

NCC2022 SECTION J PART J4 PERFORMANCE-BASED DESIGN BRIEF (PBDB)

OPAL ST IVES BOTANICA

ESD SERVICES

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DOCUMENT CONTROL SHEET

Project Number	250251
Project Name	Opal St Ives Botanica
Description	NCC2022 Section J Part J4 Performance-Based Design Brief (PBDB)
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Midson Group	REV	Draft	Rev A						
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1 INTRODUCTION

The purpose of this document is to define the environmental performance targets and objectives for the proposed Opal St Ives Botanica located at 285-295 Mona Vale Road and 1 Flinders Avenue, St Ives, NSW 2075.

1.1 NCC2022 SECTION J PART J4 PERFORMANCE-BASED DESIGN BRIEF (PBDB)

A Section J Part J4 performance-based design brief (PBDB) is a mandatory Governing requirement under Part A2 to identify and summarise the performance solution process and to assess and validate the proposed development against the performance requirements of NCC 2022 Volume One Amendment 2 Section J Energy Efficiency Part J4 Building Fabric.

The purpose of a PBDB is to record fundamental activities and outcomes of the performance-based design process, as agreed upon during key stakeholder negotiations.

When the PBDB is finalised, all critical activities and outcomes would have been identified.

Consequently, the design process can commence with confidence that the proposed design will be approved provided the process of the PBDB are followed.

During the Development Application phase, this PBDB is a live document that is circulated to the client, project manager, architect, certifier and all other stakeholders for discussion and comments. After all such feedback is received, an "agreed framework" will be adopted and subsequently serve as the basis for design development and validation.

This PBDB also includes a preliminary Part J4 assessment of the proposed development based on the deemed-to-satisfy (DTS) provisions of Part J4 to identify the constraints and opportunities particular to this project.

2 PROJECT INFORMATION

2.1 PROJECT DESCRIPTION

The proposed development of Opal St Ives Botanica is located at 285-295 Mona Vale Road and 1 Flinders Avenue, St Ives, NSW 2075. The proposed development will result in:

- Demolition of the existing buildings at the site.
- Construction of a new aged care facility.
- Construction of associated site facilities and services, including pedestrian and vehicular access and basement parking.
- Site Landscaping and infrastructure works.

Building type and function: Class 5, Class 7a and Class 9c

NCC Climate Zone: Climate Zone 5

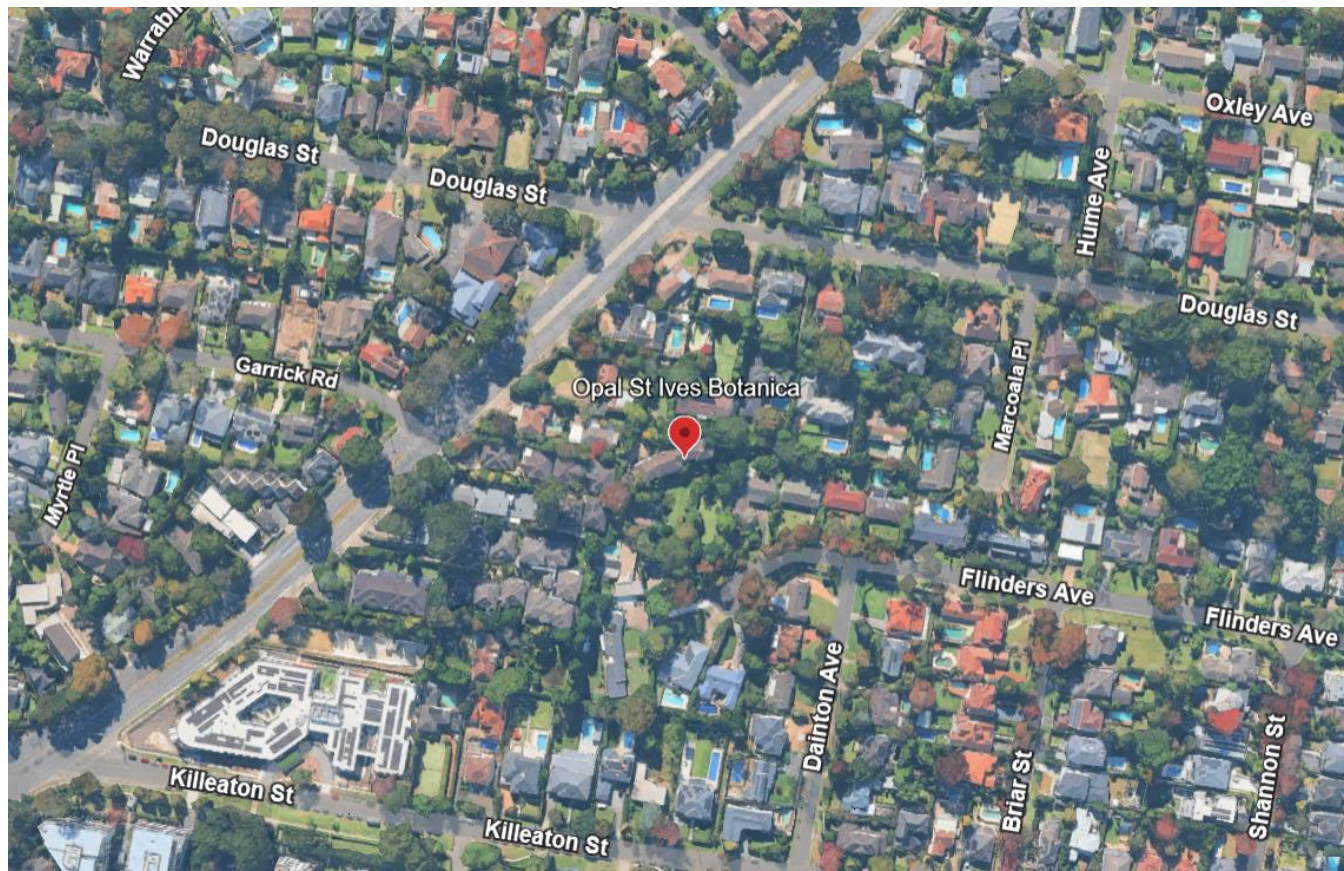


Figure 1: Aerial Photo of the Site

2.2 STAKEHOLDERS

The stakeholders consulted as a part of the PBDB development process are listed below:

Stakeholders	Role
Opal Healthcare – Mohammad Ashari	Client
Midson – Emmanuel Ghali, Onofrio Marzulli, Ben Carmody	Project Management
Formiga 1 – Scott Naylor	PCA
Grindley Constructions – Nathan Atkinson, Kathy Lloyd, Peter Wilson, Darren McFarlane	ECI
Group GSA – Lisa-Maree Carrigan, Noura Thaha, Izabella McFadden, Tina Le, John Holland, Anika Hoffman, Federica Roverato	Architect, Landscape
Colliers Urban Planning – Daniel West, Renee Stavroulakis	Planning
Henry & Hymas – Andrew Francis, Nick Heazlewood, Jackson Kane, Derek Duns, Richaine Cura	Civil, Structural
JHA Consulting Engineers – John Stefani, Lewyn Dsouza, Chris Hadjiyiannis, George Koutoulas, Yinou Xing, Kosma Tzannes, Maurice Bond, Gary Tang, Tarun Thottungal	Electrical, Fire, Hydraulic, Level 3, Mechanical, ESD

3 SECTION J PART J4 BUILDING FABRIC

3.1 NOMINATED APPLICABLE PERFORMANCE REQUIREMENT(S)

This PBDB addresses the following performance requirements of NCC 2022 Volume One Amendment 2:

- Section J Energy Efficiency J1P1 Energy Use
 - Part J4 Building Fabric

3.1.1 OTHER PARTS OF SECTION J & SPECIFICATION 33

Compliance with other parts of Section J, namely:

- Part J5 Building Sealing;
- Part J6 Air-conditioning and ventilation;
- Part J7 Artificial Lighting and Power;
- Part J8 Heated Water Supply and Swimming Pool and Spa Pool Plant; &
- Part J9 Energy Monitoring and On-site Distributed Energy Resources,

remains the responsibility of the relevant services consultant/architect.

It is the responsibility of the contractor to ensure the construction of the proposed development complies with the requirements of J4D3 Thermal Construction – General (1) – (5). If the floor has an in-slab or in-screed heating or cooling system, it is the responsibility of the contractor to comply with slab edge insulation requirements J4D7(3) and J4D7(4).

3.2 APPLICABLE AREAS

The provisions of Part J4 apply to building elements forming the *envelope* of a building.

3.2.1 ENVELOPE

For the purposes of Section J in Volume One, Envelope means the parts of a building's fabric that separate a *conditioned space* from:

- the exterior of the building; or
- a non-conditioned space including—
 - the floor of a rooftop plant room, lift-machine room or the like; and
 - the floor above a carpark or warehouse; and
 - the common wall with a car park, warehouse or the like.

3.2.2 CONDITIONED SPACE

For the purposes of Volume One, Conditioned Space means a space within a building, including a ceiling or under-floor supply air plenum or return air plenum, where the environment is likely, by the intended use of the space, to have its temperature controlled by air-conditioning.

See Appendix A – Building Envelope Markups for the agreed envelope for this development.

3.3 APPLICABLE ASSESSMENT PROCESS

The proposed performance solution to the performance requirement specified in section 3.1 above is *Verification Method J1V3 - Verification using a Reference Building*.

J1V3 is applicable for Class 3, 5, 6, 7, 8 or 9 buildings.

Under J1V3, compliance with J1P1 is verified when it is determined that the annual greenhouse gas emissions of the proposed building are not more than the annual greenhouse gas emissions of a *reference building*. More specifically, J4 is verified when it is determined that the annual greenhouse gas emissions of the proposed building are not more than the annual greenhouse gas emissions of a reference building when the proposed building is modelled with the same services as the reference building as per J1V3(1)(a)(ii).

Reference building, for the purposes of this PBDB, means a hypothetical Part J4 DTS compliant building. This is used to calculate the maximum allowable annual greenhouse gas emissions for the proposed building.

As per J1V3(2)(a), the annual greenhouse gas emissions of the proposed building can be offset by renewable energy that is generated and used on-site.

In addition to the above, the proposed building must demonstrate a thermal comfort level of between a Predicted Mean Vote (PMV) of -1 to +1 is achieved across not less than 95% of the floor area of all occupied zones for not less than 98% of the annual hours of operation of the building.

The calculation method used for determining the annual greenhouse gas emissions and thermal comfort level of the building will be in accordance with ANSI/ASHRAE Standard 140, Specification 34 Modelling Parameters for J1V3 and Specification 35 Modelling Profiles for J1V3.

As noted in section 3.1 above, it is the responsibility of the contractor, relevant services consultant and the architect to ensure the building complies with the additional requirements in Specification 33.

3.4 AGREED ACCEPTANCE CRITERIA

3.4.1 CONSTRUCTION CERTIFICATE STAGE

For Construction Certificate, the agreed acceptable documentation is a J1V3 Report containing as a minimum the following:

- General
 - Property title/address
 - Building Class and use
 - Verification Method used
 - NCC Climate Zone
 - Details of reference documentation (architectural drawings etc.)
 - Name and version and software used in the analysis
 - Name and qualifications of the person responsible for the analysis
- Proposed Building Fabric and Glazing thermal specifications
 - Total R-value, direction (upwards, downwards etc.) and solar absorptance values as applicable for opaque elements
 - Total U-value and Total SHGC as applicable for transparent/translucent elements
 - Minimum onsite renewable energy system type and peak capacity (if required)
- Modelling Inputs
 - Reference building and proposed building thermal specifications
 - Confirmation Specification 34 Modelling Parameters for J1V3 and Specification 35 Modelling Profiles for J1V3 are followed
 - For PMV: temperature setpoints, clothing value, activity level and air velocity

- Peak capacity and type of onsite renewable energy system (if any)
- Modelling Outputs
 - Annual greenhouse gas emissions of proposed building and reference building
 - Percentage of operational hours the PMV is within the range of -1 to +1 for all “conditioned” spaces
 - 3D Image of the energy model
- Building Fabric Markups showing the extent of total R-value required

3.4.2 OCCUPATION CERTIFICATE STAGE

For Occupation Certificate, the agreed acceptable evidence for signoff is as follow:

- Letter of Confirmation from Contractor(s) that construction of the building fabric has been undertaken in accordance with this design brief and the most up-to-date revision of J1V3 Report, including supporting evidence in the form of datasheets, calculations and purchase receipts to confirm the performance of building fabric/glazing or as required by the certifier.

3.4.2.1 Trade/Supplier Certificates

Typically, a range of trade/supplier certificates will be required as part of the sign-off process at the OC stage. These may include, work involved in insulation/thermal breaks, glazing, etc. JHA recommends the requirement for a Section J certificate from relevant trades (or suppliers) should be set out in the terms of engagement of the trade/supplier. These certificates should be obtained immediately after the work is done rather than at the end of construction.

Each relevant trade/supplier certificate must:

1. Clearly identify the person giving the certificate
 - a. Full Name,
 - b. Job Title,
 - c. Company Details/Letterhead, &
 - d. Qualifications and Experience
2. State the relevant Section J clause(s)/requirement(s) being certified and that they comply
3. Signed and Dated

4 PRELIMINARY PART J4 BUILDING FABRIC ASSESSMENT

A preliminary Section J Part J4 DTS assessment has been carried out for the proposed development to identify the constraints and opportunities particular to this project and to ensure compliance is achievable. Note these are not the proposed thermal specifications for the project; J1V3 assessment will be undertaken to further refine and optimise the thermal specifications in accordance with the objectives of this project during detail design. The preliminary building fabric and glazing requirements under Part J4 DTS pathway are provided below.

Building Fabric

Elements	Minimum DTS Requirements	Proposed Requirements (10% improvement)	Indicative Insulation**
Roof/Exposed Ceiling Envelope	Total R-Value of 3.7, Downwards (Solar absorptance of the upper surface of a roof must be not more than 0.45)	Total R-Value of 4.1, Downwards (Solar absorptance of the upper surface of a roof must be not more than 0.40)	R3.5 ceiling batts + R1.3 roof blanket (w/foil)
Envelope Walls	Total R-Value of 1.4	Total R-Value of 1.6	90mm R2.5 wall batts + R0.2 non-combustible thermal break on steel studs.
Envelope Floors (Suspended)	Total R-value of 2.0, Downwards	Total R-value of 2.2	50mm R2.2 rigid soffit boards
Envelope Floors (Slab-on-ground) *	Total R-value of 2.0, Downwards	Total R-value of 2.2	N/A – deemed compliant

* According to Clause 2 of Section J4D7, a slab-on-ground that does not have an in-slab heating or cooling system is considered to achieve a Total R-value of R2.0. Hence no additional insulation is required for the Envelope Floor (slab-on-ground).

**Contractors must provide the Total R-value Breakdown Calculations following AS/NZS 4859.2:2018 or Specification 38 for spandrel panels, with thermal bridging allowance using NZS 4214:2006, confirming Section J requirements are met.

Glazing

Elements	Minimum DTS Requirement	Proposed Requirements (10% improvement)	Comments
External Glazing	Total U-value = 4.2 Total SHGC = 0.35	Total U-value = 3.8 Total SHGC = 0.30	DGU Performance Tinted or the like.

Note: The contractor must also provide the Compliance Certificate or Performance Label in accordance with AS 2047:2014 from the glazing supplier confirming the thermal performance (Total U-value and Total SHGC) of all installed glazing has met Section J requirements.








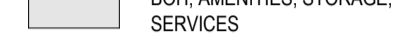







No skylights are proposed.

See Appendix A for Building Envelope Markups indicating where insulation is required.

5 APPENDIX A – BUILDING ENVELOPE MARKUPS

Amendments		
Issue	Description	Date
A	SSDA	27.03.24
B	RFI RESPONSE	18.10.24
C	FOR INFORMATION	24.07.25

LEGEND:

-  SUITE
-  PREMIUM SINGLE
-  LARGE SINGLE
-  LIFT
-  NURSE STATION/ BRIEFING ROOM
-  FOH
-  CORRIDOR
-  BOH, AMENITIES, STORAGE, SERVICES
-  CANOPY - EXISTING MAJOR TREE TO BE RETAINED
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-  S.01 - S.07 EXTERNAL SIGNAGES





NOTE:

REFER TO LANDSCAPE DRAWINGS FOR LANDSCAPE DESIGN DETAILS.

JHA
MARKUP / SKETCH

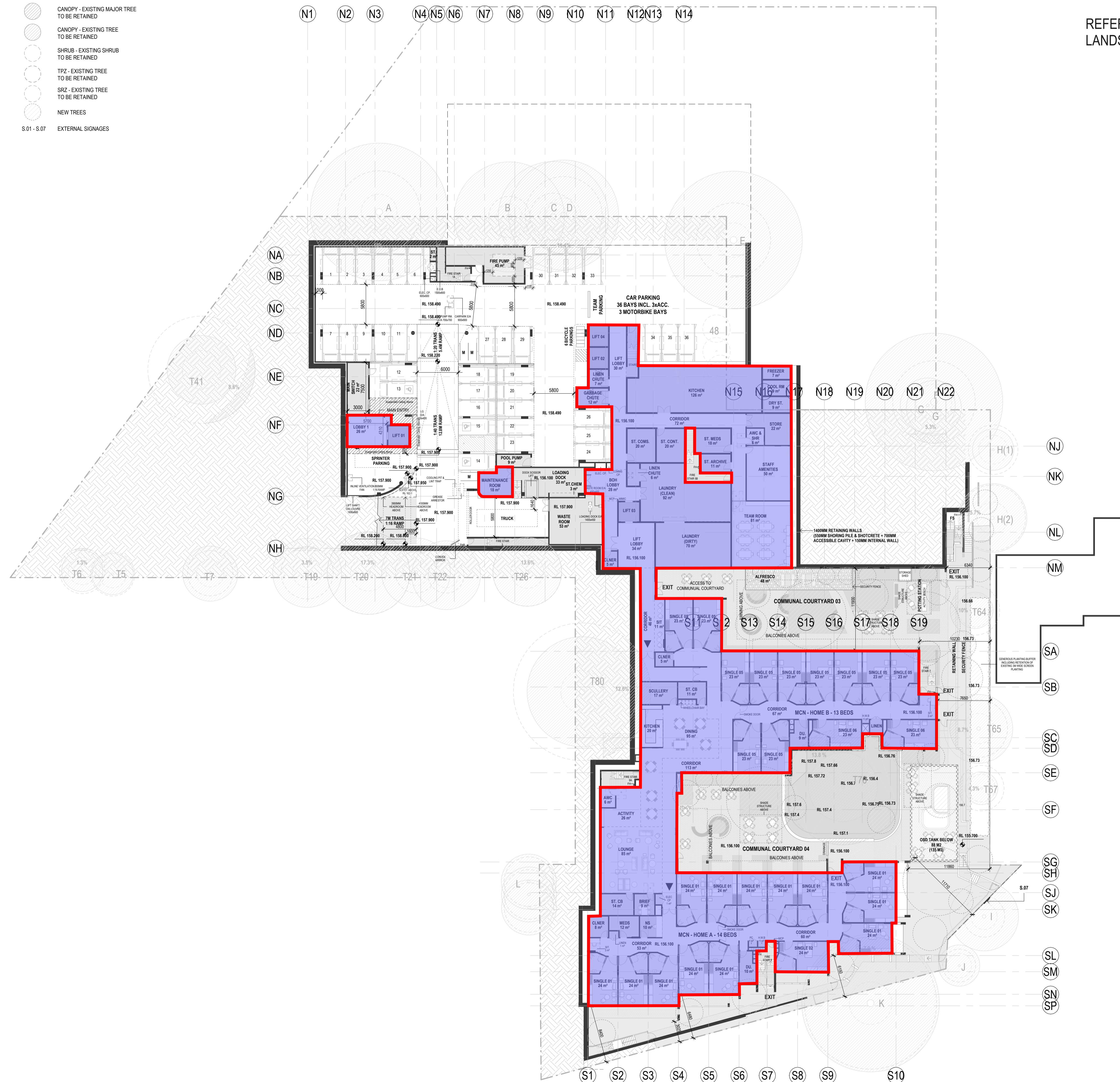
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 DOCUMENT TITLE: Opal St Ives Botanica - Building Fabric Requirement
 DOCUMENT REV: Rev A
 DOCUMENT BY: TST DATE: 14/11/2025

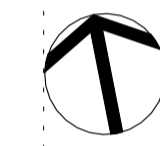
KEY

-  ROOF/CEILING ENVELOPE :- TOTAL R4.1 (DOWNWARD, SOLAR ABSOPTANCE NO MORE THAN 0.40)
-  ENVELOPE FLOORS (SUSPENDED):- TOTAL R2.2 (DOWNWARD)
-  ENVELOPE FLOORS (SLAB-ON-GROUND):- TOTAL R2.2 (DOWNWARD)*
-  ENVELOPE WALLS :- TOTAL R1.6

Note: The above construction are only to be applied to the non-glazed portions of the envelope; glazing must be installed as per the architectural layouts with its thermal performances pursuant to the respective glazing specifications stated in the Section J report (Total Systems U-Value, and Total Systems SHGC value).

* According to Clause 2 of Section J4D7, a slab-on-ground that does not have an in-slab heating or cooling system is considered to achieve a Total R-value of R2.0. Hence no additional insulation is required for Envelope Floors (slab-on-ground).




North Point

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architecture interior design urban design landscape
 nom architect Lisa-Maree Carrigan 7568
 Project Title

OPAL ST IVES BOTANICA

Drawing Title
 LOWER GROUND LEVEL





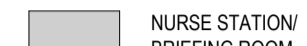


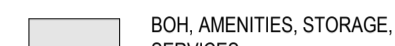






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 Drawing Created (date) 14/10/22
 Drawing Created (by) HN
 Plotted and checked by HN
 Verified NT
 Approved LMC
 Project No Drawing No Issue

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LEGEND:

-  SUITE
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NOTE:

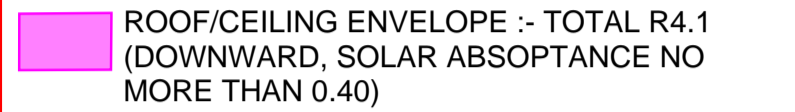
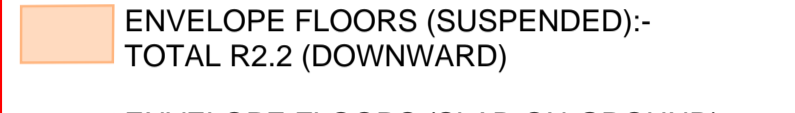
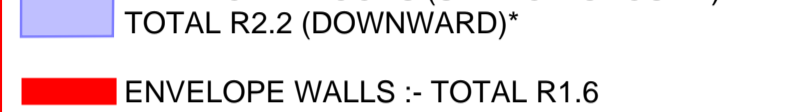
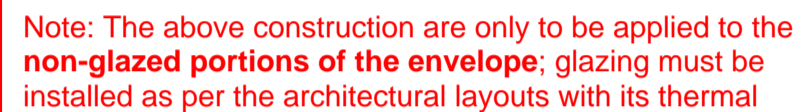
REFER TO LANDSCAPE DRAWINGS FOR LANDSCAPE DESIGN DETAILS.

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C	FOR INFORMATION	24.07.25

JHA
MARKUP / SKETCH

DOCUMENT No.: 250251
 DOCUMENT TITLE: Opal St Ives Botanica - Building Fabric Requirement
 DOCUMENT REV: Rev A
 DOCUMENT BY: TST DATE: 14/11/2025

KEY

-  ROOF/CEILING ENVELOPE :- TOTAL R4.1 (DOWNWARD, SOLAR ABSORPTANCE NO MORE THAN 0.40)
-  ENVELOPE FLOORS (SUSPENDED):- TOTAL R2.2 (DOWNWARD)
-  ENVELOPE FLOORS (SLAB-ON-GROUND):- TOTAL R2.2 (DOWNWARD)*
-  ENVELOPE WALLS :- TOTAL R1.6

Note: The above construction are only to be applied to the non-glazed portions of the envelope; glazing must be installed as per the architectural layouts with its thermal performances pursuant to the respective glazing specifications stated in the Section J report (Total Systems U-Value, and Total Systems SHGC value).

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OPAL ST IVES BOTANICA

Drawing Title		
GROUND LEVEL		
Scale	As indicated	
Drawing Created (date)	14/10/22	
Drawing Created (by)	HN	
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Verified	NT	
Approved	LMC	
Project No	Drawing No	Issue

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NOTE:

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MARKUP / SKETCH

DOCUMENT No.: 250251

DOCUMENT TITLE: Opal St Ives Botanica - Building Fabric Requirement

DOCUMENT REV: Rev A

DOCUMENT BY: TST DATE: 14/11/2025

KEY

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architecture interior design urban design landscape
nom architect Lisa-Maree Carrigan 7568
Project Title

OPAL ST IVES BOTANICA

Drawing Title

LEVEL 01

Scale As indicated

Drawing Created (date) 14/10/22

Drawing Created (by) HN

Plotted and checked by HN

Verified NT

Approved LMC

Project No Drawing No Issue

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Note: The above construction are only to be applied to the non-glazed portions of the envelope; glazing must be installed as per the architectural layouts with its thermal performances pursuant to the respective glazing specifications stated in the Section J report (Total Systems U-Value, and Total Systems SHGC value).

* According to Clause 2 of Section J4D7, a slab-on-ground that does not have an in-slab heating or cooling system is considered to achieve a Total R-value of R2.0. Hence no additional insulation is required for Envelope Floors (slab-on-ground).



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architecture interior design urban design landscape
 nom architect Lisa-Maree Carrigan 7568
 Project Title
OPAL ST IVES BOTANICA

Drawing Title
LEVEL 02


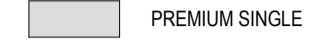


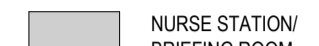


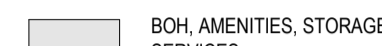






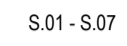
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Drawing Created (date) 08/08/22
 Drawing Created (by) HN
 Plotted and checked by HN
 Verified NT
 Approved LMC

Project No Drawing No Issue
A241932 DA 2005 C

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LEGEND:

-  SUITE
-  PREMIUM SINGLE
-  LARGE SINGLE
-  LIFT
-  NURSE STATION/ BRIEFING ROOM
-  FOH
-  CORRIDOR
-  BOH, AMENITIES, STORAGE, SERVICES
-  CANOPY - EXISTING MAJOR TREE TO BE RETAINED
-  CANOPY - EXISTING TREE TO BE RETAINED
-  SHRUB - EXISTING SHRUB TO BE RETAINED
-  TPZ - EXISTING TREE TO BE RETAINED
-  SRZ - EXISTING TREE TO BE RETAINED
-  NEW TREES
-  S.01 - S.07 EXTERNAL SIGNAGES

NOTE:





REFER TO LANDSCAPE DRAWINGS FOR LANDSCAPE DESIGN DETAILS.

Issue	Description	Date
A	SSDA	27.03.24
B	RFI RESPONSE	18.10.24
C	FOR INFORMATION	24.07.25

JHA
MARKUP / SKETCH

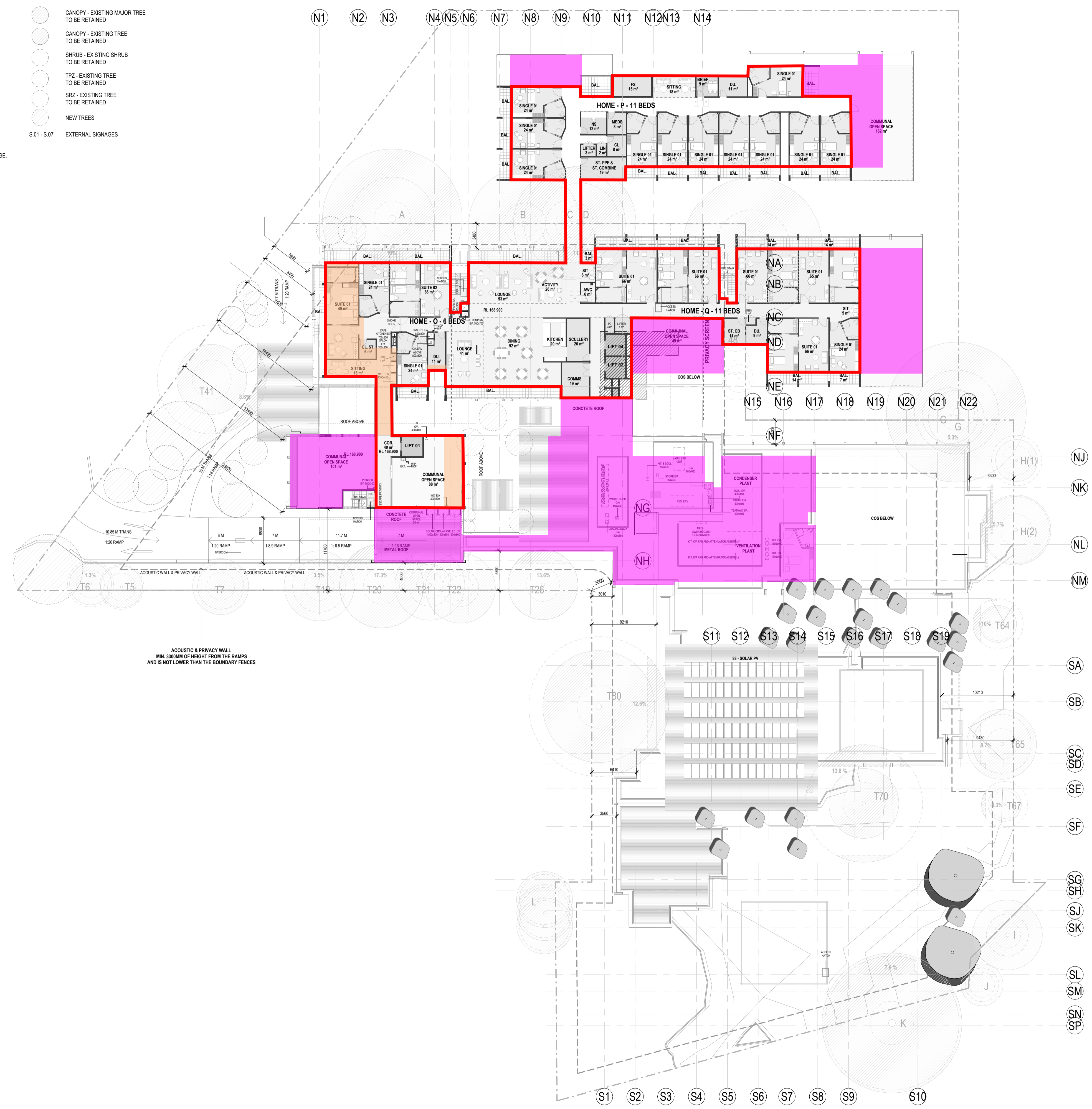
DOCUMENT No.: 250251
 DOCUMENT TITLE: Opal St Ives Botanica - Building Fabric Requirement
 DOCUMENT REV: Rev A
 DOCUMENT BY: TST DATE: 14/11/2025

KEY

-  ROOF/CEILING ENVELOPE :- TOTAL R4.1 (DOWNWARD, SOLAR ABSORPTANCE NO MORE THAN 0.40)
-  ENVELOPE FLOORS (SUSPENDED):- TOTAL R2.2 (DOWNWARD)
-  ENVELOPE FLOORS (SLAB-ON-GROUND):- TOTAL R2.2 (DOWNWARD)*
-  ENVELOPE WALLS :- TOTAL R1.6

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OPAL ST IVES BOTANICA

Drawing Title

LEVEL 03

Scale As indicated

Drawing Created (date) 08/17/18
 Drawing Created (by) HN
 Plotted and checked by HN
 Verified NT
 Approved LMC

Project No Drawing No Issue
A241932 DA 2007 C

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10/17/2025 1:32:49 PM

Issue	Description	Date
A	SSDA	27.03.24
B	RFI RESPONSE	18.10.24

LEGEND:

SUITE	CANOPY - EXISTING MAJOR TREE TO BE RETAINED
PREMIUM SINGLE	CANOPY - EXISTING TREE TO BE RETAINED
LARGE SINGLE	SHRUB - EXISTING SHRUB TO BE RETAINED
LIFT	TPZ - EXISTING TREE TO BE RETAINED
NURSE STATION/ BRIEFING ROOM	SRZ - EXISTING TREE TO BE RETAINED
FOH	NEW TREES
CORRIDOR	S.01 - S.07 EXTERNAL SIGNAGES
BOH, AMENITIES, STORAGE, SERVICES	

JHA
MARKUP / SKETCH

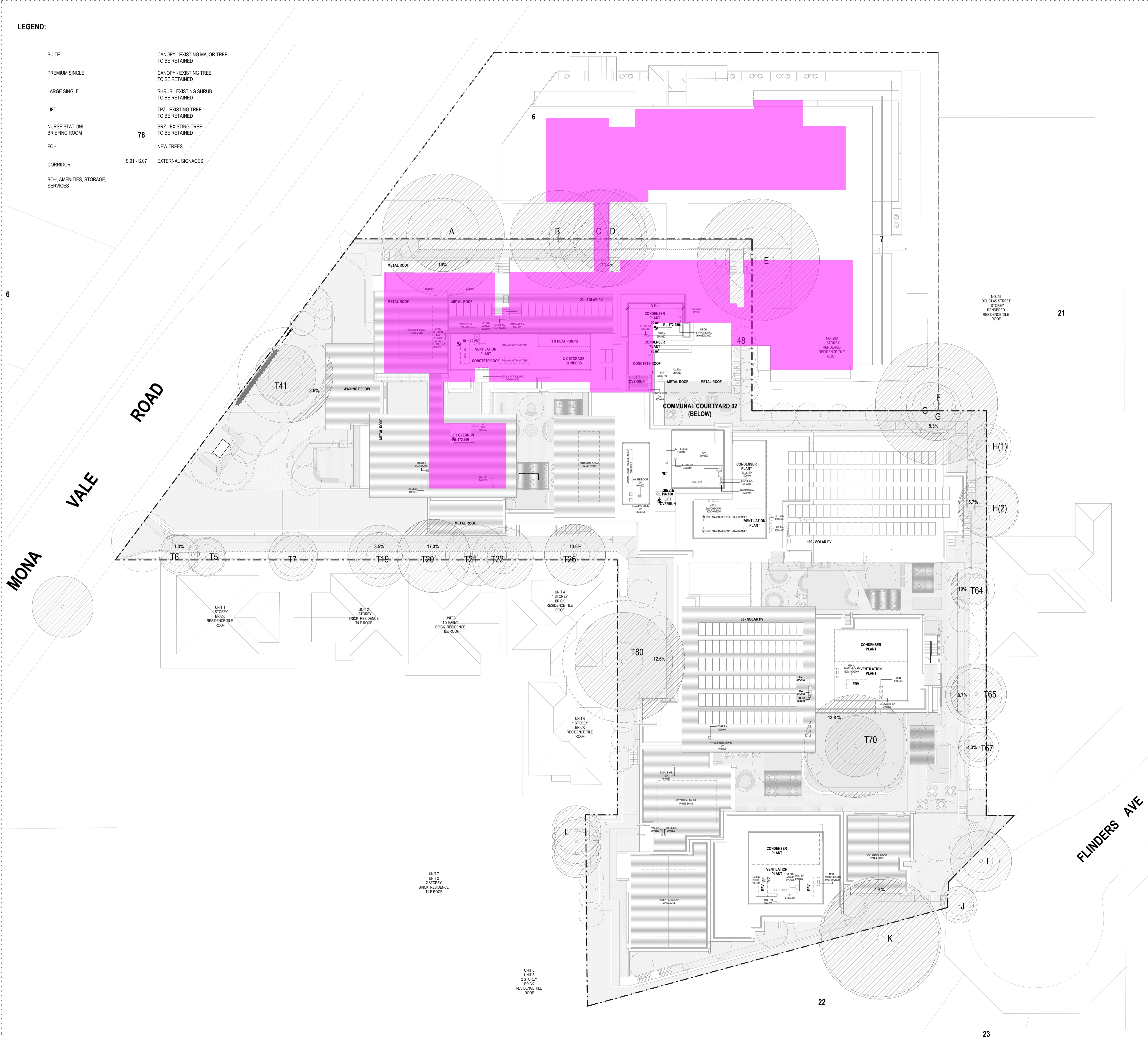
DOCUMENT No.: 250251
 DOCUMENT TITLE: Opal St Ives Botanica - Building Fabric Requirement
 DOCUMENT REV: Rev A
 DOCUMENT BY: TST DATE: 14/11/2025

KEY

- ROOF/CEILING ENVELOPE :- TOTAL R4.1 (DOWNWARD, SOLAR ABSOPTANCE NO MORE THAN 0.40)
- ENVELOPE FLOORS (SUSPENDED):- TOTAL R2.2 (DOWNWARD)
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 Project Title

OPAL ST IVES BOTANICA

Drawing Title	ROOF	
Scale	As indicated	
Drawing Created (date)	11/28/23	
Drawing Created (by)	Author	
Plotted and checked by	Designer	
Verified	Checker	
Approved	Approver	
Project No	Drawing No	Issue

A241932 DA 2008 **B**

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