

SOLAR IMPACTS TO PRINCETON

PROVIDE A SUPPLEMENTARY SHADOW ANALYSIS DETAILING THE AMOUNT OF SOLAR ACCESS THE DWELLINGS WITHIN PRINCETON APARTMENTS WOULD RECEIVE AT HALF HOURLY INTERVALS (NIL, 0-30 MINUTES, 30-60 MINUTES, 60-90 MINUTES, 90-120 MINUTES AND >120 MINUTES) BETWEEN 9AM AND 3PM, 21 JUNE (EXISTING AND PROPOSED).

The below table demonstrates the change in compliance to Princeton Apartments solar access between 9am and 3pm on June 21. A per unit breakdown can be supplied if required.

AMOUNT OF SUN (MINUTES)	EXISTING SOLAR ACCESS	APPROVED CONCEPT ENVELOPE SOLAR ACCESS	PROPOSED SOLAR ACCESS
NIL	34	50	47
1-30	1	17	15
31-60	1	13	17
61-90	6	13	14
91-120	17	17	17
>120	57	6	6

It has been noted that there are differences between the numbers in our approved concept envelope analysis and the report put forward by Steve King as part of the concept envelope application. These differences have been discussed in detail in part 1.1 of the Response to Submissions document which has been attached to this document. We noted that the methodology used to calculate solar access is the same as Steve King. It is also noted that the characterisation of overshadowing is the same as Steve King. The difference in the number is due to external factors such as the Development Application Approval of 116 Bathurst Street Sydney which was not included in the analysis by Steve King (possibly due to timing of approval).

Please read through the attachments for further information.

IMPACT OF SOUTH EASTERN UNIT

DEMONSTRATE WHETHER THE PROPOSED PROJECTION BEYOND THE APPROVED BUILDING ENVELOPE ALONG THE WESTERN ELEVATION WOULD IMPACT ON THE SOLAR ACCESS RECEIVED BY THE DWELLINGS WITHIN PRINCETON APARTMENTS.

There is current projection beyond the approved concept envelope on the Western elevation. If this projection was to be removed, it would result in an increase of solar access of 3 minutes to a total of 9 units within Princeton Apartments.

The above projection does NOT result in a loss of solar access compliance to any units within Princeton Apartments when compared to the approved concept envelope.

Further to the above, we gave an in depth analysis of this particular item in the Walsh Analysis Response to Submissions Report dated 28th August 2020. Part 1.2 of the report has been attached as an appendix to this memo.

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Walsh Analysis

1. SOLAR IMPACTS TO PRINCETON

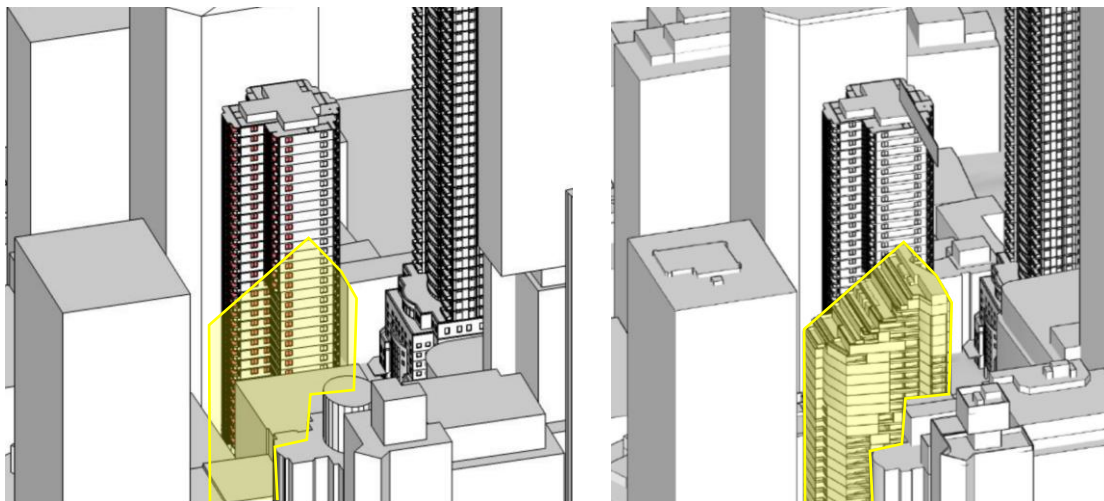
1.1 EXISTING COMPLIANCE

It has been noted that our Solar Analysis was different to the Stage 1 Solar Access Report by Steve King. Below we have created a comparison table to highlight the differences (all based on 116 units).

	Complying 9-3	Complying 9-3 Percentage	No Sun	No Sun Percentage
Existing Princeton - Steve King Report.	62	53.4%	17	14.7%
Existing Princeton - Walsh Report.	54	46.6%	19	16.4%
Proposed Princeton - Steve King Report.	5	4.3%	17	14.7%
Proposed Princeton - Walsh Report.	6	5.2%	31	26.7%

Firstly we reviewed the Methodology of Steve King as outlined in Part 5.1 and note it is an identical methodology to what we have used as outlined in part 4.2 of our report. We have also reviewed the characterisation of overshadowing is outlined in Part 6.2 of the Steve King report, which references objective 3B-2 of the ADG. Our characterisation is also outlined in part 6.2 of the report and is the same.

We have reviewed the old report and we note that there are many external factors that lead to the differences in the results of Steve King verse Walsh² Analysis. The main external factor that leads to this difference is the Development Application Approval of 116 Bathurst Street Sydney; which has been included in our analysis but not in Steve Kings report (possibly not approved at the time). The two below images demonstrate some of the impact this approval has on Princeton Apartments, with a significant increase to overshadowing to Princeton Apartments.



1030 Existing View from Sun from Stage 1 DA

1030 Existing View from Sun from Walsh2 Analysis Report

Based on the above, the existing 'base case' analysis of Princeton Apartments as noted in Table 2, part 6.3 of our SSDA report are the existing numbers that should be referenced as they include the Development Application Approval of 116 Bathurst Street.

Further to the above, we have now undertaken a minute by minute analysis on Princeton Apartments as shown in Appendix A of this Memo. It is important to note that actual solar access onsite may differ from the values shown due to external factors such as the basic 3D Massing Model as supplied by the City of Sydney.

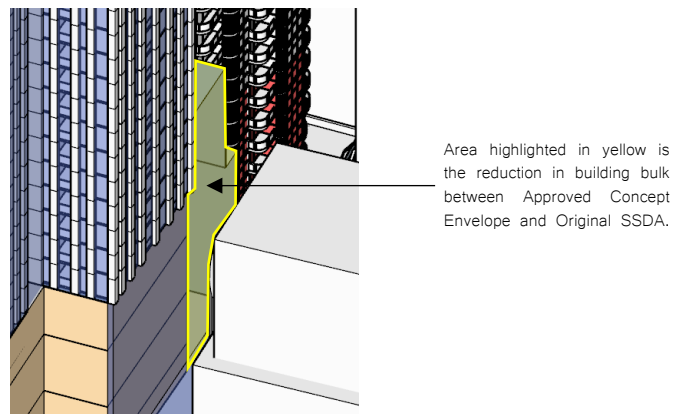
It is worth noting that the design of Princeton Towers itself does not maximise solar access. The design places living rooms facing east and west, with bedrooms on the northern façade. This fact, coupled with the unit that is on the south side of each floor which doesn't receive winter sun means this building has poor solar access prior to any redevelopment around it.

1.2 APPROVED CONCEPT ENVELOPE COMPLIANCE VS ORIGINAL SSSA

When looking Princeton Apartments in a minute by minute analysis it is noted in Appendix A that overall there is an improved solar access to Princeton for the original SSSA compared to the Approved Concept Envelope. A summary of Appendix A is that 19 apartments receive increased solar access by 8-30 minutes, whilst 9 units lose 3 minutes of solar access. Overall it means that apartments in Princeton Apartments receive a gain of 248 minutes of solar access, with a loss of 27 minutes; equating to a net gain of 211 minutes of solar access with regards to the Original SSSA compared to the Approved Concept Envelope.

The gain in solar access is attributed to two main factors:

1. The Original SSSA application has a much larger setback in the first 9 stories than what the Approved Concept Envelope allows. This is demonstrated in the below image



2. The open South Eastern Corner as sun penetrates through the gaps in the balconies in comparison to the Approved Concept Envelope.

The loss of 3 minutes to the 9 units is due to the western face of the Original SSSA protruding beyond the Approved Concept Envelope towards the Pitt St setback.

Overall, the original SSSA has improved the solar access outcome of Princeton Apartments by increasing the overall compliance by 221 minutes compared to the Approved Concept Envelope.