

Architectural quality

A combination of numeric built form controls and design objectives will inform the competition phase of the project, to allow the design issues raised to be refined and balanced. It is envisaged that the Key Design Criteria as proposed will allow an urban design and architectural outcome that is urbane, sophisticated, and ultimately achieves design excellence.

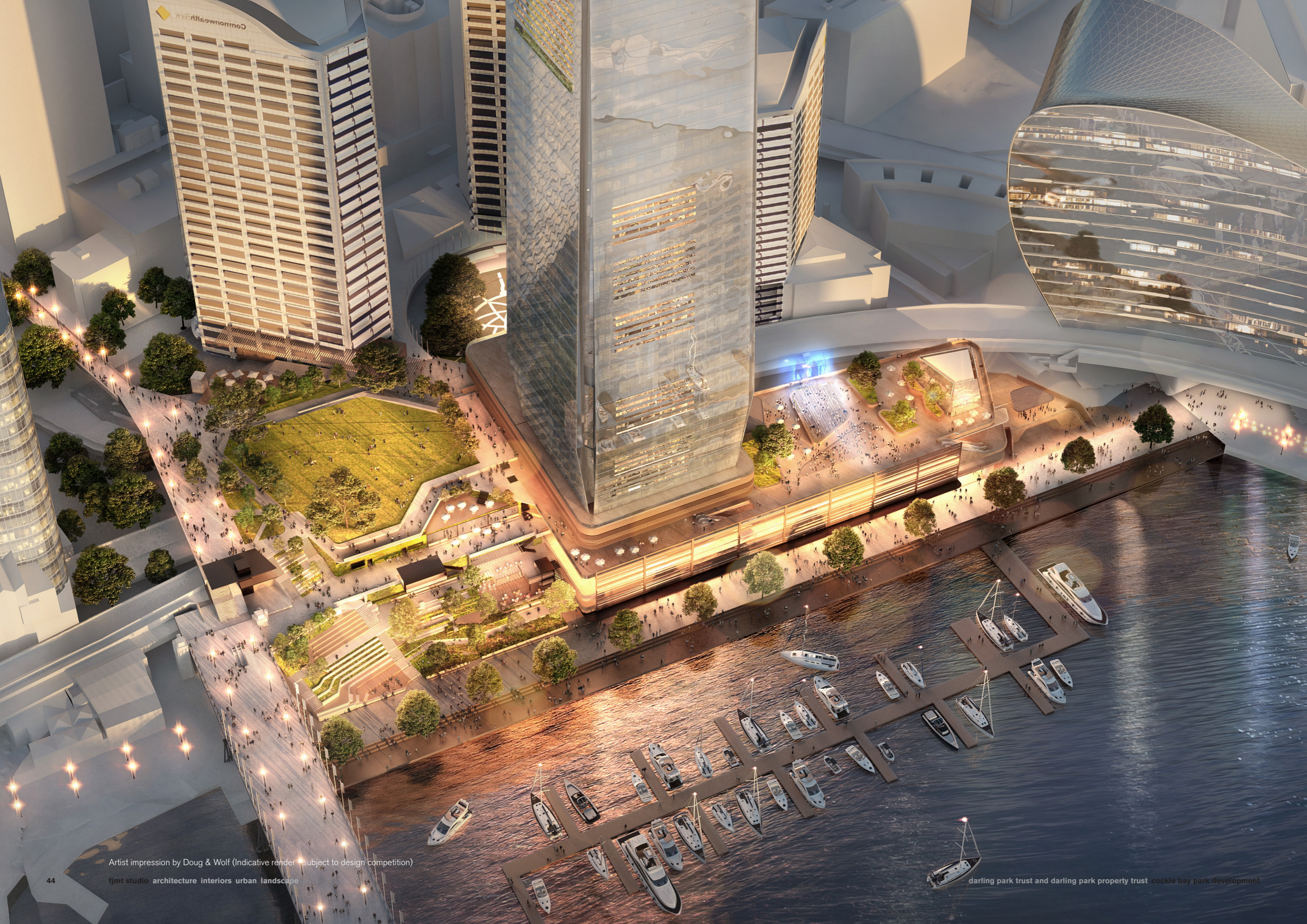
Key design parameters included in the approved Concept DA will guide the design competition process and Stage 2 SSDA including (but not limited to);

- Tower metric controls
- Overshadowing controls
- Total building area
- Design objectives.

Refer to Section 7.2 of this report for proposed controls.



Fig. 27. Artist Impression by Doug & Wolf (Indicative render - subject to design competition)



Artist impression by Doug & Wolf (Indicative render - subject to design competition)

7.0 Envelope & Key Design Criteria

This section steps through the changes to the envelope as a result of the concept massing design improvements, which includes;

- Tower envelope extension to south and reduction from north
- Increased tower envelope setback from the West
- Southern podium adjustments to capture design improvements
- Reduction of envelope at the Crescent Garden connection
- Reduction in envelope tower height

Further, we set out the design principles and metric controls considered to be relevant to the design and approval of future stages of development. These controls generate a maximum building volume within the envelope while still maintaining flexibility for design excellence outcomes. They will form part of the Concept DA approval and include (but not limited to);

- Total building size
- Overshadowing controls
- Tower metric controls
- Key design and massing objectives

7.1 Envelope Changes

Extension to south

The tower envelope is extended 15m south to accommodate potential southern tower siting options (subject to design excellence process). Investigating a more southerly tower siting was a key design principle resulting from DPE workshop process Feb - May 2018, with studies during that time determining 15m as the maximum feasible southern siting to an indicative massing when balancing structural complexity, commercial access / address, and private view impacts to both eastern and southern residential buildings potentially affected.

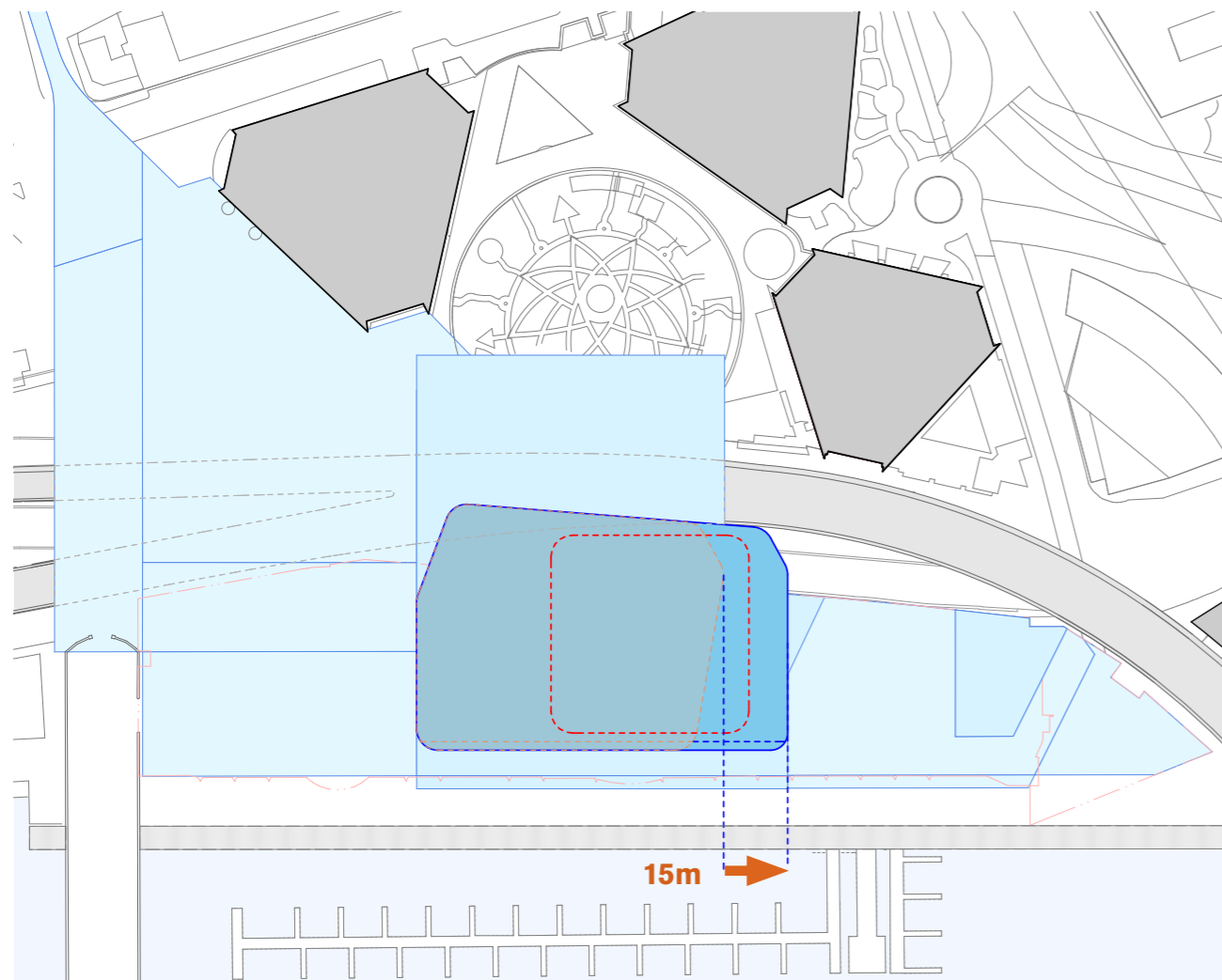


Fig. 28. Envelope extension to south

Reduction from north

The northern edge of the tower envelope is reduced by 8m. This maintains flexibility in tower siting for the Stage 2 design competition to determine the best balance of all issues raised regarding tower siting, in particular the balance of relationship to context, public benefit and private view impacts.

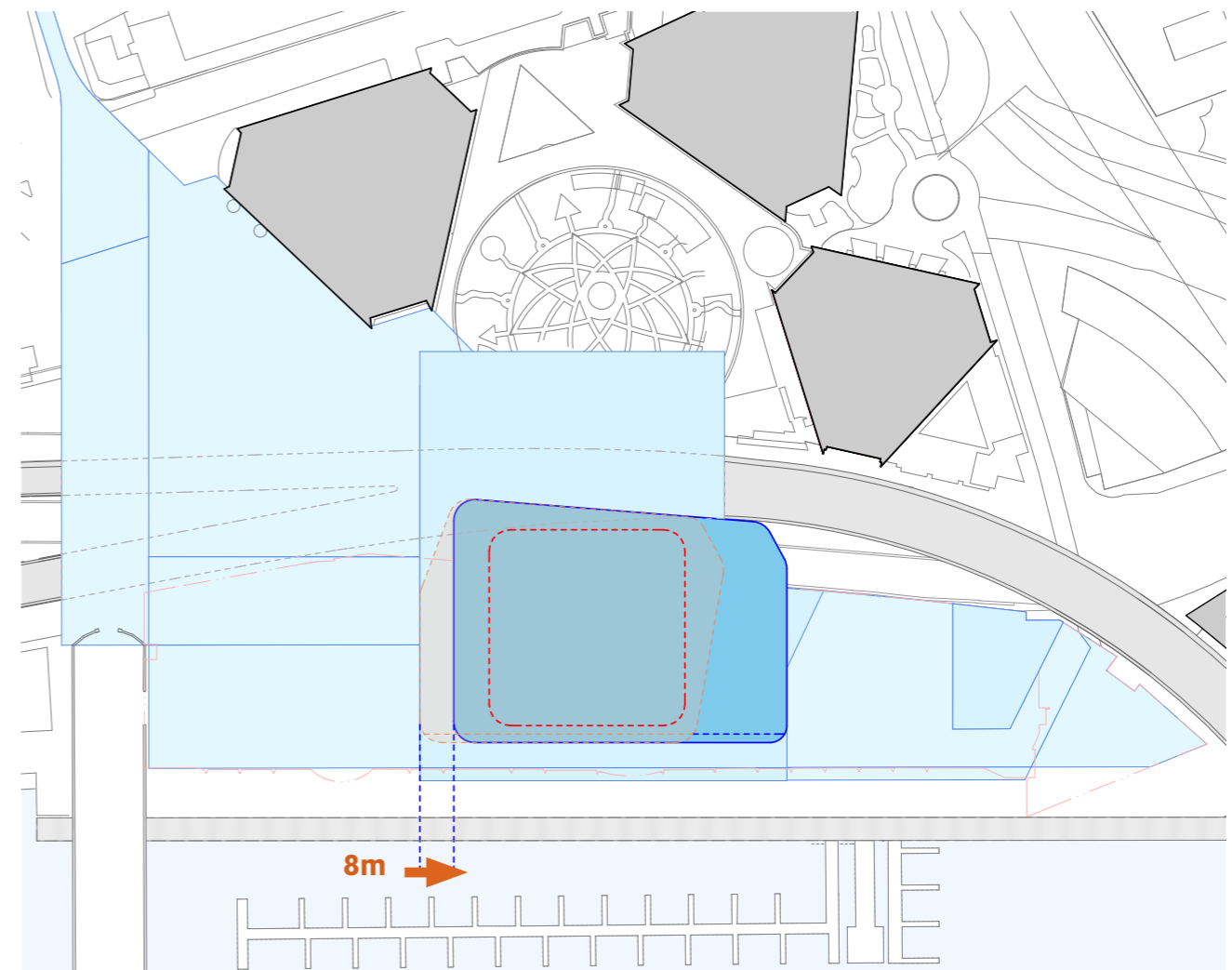


Fig. 29. Envelope reduction from north

Promenade Setback

The setback to the promenade is increased by 2m from 6m minimum / 8m average, to 8m minimum / 10m average to reduce the visual impact of the tower from the promenade, and reduce overshadowing to the southern end of the promenade. Increasing this setback further is restricted by technical constraints such as increased cantilever over Harbour St, and proximity to the rising Western Distributor freeway.

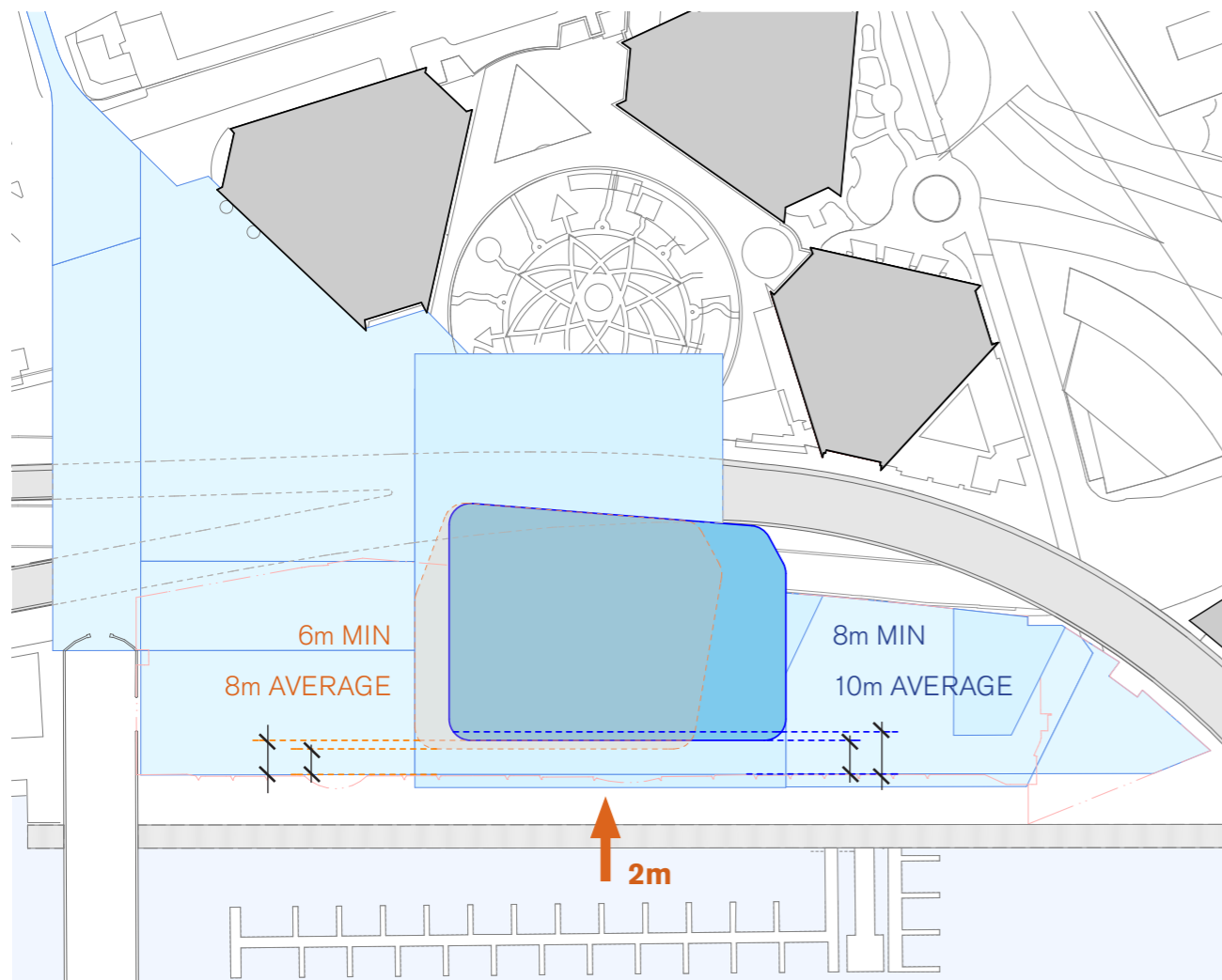


Fig. 30. Envelope increased Promenade setback

Podium South

The southern podium envelope at level 3 is adjusted to accommodate the design improvements to the southern public space. These adjustments increase amenity to the southern public space by providing opportunity for a built form separation to the Western Distributor, as well as allow architectural treatments to reduce the prominence of the tower when viewed from the southern end of the Promenade.

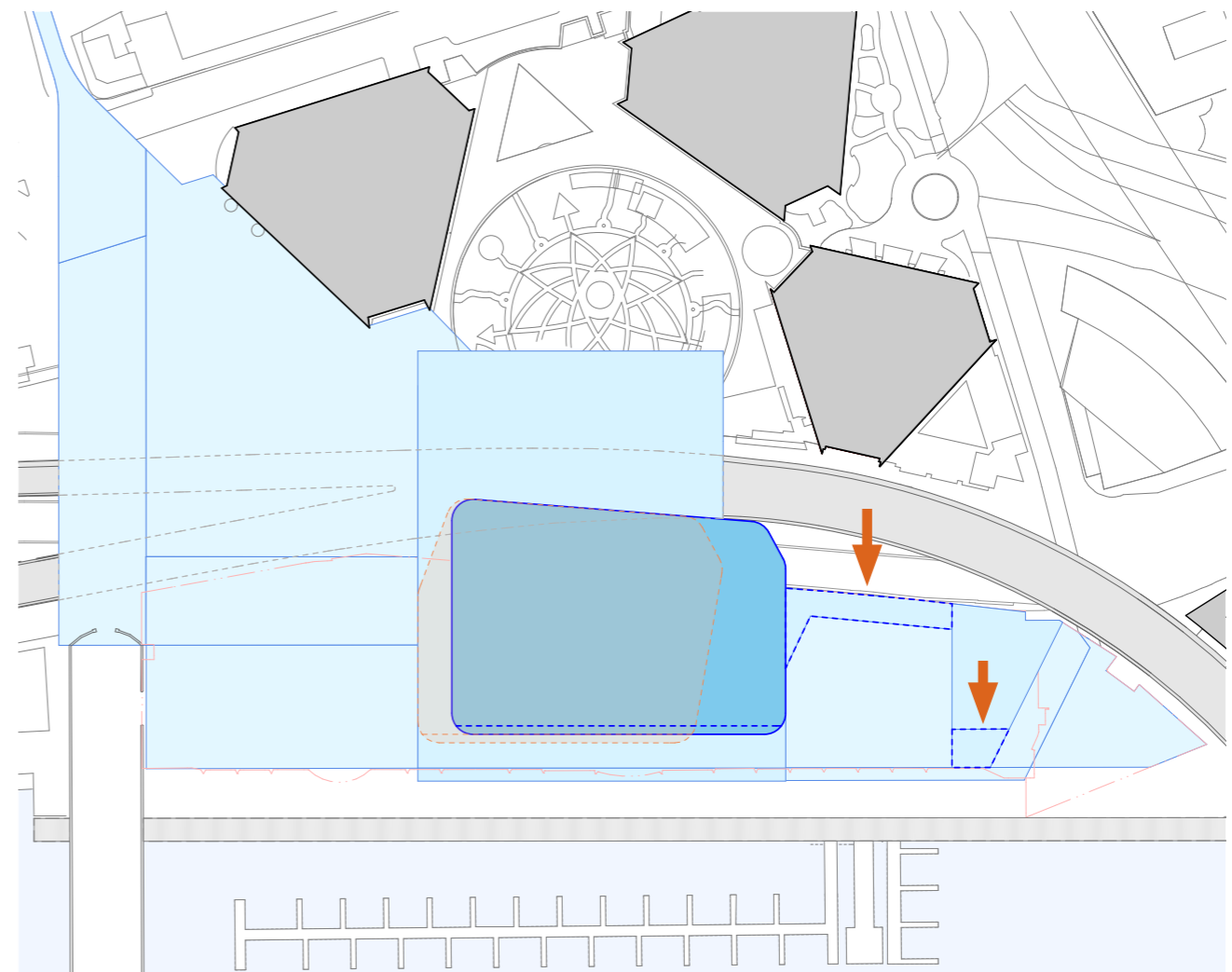


Fig. 31. Additional envelope at podium south level 3

Crescent Garden

The eastern extension of the podium envelope adjacent to the Crescent Garden connection is reduced by 10m to improve private view outlook from the residences in the Astoria apartments on Sussex St. The envelope still allows for a connection to Crescent Garden, reinvigorating this currently isolated public space through improved access and connectivity.

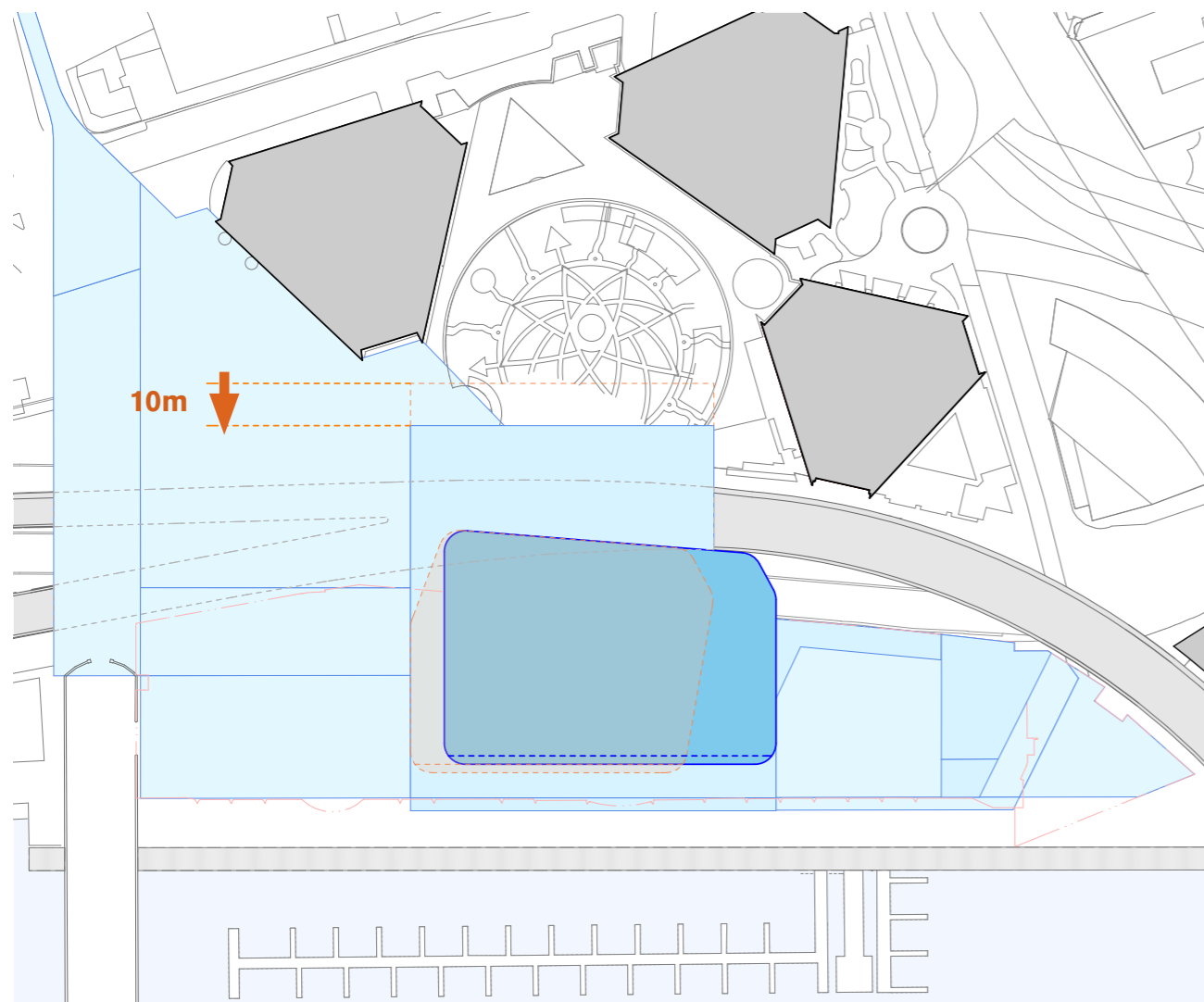


Fig. 32. Envelope Crescent Garden connection reduction

Height

The height has been reduced to RL 183.000. This is a 12m reduction from the 2017 amended concept submission and 52m lower than the original concept proposal submitted in 2016, and remains under the Tumbalong Park sun access plane.

As described in Section 6, the height of RL 183 was the resulting limit in height reduction based on the following key constraints;

- Allows feasible and desirable tower slenderness ratio while allowing for commercial requirements such as minimum / market ideal floor plate size and minimum overall area.
- Allows for a building massing that provides the best balance of private residential view sharing.
- Allows flexibility in the tower envelope for design excellence.

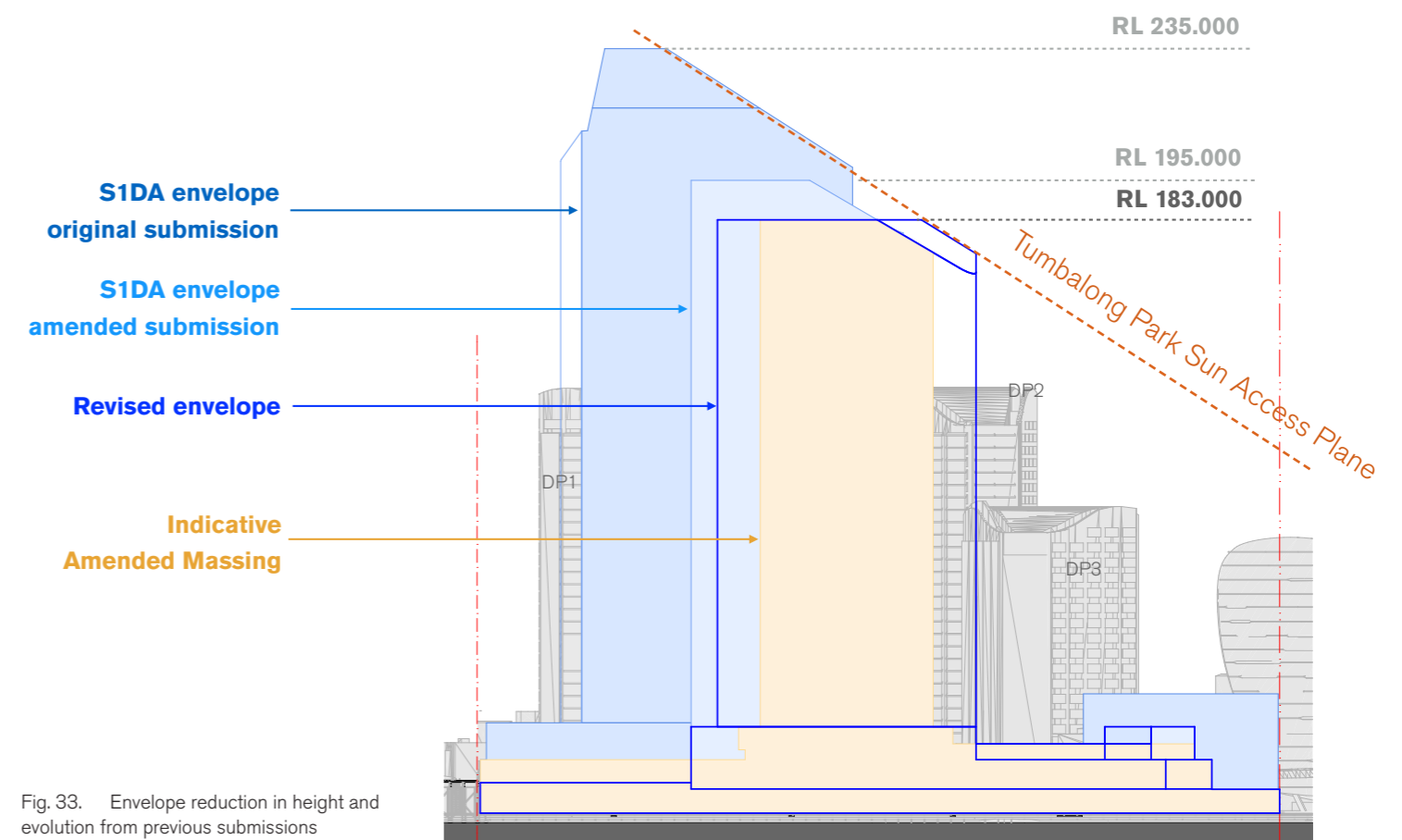


Fig. 33. Envelope reduction in height and evolution from previous submissions

Sydney Square No Additional Overshadowing

The envelope is proposed to comply with the LEP control for no additional overshadowing to Sydney Square by using the sun protection contours the city has provided in Central Sydney Planning Strategy (CSPS). This produces a cut in the top north east corner of the envelope as shown below. Refer to Appendix A - Solar Access Studies for shadow diagrams at 30 minute intervals, which indicate the revised envelope will provide no additional overshadowing the existing to Sydney Square.

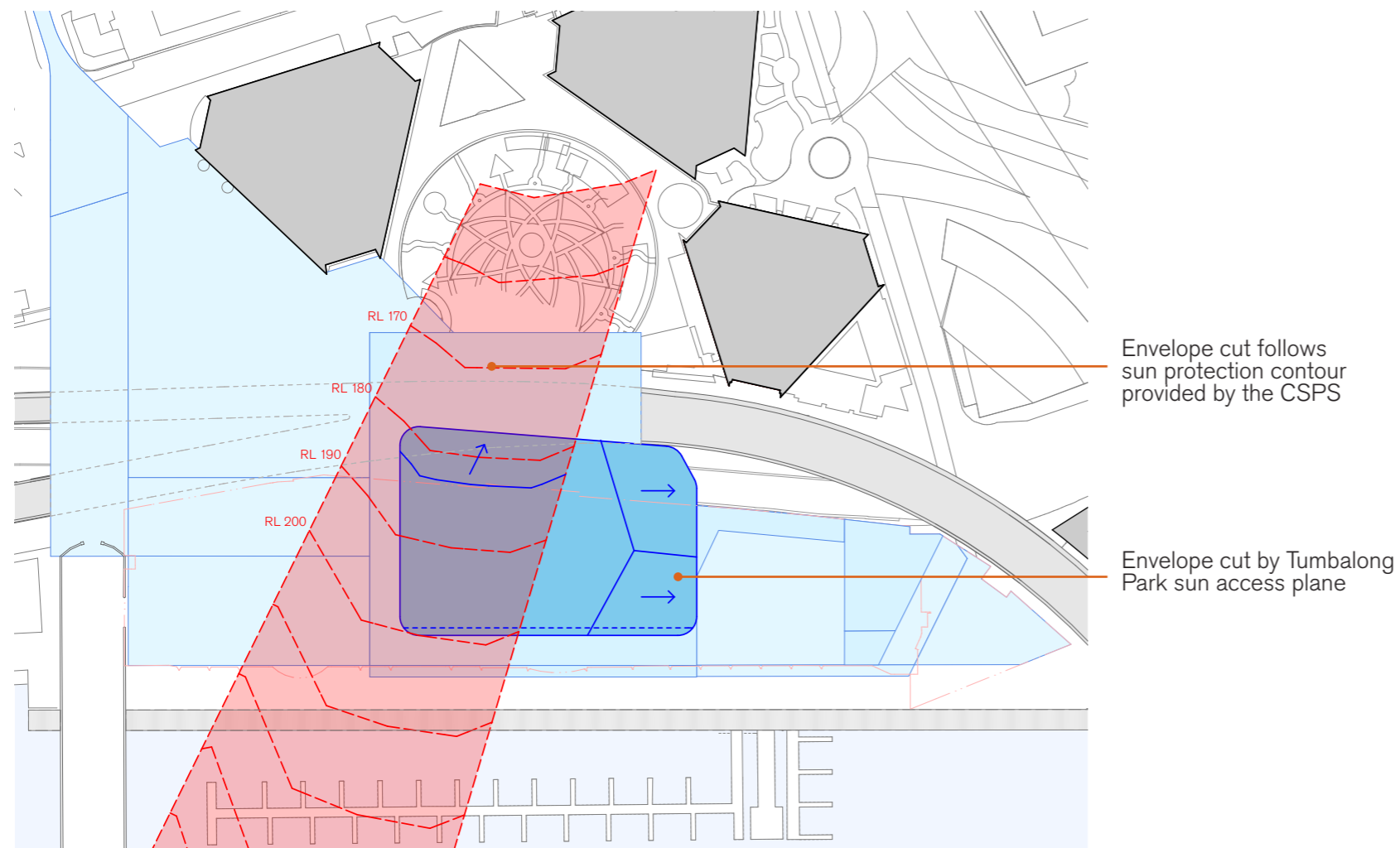


Fig. 34. Sydney square sun plane contours cutting the top of the revised envelope

Sydney Square

Type	No Additional Overshadowing
Intended Date of Protection	14 April - 31 August
Intended Time of Protection	11am - 4pm

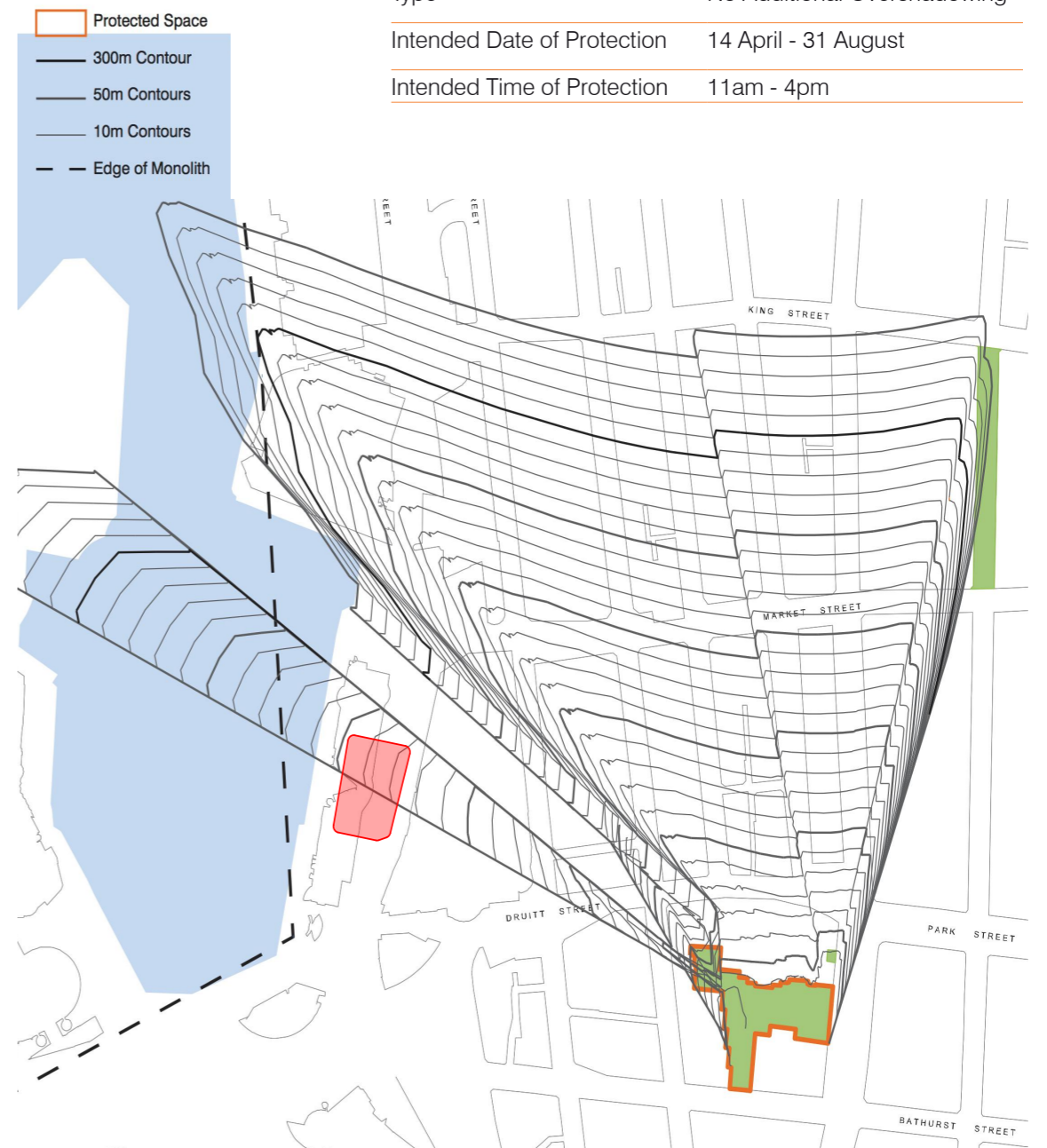


Fig. 35. Extract from the Central Sydney Planning Strategy Attachment A, Appendix M Sydney Square No Additional Overshadowing Controls

Envelope Change Summary

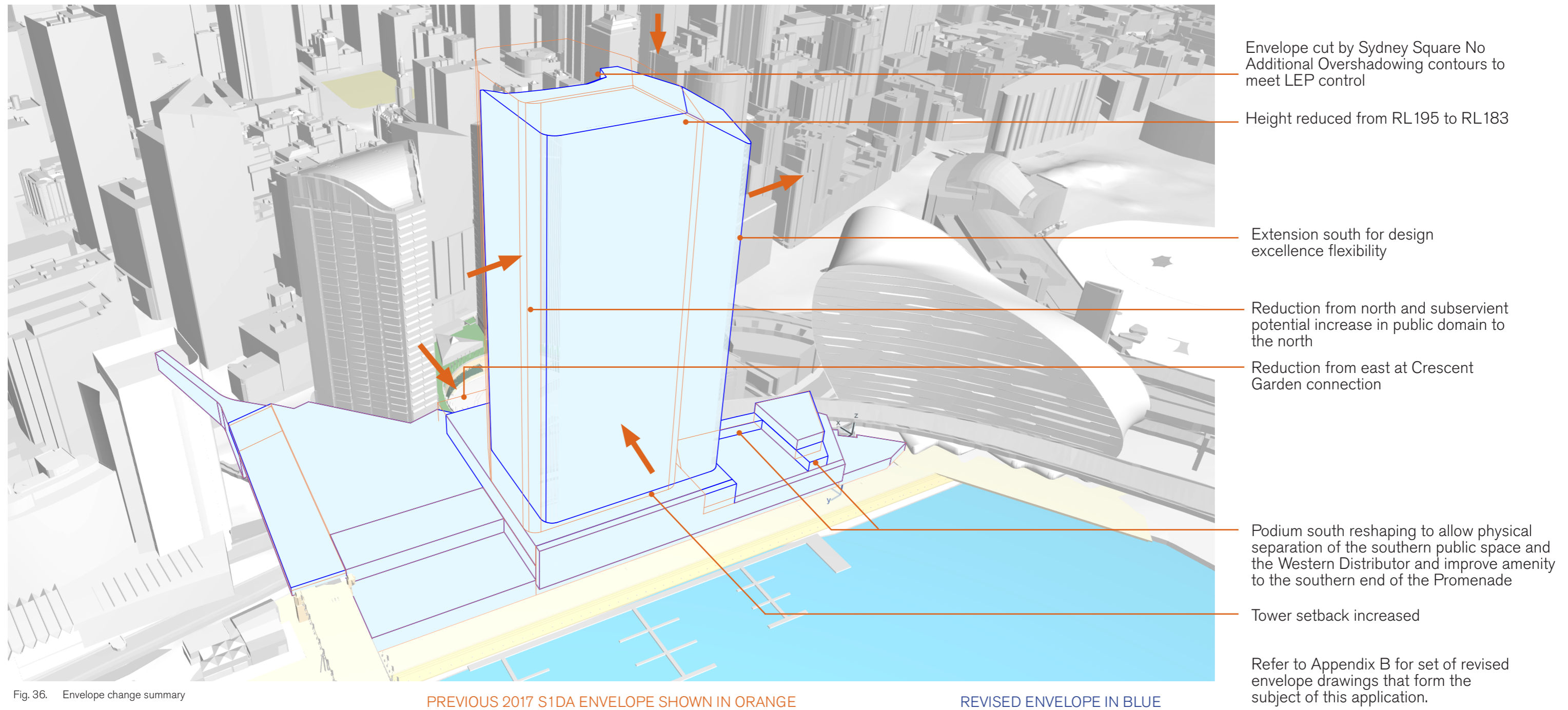


Fig. 36. Envelope change summary

7.2 Key Design Criteria

In order to provide certainty that the whole envelope will not be filled, the absolute dimensional limits are set out below to restrict the bulk and scale of the tower. The tower volumetric utilisation of 65% allows flexibility for the Stage 2 design excellence process to define the best outcome from a range of possibilities.

The following controls have been defined to guide the design of built form within the envelope (note these are appropriate to the proposed revised building envelope only).

Total Building Size

The following are total building areas within the whole envelope including the tower, tower base, podium, and deck (refer to Appendix B).

- Maximum building commercial GFA 75,000m²
- Maximum building retail GFA 14,000m²
- Publicly accessible open space shall include at least 6,000m² on the northern side of the site between the tower and Pyrmont bridge, and may include transitional space such as access and circulation spaces, stairs, terraces, hard and soft landscaping, and retail interfaces.

Overshadowing controls

- No additional overshadowing to public spaces at certain times as per the Sydney LEP 2012 control
- Future Town Hall Square Controls (refer to overshadowing definitions on page 41)
 - Maximum annual average additional overshadowing hours 2.5 hrs
 - Maximum duration of overshadowing period 50 days
 - Maximum peak day overshadowing increase 1%

Tower Built Form Controls

The following controls apply to the tower envelope only (from RL29 and above which does not include tower base, podium and deck, refer to Appendix B). Refer to the following page for an example measure.

- Maximum tower footprint 3,000m²
- An average tower floor plate size of up to 2,350m² GFA
- Maximum tower facade length along the promenade frontage 60m
- Maximum tower volumetric envelope utilisation 65% (refer Figure 38)

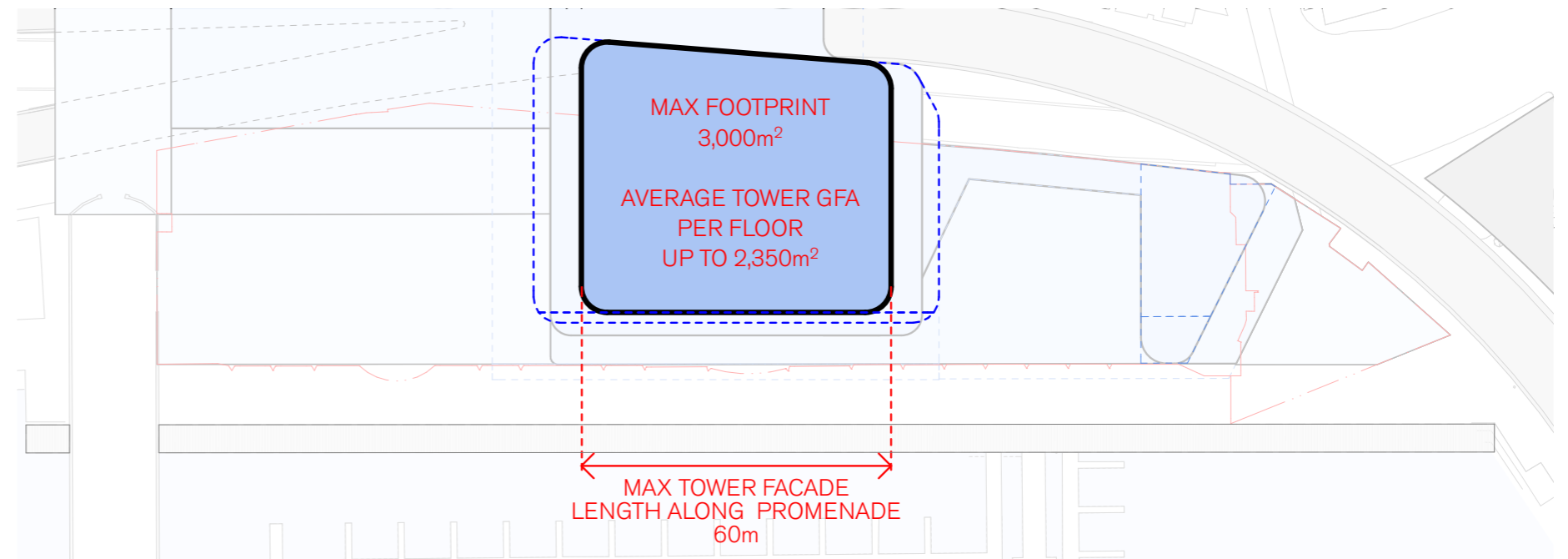


Fig. 37. Maximum footprint and promenade frontage

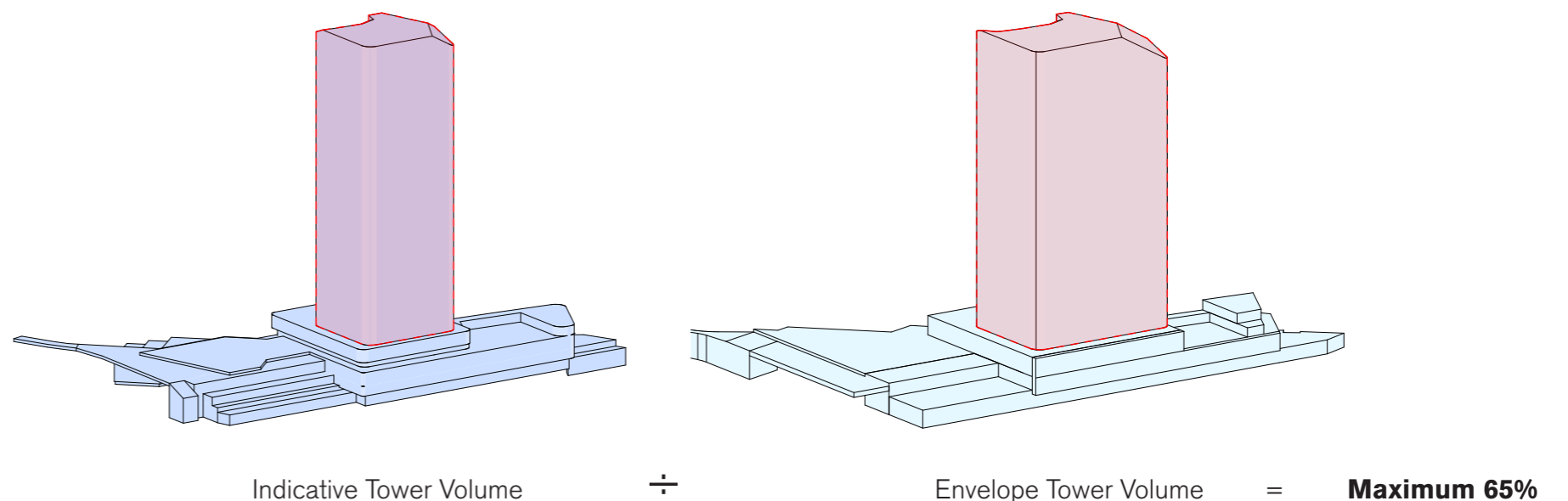


Fig. 38. Volumetric utilisation calculation

Indicative Measures Against Controls

The following measures an indicative amended massing within the revised envelope against the key design criteria metric controls.

The key design criteria generates a maximum building volume within the envelope, but allows flexibility for the Stage 2 design excellence process to define the best outcome from a range of possibilities.

Revised Concept Envelope

- Tower envelope area in plan 4,086m²
- Tower length along Promenade frontage 78.6m
- Tower volume 620,630m³

Indicative Amended Massing

- Total building commercial GFA 75,000m², retail GFA 14,000m²
- Tower footprint 2,500m²
- Tower average floor plate (38 tower floors) GFA 1,883m²
- Tower facade length along Promenade frontage 52.5m
- Tower volume 382,927m³, tower envelope volumetric utilisation 62%

This massing was used as a typical maximum volume for the Visual Impact Assessment by Ethos Urban and Virtual Ideas in the response to submissions.

