

3.4 CHILD CARE

The Department of Planning:

Confirm the proposed internal and external floor area of the proposed childcare facility and provide an assessment against the Council's Development Control Plan childcare centre floorspace requirements.

The City of Sydney:

- *The child care centre will require detailed review in relation to acoustic treatments between floors, sufficient and useable outdoor space capable of accreditation, solar access to outdoor space, appointment of child care centre spaces per level, and practicalities of evacuation via fire stairs and lifts.*
- *At this stage, the amount of outdoor space shown in the DA drawings (239sqm) is only sufficient for a 34-place centre as opposed to 90-place. The glazing line of the building will have to be moved dramatically.*
- *The Applicant and operator should familiarise themselves with the provisions of draft amendments to the Sydney DCP 2012 Section 4.4.4 regarding child care centres. The base building would require adjustment taking into account the fire safety and evacuation requirements of the draft DCP. These are safety features, beyond compliance with the BCA, for centres at higher levels within multi-level mixed use development..*

Response

Since lodgement of the Development Application the base build has been revised to ensure future compliance with the DCP is achievable. See below for details.

Outdoor Space:

The external glazing line of both level 3 and 4 have been revised to create a combined unencumbered external area of 685sqm which is suitable for a 90-place centre based on DCP requirement of 7sqm of usable space per child. Level 3 has 268sqm of external space for 36 children (7.44sqm per child). Level 4 has 417sqm of external space for 54 children (7.72sqm per child). Refer to figures 3.4.1, 3.4.2, 3.4.3, and 3.4.4 for the indicative layout of the child care levels 3 and 4.

Acoustics:

An acoustic consultant has been appointed and a assessment prepared to ensure noise levels are controlled within the child care centre. As advised by the acoustic consultant, noise attenuation measures have been incorporated into the facade and provisioned in the ceiling design to ensure the requirements set out in the Sydney DCP 2012 Section 4.4.4.5 can be achieved.

Solar Access:

Since the lodgment of the DA, extensive solar studies have been undertaken to help refine the size and orientation of the outdoor spaces. The outdoor spaces on both the child care levels receive adequate solar access between 9am and 3pm (and extended hours 8am to 4pm) on the 22nd June as per the Sydney DCP 2012 Section 4.4.4.3. Refer to Figures 3.4.5, 3.4.6 and 3.4.7.

Balustrade:

A 1.8m high balustrade has been incorporated into the outdoor space design to ensure children are unable to climb over as well as to prevent objects being thrown over the edge. The balustrade design also helps protect users of the space from adverse wind and climatic conditions.

Evacuation:

Various design measures have been incorporated into the base building to assist with the practicalities of evacuation via the fire stairs and lifts. These measures are in response to the Sydney DCP 2012 Section 4.4.4 and include:

1. Provision for a safe haven to be incorporated into future fit out on both Levels 3 and 4.
2. Provision for connection to a dedicated UPS system has been incorporated into the base building to ensure the evacuation lift can remain operational even during a blackout scenario.
3. The entire building will be fire sprinkled even though it falls under the 25m fire sprinkler requirement.

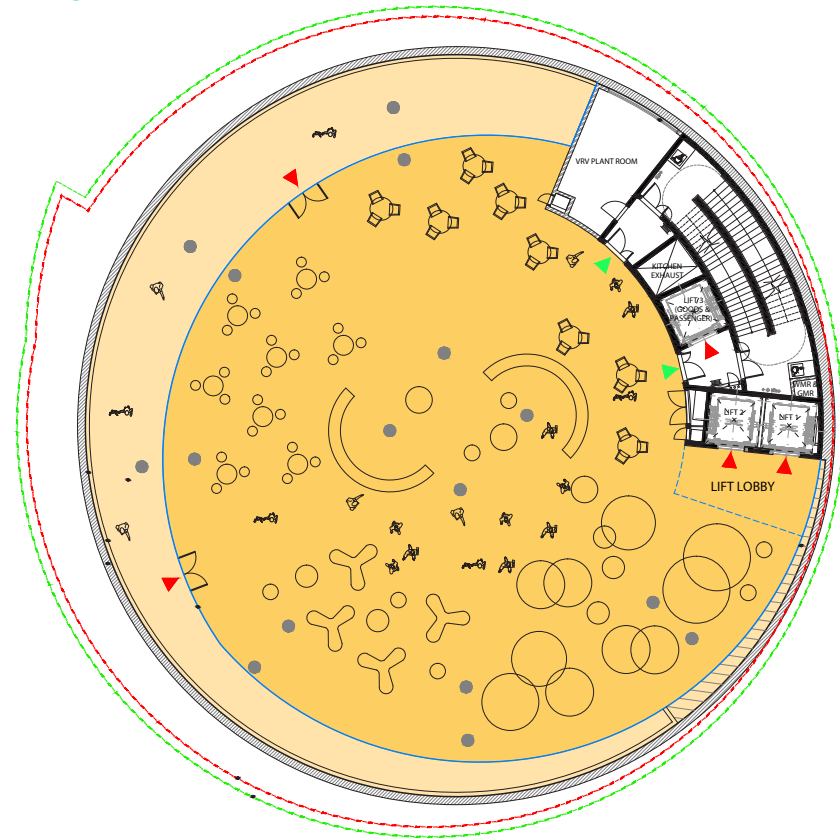


Figure 3.4.1_DA level 3 plan - indicative child care layout

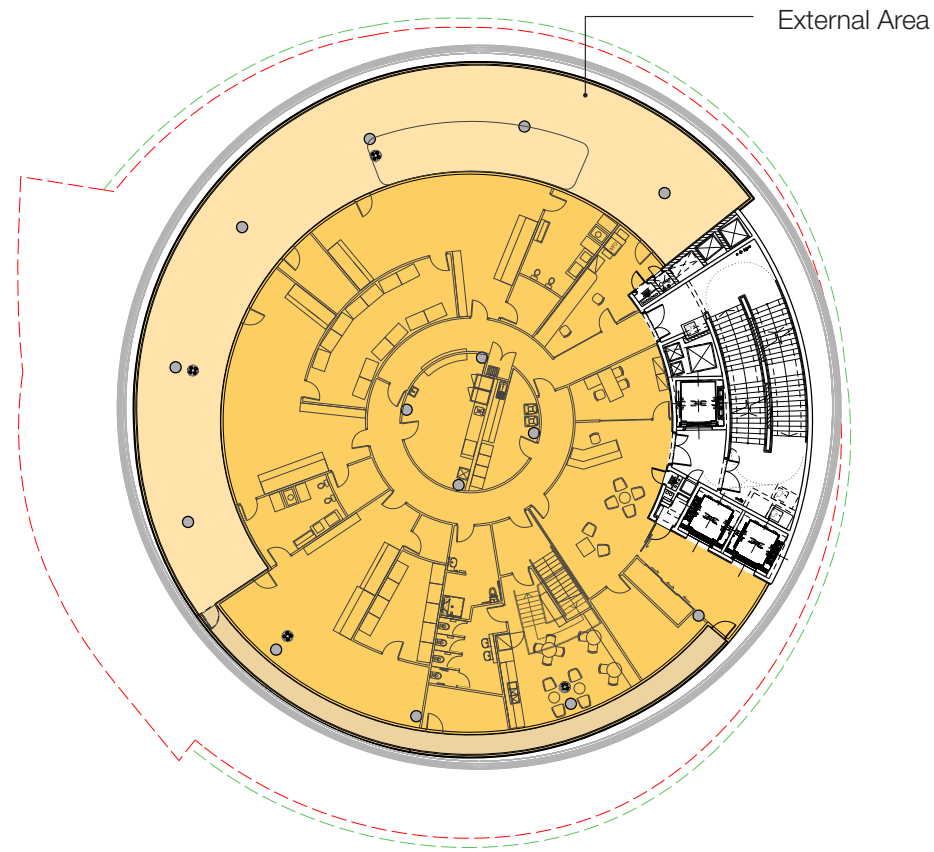


Figure 3.4.2_Proposed Level 3 Plan - indicative child care layout

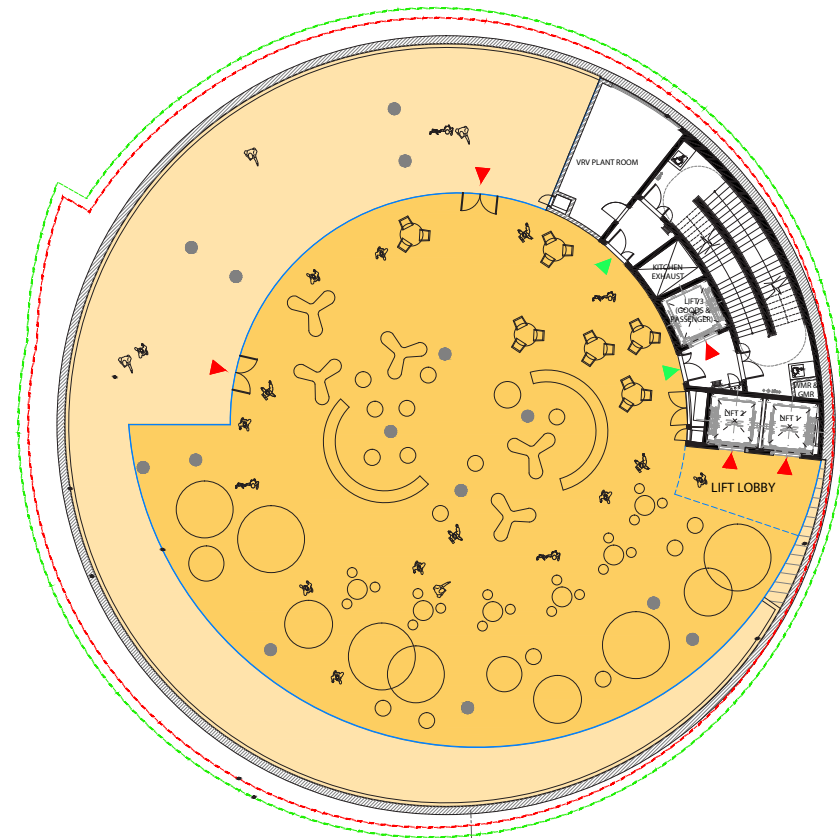


Figure 3.4.3_DA level 4 plan - indicative child care layout

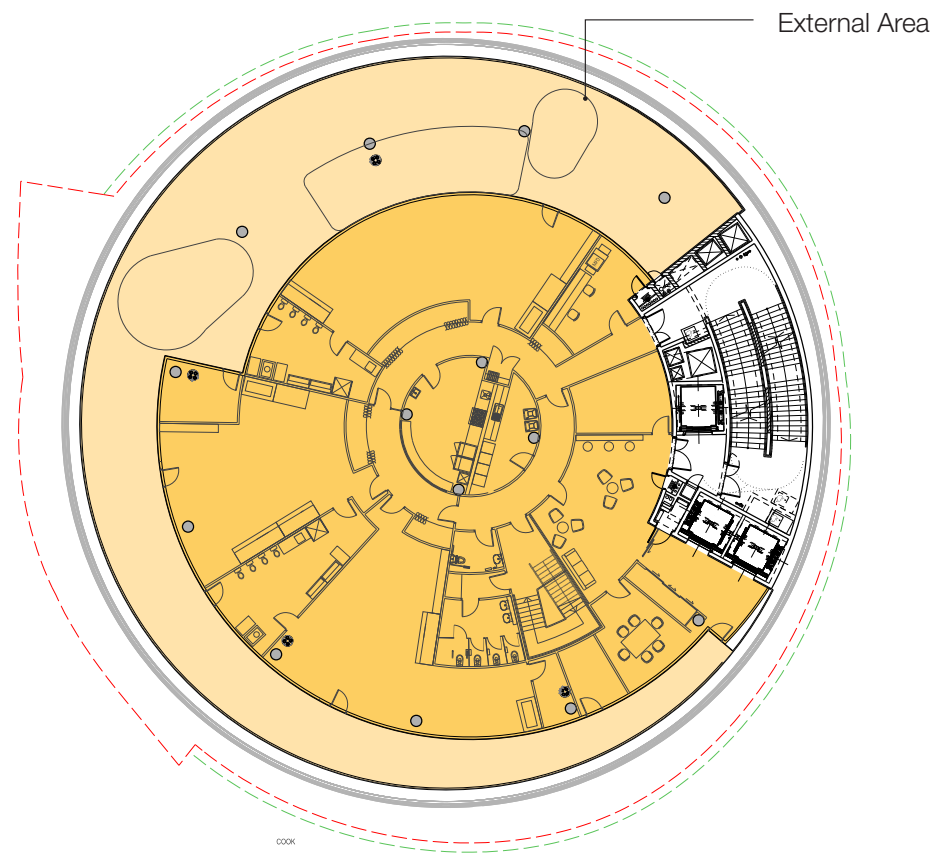


Figure 3.4.4_Proposed Level 4 Plan - indicative child care layout

22nd June	% Exposed to Direct Sunlight		Area Exposed (m ²)	
Start	L3	L4	L3	L4
8:00	72%	56%	216	243
9:00	62%	42%	188	183
10:00	55%	35%	167	151
11:00	57%	37%	171	160
12:00	58%	44%	175	191
13:00	62%	53%	187	230
14:00	79%	71%	237	310
15:00	86%	61%	258	267
16:00	70%	50%	211	218
9am to 3pm	66%	49%		
8am to 4pm	67%	50%		

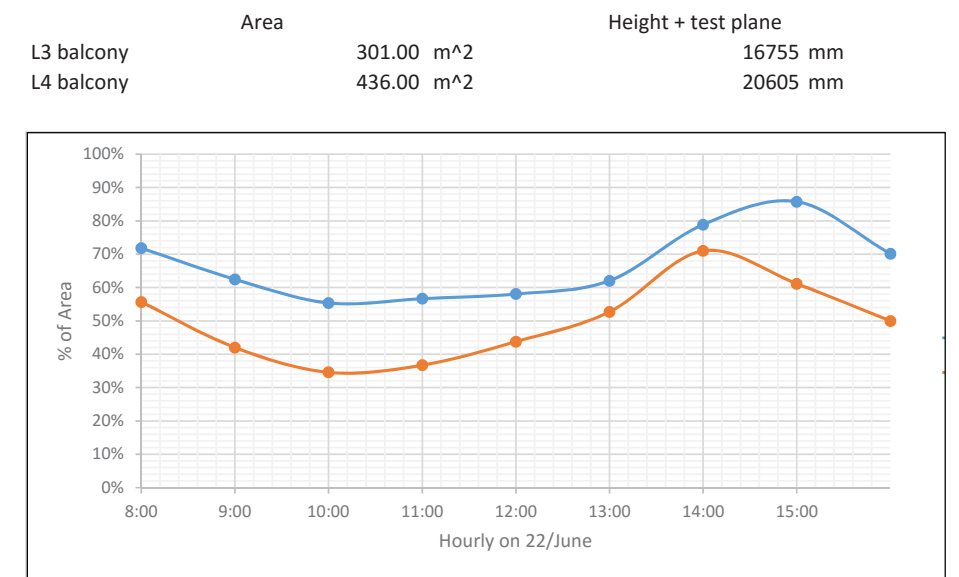
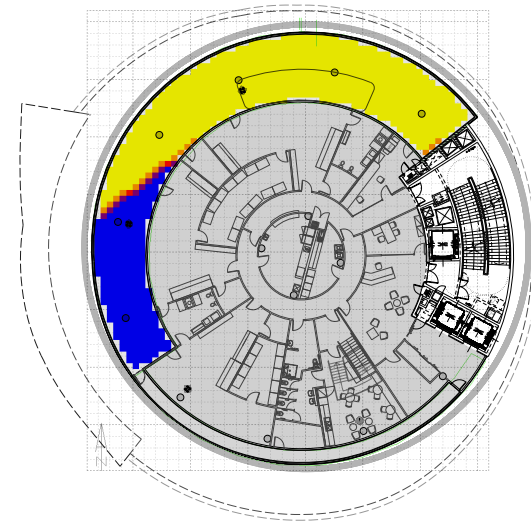
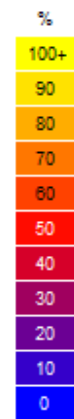


Figure 3.4.5_Levels of direct sun light penetration onto the child care terraces

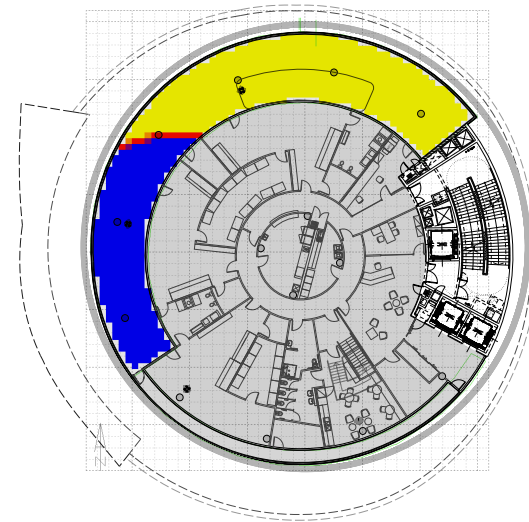
Percentage Exposed

Value Range: 0 - 100 %

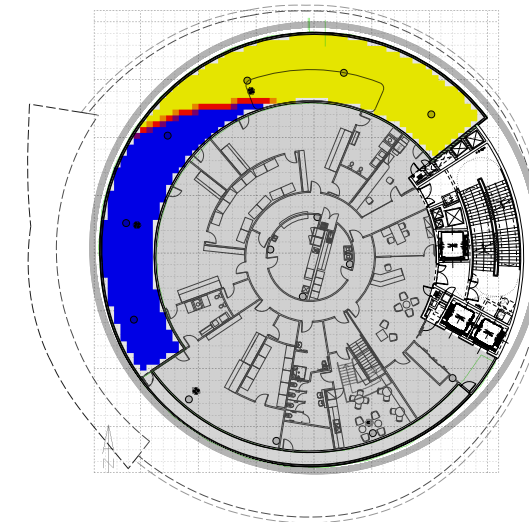
© ECOTECT v5



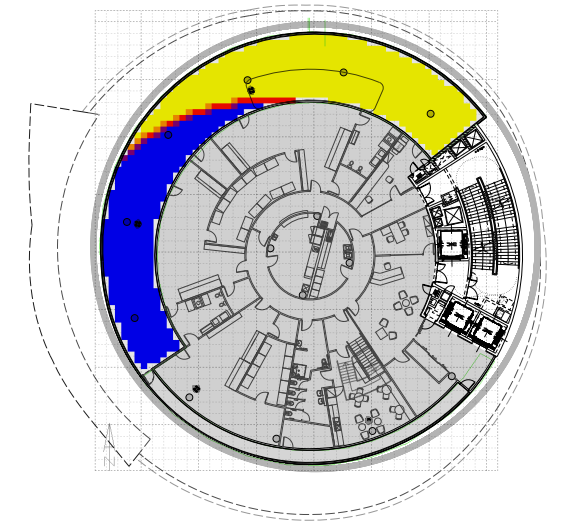
8AM Percentage of outdoor area exposed to direct sunlight:
Average Value: 71.81 %



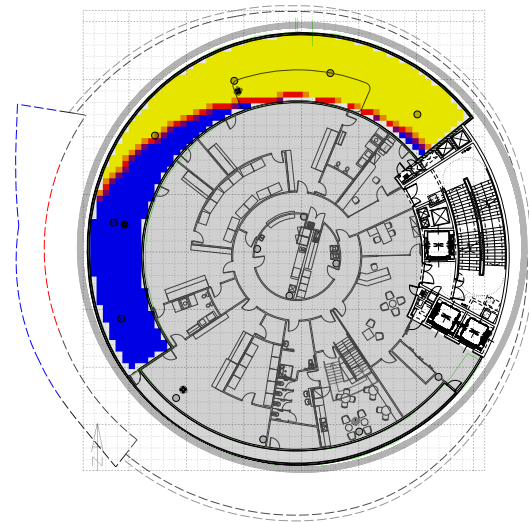
9AM Percentage of outdoor area exposed to direct sunlight:
Average Value: 62.45 %



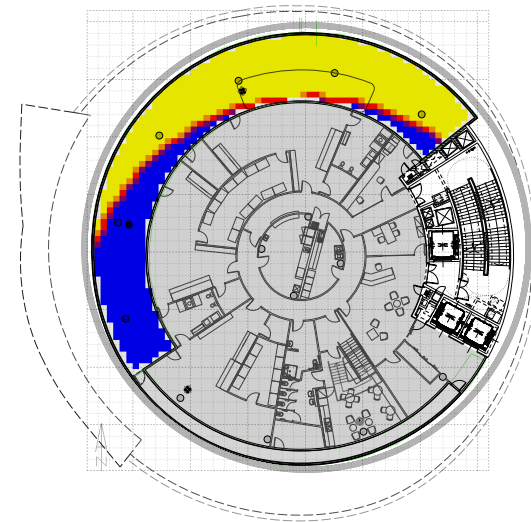
10AM Percentage of outdoor area exposed to direct sunlight:
Average Value: 55.38 %



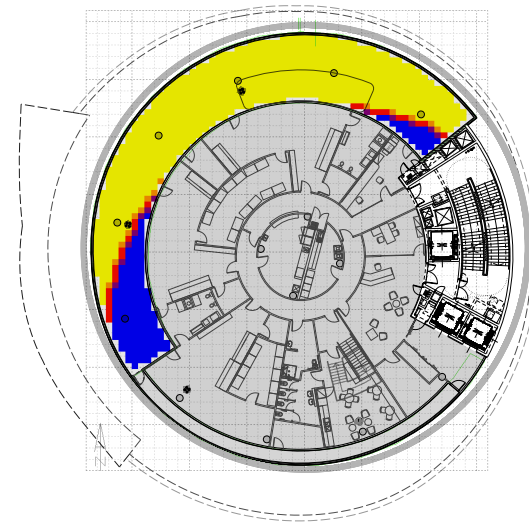
11AM Percentage of outdoor area exposed to direct sunlight:
Average Value: 56.67 %



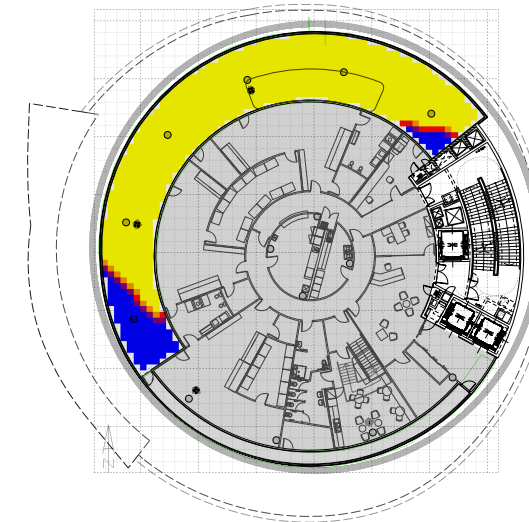
12PM Percentage of outdoor area exposed to direct sunlight:
Average Value: 58.07 %



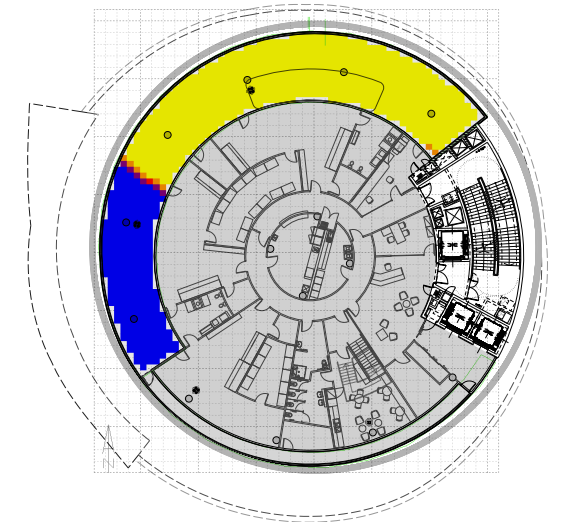
1PM Percentage of outdoor area exposed to direct sunlight:
Average Value: 62.05 %



2PM Percentage of outdoor area exposed to direct sunlight:
Average Value: 78.88 %



3PM Percentage of outdoor area exposed to direct sunlight:
Average Value: 85.76 %



4PM Percentage of outdoor area exposed to direct sunlight:
Average Value: 70.12 %

Figure 3.4.6_Level 3 outdoor area solar penetration study between hours of 8am and 4pm

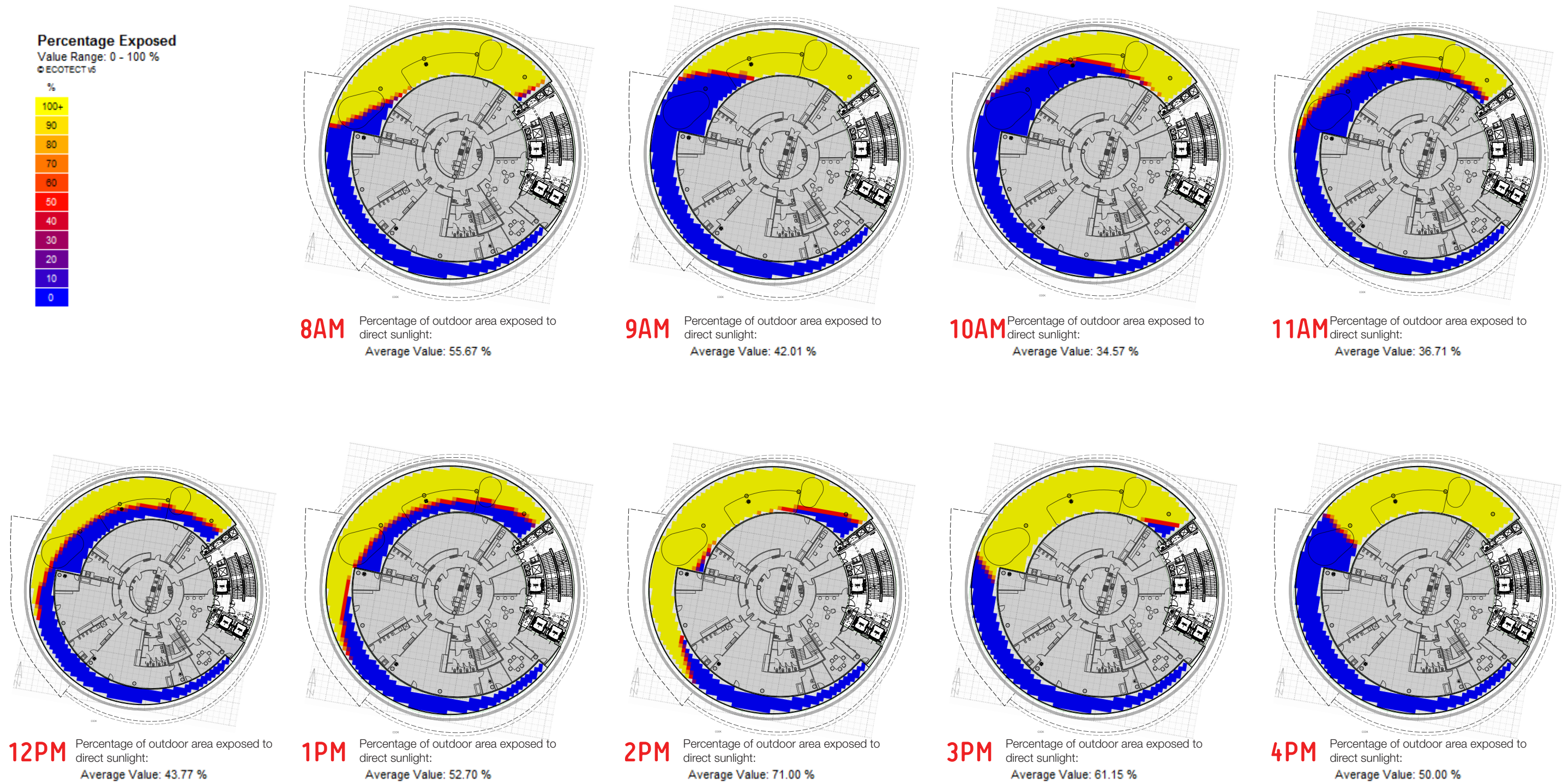


Figure 3.4.7_Level 4 outdoor area solar penetration study between hours of 8am and 4pm

3.5 BUILDING HEIGHT

Sydney Harbour Foreshore Authority (now Place Management NSW):

The Authority notes that the height of the proposed building (Darling Exchange) on the North Plot has increased by 5 metres. Any increase in building height should not create additional overshadowing across Haymarket Square during mid-winter. Further modelling is considered necessary in order to ensure solar access across Haymarket Square is maximised, especially the critical 12 midday to 2.00pm lunch time period during mid-winter and to confirm that the built form of the Darling Exchange does not dominate the public square.

Response

The impact from the 5m increase in height has been assessed in great detail as part of the S96 modification to the Concept Plan which has now been approved. The building is entirely within this parameter plan and consistent with the overall parameter plan height control.

The building has been positioned to minimise the shadowing throughout the year. Refer to Appendix B - Shadow Analysis for further information.

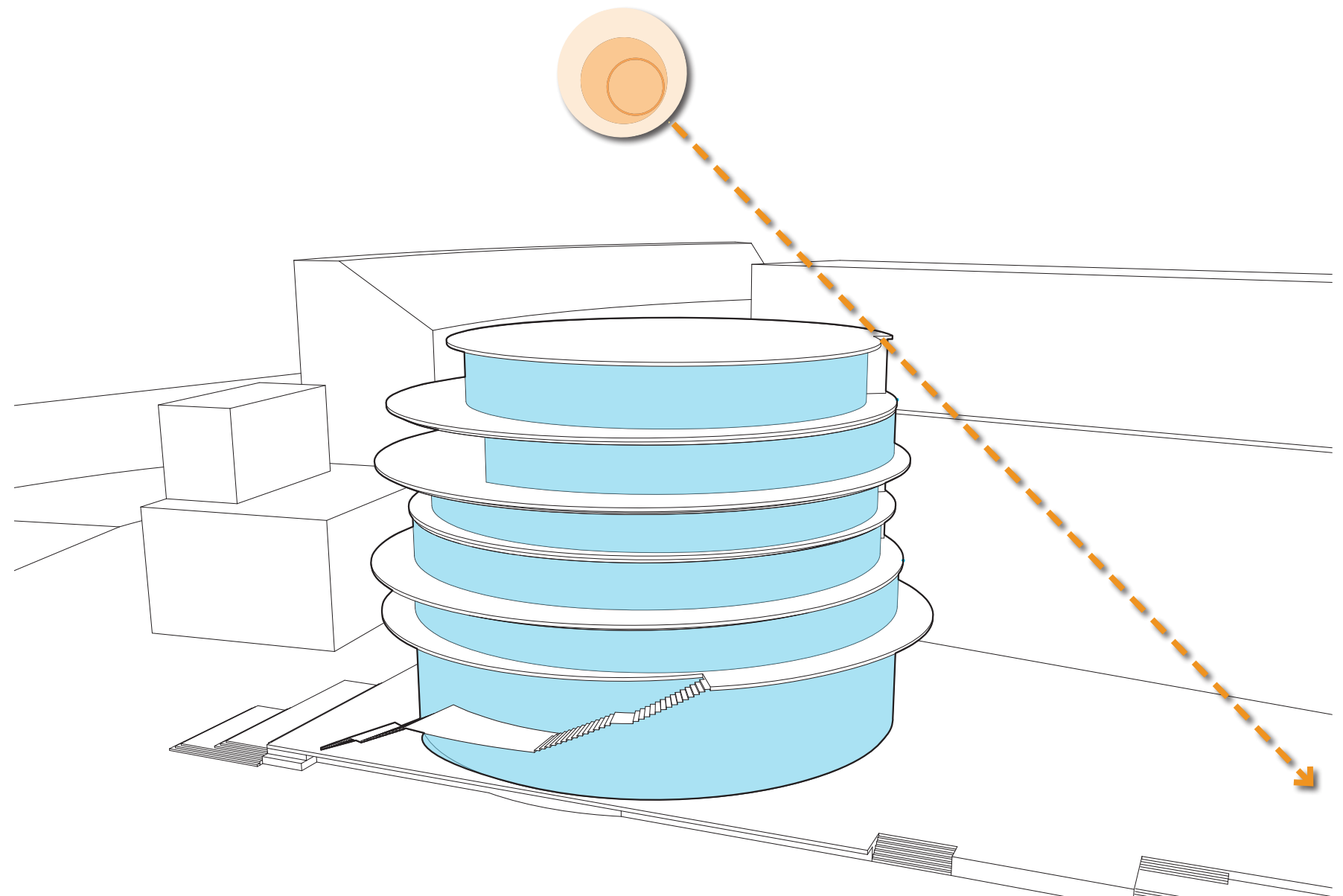


Figure 3.4.1_ The building form has been developed to taper to the solar access plane to minimise the amount of shadowing to The Square.