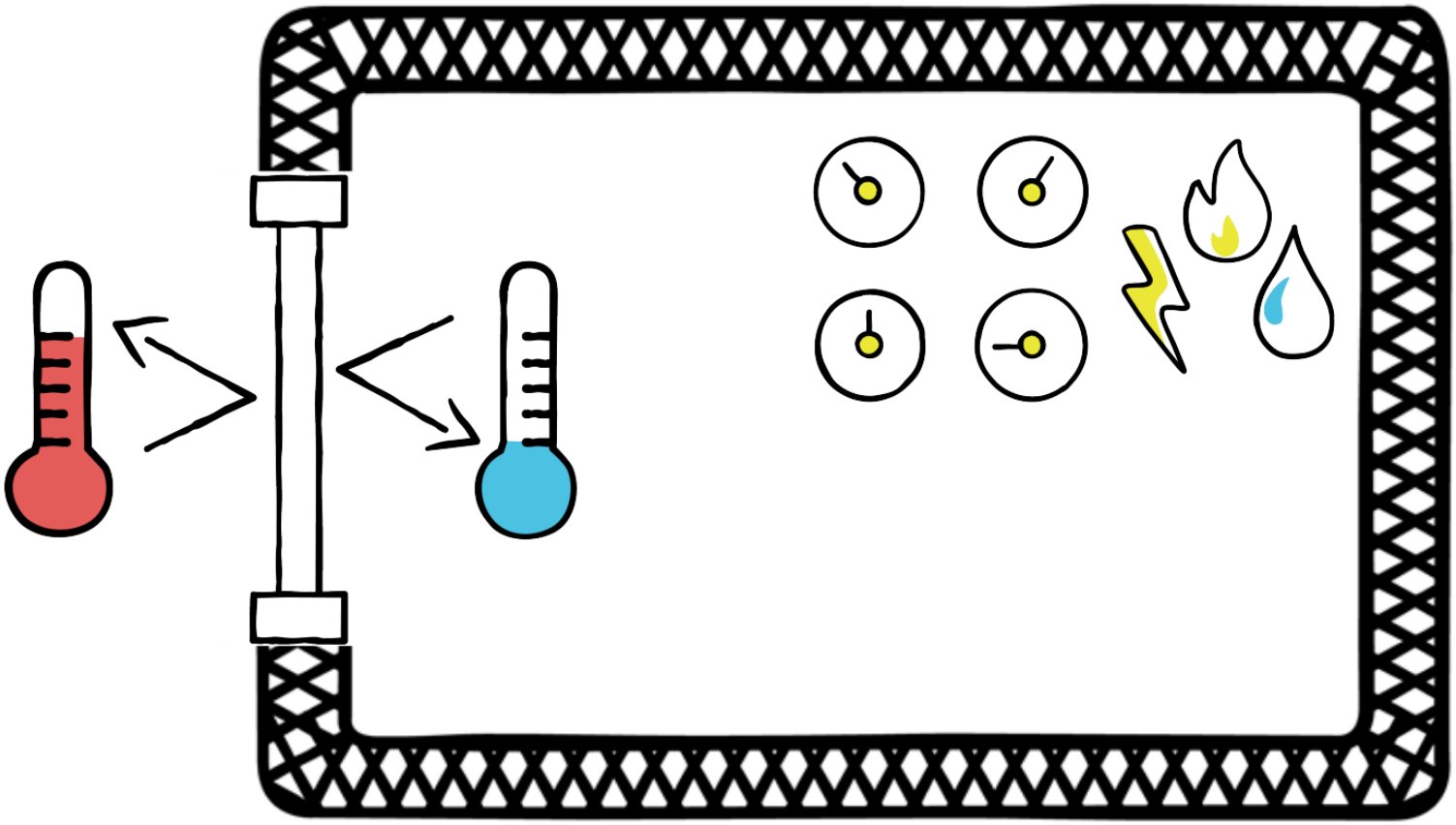
lid Low Impact Development Consulting



BCA Section J report

85 Sharps Rd, Tullamarine (MEL2)

Prepared for: EMKC³
Prepared by: Low Impact Development Consulting

19/12/2024

e: info@lidconsulting.com.au
p: 03 9016 9486
a: Level 6, 114 Flinders St, Melbourne 3000
w: lidconsulting.com.au

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Version	Date	Description	Drawings	Prepared	Checked
1.0	01/11/2024	Permit issue	Rev. A (20/09/2024)	JN	CH
1.1	19/12/2024	Pre-app ESD comments	Rev. G (18/12/2024)	JN	CH

Executive summary

LID Consulting has been engaged to provide advice and recommendations for compliance with the energy efficiency provisions of Volume 1 of the Building Code of Australia (BCA) 2022 for the proposed MEL2 data centre works at 85 Sharps Road, Tullamarine. The review is based on the elemental deemed to satisfy (DtS) provisions of section J.

Basic Parameters

Building class	Class 5 (tech spaces, guard kiosk) & Class 7b (data halls)
BCA climate zone	Zone 6
NCC edition used in this report	2022

General Scope of Work

The assessed building comprises new data centre halls and associated tech (office) spaces. Section J energy efficiency requirements apply to all spaces, but Part J4 and Part J5 apply only to spaces conditioned for occupant comfort (i.e. excluding data halls with process cooling).

Compliance framework

To comply with this Deemed to Satisfy prescriptive assessment, new buildings or portions of buildings will need to:

- Part J4 – meet or exceed the minimum insulation requirements of J4 for the roof/ceiling, wall and floor elements, and not exceed the maximum allowance for heat gain/loss as calculated by the façade calculator.
- Part J5 – Include all required building sealing measures.
- Part J6 – meet HVAC system efficiency requirements - by Mechanical Engineer.
- Part J7 – meet Artificial lighting and power requirements - by Electrical Engineer.
- Part J8 – meet heated water supply requirements – by Hydraulic Engineer.
- Part J9 – meet energy monitoring requirements and on-site distributed energy resources.

Drawings Assessed

The drawings used to assess the compliance of the building are those provided by Greenbox, received on 18/12/2024 (Rev. G).

Compliance summary

Section J clause	Status	Reference for compliance
J4 BUILDING FABRIC		
J4D3 Thermal construction – general	Can comply	Drawings
J4D4 Roof and ceiling construction	Can comply	Text
J4D5 Roof lights	N/A	Drawings
J4D6 Walls and glazing	Can comply	Appendix 2
J4D7 Floors	Can comply	Text
J5 BUILDING SEALING		
J5D3 Chimneys and flues	N/A	Text
J5D4 Roof lights	N/A	Drawings
J5D5 Windows and doors	Can comply	Text
J5D6 Exhaust fans	Can comply	Text
J5D7 Construction of ceilings, walls and floors	Can comply	Text
J5D8 Evaporative coolers	N/A	Drawings
J6 AIR CONDITIONING AND VENTILATION		
J6D3 Air conditioning system control	Addressed by relevant mechanical engineer	Mechanical documentation
J6D4 Mechanical ventilation system control		
J6D5 Fans and duct systems		
J6D6 Ductwork insulation		
J6D7 Ductwork sealing		
J6D8 Pump systems		
J6D9 Pipework insulation		
J6D10 Space heating		
J6D11 Refrigerant chillers		
J6D12 Unitary air-conditioning equipment		
J6D13 Heat rejection equipment		
J7 ARTIFICIAL LIGHTING AND POWER		
J7D3 Artificial lighting	Addressed by relevant electrical engineer	Electrical documentation
J7D4 Interior artificial lighting and power control		
J7D5 Interior decorative and display lighting		
J7D6 Exterior artificial lighting		
J7D7 Boiling water and chilled water storage units		
J7D8 Lifts		
J7D9 Escalators and moving walkways		
J8 HEATED WATER SUPPLY AND SWIMMING POOL AND SPA POOL PLANT		
J8D2 Heated water supply	Can comply	Text
J8D3 Swimming pool heating and pumping	N/A	Drawings
J8D4 Spa pool heating and pumping	N/A	Drawings
J9 ENERGY MONITORING AND ON-SITE DISTRIBUTED ENERGY RESOURCES		
J9D3 Facilities for energy monitoring	N/A	Text
J9D4 Facilities for electric vehicle charging equipment	N/A	Drawings
J9D5 Facilities for solar photovoltaic and battery systems	Can comply	Text

Required Actions

1. Provide fabric insulation and glazing specifications as per section J4, appendix 1 and appendix 2.
2. Seal the building as per J5.
3. Provide Air conditioning and ventilation as per J6.
4. Do not exceed the artificial lighting and power allowances as per section J7 and appendix 4, and provide controls as required.
5. Provide heated water supply as per J8.
6. Provide energy monitoring and on-site distributed energy resources as per section J9.

J4 Building Fabric

J4D3 Thermal construction – general

All required insulation must comply with AS/NZS 4859.1. It must be installed so that it abuts or overlaps adjoining insulation other than at supporting members, and forms a continuous barrier with ceilings, walls, bulkheads or the like.

Reflective insulation must be installed with the necessary airspace to achieve the required R-value, closely fitted against any penetration, adequately supported by the framing member or similar, and have a minimum 50mm overlap or otherwise be taped together.

Bulk insulation must maintain its position and not be compressed unless passing over roof battens or under the impact of pipes. In a ceiling where there is no insulation in the wall beneath, the ceiling insulation must overlap the wall by no less than 50mm.

J4D4 Roof and ceiling construction

In climate zone 6, a roof or ceiling must achieve a total system thermal resistance of R3.2 for a downward direction of heat flow (including allowance for thermal bridging), with the solar absorptance of the upper surface for a roof not more than 0.45. Thermal bridging elements must be calculated in accordance with AS4859.2.

Insulation R-value requirements for the roof/ceiling are outlined in the insulation plan attached to this report.

J4D4a Roof and Ceiling Insulation Solutions

- R3.2 total system thermal resistance can be achieved with the addition of R3.0 ceiling blanket laid over ceiling tiles (continuous application).
- The solar absorptance of the upper surface of a roof must not be more than 0.45. The following Colorbond colours meet this criteria: Classic Cream, Evening Haze, Paperbark, Shale Grey and Surfmist.

J4D5 Roof lights

- N/A - No roof lights are specified within the conditioned building envelope.

J4D6 Walls and glazing

The total system U-value and solar admittance of wall-glazing construction has been calculated in accordance with Specification S37C5 and S37C6, with compliance requirements shown below.

Wall-glazing element	**Performance requirement**
External wall	R-value: ≥ 1.4 m^2.K/W
Internal wall	R-value: ≥ 1.4 m^2.K/W
Glazing	<u>Tech spaces:</u> U-value: ≤ 6.0 W/m^2.K SHGC: ≤ 0.75

	Security guard kiosk: U-value: ≤ 6.0 W/m^2.K SHGC: ≤ 0.29

Note the above performance requirements describe the minimum performance required to achieve compliance with part J4D6. Walls with higher total system insulation values and glazing systems with lower U-Value and SHGC will also comply.

Refer to the insulation plan found in the appendices of this report, for identification of applicable walls forming part of the conditioned building envelope.

J4D6a Wall Insulation Solutions

- A total system thermal resistance of R1.4 can be achieved for:
  - 92mm lightweight clad metal stud walls with provision of R2.5 bulk insulation between studs and R0.2 thermal break tape or equivalent applied at frame-cladding fixing points to mitigate against thermal bridging.
  - 150mm concrete panel construction framed internally with 92mm steel (50mm air space between concrete and frame), and lightweight internal lining (plaster) with provision of R2.0 bulk insulation between studs.
  - 150mm concrete panel construction (structural/no framing) with provision of 35mm insulated plasterboard (R1.15 product thermal resistance or greater).

J4D7 Floors

Refer to the insulation plan found in the appendices of this report, for insulation requirements of different floors of the building.

In climate zone 6, a floor must achieve a total R-Value of R2.0 for a downward direction of heat flow (including allowance for thermal bridging). Thermal bridging elements must be calculated in accordance with AS4859.2.

The ground thermal resistance is considered to achieve R2.0 in accordance with J4D7 (1) for a concrete slab on ground. All additional insulation and / or floor materials will further enhance the thermal resistance.

J4D7a Floor Insulation Solutions

- An elevated floor or eave where conditioned above and non-conditioned below, must demonstrate a total R-value of R2.0 (downwards heat flow). This may be achieved by installing R2.0 batts or 50mm XPS (R2.0) lining to the underside of suspended concrete slabs.

J5 Building Sealing

J5D3 Chimneys and flues

Chimney and fireplace flues must all be fitted with a closable damper or flap to seal against heat loss or infiltration when not in use.

- N/A - No chimneys or fireplace flue are specified.

J5D4 Roof lights

Roof lights serving a conditioned space or habitable rooms are required to be sealed, or capable of being sealed. Additionally, a ceiling diffuser or similar, or weatherproof seal, or occupant controllable shutter system must be installed to the roof light. This is only applicable for openable types.

- N/A - No roof lights have been specified within the conditioned building envelope.

J5D5 Windows and doors

Complying seals (a foam or rubber compression strip, fibrous seal or similar) must be fitted to all doors and openable windows forming part of the envelope of a conditioned space or opening to outside. Fire doors and windows complying with AS 2047 are except from this requirement.

Windows in Australia are designed and built to comply with AS 2047 which also requires weatherproof seals to be fitted. In this case no further sealing is required, however, if the windows are not compliant with this standard, then weather proofing will be required for all windows.

An entrance door leading to a conditioned space of 50 m^2 or more must have an airlock, door closers or being a revolving or automatic door.

J5D6 Exhaust fans

When serving a conditioned space, kitchen or bathroom exhaust fans must be fitted with a self-closing damper.

J5D7 Construction of ceilings, walls and floors

Skirting, architraves, cornices, close fitting lining systems or caulking must be specified to ensure the junctions of linings and openings or penetrations in the building envelope (between conditioned and non-conditioned spaces) are sealed properly. Ensure gaps around window reveals and doors are sealed, unless these openings or grilles are required for smoke hazard management.

J5D8 Evaporative coolers

If included in the project these must all be fitted with a closable damper or flap to seal against heat loss or infiltration when not in use.

J6 Air Conditioning and Ventilation Systems

Addressed by relevant mechanical engineer.

J7 Artificial Lighting and Power

Addressed by relevant electrical engineer.

J8 Heated Water Supply and Swimming Pool and Spa Pool Plant

J8D2 Heated water supply

- Heated water supply systems for food preparation and sanitary purposes must be designed and installed in accordance with Part B2 of NCC Volume Three – Plumbing Code of Australia.

J8D3 Swimming pool heating and pumping

- N/A – No swimming pool.

J8D4 Spa pool heating and pumping

- N/A – No spa pool.

J9 Energy Monitoring an on-site distributed energy sources

J9D3 Facilities for energy monitoring

- A building with a floor area greater than 2500 m^2, must have the facility to individually record the energy consumption of the following services:
    - HVAC plant
    - Artificial lighting
    - Appliances
    - Central hot water system
    - Internal transport when there is more than one serving the building
    - Other major ancillary plants

J9D4 Facilities for electric vehicle charging equipment

As the proposed works do not include construction of a carpark building structure, there are no applicable electric vehicle charging requirements.

J9D5 Facilities for solar photovoltaic and battery systems

The main electrical switchboard of a building must:

a) Contain at least two empty three-phase circuit breaker slots and four DIN rail spaces labelled to indicate the use of each space for a solar PV system and a battery system; and

b) Be sized to accommodate the installation of solar PV panels producing their maximum electrical output on at least 20% of the building roof area.

At least 20% of the roof area of a building must be left clear for the installation of solar PV panels, except for buildings -

a) With installed solar PV panels on at least 20% of the roof area, or an equivalent generation capacity elsewhere on-site; or
b) Where 100% of the roof area is shaded for more than 70% of daylight hours; or
c) With a roof area of not more than 55m^2; or
d) Where more than 50% of the roof area is used as a terrace, carpark, roof garden, roof light or similar.

Appendix 1: Additional Information

Roof/ceiling insulation requirements

The total roof/ceiling insulating value of above a conditioned space in this climate zone 6 should be R3.2 acting against summer heat ingress.

Glazing

Terms:
U value – measure of heat flow through a window. Lower values represent better insulating windows
SHGC – Solar Heat Gain Co-efficient – higher values represent higher penetration of solar radiation
U_w and **$SHGC_w$** represent the window whole system values that include the effect of glass and frame together

Sealing Doors & Windows

New windows and doors are required to be sealed to AS2047. Windows (not sealed to AS2047) and doors between a conditioned and non-conditioned space must have a foam or rubber compressible strip or fibrous seal fitted to each edge and the bottom.

These must be fitted to all doors of conditioned spaces leading to non-conditioned spaces and be documented on the plans.

Appendix 2: Wall-glazing Assessment

NCC 2019 Wall-Glazing Calculator v3.0

Wall and glazing energy efficiency in Class 2-9 buildings - Method 2 of Specification J1.5a, NCC 2019

Building name and description: 85 Sharps Rd (MEL2) Tullamarine - security guard kiosk

Classification: Other

Climate Zone: 6

Calculated Area-Weighted U-Value	1.94
Allowable Area-Weighted U-Value	2.00
Building total U-Value allowance met	**98%**
Calculated Representative Air-Conditioning Energy Value	8.3
Allowable Representative Air-Conditioning Energy Value	8.5
Building total SHGC allowance met	**99%**
Check Values	Visible
Wall Element Requirements	**Met**
Display Glazing Element Requirements	**-**

Use of this calculator does not guarantee compliance with the NCC. The disclaimer and a version update check are available at the bottom of the page.

Building Check-Values

	Area (m^2) Walls	Glazing	**Sub-total**	Display	Glazing Percentage (non display)
North	10.2	9.5	**19.7**	0.0	48%
East	4.3	3.8	**8.1**	0.0	47%
South	13.7	0.0	**13.7**	0.0	0%
West	3.4	2.8	**6.2**	0.0	45%
Internal	21.6	0.0	**21.6**	0.0	0%
Total	**53.2**	**16.1**	**69.3**	**0.0**	**23%**

Element Limits

Wall U-Value*	1.00
Display Glazing U-Value	5.8
Display Glazing Solar Admittance	0.81

*The wall u-value limit will update based on building class and glazing %

Element Description					U-Value		SHGC and Shading					Element Check-Values				
ID	Description (optional)	Element Type	Facing Sector	Area (m^2)	U-Value	U-Value Element share of allowance used	SHGC	Glazing Height (m)	Shading Height (m)	Shading Projection (m)	SHGC Element share of allowance used	Rounded G/H	Rounded P/H	Shading Factor	Solar Admittance	AC Energy Value
1	North wall	Wall	North	10.21	0.71	5% of building total					Not counted	0	0	1	0	0
2	East wall	Wall	East	4.30	0.71	2% of building total					Not counted	0	0	1	0	0
3	South wall	Wall	South	13.70	0.71	7% of building total					Not counted	0	0	1	0	0
4	West wall	Wall	West	3.40	0.71	2% of building total					Not counted	0	0	1	0	0
5	Internal wall	Wall	Internal	21.60	0.71	11% of building total					Not counted	0	0	1	0	0
6						Not counted					Not counted	0	0	1	0	0
7	00 north	Glazing	North	9.49	6.00	42% of building total	0.29	1.3	2.2	0.6	70% of building total	0.5	0.2	1	0.29	5.834452
8	00 east	Glazing	East	3.80	6.00	17% of building total	0.29	1.5	2.4	2.8	15% of building total	0.4	1.1	0.68	0.1972	1.2139632
9	00 west	Glazing	West	2.80	6.00	12% of building total	0.29	1.3	2.2	1.3	15% of building total	0.5	0.5	0.95	0.2755	1.288238
10						Not counted					Not counted	0	0	1	0	0
11						Not counted					Not counted	0	0	1	0	0
12						Not counted					Not counted	0	0	1	0	0
13						Not counted					Not counted	0	0	1	0	0
14						Not counted					Not counted	0	0	1	0	0
15						Not counted					Not counted	0	0	1	0	0
16						Not counted					Not counted	0	0	1	0	0
17						Not counted					Not counted	0	0	1	0	0
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Check for version update

NCC 2019 Wall-Glazing Calculator v3.0

Wall and glazing energy efficiency in Class 2-9 buildings - Method 2 of Specification J1.5a, NCC 2019

Building name and description: 85 Sharps Rd (MEL2) Tullamarine

Classification: Other

Climate Zone: 6

Calculated Area-Weighted U-Value	0.73
Allowable Area-Weighted U-Value	2.00
Building total U-Value allowance met	**37%**
Calculated Representative Air-Conditioning Energy Value	0.0
Allowable Representative Air-Conditioning Energy Value	0.0
Building total SHGC allowance met	**-**
Check Values	Visible
Wall Element Requirements	**Met**
Display Glazing Element Requirements	**-**

Use of this calculator does not guarantee compliance with the NCC. The disclaimer and a version update check are available at the bottom of the page.

Building Check-Values

	Area (m^2) Walls	Glazing	**Sub-total**	Display	Glazing Percentage (non display)
North	9146.5	243.4	**9389.9**	0.0	3%
East	6526.7	0.0	**6526.7**	0.0	0%
South	9216.1	66.6	**9282.7**	0.0	1%
West	6710.6	0.0	**6710.6**	0.0	0%
Internal	69015.7	0.0	**69015.7**	0.0	0%
Total	**100615.5**	**310.0**	**100925.5**	**0.0**	**0%**

Element Limits

Wall U-Value*	0.71
Display Glazing U-Value	5.8
Display Glazing Solar Admittance	0.81

*The wall u-value limit will update based on building class and glazing %

Element Description					U-Value		SHGC and Shading					Element Check-Values				
ID	Description (optional)	Element Type	Facing Sector	Area (m^2)	U-Value	U-Value Element share of allowance used	SHGC	Glazing Height (m)	Shading Height (m)	Shading Projection (m)	SHGC Element share of allowance used	Rounded G/H	Rounded P/H	Shading Factor	Solar Admittance	AC Energy Value
1	North wall	Wall	North	9146.46	0.71	9% of building total					Not counted	0	0	1	0	0
2	East wall	Wall	East	6526.65	0.71	6% of building total					Not counted	0	0	1	0	0
3	South wall	Wall	South	9216.05	0.71	9% of building total					Not counted	0	0	1	0	0
4	West wall	Wall	West	6710.60	0.71	7% of building total					Not counted	0	0	1	0	0
5	Internal wall	Wall	Internal	69015.70	0.71	67% of building total					Not counted	0	0	1	0	0
6						Not counted					Not counted	0	0	1	0	0
7	00 entry	Glazing	North	6.44	6.00	0% of building total	0.75				0% of building total	0	0	1	0.75	0
8	00 tech	Glazing	North	12.00	6.00	0% of building total	0.75				0% of building total	0	0	1	0.75	0
9	01 tech north	Glazing	North	75.00	6.00	1% of building total	0.75				0% of building total	0	0	1	0.75	0
10	01 tech south	Glazing	South	22.20	6.00	0% of building total	0.75				0% of building total	0	0	1	0.75	0
11	02 tech north	Glazing	North	75.00	6.00	1% of building total	0.75				0% of building total	0	0	1	0.75	0
12	02 tech south	Glazing	South	22.20	6.00	0% of building total	0.75				0% of building total	0	0	1	0.75	0
13	03 tech north	Glazing	North	75.00	6.00	1% of building total	0.75				0% of building total	0	0	1	0.75	0
14	03 tech south	Glazing	South	22.20	6.00	0% of building total	0.75				0% of building total	0	0	1	0.75	0
15						Not counted					Not counted	0	0	1	0	0
16						Not counted					Not counted	0	0	1	0	0
17						Not counted					Not counted	0	0	1	0	0
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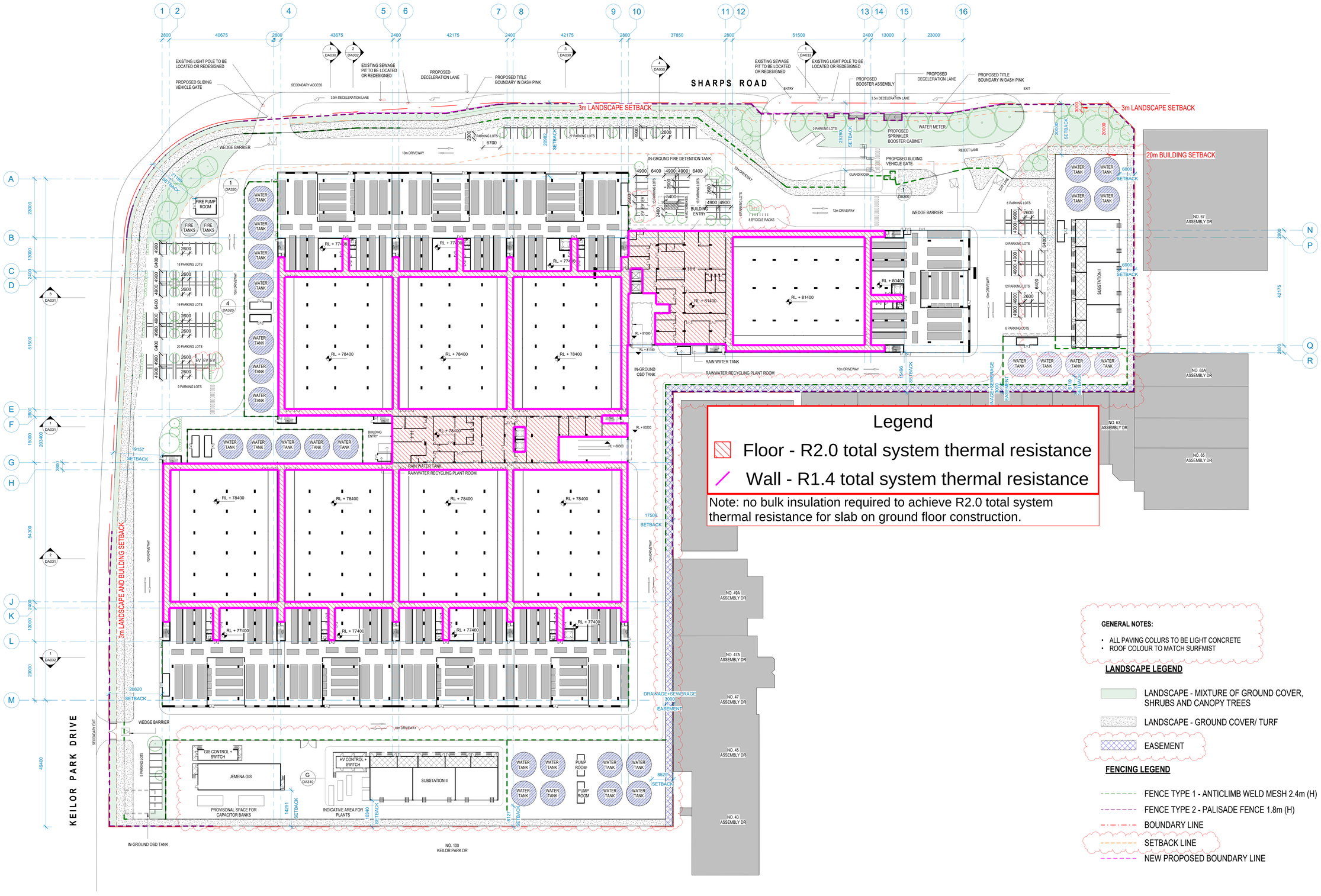
Appendix 3: Insulation Plan



Legend

- Floor - R2.0 total system thermal resistance
- Wall - R1.4 total system thermal resistance

Note: no bulk insulation required to achieve R2.0 total system thermal resistance for slab on ground floor construction.

GENERAL NOTES:

- ALL PAVING COLURS TO BE LIGHT CONCRETE
- ROOF COLOUR TO MATCH SURFMIST

LANDSCAPE LEGEND

- LANDSCAPE - MIXTURE OF GROUND COVER, SHRUBS AND CANOPY TREES
- LANDSCAPE - GROUND COVER/ TURF
- EASEMENT

FENCING LEGEND

- FENCE TYPE 1 - ANTICLIMB WELD MESH 2.4m (H)
- FENCE TYPE 2 - PALISADE FENCE 1.8m (H)
- BOUNDARY LINE
- SETBACK LINE
- NEW PROPOSED BOUNDARY LINE

Issue	Date	Description
A	31.07.2024	FOR DA
B	21.08.2024	FOR DA
C	26.08.2024	FOR DA
D	28.09.2024	FOR DA
G	18.12.2024	FOR DA

Notes

Key Plan

Project Manager

Construction Manager

Client: AIRTRUNK

Greenbox A WOOLPERT COMPANY
+61 2 8069 8930
LEVEL 22
68 PITT STREET
SYDNEY NSW 2000 AUSTRALIA
GREENBOX ARCHITECTURE PTY LTD
ABN: 79 139 779 098
ISO 9001 CERTIFIED QUALITY SYSTEM

- Use written dimensions only
- Do not scale from drawing
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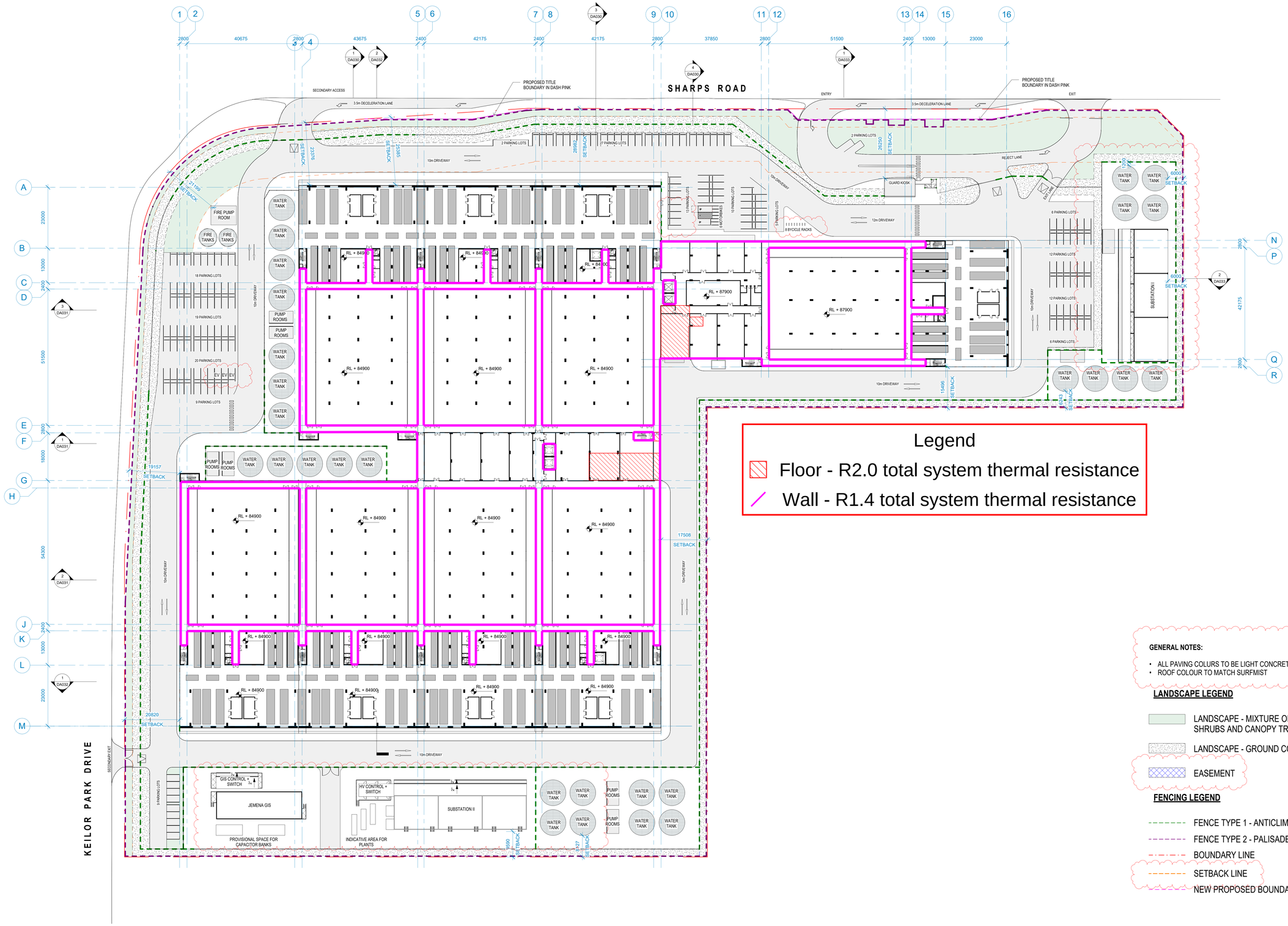
- Nominated Architect - Gerard Page; NSW reg No.7247, Vic reg No.17664, QLD reg No.4538

Client	EMKC
Project	PROPOSED DATA CENTRE 85-95 Sharps Road Tullamarine VIC 3043
Scale	1 : 500
Sheet	
Scale Bar	1:500 0 5 10 15 25m
Drawn By	HL/AZ
Project Status	DA SUBMISSION
Checked By	DK/SFI
Drawing Title	OVERALL LEVEL 1 PLAN
Approved By	AO
Job Number	240004
Drawing Number	DA011
Issue	G

A0



Legend

- Floor - R2.0 total system thermal resistance
- Wall - R1.4 total system thermal resistance

GENERAL NOTES:

- ALL PAVING COLURS TO BE LIGHT CONCRETE
- ROOF COLOUR TO MATCH SURFMIST

LANDSCAPE LEGEND

- LANDSCAPE - MIXTURE OF GROUND COVER, SHRUBS AND CANOPY TREES
- LANDSCAPE - GROUND COVER/ TURF
- EASEMENT

FENCING LEGEND

- FENCE TYPE 1 - ANTICLIMB WELD MESH 2.4m (H)
- FENCE TYPE 2 - PALISADE FENCE 1.8m (H)
- BOUNDARY LINE
- SETBACK LINE
- NEW PROPOSED BOUNDARY LINE

Issue	Date	Description
A	31.07.2024	FOR DA
B	21.08.2024	FOR DA
C	26.08.2024	FOR DA
D	28.08.2024	FOR DA
G	18.12.2024	FOR DA

Notes

Key Plan

Project Manager

Construction Manager

Client: AIRTRUNK

GreenBox A WOOLPERT COMPANY
+61 2 8069 8930
LEVEL 22
68 PITT STREET
SYDNEY NSW 2000 AUSTRALIA
GREENBOX ARCHITECTURE PTY LTD
ABN: 79 139 779 098
ISO 9001 CERTIFIED QUALITY SYSTEM

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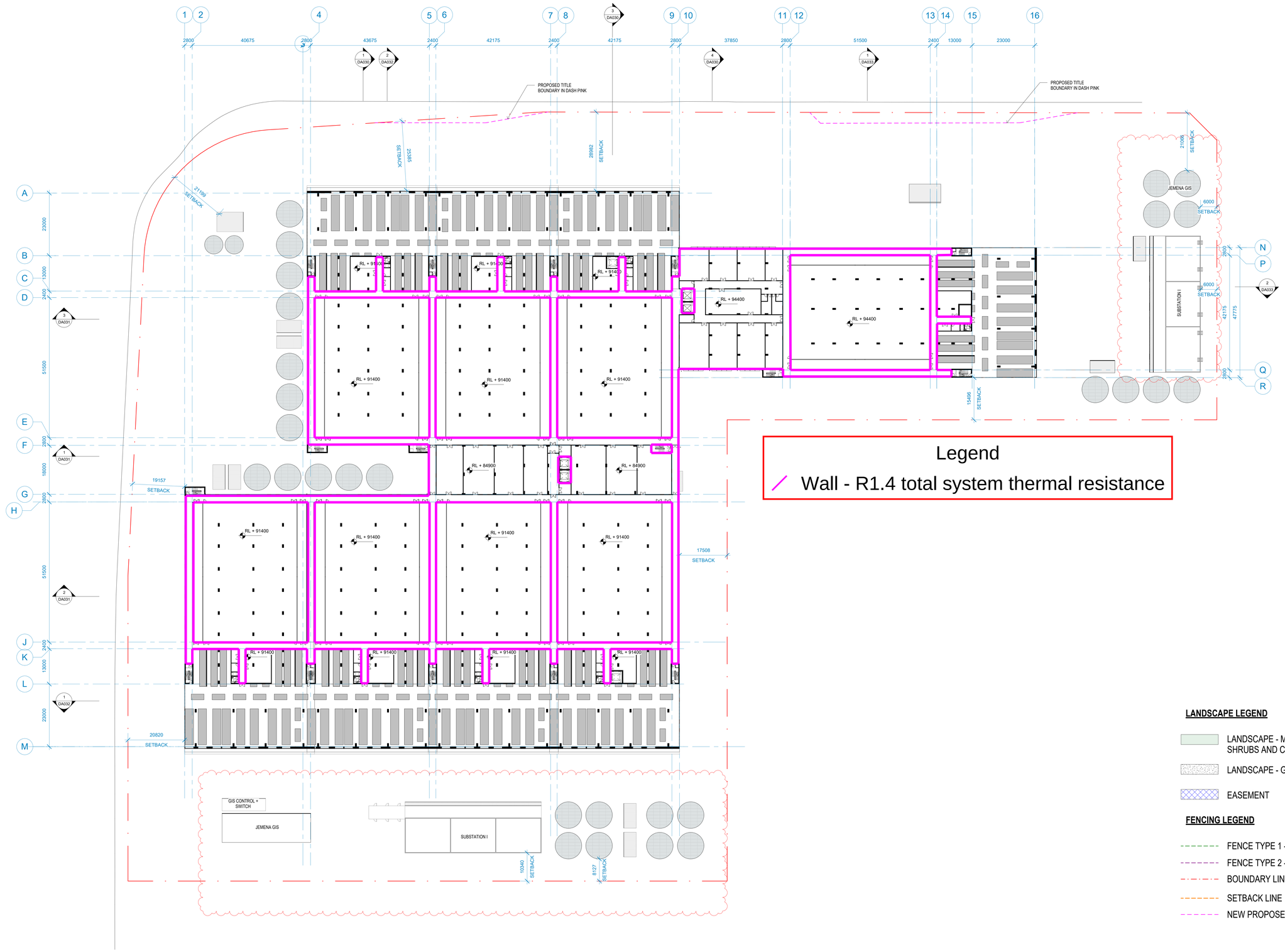
Client	EMKC
Project	PROPOSED DATA CENTRE 85-95 Sharps Road Tullamarine VIC 3043
Scale	1 : 500
Sheet	
Scale Bar	1:500 0 5 10 15 25m
Drawn By	HL/AZ
Project Status	DA SUBMISSION
Checked By	DK/SFI
Drawing Title	OVERALL LEVEL 2 PLAN
Approved By	AO
Job Number	240004
Drawing Number	DA012
Issue	G

A0



LANDSCAPE LEGEND

- LANDSCAPE - MIXTURE OF GROUND COVER, SHRUBS AND CANOPY TREES
- LANDSCAPE - GROUND COVER/ TURF
- EASEMENT

FENCING LEGEND

- FENCE TYPE 1 - ANTICLIMB WELD MESH 2.4m (H)
- FENCE TYPE 2 - PALISADE FENCE 1.8m (H)
- BOUNDARY LINE
- SETBACK LINE
- NEW PROPOSED BOUNDARY LINE

Issue	Date	Description
A	31.07.2024	FOR DA
B	21.08.2024	FOR DA
C	26.08.2024	FOR DA
D	28.08.2024	FOR DA
G	18.12.2024	FOR DA

Notes

Key Plan

Project Manager

Construction Manager

Client: AIRTRUNK

GREENBOX ARCHITECTURE PTY LTD
ABN: 79 139 779 098
ISO 9001 CERTIFIED QUALITY SYSTEM
+61 2 8069 8930
LEVEL 22
68 PITT STREET
SYDNEY NSW 2000 AUSTRALIA

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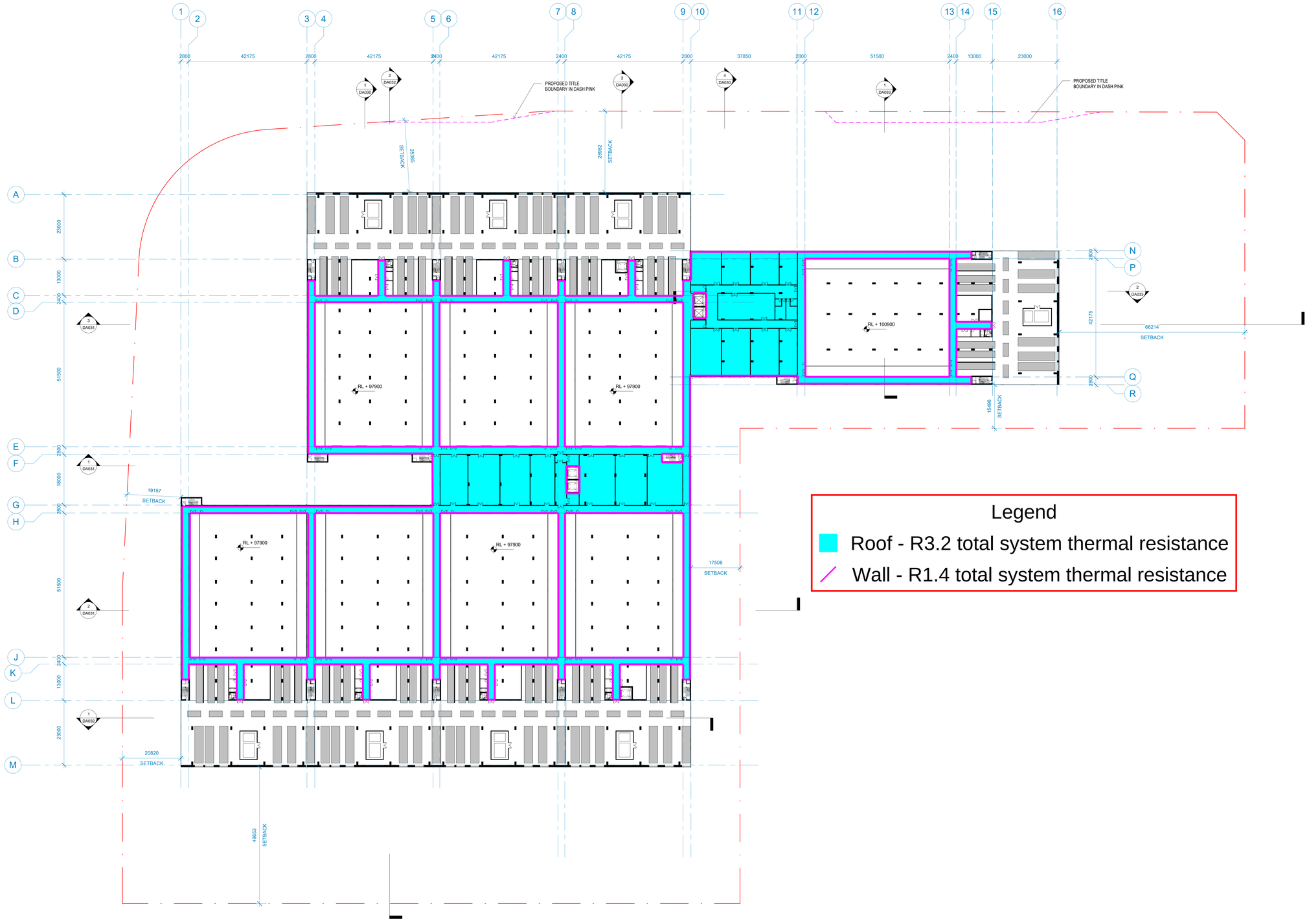
- Nominated Architect - Gerard Page, NSW reg No.7247, Vic reg No.17664, QLD reg No.4538

Client	EMKC
Project	PROPOSED DATA CENTRE 85-95 Sharps Road Tullamarine VIC 3043
Scale	1 : 500
Sheet	
Scale Bar	1:500 0 5 10 15 25m
Drawn By	HL/AZ
Project Status	DA SUBMISSION
Checked By	DK/SFI
Drawing Title	OVERALL LEVEL 3 PLAN
Approved By	AO
Job Number	240004
Drawing Number	DA013
Issue	G

A0



1 LEVEL 4
1 : 500

N

Issue	Date	Description
A	31.07.2024	FOR DA
B	21.08.2024	FOR DA
C	26.08.2024	FOR DA
D	28.08.2024	FOR DA

A0

Notes

Key Plan

Project Manager

Construction Manager

Client

Greenbox
+61 2 8069 8930
LEVEL 22
68 PITT STREET
SYDNEY NSW 2000 AUSTRALIA
GREENBOX ARCHITECTURE PTY LTD
ABN: 79 139 779 098
ISO 9001 CERTIFIED QUALITY SYSTEM

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- All materials to be used in accordance with the manufacturer's specifications and instructions and shall comply with the relevant Australian Standards
-
- Nominated Architect - Gerard Page; NSW reg No.7247, Vic reg No.17664, QLD reg No.4538

Client: EMKC

Project: PROPOSED DATA CENTRE
85-95 Sharps Road
Tullamarine VIC 3043

Scale: 1 : 500

Sheet

Scale Bar: 1:500 0 5 10 15 25m

Drawn By: HUAZ

Project Status

Checked By: DK/SFI

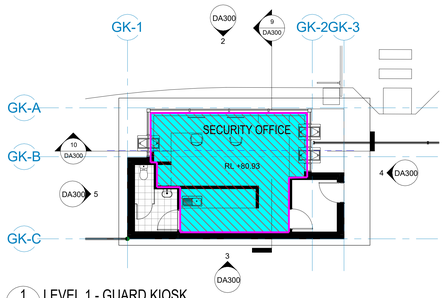
Drawing Title: **OVERALL LEVEL 4 PLAN**

Approved By: AO

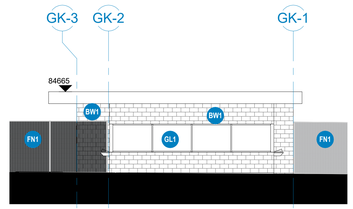
Job Number: 240004

Drawing Number: DA014

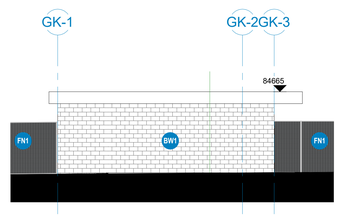
Issue: D



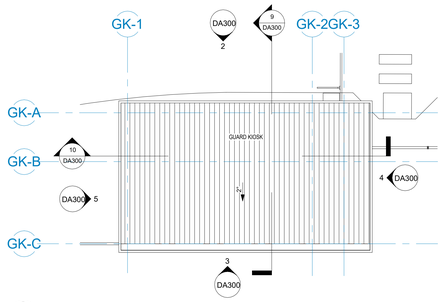
1 LEVEL 1 - GUARD KIOSK
1 : 100



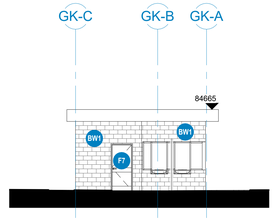
2 GUARD KIOSK NORTH
1 : 100



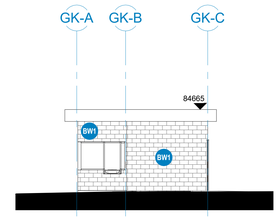
3 GUARD KIOSK SOUTH
1 : 100



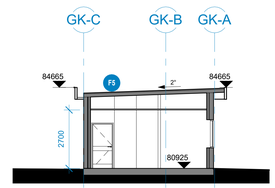
6 SECURITY GUARD KIOSK - L2 (ROOF PLAN)
1 : 100



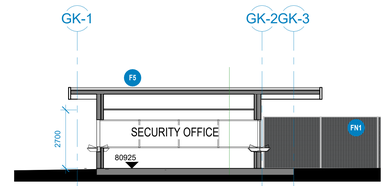
4 GUARD KIOSK EAST
1 : 100



5 GUARD KIOSK WEST
1 : 100



9 GUARD KIOSK SECTION
1 : 100



10 GUARD KIOSK SECTION
1 : 100

Legend

- Floor - R2.0 total system thermal resistance
- Roof - R3.2 total system thermal resistance
- Wall - R1.4 total system thermal resistance

Note: no bulk insulation required to achieve R2.0 total system thermal resistance for slab on ground floor construction.

Issue	Date	Description
A	31.07.2024	FOR DA
B	21.08.2024	FOR DA
C	26.08.2024	FOR DA
D	28.09.2024	FOR DA

A0

Notes

Key Plan

Project Manager

Construction Manager

Client

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LEVEL 22
68 PITT STREET
SYDNEY NSW 2000 AUSTRALIA
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ABN: 79 139 779 098
ISO 9001 CERTIFIED QUALITY SYSTEM

Client: EMKC

Project: PROPOSED DATA CENTRE
85-95 Sharps Road
Tullamarine VIC 3043

Scale	1 : 100
Drawn By	KG
Checked By	DK/SFI
Approved By	AO
Job Number	240004
Sheet	
Scale Bar	1:100 0 1 2 3 5m
Project Status	FOR COORDINATION
Drawing Title	SECURITY GUARD KIOSK DETAILS
Drawing Number	DA300
Issue	D