



Wellbeing

Innovation

Community

Flexibility

Australian Catholic University

Health

Learning and Research

**CON O'DONNELL**

**Australian Catholic University**

Director of Properties

**MARK KELLY**

**WOODS BAGOT**

Global Sector Leader – Education Science

Global Director of Sustainability



## Introducing The Australian Catholic University



- Australian Catholic University (ACU) is national in its reach, public in its relevance and committed to the common good.
- The University opened in 1991 but can trace its origins back to the mid-1800's
- ACU is recognised and funded by the Commonwealth Government and is open to students and staff of all beliefs.
- ACU has six campuses in Australia and offer programs throughout Australia and overseas.

# Our Campuses



Mount St Mary Campus, Strathfield NSW



MacKillop Campus, North Sydney NSW



Signadou Campus, Canberra ACT



McAuley Campus, Brisbane QLD



Aquinas Campus, Ballarat VIC



St Patrick's Campus, Melbourne VIC



Australian Catholic University





# Imagine a building that

- So connected to ground that
- Immediately start to make oxygen, on day one
- Sequester carbon dioxide and fix nitrogen
- Distil water
- Provides habitat for hundreds of species
- Build new top soil
- Accrue solar energy as fuel
- Make complex sugars and food
- Change colours with the season
- Create complex micro-climates
- Self replicate







hierarchy  
structure  
command  
control  
=  
real estate

human  
sustainable  
health  
wellbeing  
comfort  
motivation  
freedom  
organisation  
=  
high performance  
workplace

# National Centre for Health and Wellbeing

ACU National



- Respond to the Fitzroy Urban Grain
- Link the Old and New Pedestrian laneways
- Activate edges at ground level with cafes and bookshops
- Create outdoor spaces for informal learning and promote cross fertilisation of multidisciplinary groups
- Fostering Human Interactions
- Creating distinct connected Healing Environments through Sustainable Design

**Catholic** is an adjective derived from the Greek adjective καθολικός (*katholikos*), meaning "universal".



UNIVERSAL

MELBOURNE





ORIENTATION

ILLUMINATION

INSULATION

VENTILATION

National Centre for Health and Wellbeing  
ACU National



View through laneway looking West



National Centre for Health and Wellbeing  
ACU National



View through laneway looking West



National Centre for Health and Wellbeing  
[ACU National](#)





National Centre for Health and Wellbeing  
ACU National



# National Centre for Health and Wellbeing ACU National





National Centre for Health and Wellbeing  
ACU National



# National Centre for Health and Wellbeing

## ACU National



### SITE LOCATION EMBEDDED SITE

- Main Frontage to Young Street
- Good Access to Public Transport
- Heritage Precinct
- No Impact on Views towards St Patricks Cathedral



### USES AND FUNCTION

- Part of Academic Campus
- Integration with Mixed -Use Precinct
- Contribution of Student life to local economy



### ENVIRONMENTAL CONDITIONS

- Significant Northern Exposure
- East and west Solar Control
- Minimal Impact of South Westerlies
- Brownfield Site
- Fall of Site from Brunswick St to Young St.

# National Centre for Health and Wellbeing

## ACU National



**SIGNIFICANT VIEWS FROM SITE**



**EXTENSION OF SOCIAL SUPPORT NETWORK**

- Achieve 6 Star Green Star Accreditation
- Regeneration of Brownfield site
- Daylight
- External Sunshading
- Thermal Exposure
- Passive Ventilation
- Raised Floor Displacement Air System
- In-Slab cooling
- Waste and Water Management



**ESD INITIATIVES**

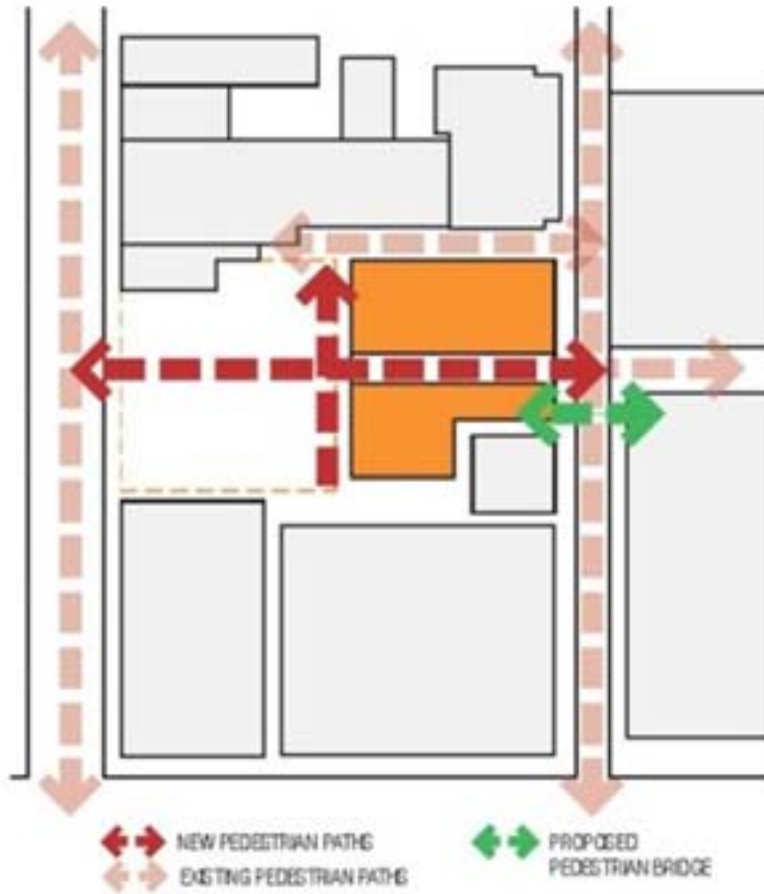


National Centre for Health and Wellbeing  
ACU National

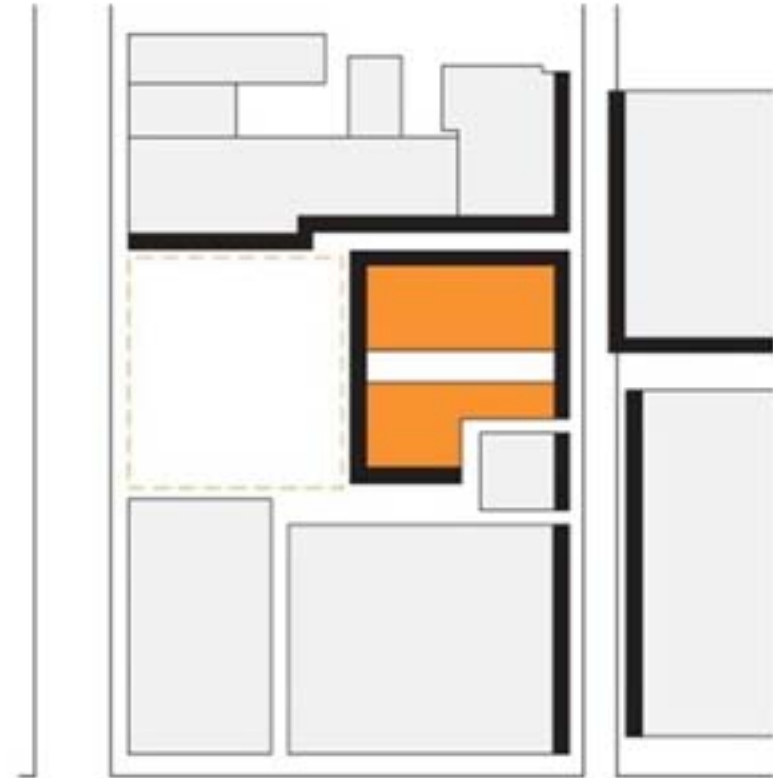




National Centre for Health and Wellbeing  
ACU National



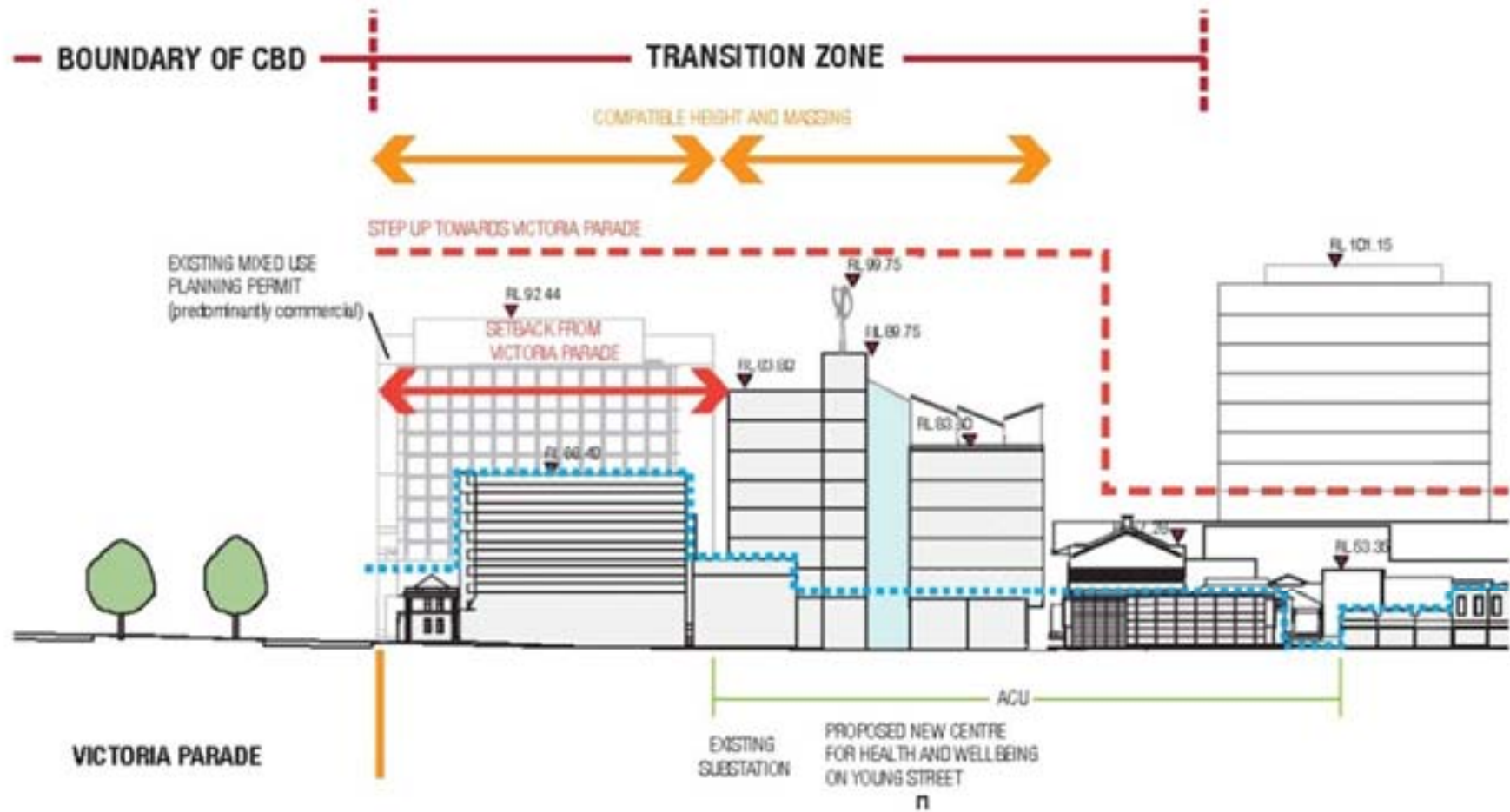
ACCESS –  
INCREASING PEDESTRIAN PERMEABILITY

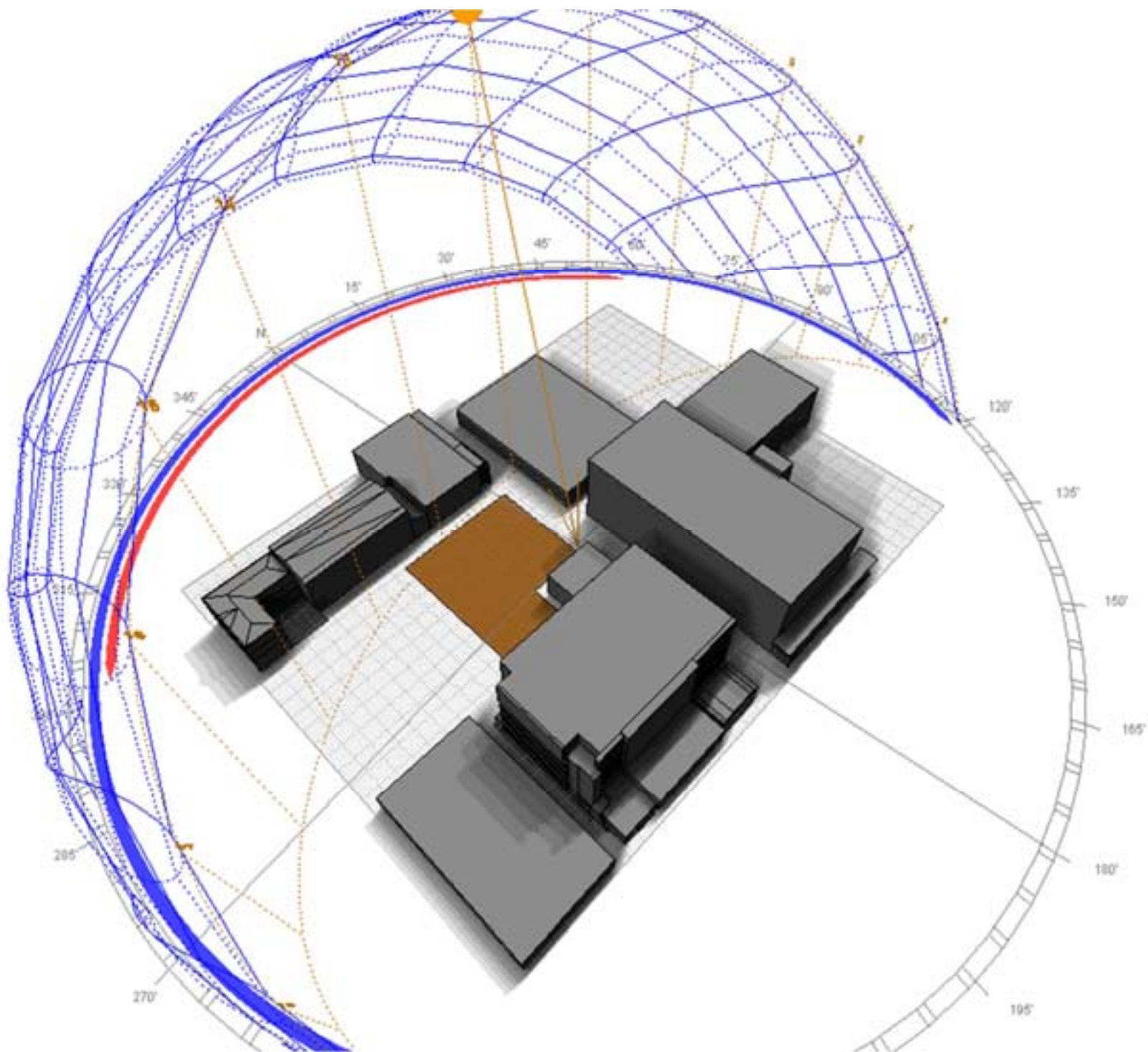


REINFORCING THE URBAN EDGE  
AND PUBLIC DOMAIN

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ACU National

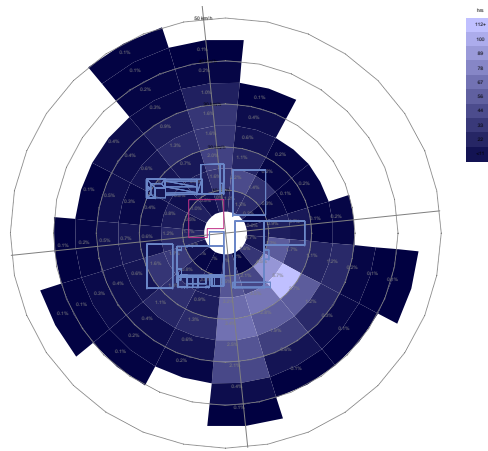




# National Centre for Health and Wellbeing

## ACU National

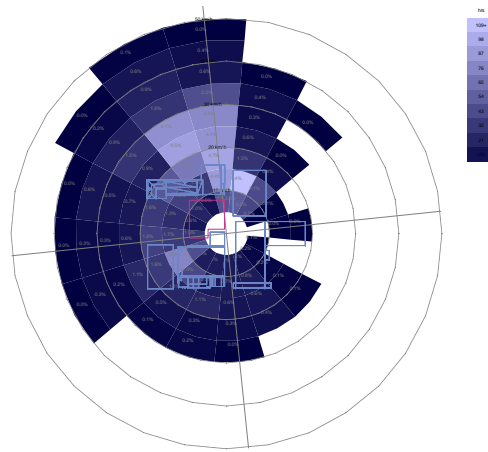
**Prevailing Winds**  
Wind Frequency (Dir)  
Malesville, Victoria - Australia  
Date: 01 September - 30 September  
Time: 00:00 - 24:00  
# 17017121-14  
**summer**



[Duration shown as percentage]



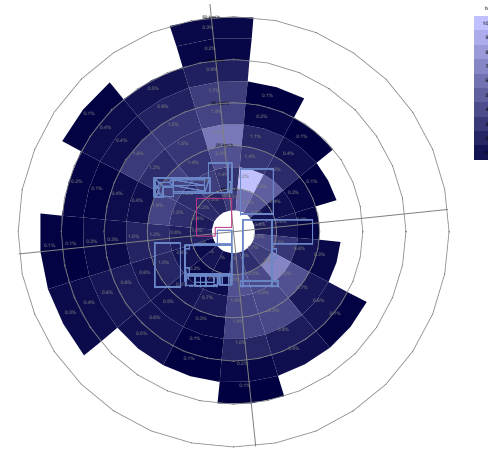
**Prevailing Winds**  
Wind Frequency (Dir)  
Malesville, Victoria - Australia  
Date: 01 June - 30 August  
Time: 00:00 - 24:00  
# 17017121-14  
**winter**



[Duration shown as percentage]



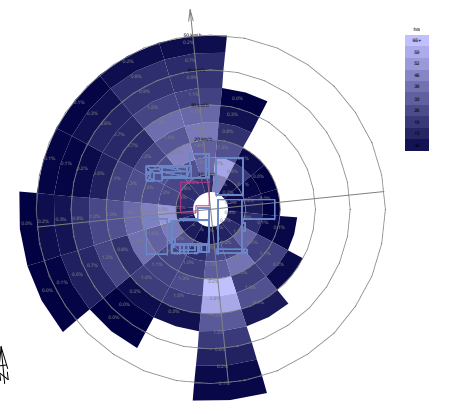
**Prevailing Winds**  
Wind Frequency (Dir)  
Malesville, Victoria - Australia  
Date: 01 March - 31 May  
Time: 00:00 - 24:00  
# 17017121-14  
**autumn**



[Duration shown as percentage]



**Prevailing Winds**  
Wind Frequency (Dir)  
Malesville, Victoria - Australia  
Date: 01 September - 30 November  
Time: 00:00 - 24:00  
# 17017121-14  
**spring**



[Duration shown as percentage]





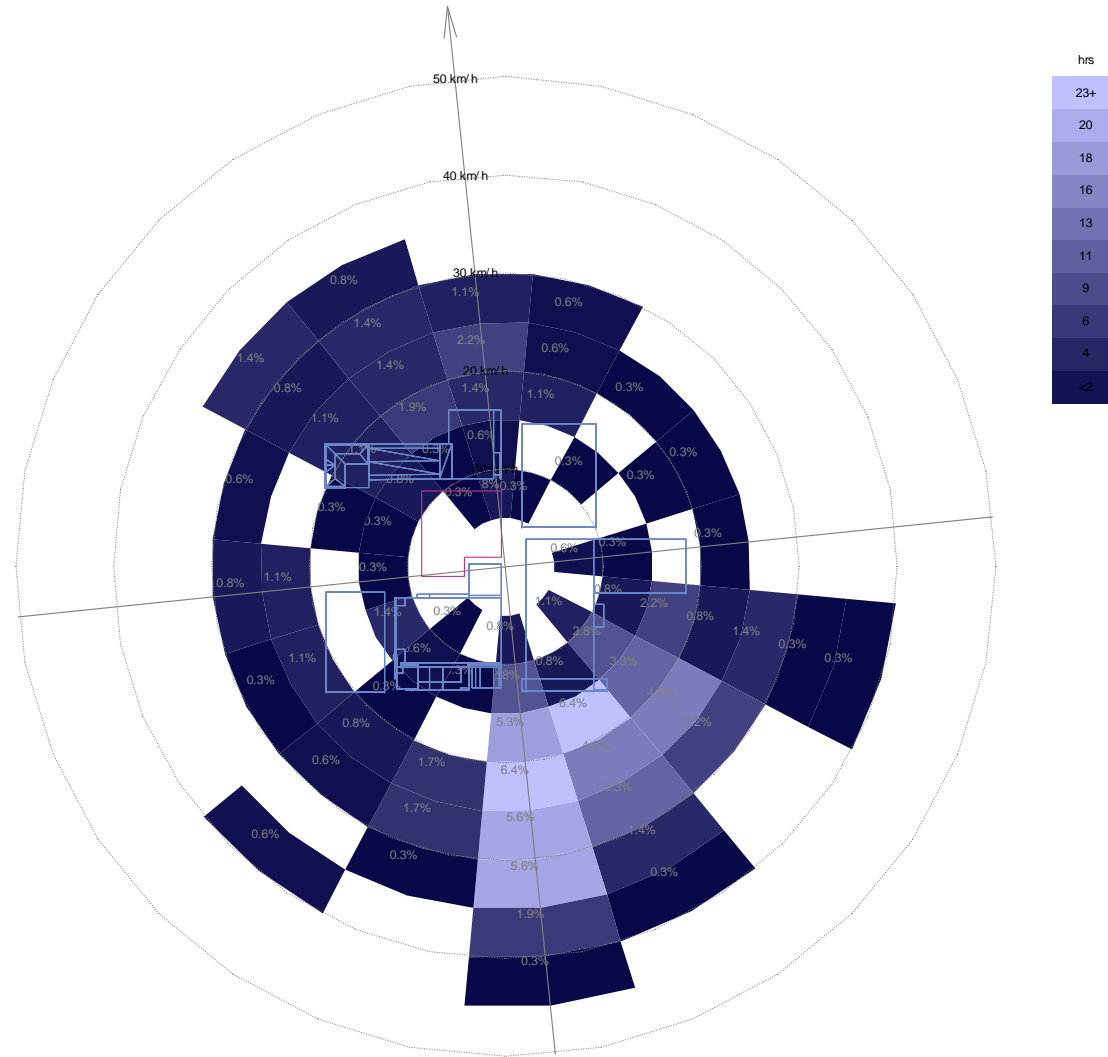
# National Centre for Health and Wellbeing

## ACU National

### Prevailing Winds Wind Frequency (Hrs)

Melbourne - Victoria - Australia  
Date: 1st December - 28th February  
Time: 14:00 - 18:00  
© ECOTECT vs

Summer Solstice - Afternoon



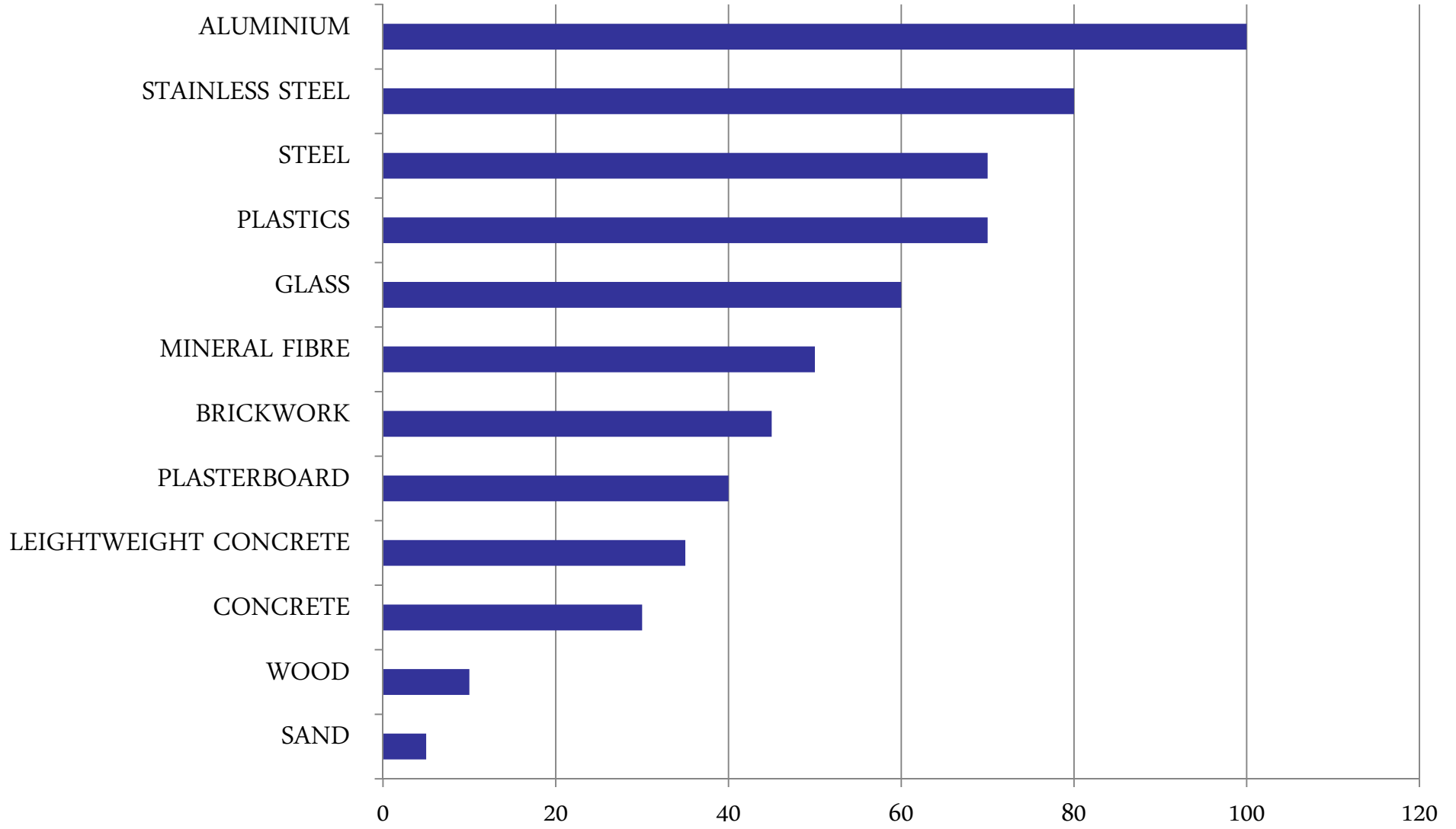
[Duration shown as percentages]



# Zero Energy Building

- Design and Construction
- Embedded energy in materials
- Energy Generation
- Generate Energy versus Conserve Energy
- Occupant behaviour
- Net off-site zero energy use
- Off-the-grid completely





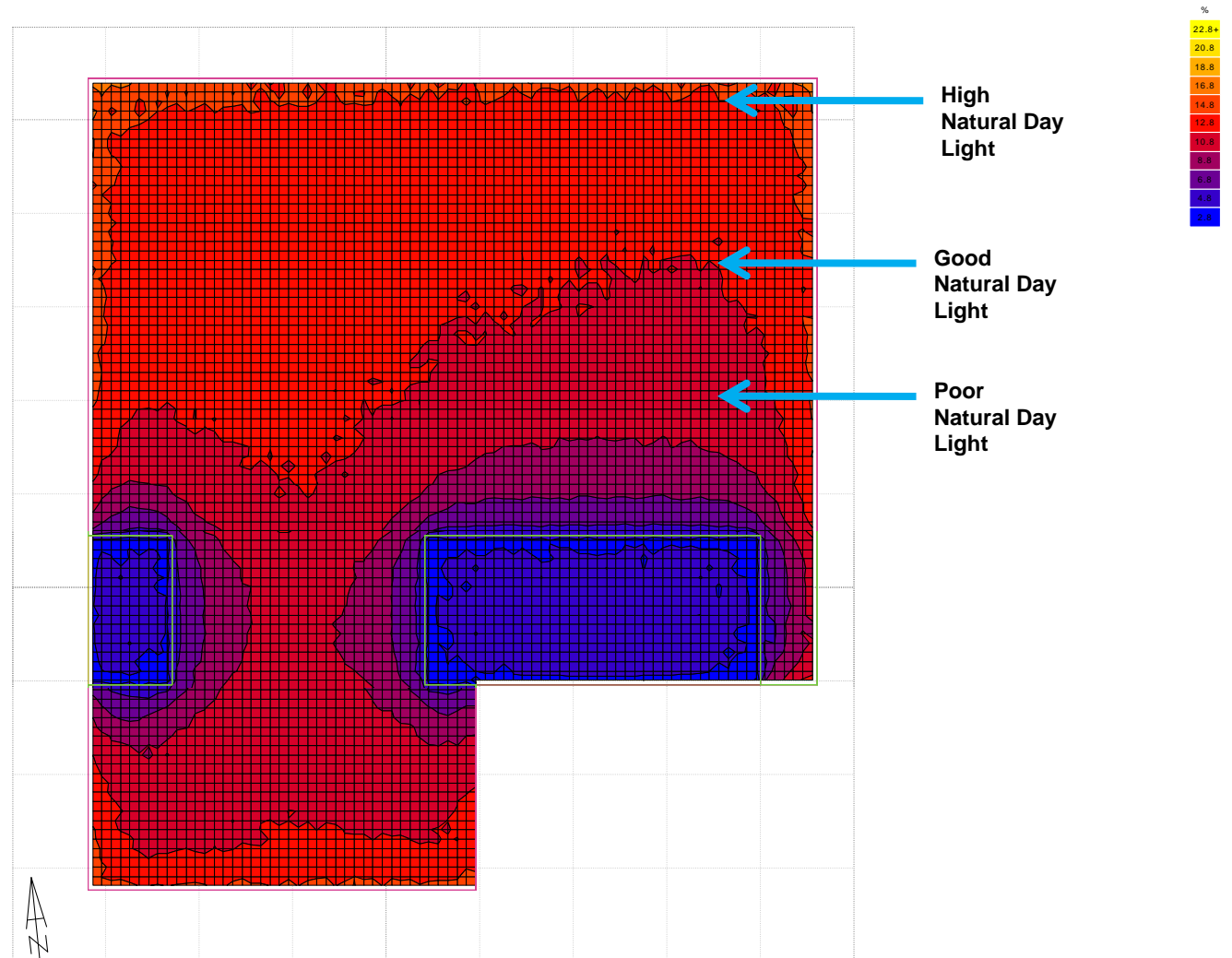
RELATIVE EMBODIED ENERGY



# National Centre for Health and Wellbeing

## ACU National

**Lighting Analysis**  
Daylight Factor  
Contour Range: 2.8 - 22.8 %  
In Steps of: 2.0 %  
© ECOTECH v2



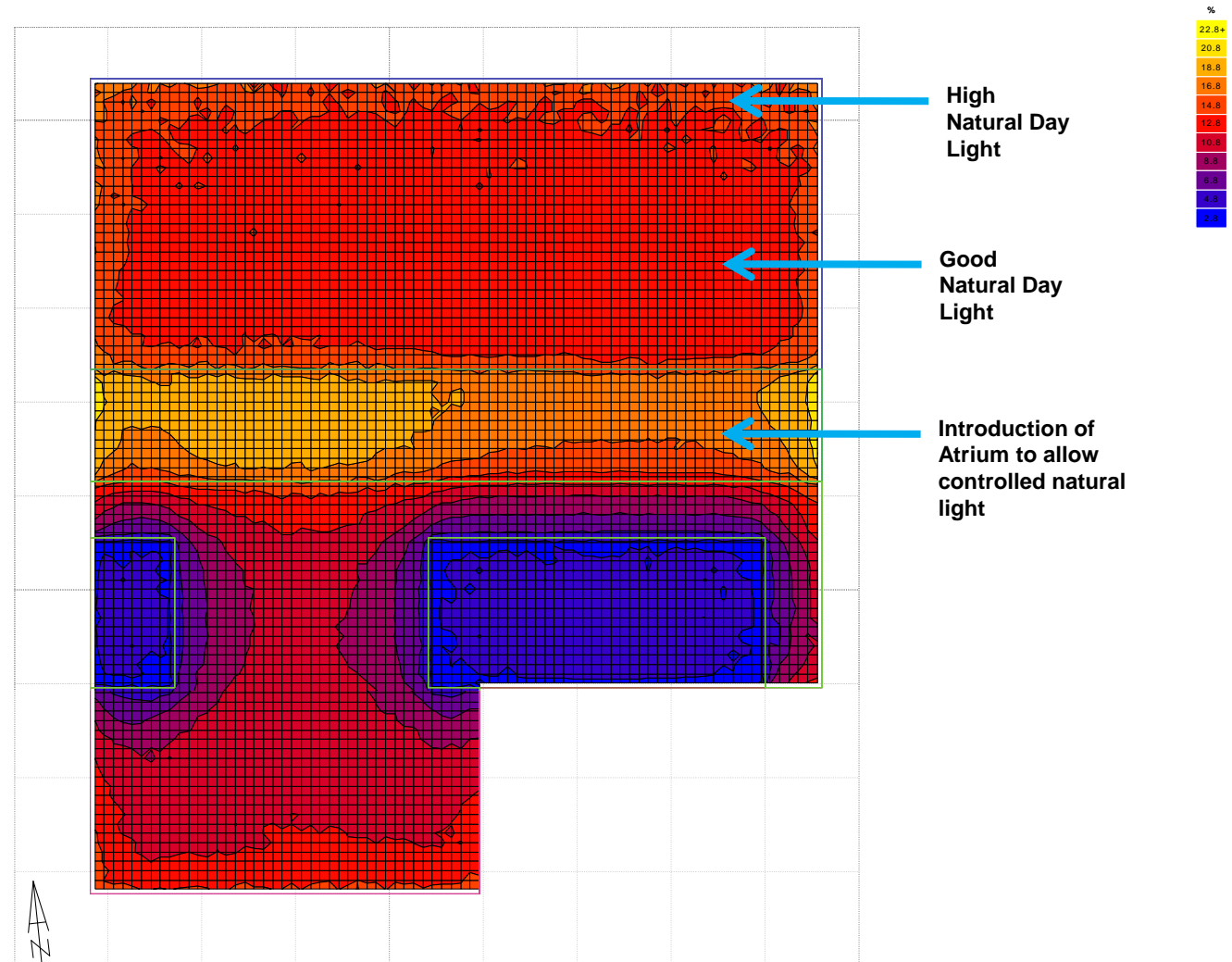
Average Value: 11.88 %  
Visible Nodes: 5994



# National Centre for Health and Wellbeing

## ACU National

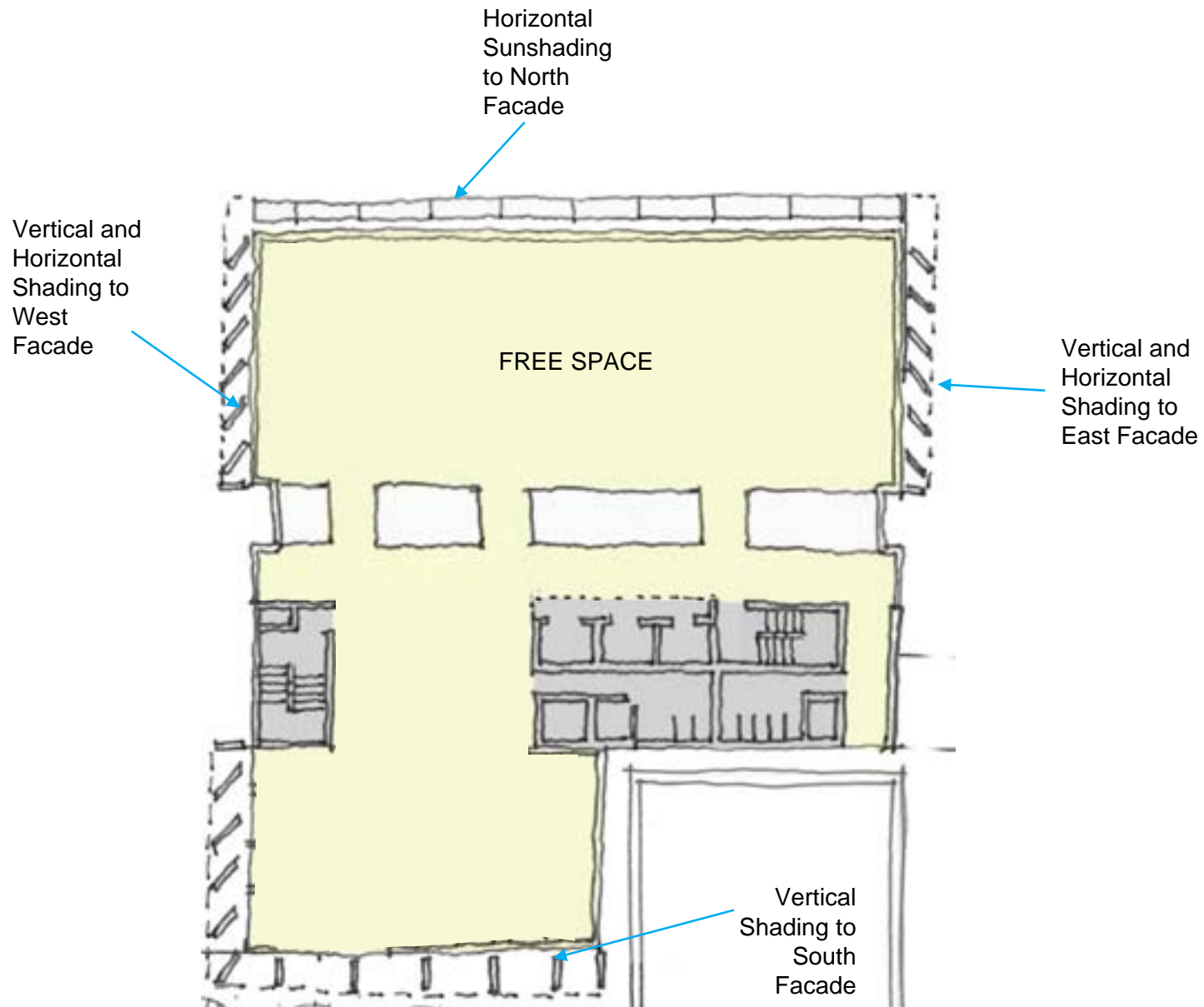
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© ECOTECT v2

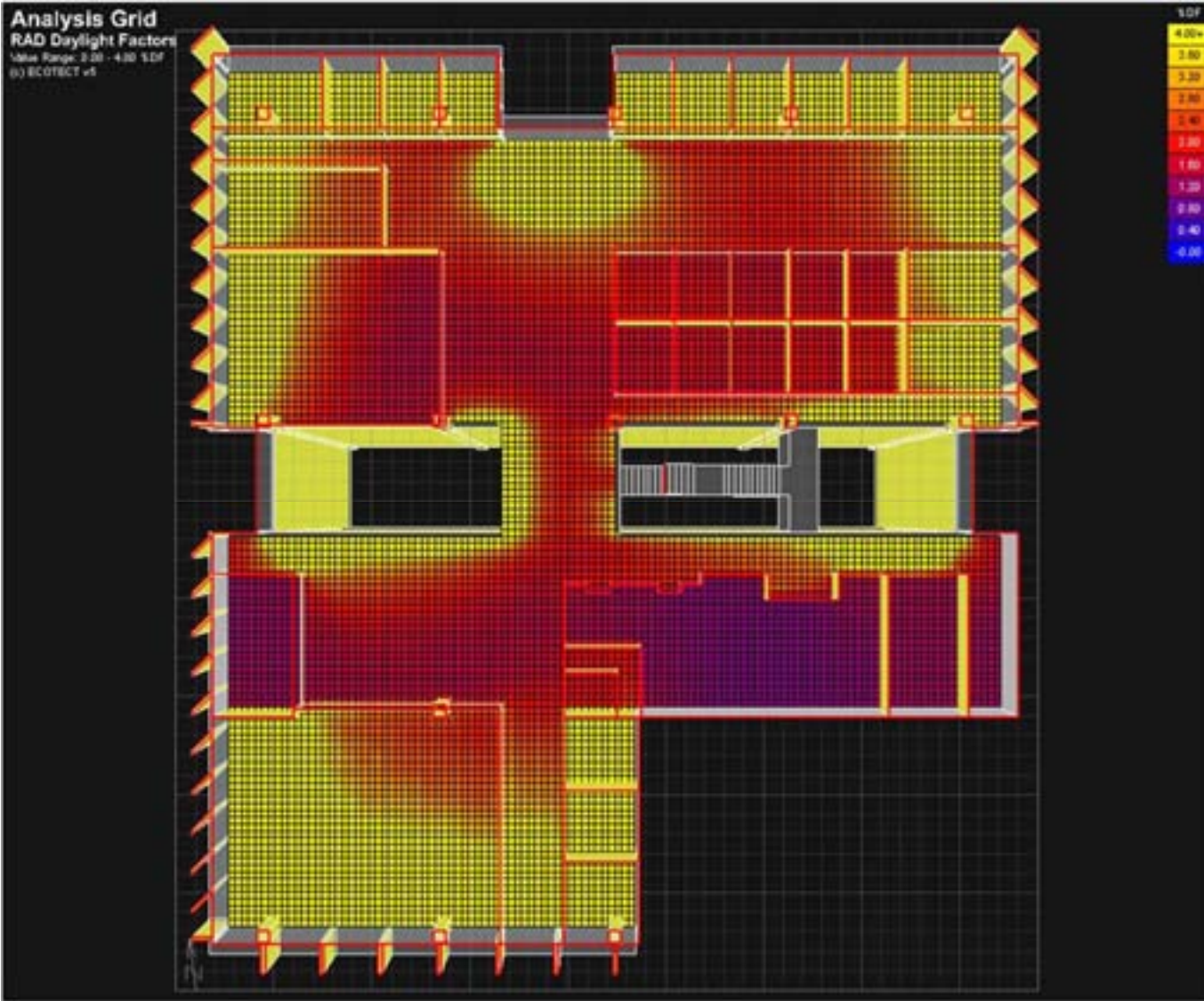


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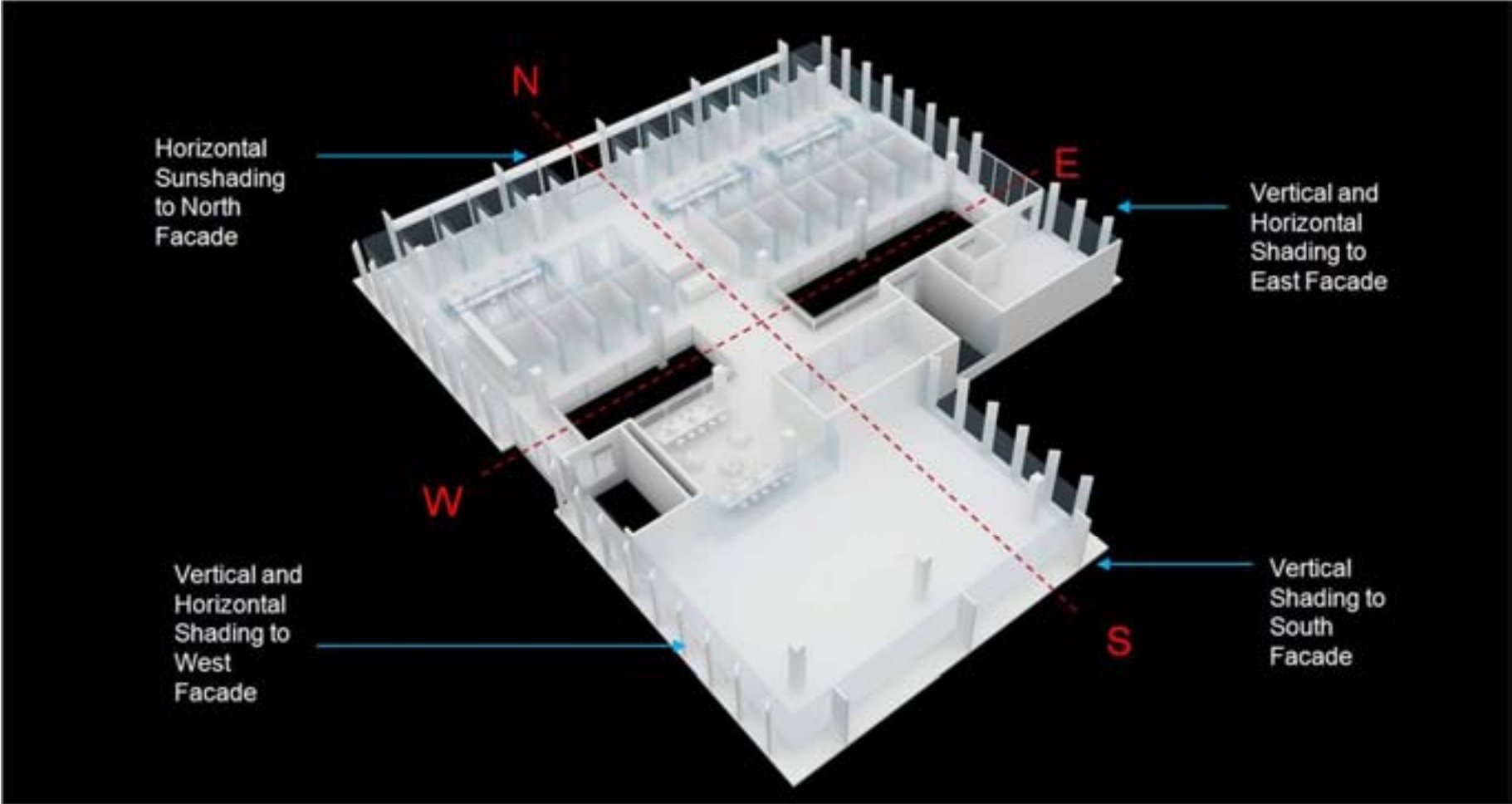
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ACU National

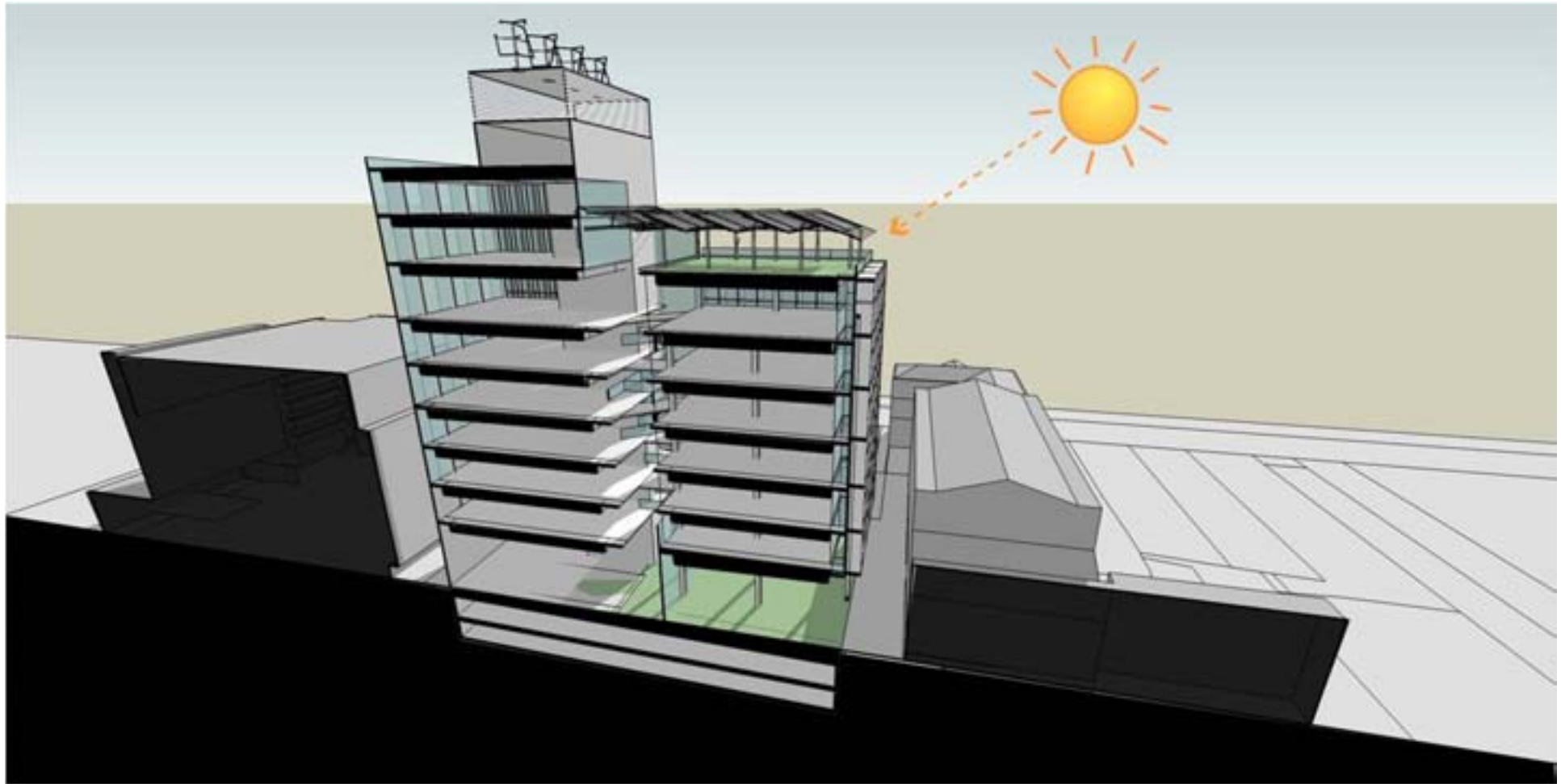








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AXONOMETRIC SECTION

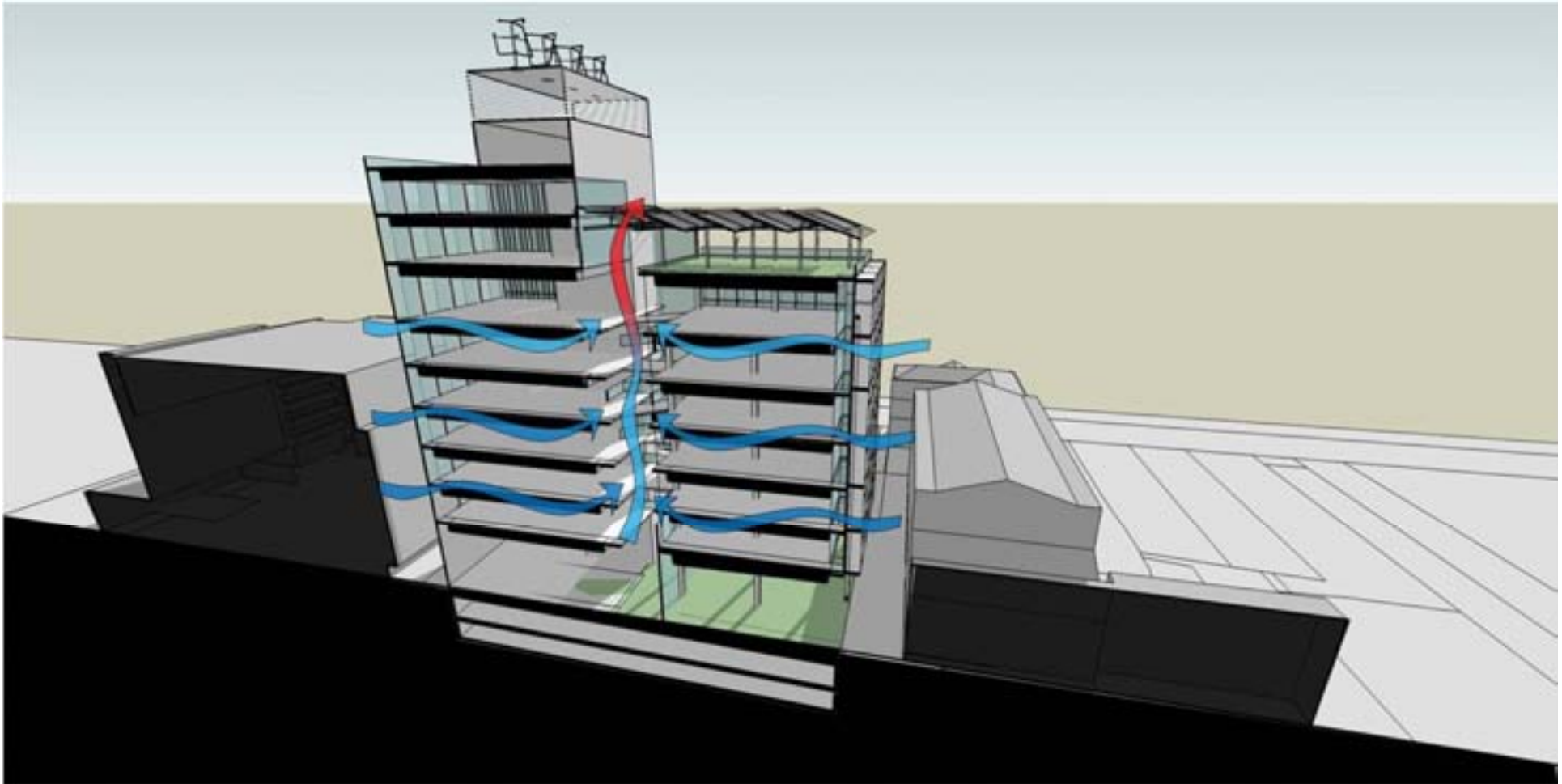
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ACU National



CROSS VENTILATION



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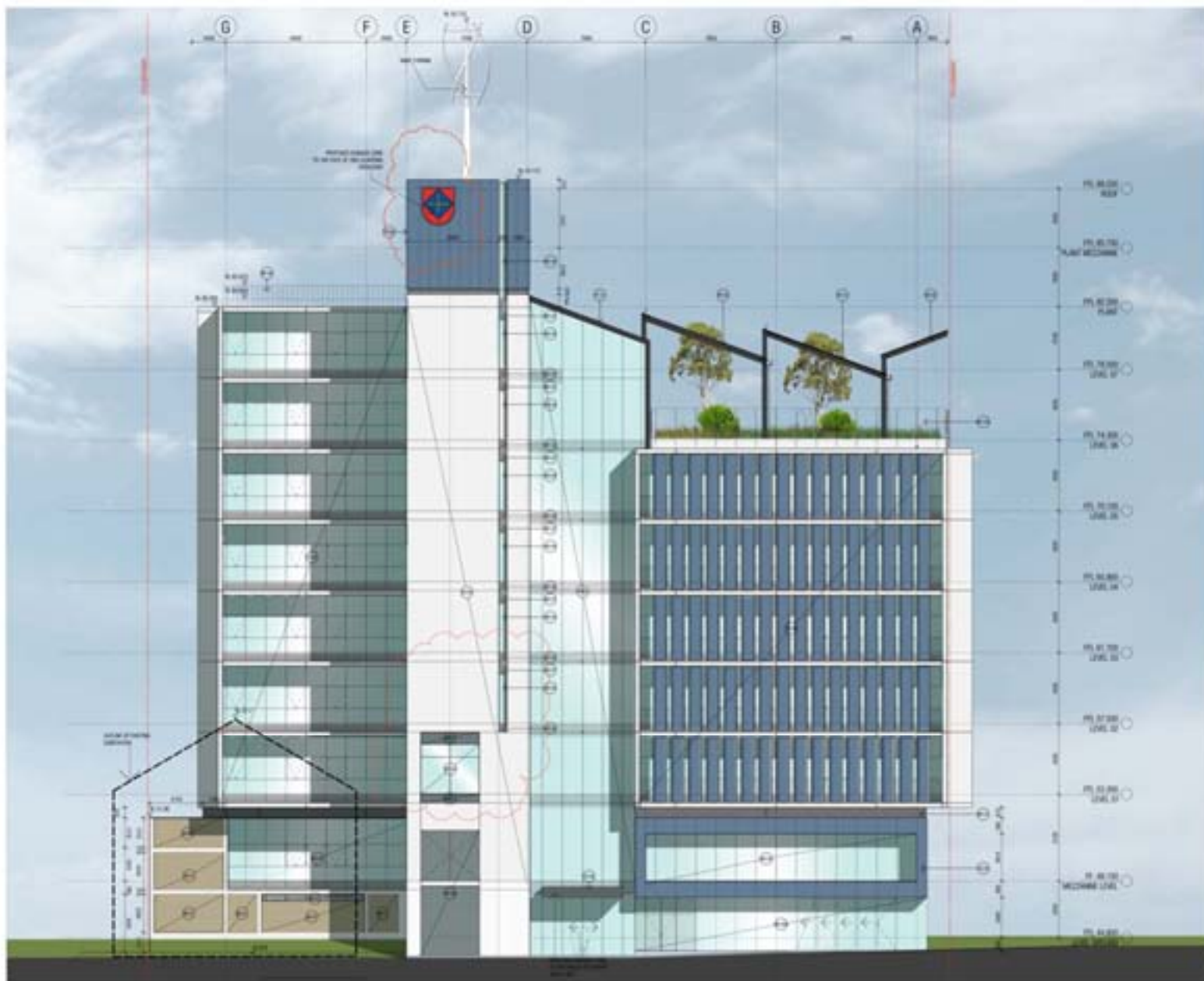


NIGHT PURGING

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ACU National



WATER COLLECTION



**Notes**

1. Refer to the relevant section for details of the building's structure and services.
2. Refer to the relevant section for details of the building's facade and cladding.
3. Refer to the relevant section for details of the building's interior fit-out and furniture.
4. Refer to the relevant section for details of the building's landscaping and site works.
5. Refer to the relevant section for details of the building's sustainability and energy performance.



- Legend**
- 1. Refer to the relevant section for details of the building's structure and services.
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  - 5. Refer to the relevant section for details of the building's sustainability and energy performance.

Architect	WOODS BAGOT
Client	Australian Catholic University
Project Name	ACU National Centre for Health & Wellbeing
Location	Perth, Western Australia
Date	2023

**AUSTRALIAN CATHOLIC UNIVERSITY**

ACU NATIONAL CENTRE FOR HEALTH & WELLBEING

**WOODS BAGOT**

ARCHITECTS

**EAST ELEVATION**

Scale: 1:100

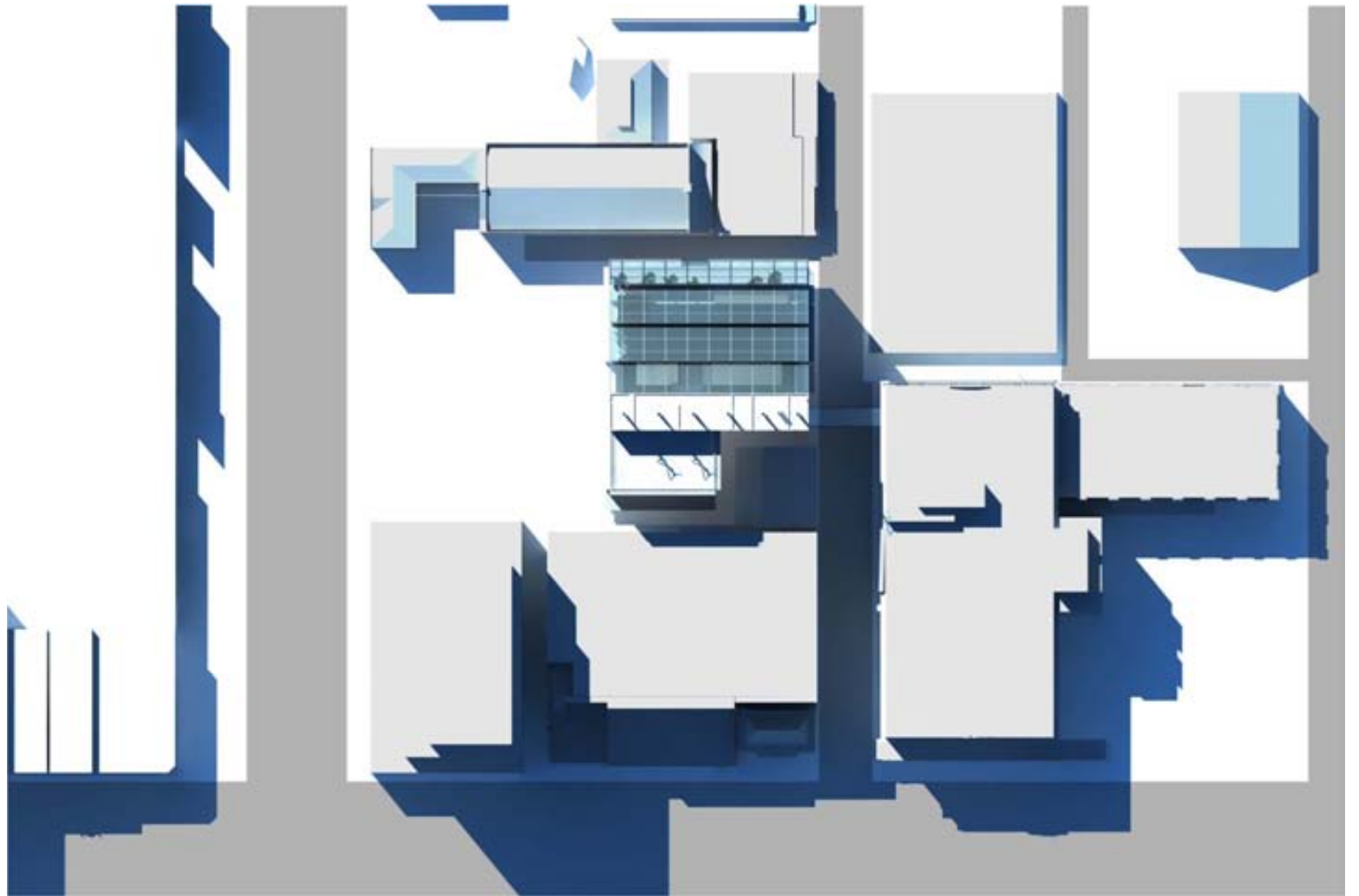
Project No: 2-30-1400

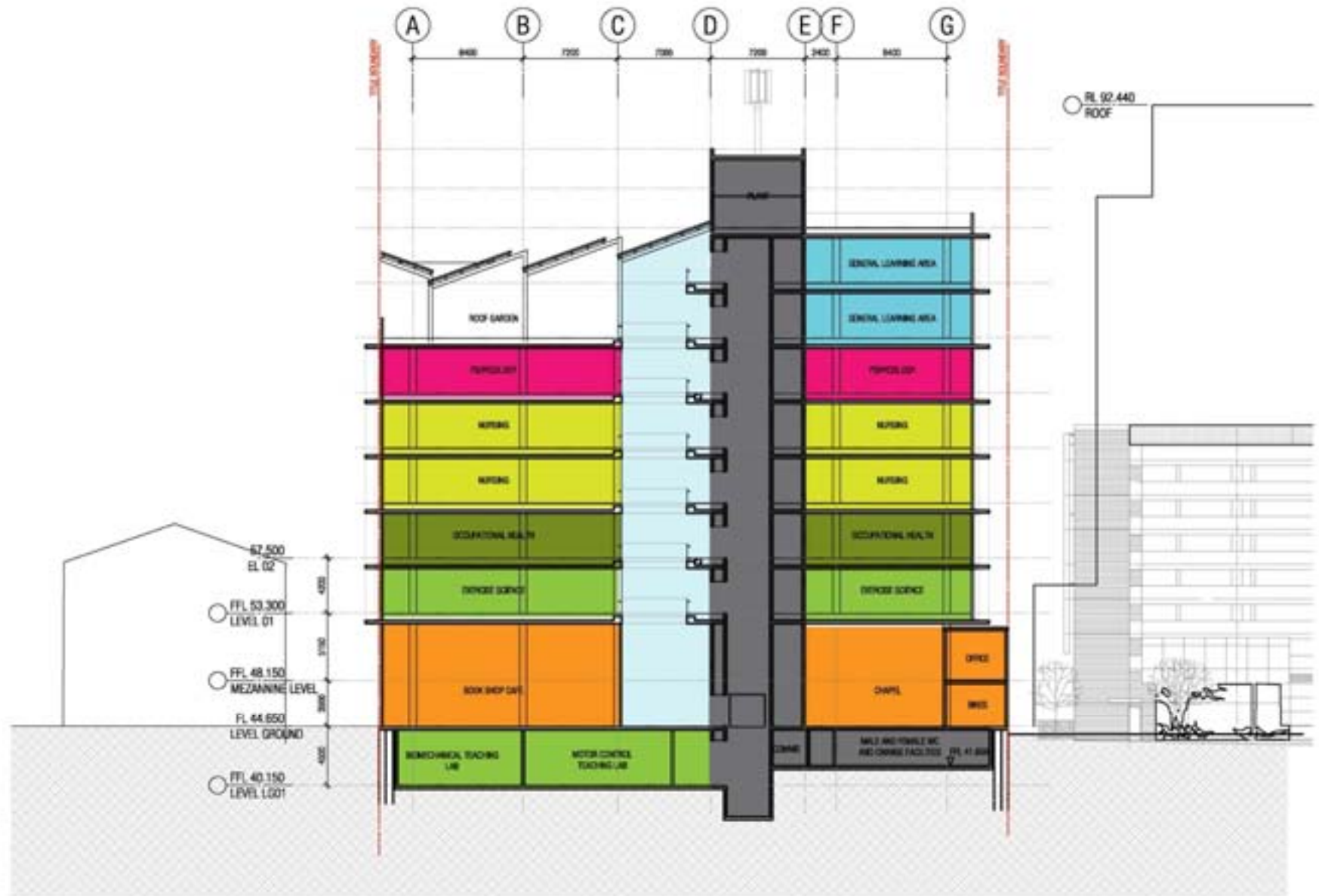
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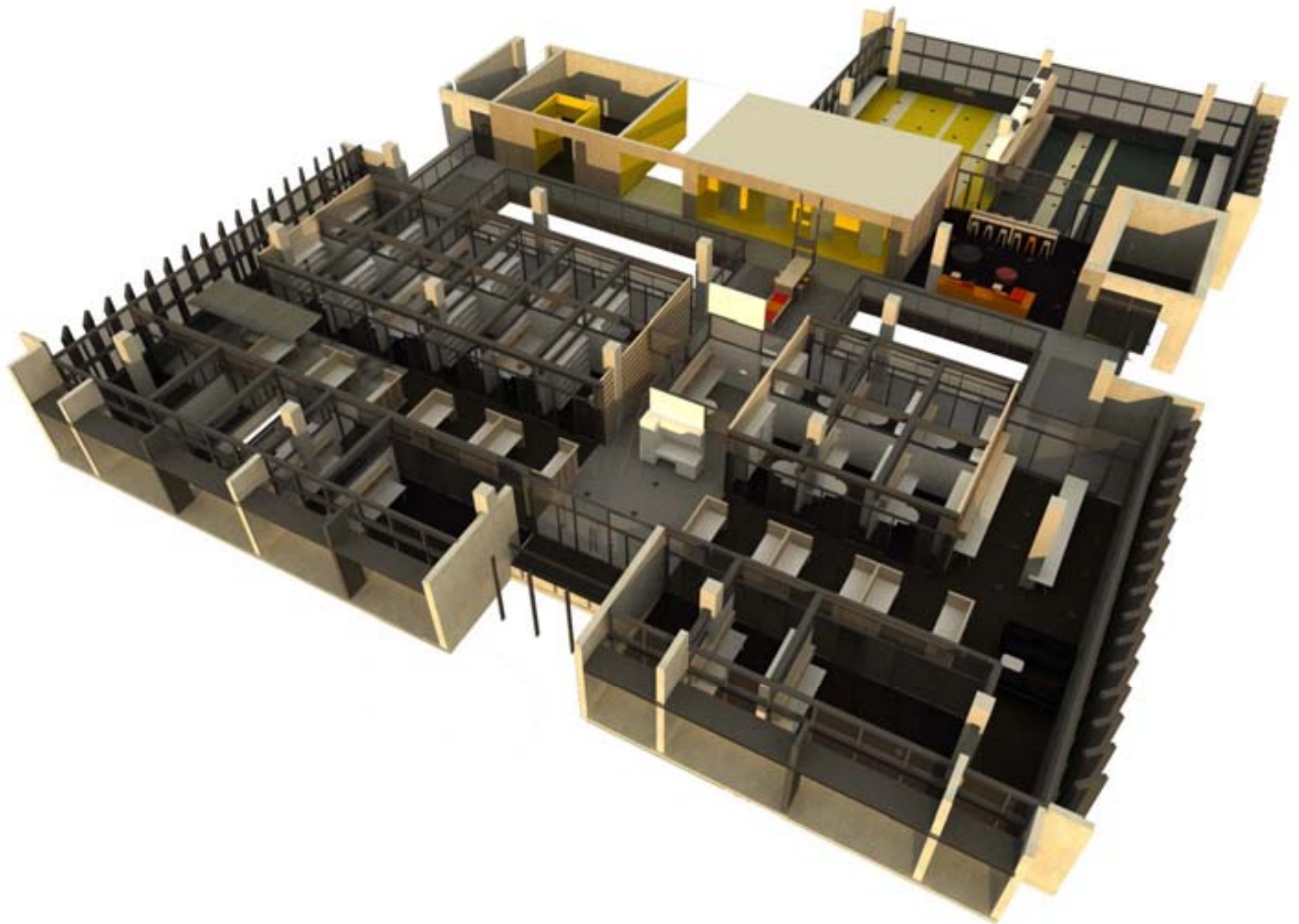
Date: 17/04

Discipline: CIVIL PLANNING











Section through offices- Mechanical Strategy















*We are but Travellers*















# jamie athome



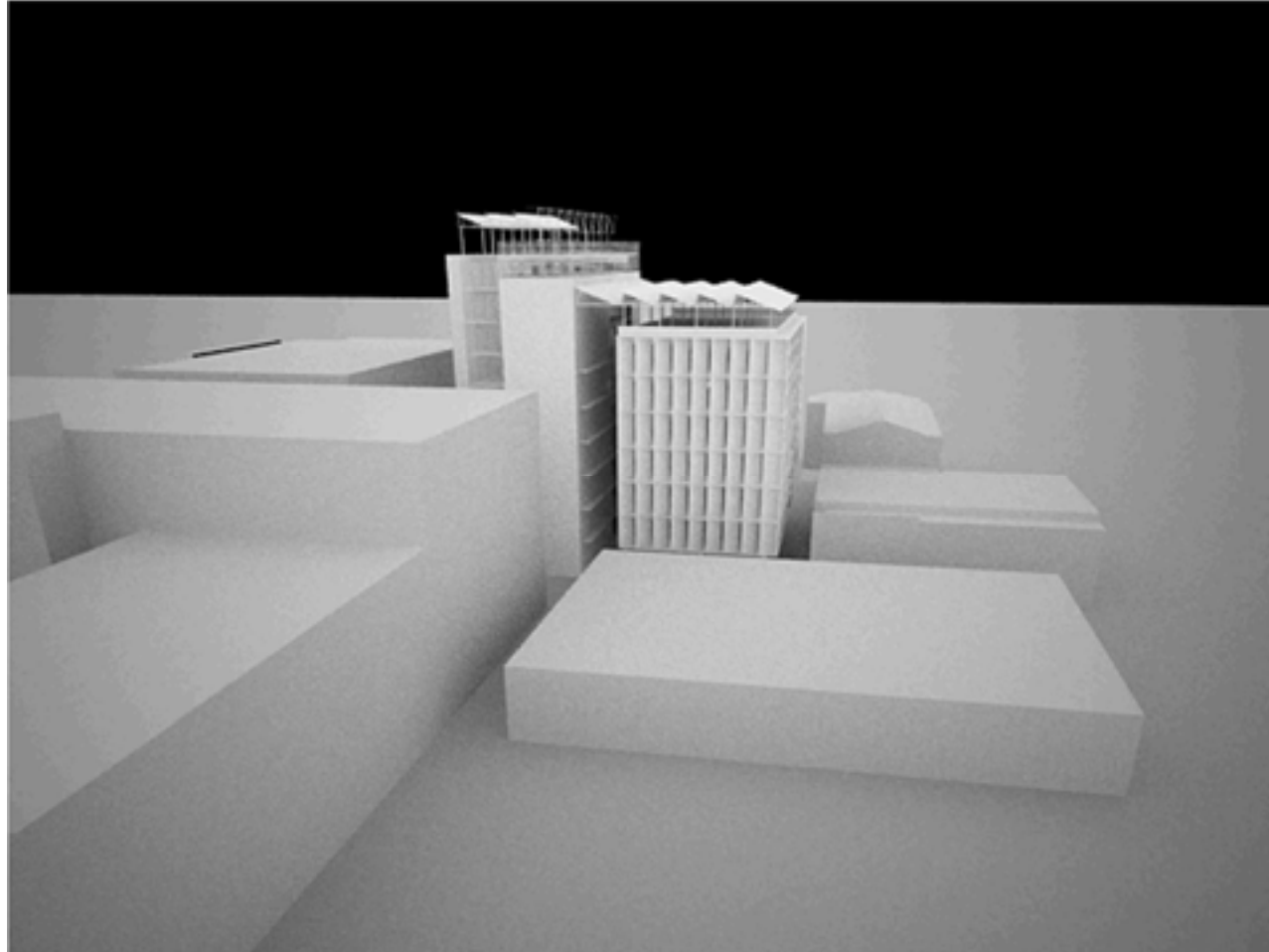
Cook Your Way to  
the Good Life

















National Centre for Health and Wellbeing  
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National Centre for Health and Wellbeing

	University of Adelaide – New Engineering Building	Latrobe University – Shepparton	University of South Australia – M2 Building	Australian Catholic University – National Centre for Health & Wellbeing
Area	13 266	1 838	7 200	12 990
Lighting (W/sqm)	8.5	9.6	10	8.5
Power (W/sqm)	20 to 25	20 to 25	20 to 25	15 to 20
AC Mech. Load (chiller capacity) (W/sqm)	72	125	139	72

Note: Figures are approximate designed figures

Source UMOW LAI

ACU

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# ACU

## National Centre for Health and Wellbeing

With Fit out	ACU National Centre for Health and Wellbeing - Cost Plan A Version 6* Base Build	Adelaide University Vet Sciences	School of Economics & Commerce, University of Melbourne	South Australia Water Headquarters 6*	Neurosciences – wet labs and animal house
Area m2	12 990	5 000	24 000	29 850	19 400
\$ Total	49 5m	28 5m	95 m	131 m	95 m
\$/m2 Base Build plus Fit out	3 811	5 700*	3 958	4 389	4 897
NLA/GLA Efficiency	67 %*	TBA	71 % TBC	73 %	69 %

Excl Basement

\*NLA Excludes all links and 2m around north and south of atrium

Source RIDER LEVIT BUCKNALL



# ACU

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Source RIDER LEVIT BUCKNALL





ACU National

Australian Catholic University

Brisbane Sydney Canberra Ballarat Melbourne

**WOODS  
BAGOT™**

**AUSTRALIA  
ASIA  
MIDDLE EAST  
EUROPE  
NORTH AMERICA**