

**ANGEL PLACE
LEVEL 8, 123 PITT STREET
SYDNEY NSW 2000**

URBIS.COM.AU
Urbis Pty Ltd
ABN 50 105 256 228

10 September 2021

Ms Clare Collett
Mills Oakley
151 Clarence Street
Sydney NSW 2000

Dear Clare,

NEPEAN BUSINESS PARK. DA 9876 LOCATED AT 14-278 OLD CASTLEREAGH ROAD, PENRITH

The Statement of Facts and Contentions issued by Land and Environment Court of New South Wales Case Number 2021/204069 includes contentions regarding tree canopy and urban heat, including the following:

9. The Application does not provide evidence that the subdivision plan has been informed by design studies to set a framework for good urban design outcomes and that the design will achieve the objectives set out in the Penrith Lakes SEPP.

Particulars

9.7. The subdivision layout gives insufficient regard to achievement of a minimum of 25% tree canopy cover as recommended in Draft Greener Places Design Guide. The proposed development sites cover the entire Employment zone land. The proposed setbacks in the Applicant's DCP will not accommodate canopy trees on individual allotments to meet the target. There is no provision for landscape corridors and communal open spaces that would contribute to achievement of the target.

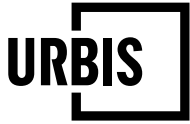
RESPONSE TO SOFAC

Urbis has undertaken the analysis and modelling (refer to Figure 1 and Table 1 below, and Attachment 1) to demonstrate that the development can achieve a minimum of 25% Tree Canopy Cover as recommended in the Draft Greener Places Design Guide. This clarifies particular 9.7 above and other contentions.

This information has also been provided previously to DPIE in URBIS submissions dated 28 August 2020 and 19 May 2021.

The data above has been built up from the following assumptions:

- 10% landscape area per lot. Refer to Figure 2 which demonstrates that a typical lot can achieve a tree canopy cover of 23% however our precinct tree canopy calculations conservatively allow for an average of 15% tree canopy per lot.



- The Vegetated Verge can achieve a 12% tree canopy cover over the site.
- The Great River Walk Open Space achieves a 4.5% tree canopy cover; and
- The Castlereagh Road buffer achieves a 3.4% tree canopy cover.

This results in **31%** tree canopy cover across the whole site, and **25%** across the Employment zoned precinct area, which achieves the NSW Government and Penrith Council objectives contained in the:

- SEPP Penrith Lakes 1989 objectives
- Draft Penrith Lakes DCP objectives
- Premier's priorities
- Draft Greener Places Design guide
- Penrith City Council Cooling the City Strategy

The contentions are thus refuted.

Should you have any further questions please contact me.

Kind regards,

A handwritten signature in black ink, appearing to read "Carlos Frias".

Carlos Frias
Director
+61 2 8233 9971
cfrias@urbis.com.au

CC: Phil James ; Dylan Baudinet. dylan@precinctgroup.com.au

Figure 1 - Proposed tree canopy for the Nepean Business Park



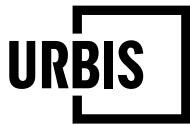
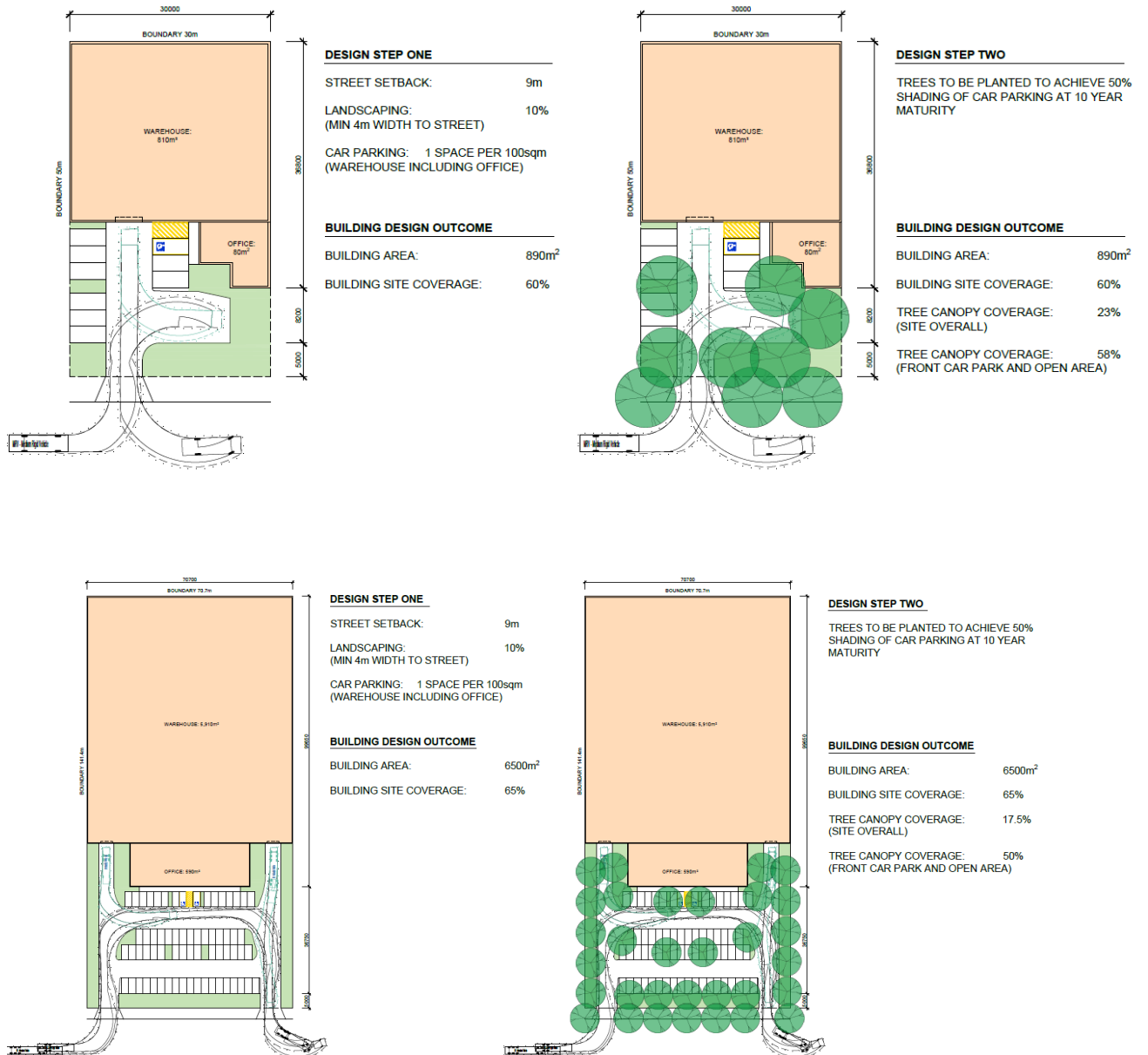
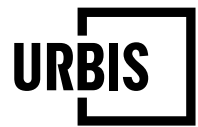


Table 1 -Proposed Tree Canopy Calculations for the Nepean Business Park

NEPEAN BUSINESS PARK					
Tree Canopy Analysis					
22-Dec-20					
Total Site Area	491,111	m²			
Open Space	22,173	m ²			
Castlereagh Road buffer	16,776	m ²			
Total Precinct Area (excluding Open Space and Castlereagh Road buffer)	452,162	m²			
Road Reserve	58,669	m ²			
DEEP SOIL AND TREE COVER			Tree Canopy Area		
	Areas		Assumption Tree Canopy Area (%)	Tree Canopy Area	Percentage Tree Canopy
Developable Area	393,493	m ²	15%	59,024	m ² 13.1%
Vegetated Verge	18,733	m ²	289%	54,138	m ² 12.0%
Total Precinct				113,162	m² 25.0%
Open Space (Great River Walk)	22,173	m ²	100%	22,173	m ² 4.5%
Castlereagh Road buffer	16,776	m ²	100%	16,776	m ² 3.4%
Total Site Area				152,111	m² 31.0%

Figure 2 - Estimated tree canopy cover per typical lot types.(prepared by MCHP Architects – Attachment 2)





APPENDIX 1 - TREE CANOPY CALCULATIONS (URBIS)






MINIMUM TREE CANOPY TOTAL SITE AREA

31.0%

MINIMUM TREE CANOPY TOTAL PRECINCT AREA

25.0%

LEGEND

-  SITE BOUNDARY
-  PROPOSED OPEN SPACE AREAS
-  VERGE AREA FOR PLANTING
-  20m WIDE ENVIRONMENTAL ZONE ALONG OLD CASTLEREAGH ROAD
-  TREE LAYOUT OPTIMISED FOR CANOPY COVER



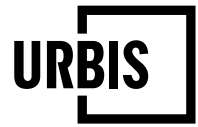
NEPEAN BUSINESS PARK

INDICATIVE TREE CANOPY PLAN



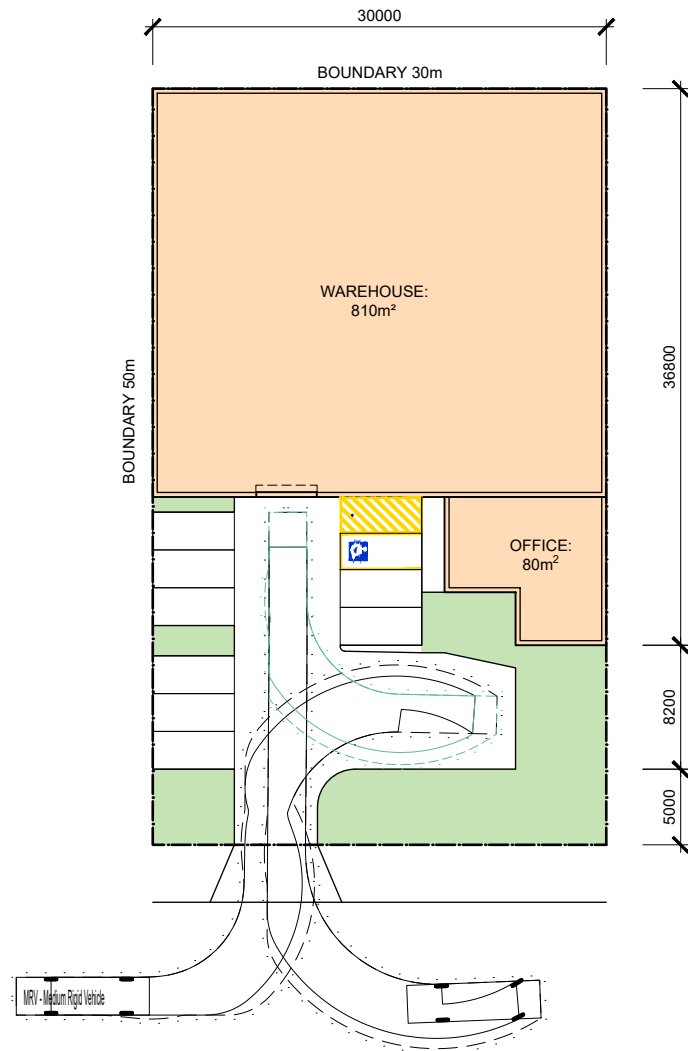
Copyright by Urbis Pty Ltd. This drawing or parts thereof may not be reproduced for any purpose without the consent of Urbis Pty Ltd.
This plan is conceptual and is for discussion purposes only. Subject to further detail study, Council approval, engineering input, and survey. Cadastral boundaries, areas and dimensions are approximate only. Figured dimensions shall take preference to scaled dimensions. No relevance should be placed on this plan for any financial dealings of the land.

DATE: 21.12.2020
DRAWING NO: PP02
REV: A



APPENDIX 2 - TREE CANOPY CALCULATION FOR SINGLE LOTS (MCHP ARCHITECTS)

TYPICAL EMPLOYMENT ZONE CONTROLS

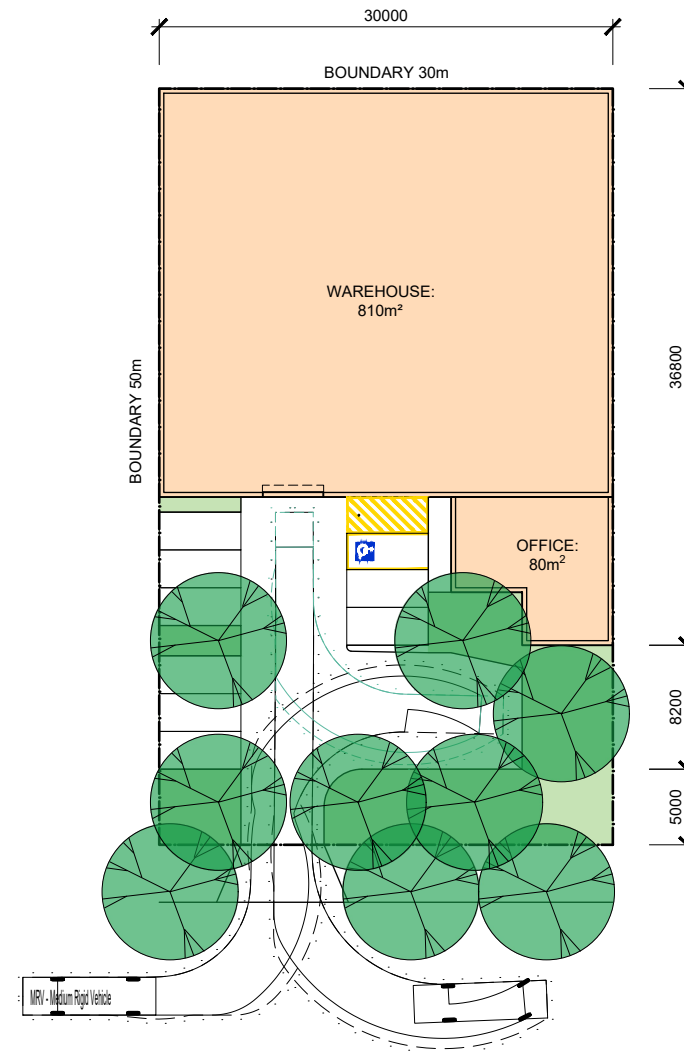


DESIGN STEP ONE

- STREET SETBACK: 9m
- LANDSCAPING: 10%
(MIN 4m WIDTH TO STREET)
- CAR PARKING: 1 SPACE PER 100sqm
(WAREHOUSE INCLUDING OFFICE)

BUILDING DESIGN OUTCOME

- BUILDING AREA: 890m²
- BUILDING SITE COVERAGE: 60%



DESIGN STEP TWO

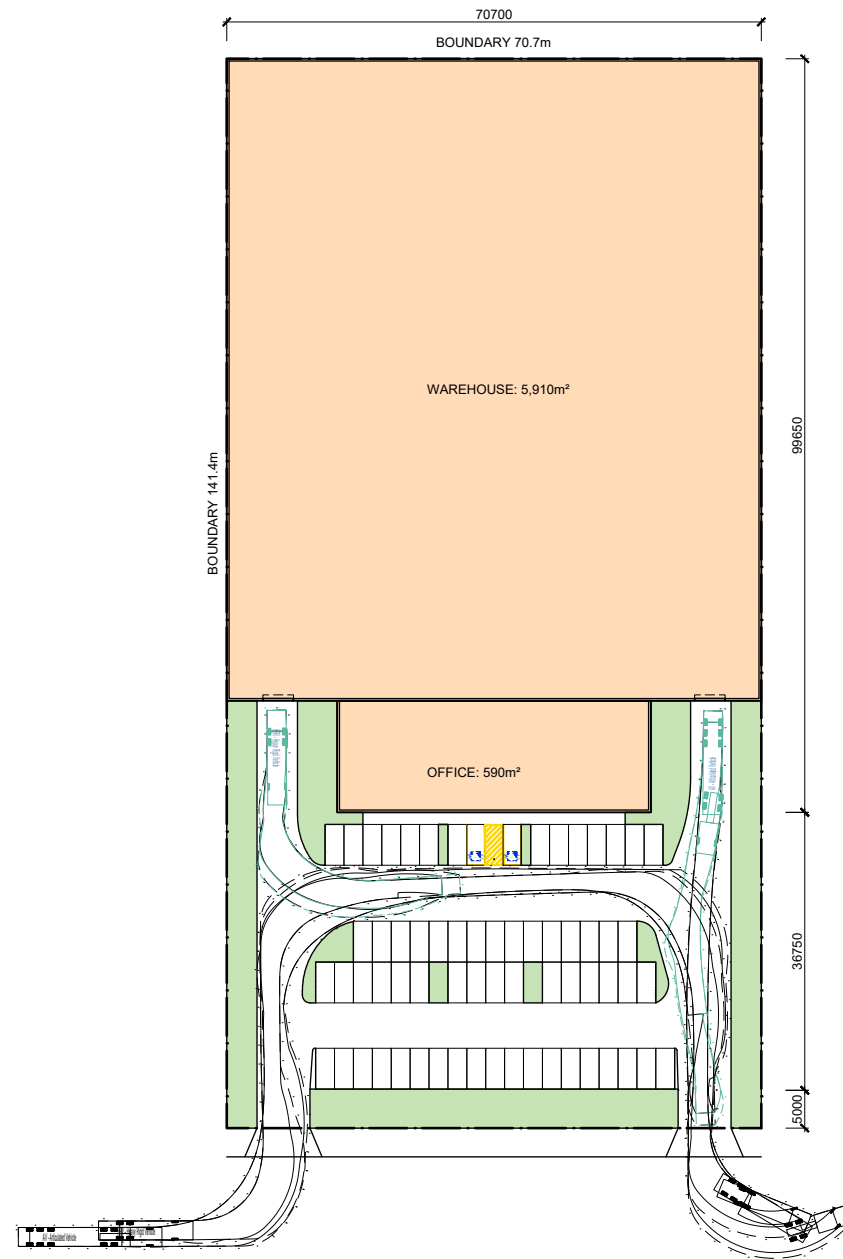
TREES TO BE PLANTED TO ACHIEVE 50% SHADING OF CAR PARKING AT 10 YEAR MATURITY

BUILDING DESIGN OUTCOME

- BUILDING AREA: 890m²
- BUILDING SITE COVERAGE: 60%
- TREE CANOPY COVERAGE: 23%
(SITE OVERALL)
- TREE CANOPY COVERAGE: 58%
(FRONT CAR PARK AND OPEN AREA)

DEVELOPMENT ANALYSIS - 1,500m² SINGLE LOT SITE + INDUSTRIAL BUILDING
(TYPICAL EMPLOYMENT ZONE CONTROLS)
NEPEAN BUSINESS PARK - PENRITH

TYPICAL EMPLOYMENT ZONE CONTROLS

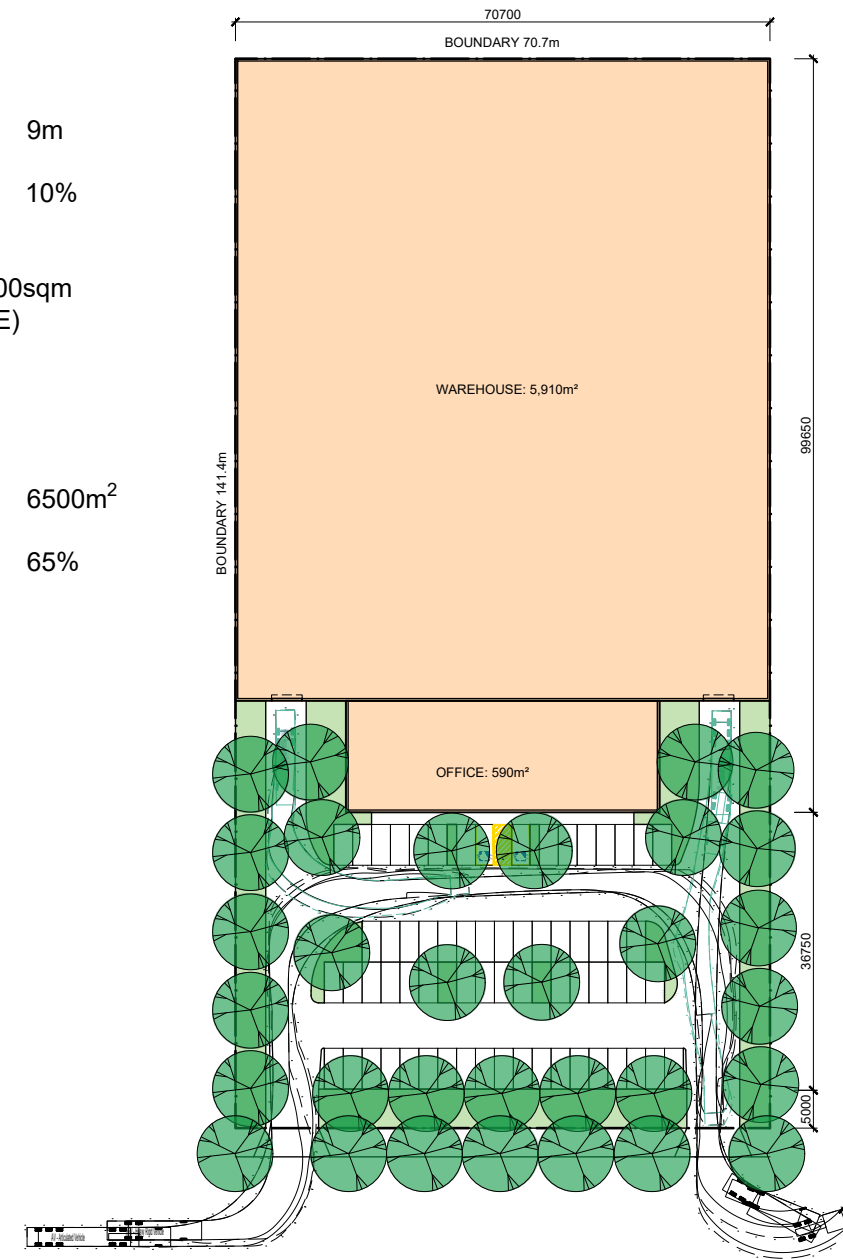


DESIGN STEP ONE

- STREET SETBACK: 9m
- LANDSCAPING: 10%
(MIN 4m WIDTH TO STREET)
- CAR PARKING: 1 SPACE PER 100sqm
(WAREHOUSE INCLUDING OFFICE)

BUILDING DESIGN OUTCOME

- BUILDING AREA: 6500m²
- BUILDING SITE COVERAGE: 65%



DESIGN STEP TWO

TREES TO BE PLANTED TO ACHIEVE 50% SHADING OF CAR PARKING AT 10 YEAR MATURITY

BUILDING DESIGN OUTCOME

- BUILDING AREA: 6500m²
- BUILDING SITE COVERAGE: 65%
- TREE CANOPY COVERAGE: 17.5%
(SITE OVERALL)
- TREE CANOPY COVERAGE: 50%
(FRONT CAR PARK AND OPEN AREA)

DEVELOPMENT ANALYSIS - 10,000m² SITE + INDUSTRIAL BUILDING
(TYPICAL EMPLOYMENT ZONE CONTROLS)
NEPEAN BUSINESS PARK - PENRITH

