

Central Barangaroo

Base case to achieve solar clause B3

Prepared for
Aqualand

Issued
08 Aug 2024

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SJB acknowledge the Traditional Custodians of the land on which we live, practice, and visit, and pay our respects to Elders past, present, and emerging. We recognise the continuous engagement and caring of the lands, waters, and skies by First Nations peoples for time immemorial.

We support the Uluru Statement from the Heart and accept its invitation to walk with Aboriginal and Torres Strait Islander people in a movement of the Australian people toward a better future.

Issued		
V03	Issued	08/08/2024



Certified Management Systems
ISO 9001:2015 Quality Management System
ISO 45001:2018 Occupational Health & Safety Management System
ISO 14001:2015 Environmental Management System

Version: 00
Prepared by: HT
Checked by: FL, EW

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MOD 8 Approved Envelope

Shadow Analysis

The MOD 8 approved envelope below depicts the overshadowing on Hickson Park being greater than an average of 2,500 sqm of overshadowing between 12pm to 2pm on 21st June each year.

The following table depicts the area of Hickson Park that receives sun and gets overshadowed between 12:00 to 14:00 on the 21 June each year, by the MOD 8 Approved Envelope -

TIME	RECEIVES SUN (sqm)	SHADOW AREA (sqm)
12:00	6698	4716.3
13:00	7402	4012.3
14:00	8632	2782.3
Average overshadowing		3836 sqm

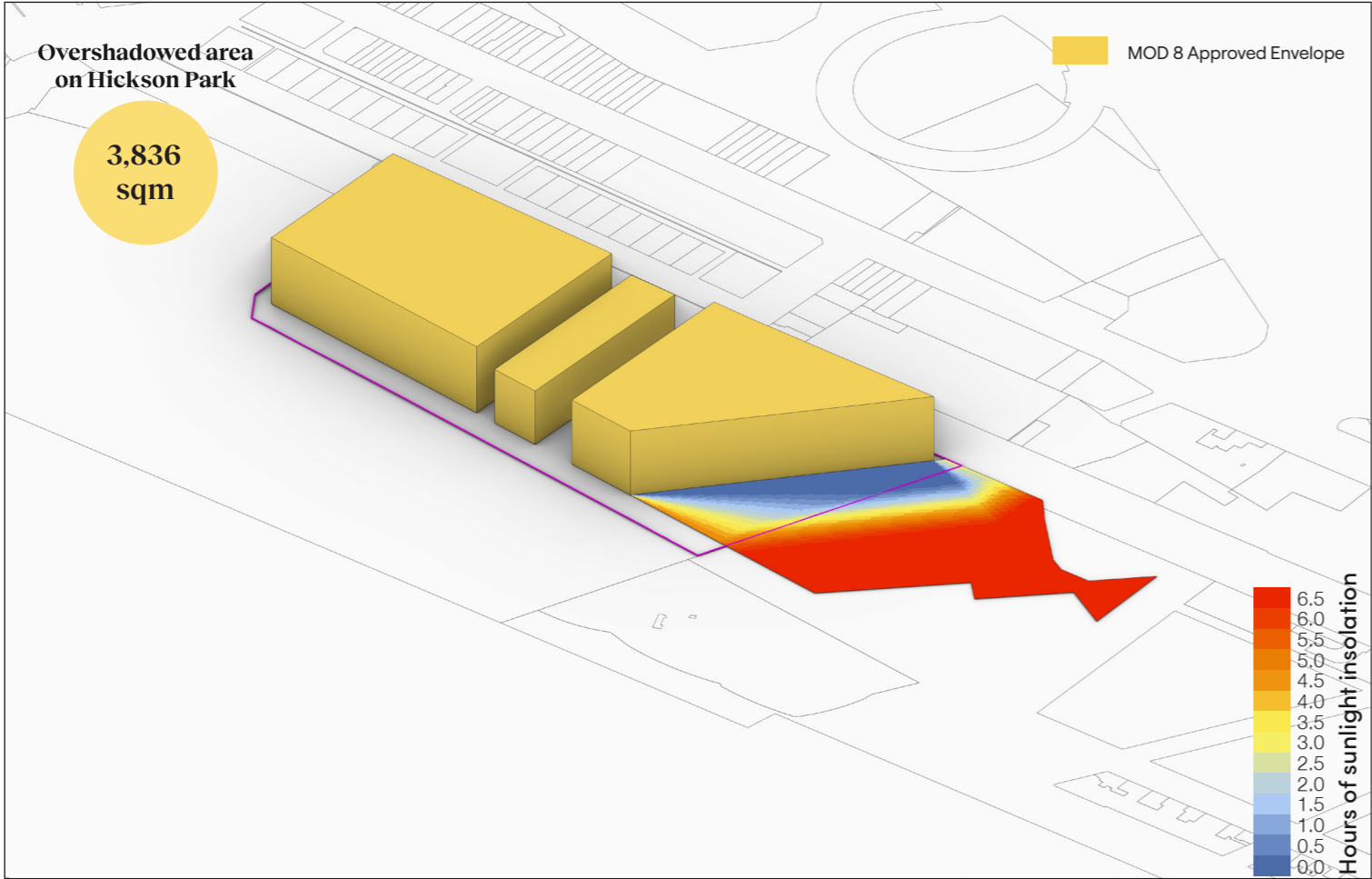


Figure 1: MOD 8 Approved Envelope

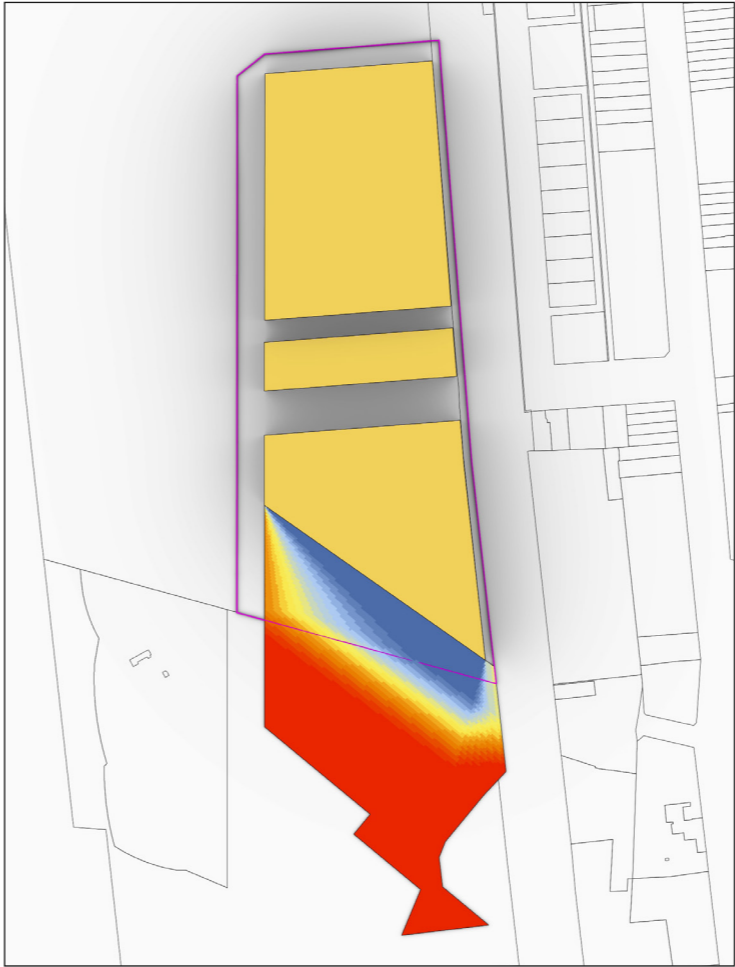


Figure 2: Plan and isometric view of MOD

Base Case - MOD 8 approved envelope (subject to Condition B3)

Shadow Analysis

The MOD 8 envelope has been updated to achieve a base case that satisfies the Clause B3.2 (a). The massing below depicts the overshadowing on Hickson Park that maintains an average of 2,500 sqm of overshadowing between 12pm to 2pm on 21st June each year. Reduction of south east corner of Block 5 by approximately 15 meters in height would result in achieving the Clause B3. 2 (a).

Clause B3, 2 (a) is defined as below :

The footprint and building envelope of Block 5 is to be reduced to remain within the B4 zoned land. Future above ground buildings in Block 5:

(a) are to minimise overshadowing of Hickson Park, ensuring no more than an average of 2,500 sqm of Hickson Park is overshadowed by built form between the hours of 12:00 and 14:00 on the 21 June each year.

The following table depicts the area of Hickson Park that receives sun and gets overshadowed between 12:00 to 14:00 on the 21 June each year, for the updated MOD 8 envelope -

TIME	RECEIVES SUN (sqm)	SHADOW AREA (SQM)
12:00	8321	3093
13:00	8903	2511
14:00	9520	1894
Average overshadowing		2500 sqm

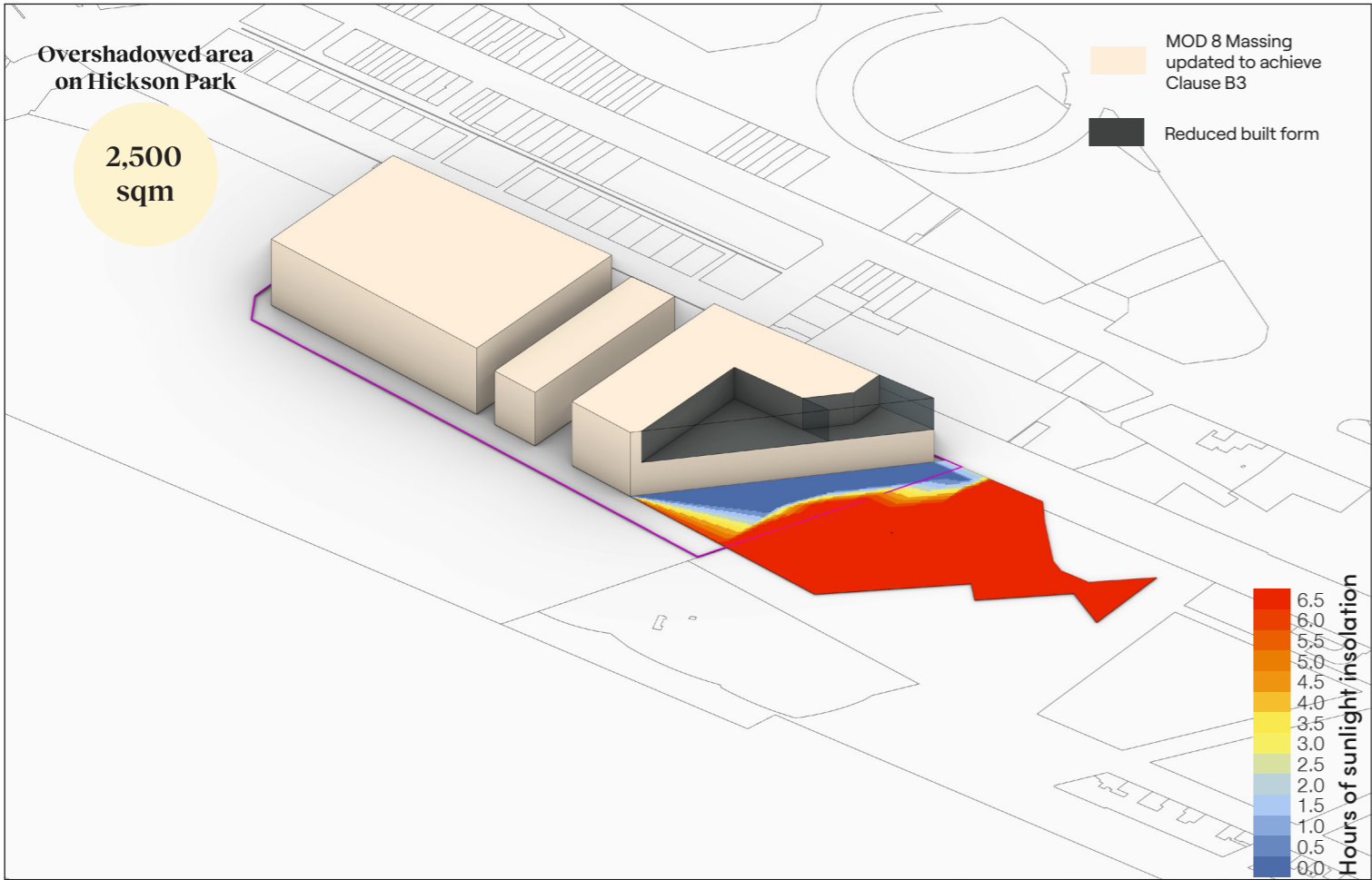


Figure 1 : Updated MOD 8 Approved Envelope indicating the reduction of mass in black required to achieve Clause B3. 2 (a)

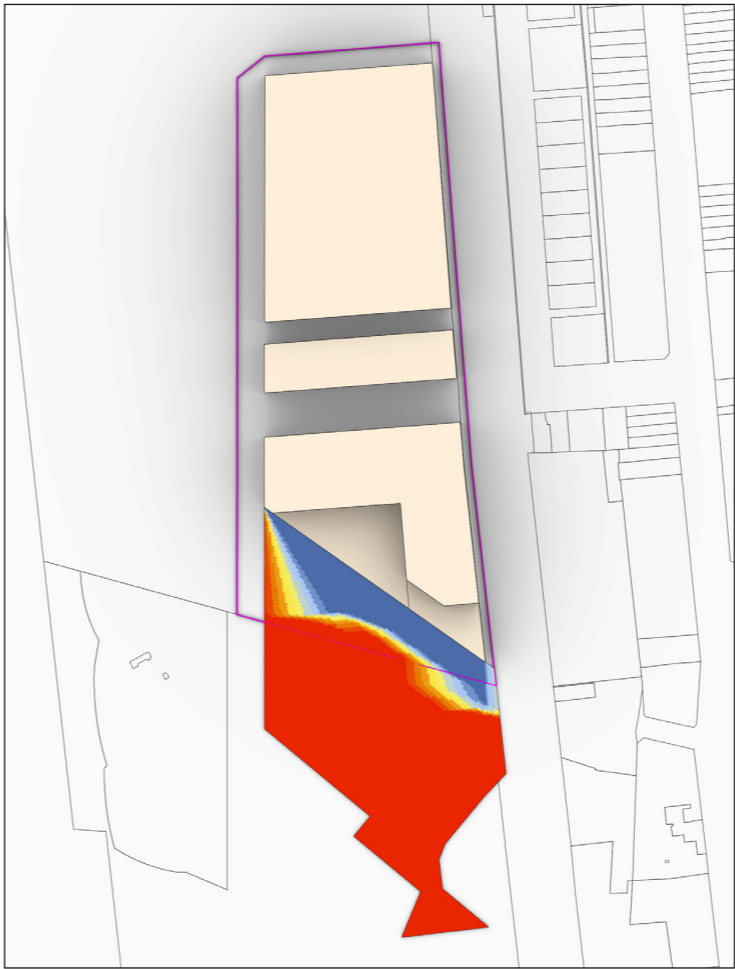
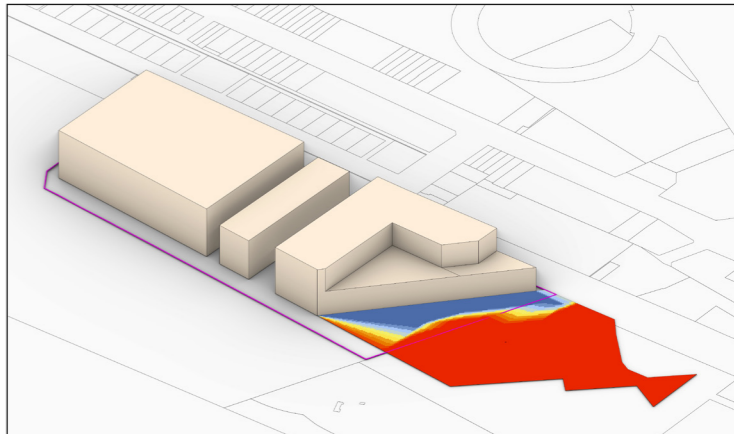


Figure 2 : Plan and isometric view of "Base Case" for MOD achieving under 2,500 sqm of overshadowing on Hickson Park.



MOD 9 RtS Envelope

Shadow Analysis

The MOD 9 RtS envelope overshadows Hickson Park by approximately 272 sqm above the average overshadowing allowed as per Clause B3(a) of 2,500 sqm, between 12pm to 2pm on 21st June each year.

The following table depicts the area of Hickson Park that receives sun and gets overshadowed between 12:00 to 14:00 on the 21 June each year, by the “MOD 9 RtS Envelope”

TIME	RECEIVES SUN (sqm)	SHADOW AREA (SQM)
12:00	6359	3430
13:00	6987	2802
14:00	7704	2085
Average overshadowing		2772 sqm



Figure 1: MOD 9 RtS Envelope and overshadowing on Hickson Park



Figure 2: Plan of MOD 9 RtS Envelope

MOD 9 RtS Reference Design

Shadow Analysis

The following table depicts the area of Hickson Park that receives sun and gets overshadowed between 12:00 to 14:00 on the 21 June each year, by the MOD 9 RtS Reference Design -

TIME	RECEIVES SUN (sqm)	SHADOW AREA (SQM)
12:00	6721	3068
13:00	7161	2628
14:00	7871	1918
Average overshadowing		2538 sqm



Figure 1: Proposed MOD 9 Reference Design