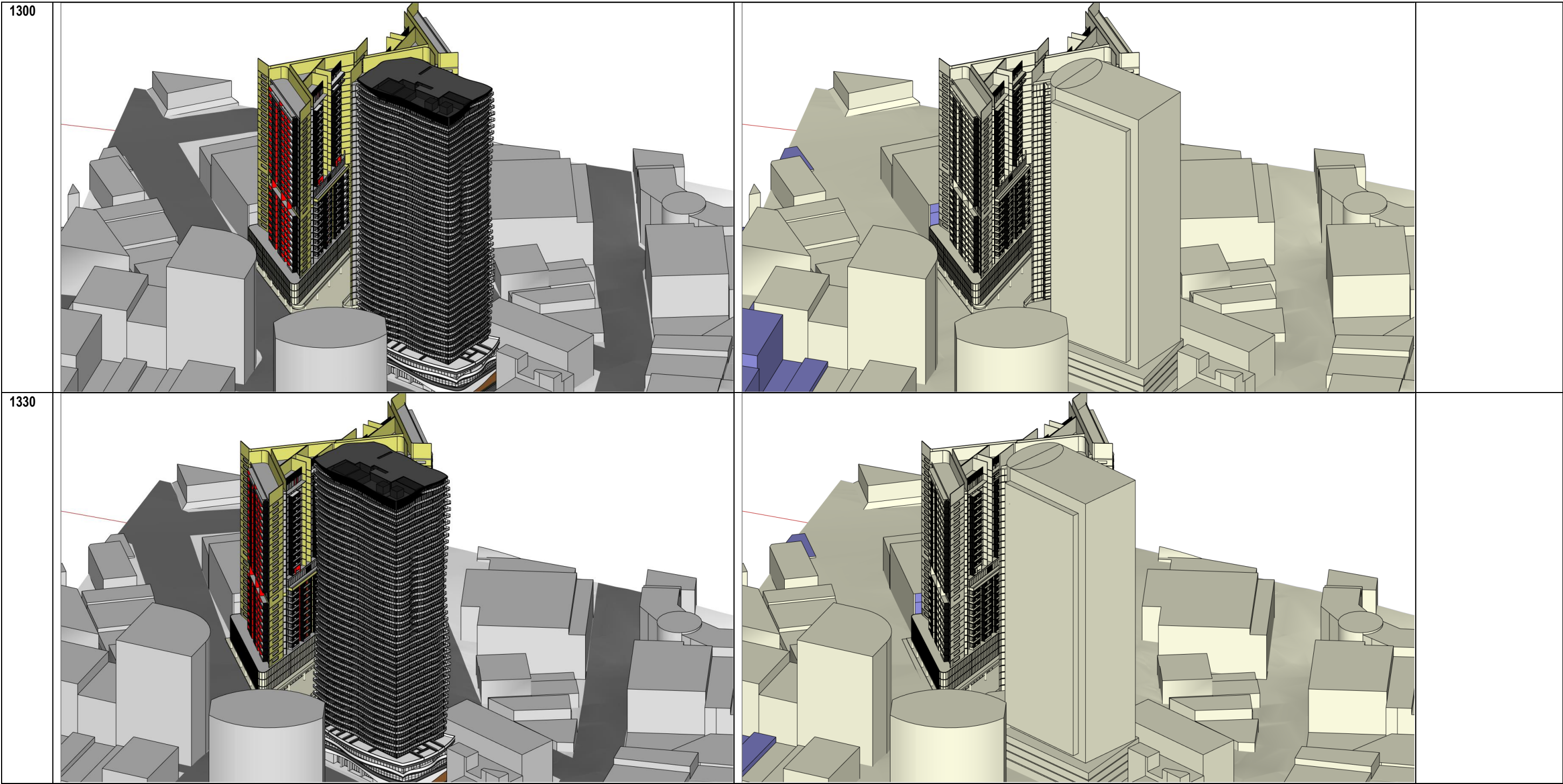
0800		
0830		

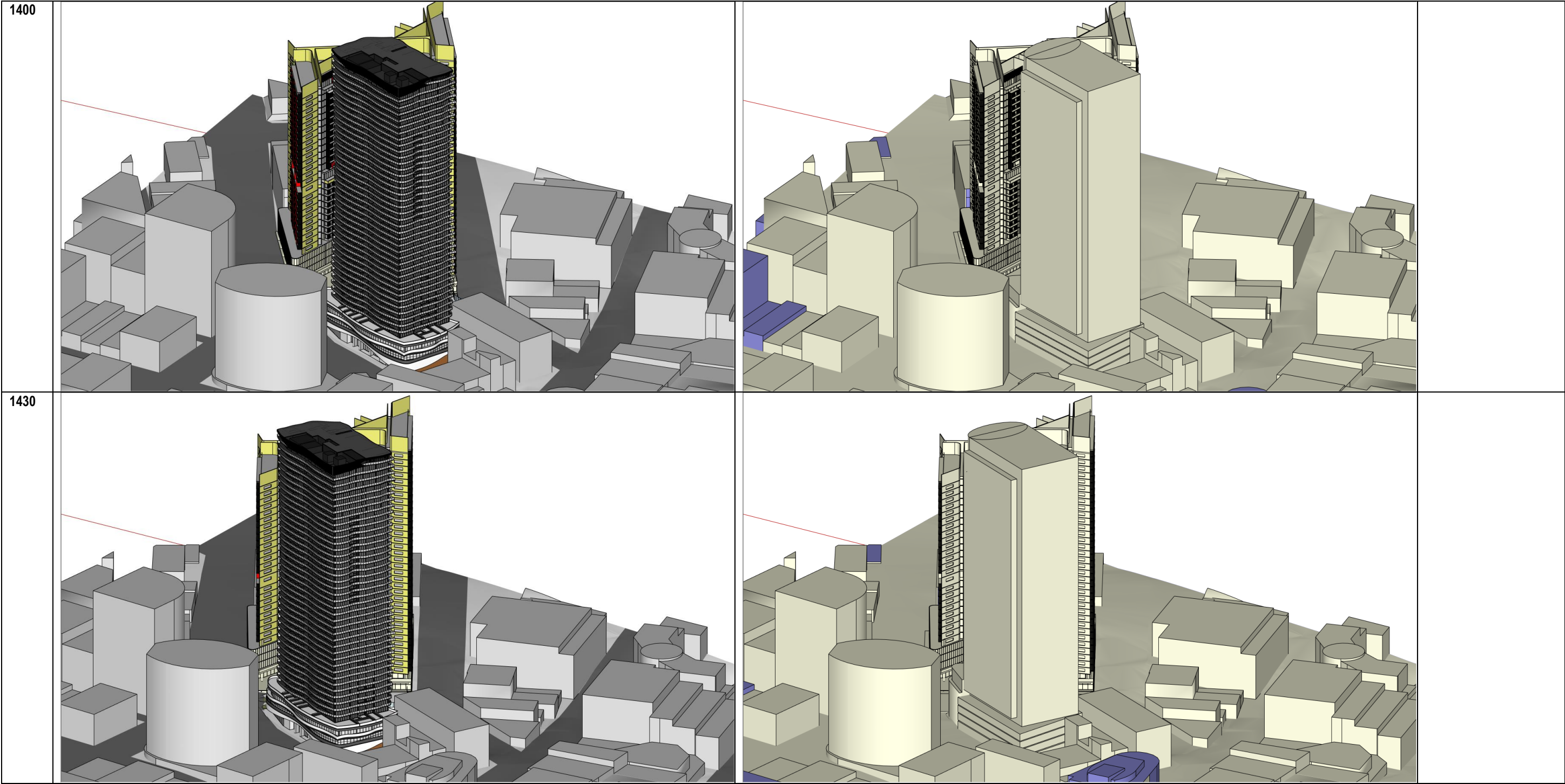


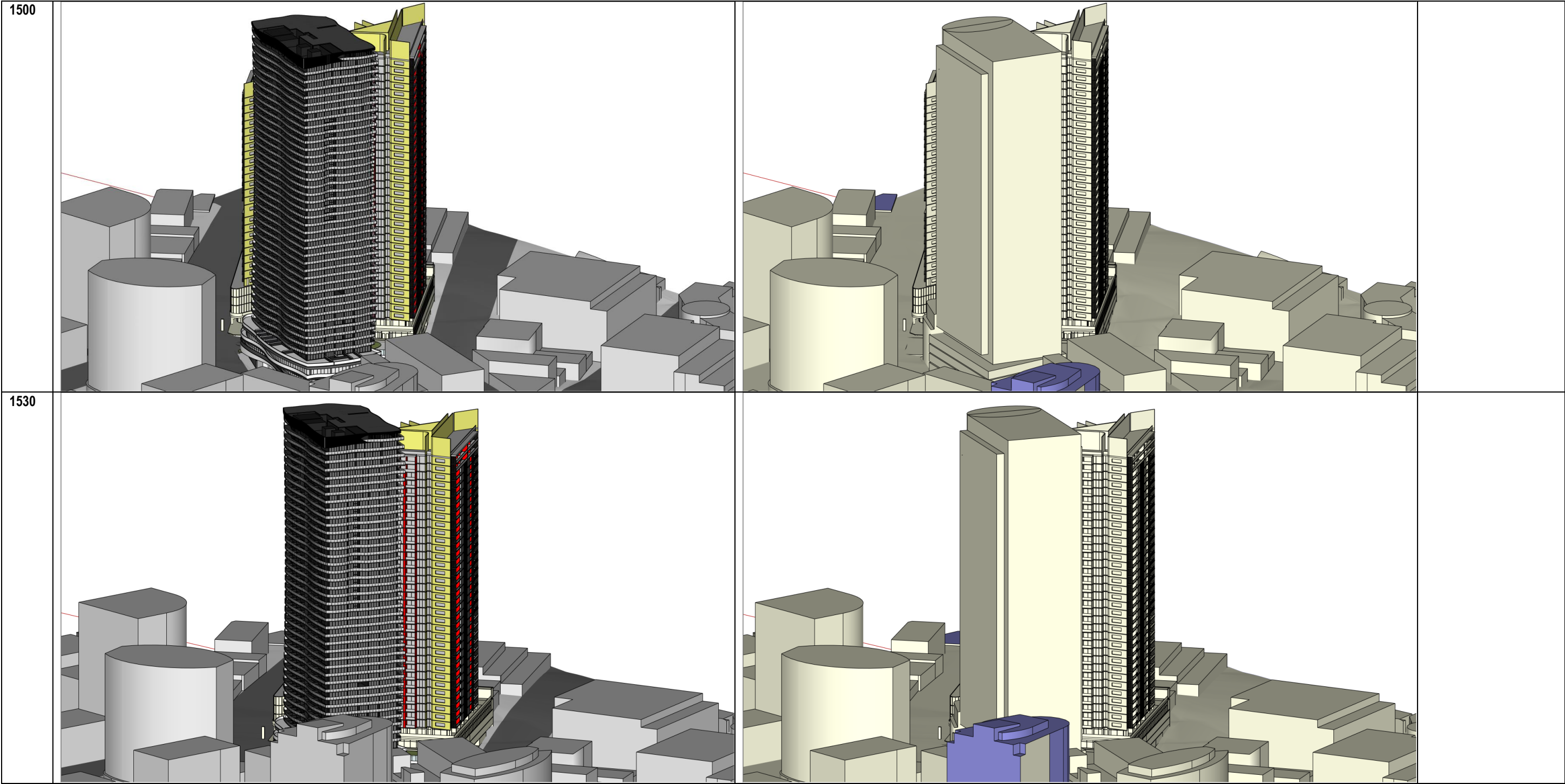
1000			
1030			First overshadowing impact. Because projected envelope for #500-512 assumed a curved east elevation, the impact of the subject scheme is very slightly greater on the glazing of the SW corner apartments in the Mirvac development.

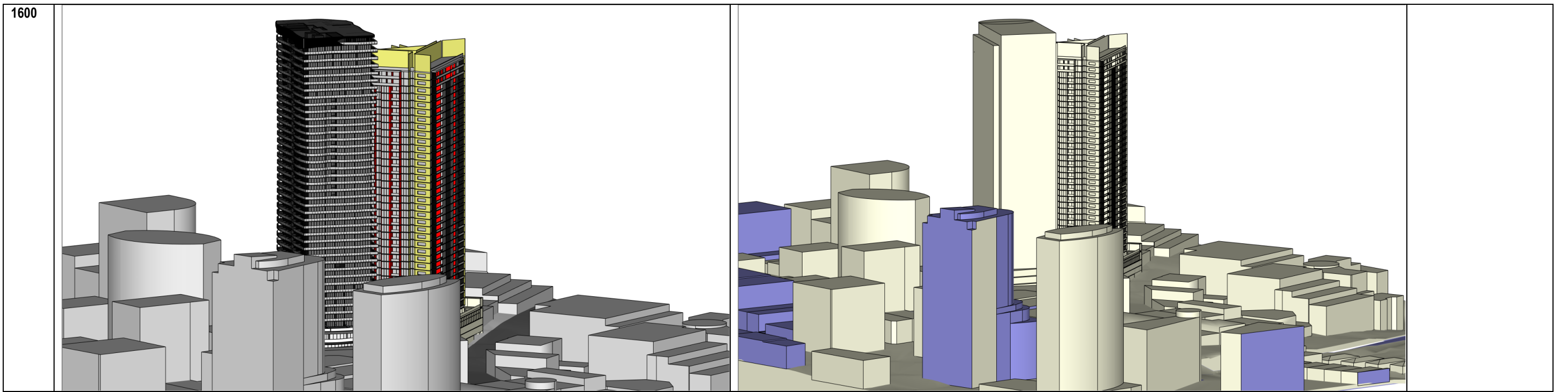












APPENDIX B CREDENTIALS



Steve King

B.Arch(Hons.) Dip.Bdg.Sc. (Sydney)

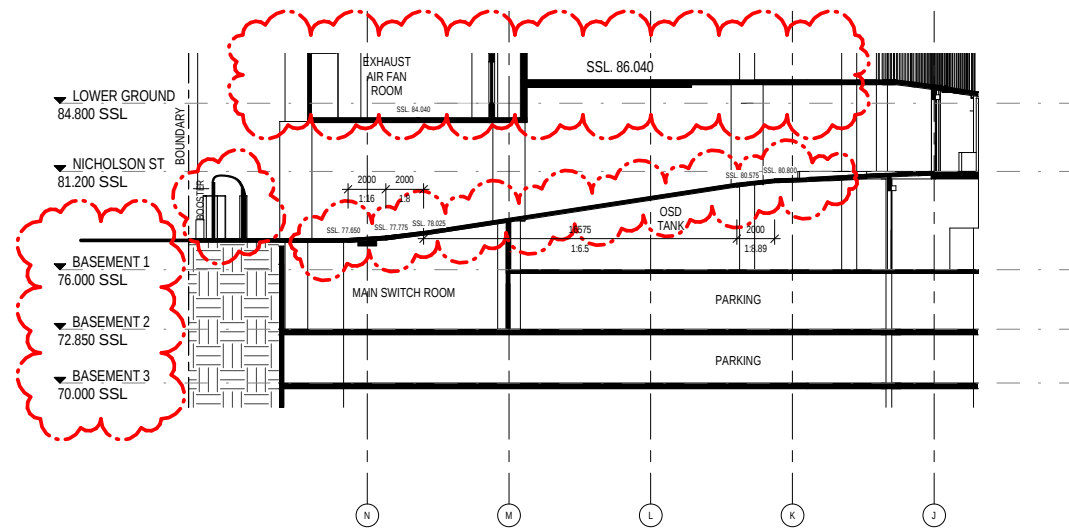
I have taught architectural design, thermal comfort and building services at the Universities of Sydney, Canberra and New South Wales since 1971. From 1992, I was a Research Project Leader in SOLARCH, the National Solar Architecture Research Unit at the University of NSW. Until its disestablishment in November 2006, I was the Associate Director, Centre for Sustainable Built Environments, UNSW.

My research and consultancy includes work in solar access, energy simulation and assessment for houses and multi-dwelling developments, building assessments under the NSW SEDA Energy Smart Buildings program, appropriate design and alternative technologies for museums and other cultural institutions, and asthma and domestic building design. I am the principal author of *SITE PLANNING IN AUSTRALIA: Strategies for energy efficient residential planning*, funded by the then Department of Primary Industry and Energy, and published by AGPS, and of the RAIA Environment Design Guides on the same topic. Through UNISEARCH, NEERG Seminars and Linarch, I conduct training in solar access and overshadowing assessment for Local Councils. I have delivered professional development courses on topics relating to energy efficient design both in Australia and internationally.

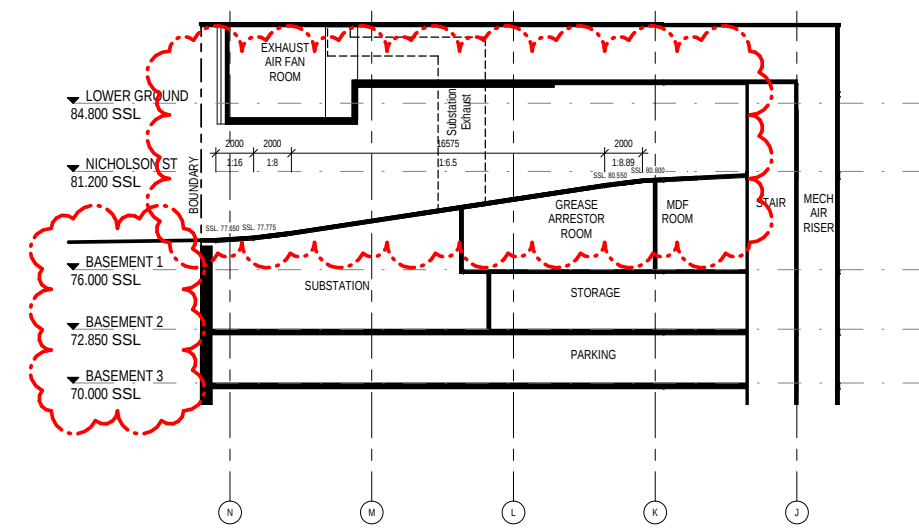
SOLARCH/UNISEARCH were the contractors to SEDA NSW for the setting up and administration of the House Energy Rating Management Body (HMB), which accredits assessors under the Nationwide House Energy Rating Scheme (NatHERS), NSW. I was the technical supervisor of the HMB, with a broad overview of the dwelling thermal performance assessments carried out in NSW over five years. I have been a member of the NSW BRAC Energy Subcommittee, and also a member of the AGO Technical Advisory Committee on the implementation of AccuRate, the new mandated software tool under NatHERS. I undertook the Expert Review for the NSW Department of Planning, of the comparison of NatHERS and DIY methods of compliance for Thermal Comfort under BASIX, and was subsequently a member of a three person expert panel advising on the implementation of AccuRate in BASIX.

I have delivered the key papers in the general area of assessment of ventilation and solar access performance and compliance, for NEERG Seminars, cited by Commissioners of the LEC. Senior Commissioner Moore cited my assistance in reframing of the Planning Principle related to solar access (formerly known as the Parsonage Principle) in *The Benevolent Society v Waverley Council [2010] NSWLEC 1082*.

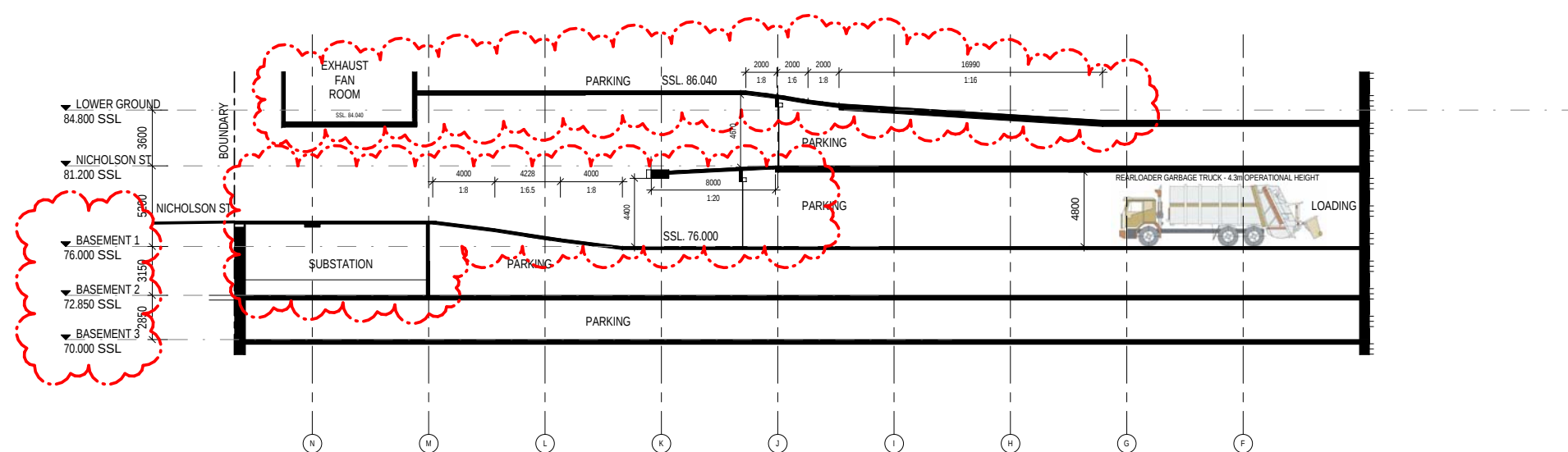
I practiced as a Registered Architect from 1971 to 2014, and maintain a specialist consultancy in appropriate design for passive environmental control in buildings, specialising in solar access and natural ventilation compliance. I regularly assist the Land and Environment Court as an expert witness in related matters.



Ramp Section A
A
1 : 200



Ramp Section B
B
1 : 200



Ramp Section C
C
1 : 200