

Pitt Street Developer South



NSW Independent
Planning
Commission

Pitt Street South
OSD

SOLAR ACCESS
SUBMISSION

18 March 2021
Final

IPC Request - 11 March 2021

The Commission requests the Applicant provide the following information:

1. *Solar Access: the investigations, analysis and quantification (including sensitivity analysis and assumptions) undertaken in consideration of additional building setbacks and any resulting benefit in solar access for the Princeton Apartment building and also for the apartments on the south side of the proposed over station development (OSD) tower.*

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Princeton Apartments

Princeton Living Rooms

Princeton Apartments was not designed to maximise solar access. This is evidenced by:

- living rooms being orientated east or west (all levels)
- bedrooms on the northern facade (for levels 9-25)
- 'self shading' within the building to 28% of the apartments

Living Rooms are located:

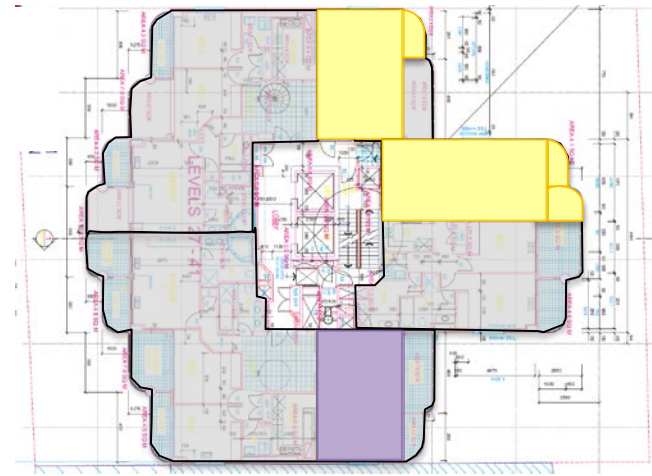
- 4 per floor (levels 9 to 25)
- 3 per floor (levels 26 to 41)

Impacted Living Rooms are located:

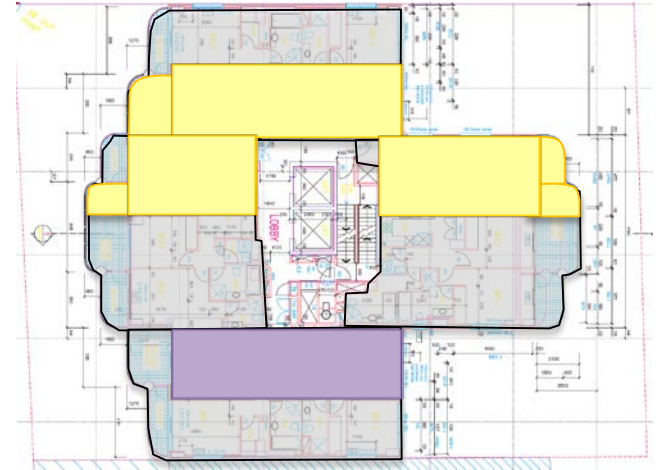
- 3 per floor (levels 9 to 25)
- 2 per floor (levels 26 to 41)

The location of impacted (by the proposed South OSD) Living Rooms is shown in yellow shading in the diagram (total number 83)

The location of non-impacted (by the proposed South OSD) Living Rooms is shown in purple shading in the diagram (total number 33)



Levels 26 - 41



Levels 9 - 25

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Definitions

Definitions

For the purpose of this submission the following terms are defined:

- **Compliance** – *1sqm of sun onto living room glazing for **2 hours** between 9am and 3pm on 21 June (the shortest day of the year, the hardest for solar access)*
- **Minutes** – *1sqm of sun onto living room glazing **per minute** between 9am and 3pm on 21 June (the shortest day of the year, the hardest for solar access)*
- **Habitable Rooms** – *all rooms excluding bathrooms, laundries and storerooms*

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Stage 1 Concept Approval
Solar access results

Stage 1 Concept Approval

The following table shows the solar access to Princeton Apartments based on the Stage 1 Concept DA approval:

- The 'Steve King' report was included in the Stage 1 application
- The 'Walsh' report is an updated Stage 1 report that includes the impact of the Castle Residences development. This represents the Stage 1 baseline for the purpose of this submission
- Of the 116 apartments, 54 are solar Compliant if there was no OSD development

	Complying number of apartments (total 116 apartments)	Complying percentage (total 116 apartments)
Princeton, no OSD - Steve King Report	62	53.4%
Princeton, no OSD - Walsh Report	54	46.6%
Princeton, Stage 1 DA Approval - Steve King Report	5	4.3%
Princeton, Stage 1 DA Approval - Walsh Report	6	5.2%

Stage 1 DA Approval

It is useful to consider solar amenity to Princeton beyond the Compliant hours and Compliant spaces under the Stage 1 DA Approval. The table below sets this out as follows:

- The first row illustrates the change in the Compliant hours.
- The second row, using 8am to 4pm, illustrates far less impact of the Stage 1 DA Approval.
- When considering all Habitable Rooms, the third row further illustrates even less impact.

	Princeton No OSD	Princeton Stage 1 DA Approval	Change
>2 hrs 9-3 Living	54 / 116 (46.6%)	6 / 116 (5.2%)	41.4%
>2 hrs 8-4 Living	56 / 116 (48.3%)	24 / 116 (20.7%)	27.6%
>2 hrs 8-4 Habitable Rooms	56 / 116 (48.3%)	39 / 116 (33.6%)	14.7%

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Stage 2 Detailed
Application and
Amendments

Solar access improvements

Stage 2 Detailed Application

Whilst the overall Compliance between Stage 1 and Stage 2 does not change, there is an increase in the amount of sun Princeton Apartments receive.

An improvement of **156** Minutes against the Stage 1 baseline is achieved.

This was as a result of:

- the increased setback to the eastern boundary (from 3.0m to 4.5m) initiated by the Applicant
- the reduction and setback of the podium to the western boundary initiated by the Applicant

These 156 Minutes benefit a total of 19 apartments.

Stage 2 Detailed Application – Revised

Subsequent to the Stage 2 Detailed Application, further changes were made.

This resulted in an improvement of **168** Minutes against the Stage 1 baseline.

This was as a result of:

- the increased setback to the eastern boundary (from 3.0m to 4.5m) initiated by the Applicant
- the reduction and setback of the podium to the western boundary initiated by the Applicant
- the reduction in facade depth on the west initiated by the Applicant

These 168 Minutes benefit a total of 19 Apartments.

Stage 2 Detailed Application – Revised

A further change that contributed to an overall amenity improvement of the overshadowing to Princeton Apartments was the relocation and reduction in the balcony width for the South Eastern Apartment on all levels of the proposed South OSD.

This change responded to a request from Princeton Apartments representatives in a community engagement session initiated by the Applicant on 15 June 2020.

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Investigations, analysis and
quantification of studies
beyond the Stage 2 revised
application

Study 1 – Remove projection south west corner

Western Setback (Pitt Street) increase:

- Increase setback in the south west corner by 0.2m consistent with the Stage 1 envelope

Improvement to Princeton Apartments:

- No improvement to Compliance
- Increase of 1 Minute to living areas of 9 apartments i.e. 9 Minutes in total

Solar impact on South OSD:

- No change

Applicant comment:

- This setback increase is consistent with the projection beyond the envelope
- The Applicant put this forward to the Design Review Panel (DRP) who rejected this design consideration due to the reduced facade articulation and hence was not pursued

Study 2 – Increase western setback at corner

Western Setback (Pitt Street) increase:

- Increase setback in the south western corner by 1.5m from 4.7m to 6.2m and a width of 2.84m

Improvement to Princeton Apartments:

- No improvement to Compliance
- Increase of 5 Minutes to living areas of 9 apartments i.e. 45 Minutes in total

Solar impact on South OSD:

- Loss of Compliance to 20 apartments, taking Compliance down to 41%

Applicant comment:

- This setback increase is consistent with the depth of the setback to the east verses the Stage 1 approval
- This increases Princeton's solar access by 45 Minutes whilst compromising the OSD solar Compliance for 20 apartments.

Study 3 – Increase western setback in entirety

Western Setback (Pitt Street) increase:

- Increase setback to the western facade of the building in its full length by 1.5m from 4.7m to 6.2m

Improvement to Princeton Apartments:

- No improvement to Compliance
- Increase of 10 to 17 Minutes to living areas of 19 apartments

Solar impact on South OSD:

- Not applicable due to extensive redesign required

Applicant comment:

- During the Stage 1 Application process this study was undertaken as a ‘extreme’ exercise to demonstrate only marginal improvements are achieved even with drastic moves. Accordingly, this was not progressed by the Applicant (Sydney Metro) or DPIE
- Such a drastic move makes the development unviable

Study 4 – Remove balcony to south east corner

Eastern Setback (Pitt Street) increase:

- Remove balcony to south east corner apartment

Improvement to Princeton Apartments:

- No improvement to Compliance
- No improvement in Minutes

Solar impact on South OSD:

- No change

Applicant comment:

- Not viable as no benefit is provided to Princeton Apartments and results in an amenity reduction to the south east corner apartment

Study 5 – Increase eastern setback at corner

Eastern Setback increase:

- Increase setback in the south east corner by a further 1.5m from 4.5 to 6.0m and a width of 2.84m

Improvement to Princeton Apartments:

- No improvement to Compliance
- Increase of 2 Minutes to living areas of 12 apartments i.e. 24 Minutes in total

Solar impact on South OSD:

- No change

Applicant comment:

- Not viable as results in an amenity reduction to the south east corner apartment
- Such a move makes the development unviable as this apartment is one of the highest revenue generating in the development which becomes completely compromised by such a setback, as described above

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