

# **NCC Section J Report**

# **Boarding House 102 Broomfield St CABRAMATTA NSW 2166**

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**11 November 2020** 

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Version

Date

Approved by

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#### **1** INTRODUCTION

This report assesses the proposed development for its compliance with Section J energy efficiency provisions of the National Construction Code (NCC) 2016 Volume 1. These provisions will apply or all new (and altered) construction work.

This report will detail the measures required to achieve compliance and will be required as part of the submission to the council or the consent authority for the Construction Certificate application.

#### 2 APPLICATION

NSW J(B) states that Class 3 and Class 5 to 9 building must comply with the provisions of the national Section J. Therefore, the Section J Deemed-to-Satisfy (DTS) provisions of the NCC 2016 Amendment 1 (Volume One) have been applied for the assessment of this project and this report will outline what measures are required for this building to comply.

The DTS provisions consist of 7 Parts.

This report is concerned with the following parts:

- Part J1: Building Fabric
- Part J2: Glazing
- Part J3: Building Sealing
- Part J6: Artificial Lighting and Power
- Part J7: Hot Water Supply
- Part J8: Access for Maintenance

The following sections will not form part of this report, as they will require the expertise of specialist service consultants:

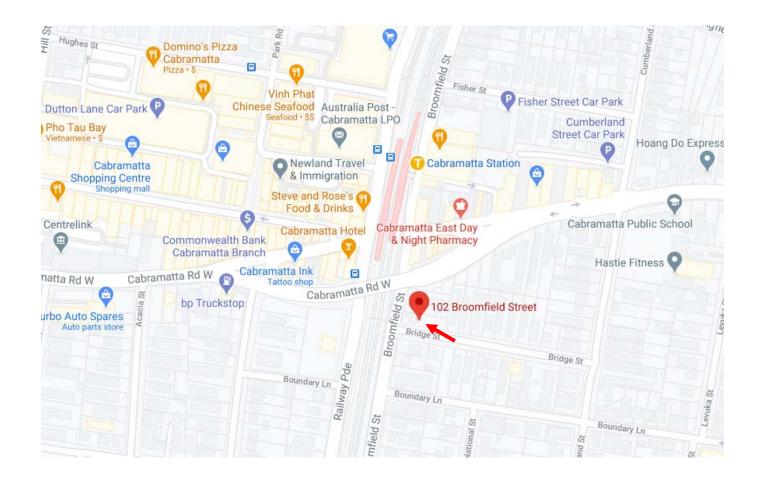
• Part J5: Air-conditioning and Ventilations Systems

(Note: Part J4 has been removed from NCC since 2010)

#### 3 BUILDING DETAILS

The title, address and location details for the project are as follows:

- Project: Boarding House
- Address: 102 Broomfield St CABRAMATTA NSW 2166
- Authority: Fairfield City Council



**Climate zone:** 

#### 6 (Mild Temperate)

- This climate zone is characterised by low diurnal temperatures near the coast to high diurnal ranges inland.
- Four distinct seasons: Summer and winter can exceed human comfort range, spring and autumn are ideal for human comfort
- Mild to cool winters with low humidity, hot to very hot summers with moderate humidity

**Description:** A new 5 storey Boarding House consisting of 36 self-contained rooms is being built at the above address. There is a 2 level basement car park directly under the ground floor. There is also a Common Room on the ground level. There will be new glazing on all facades. As all rooms will be conditioned, the glazing and external (envelope) walls are required to comply with the NCC.

**Building class: Class 3**: "a residential building, other than a building of Class 1 or 2, which is a common place of long term or transient living for a number of unrelated persons including a boarding house, guest house..."

 References:
 a) Plans:

 URBAN LINK
 Project No.: 19-029. Issue Date: 5/11/2020

 Version C: 04/11/2020
 Drawing Numbers: DA001, DA1001, DA1002, DA1003, DA2001, DA2002, DA2003, DA2004, DA2005, DA2006, DA2007, DA2101, DA2103, DA2104, DA2105, DA2106, DA3001, DA3002, DA3003, DA4001, DA6001.

b) National Construction Code 2016 Vol. 1 (Amendment 1)

#### 4 SUMMARY AND CERTIFIER CHECK:

Below is a summary of the energy efficiency actions required to meet the requirements of the NCC. Details are available in each relevant section.

Element	Insulation Requirements	Action	Certifier Check
Ceiling/Roof	Insulation is required in the concrete roof of level 4	Add minimum insulation of <b>R2.62</b> (or <b>R2.84</b> if insulation fills the cavity above the plasterboard)	
External Walls	Insulation is required in the external walls:		
	Ground-L3: face brick/air space/ 120mm AFS.	Add minimum insulation of <b>R1.66</b> in cavity (or <b>R1.83</b> if insulation fills the cavity)	
	Level 4: 6mm fibre sheet cladding, 90mm stud frame, 10mm plaster.	Add minimum insulation of <b>R2.38</b> in cavity (or <b>R2.55</b> if insulation fills the cavity)	
Walls other than External: (dividing conditioned & non- conditioned space	Party wall between the units and the lifts/ stairwells: These are constructed of 200mm AFS on a stud frame and lined internally with plasterboard	Add minimum insulation of <b>R0.47</b> in stud frame	
Floor	Insulation is required only in the suspended concrete floor of all ground floor rooms and some of level 1 rooms that are above 'open air'.	Install minimum insulation of <b>R1.7</b>	
External Glazing	Refer to Section 6 for required glazing specifications	Ensure that a certificate of compliance is supplied with the windows.	

#### J3: Building Sealing

Sealing of new doors and windows is required. Refer to the relevant sections below for details.

#### J5: Air Conditioning and Ventilation Systems:

Refer to the design and installation requirements of the Mechanical Engineer or trade contractor's specifications.

#### J6: Artificial Lighting and Power:

See Section 10 further requirements on interior lighting and control.

#### J7: Hot Water Supply and

Hot water system to be installed in accordance with Part B2 of NCC Volume 3 – Plumbing Code of Australia.

#### J8: Accesses for Maintenance

A building or sole occupancy unit with a floor area of more than 500 m<sup>2</sup> must have the facility to record the consumption of gas and electricity.

#### Following is the detail of each part of Section J of the NCC:

Parts J1 – J3 are applicable only to NEW or ALTERED building works forming part of the external envelope around conditioned areas and the envelope separating the conditioned space from un-conditioned space.

#### 5 PART J1: BUILDING FABRIC

The NCC Part J1 is concerned with the following 4 provisions:

- J1.3 Roof and ceiling construction
- J1.4 Roof lights
- J1.5 Walls
- J1.6 Floors

The provisions in Part J1 apply to the conditioned spaces in the proposed development. The NCC uses the term 'envelope' to demarcate the conditioned space from non-conditioned space and the exterior of the building. A space is deemed to be conditioned if the air contained will be actively heated or cooled by an air-conditioning service (see definitions at the end of this report).

The diagram below shows the building envelope (Figure 5.1). The conditioned area is shown with light blue shading. This is the boundary between the conditioned and non-conditioned zones (or outdoor space). Note that each boarding room complete with its own bathroom (irrespective of whether it has an operable window or not) is a Sole Occupancy Unit (SOU).

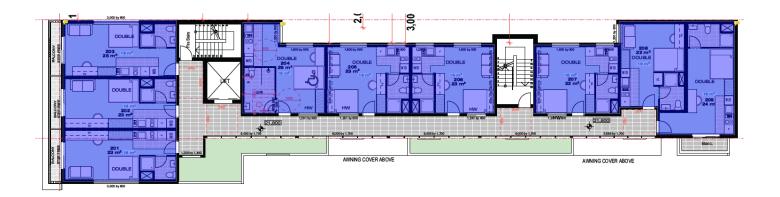
# Figure 5.1 (Floor Plans):



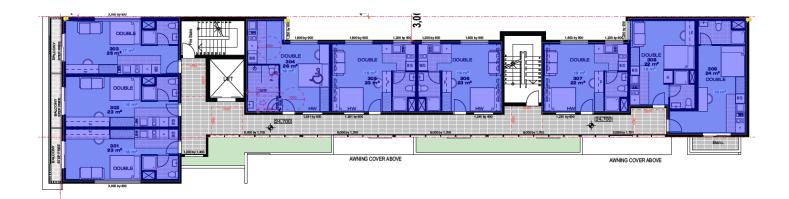
# Ground:



#### Level 2:



#### Level 3:

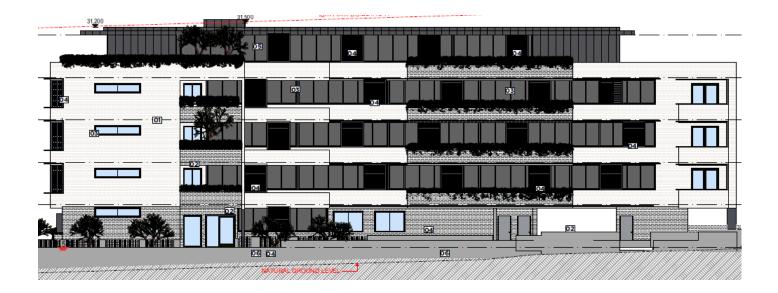


#### Level 4:



# Figure 5.2 (Elevations):

### South:

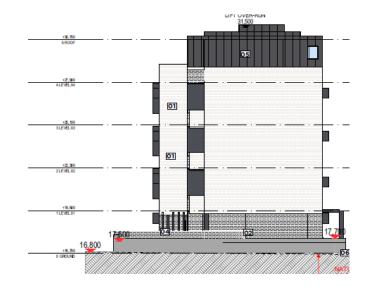


#### North:



# West & East:





#### 5.1 J1.3: ROOF AND CEILING CONSTRUCTION

#### 5.1.1 Roof and ceiling insulation requirement

A building's roof & ceiling in climate zone 6 is required to achieve a minimum total R-value of 3.2 in the downward direction with a solar absorbance value of not more than 0.4 (light).

The roof will be a concrete roof to 5 degrees with a suspended ceiling under and an external waterproof membrane below a concrete tiled walking surface above

	<b>Roof Type:</b> Solid concrete roof to 5°, suspended plaster ceiling	R-Value (heat flow direction: downwards)
1	Outdoor air film (7m/s)	0.04
2	Waterproof membrane, rubber synthetic (4mm, 961 kg/m <sup>3</sup> )	0.03
3	Solid Concrete (100mm, 2400 kg/m <sup>3</sup> )	0.07
4	Ceiling Air Space (100mm to 300mm, non-reflective)	0.22
5	Plasterboard (10mm)	0.06
6	Indoor air film (still air)	0.16
	Total <i>R-Value</i>	0.58

#### Table 5.1a:

R-Value for Roof & Ceiling Construction	Insulation R-Value Requirements	Action to Achieve Compliance
0.58	<ul> <li><b>3.2</b> required:</li> <li>Additional insulation needed is:</li> <li>3.2 - 0.58 = <b>2.62</b></li> </ul>	Add minimum insulation of <b>R2.62</b> to the ceiling below the concrete tiled walking surface above
Assuming the insulation fills the air space between the concrete and plasterboard (air space = 0.22). 0.58 - 0.22 = 0.36	<b>3.2</b> Required. Additional R-Value is 3.2 - 0.36 = <b>2.84</b>	Addition minimum insulation of <b>R2.84</b> to the ceiling below the concrete tiled walking surface above

The insulation requirement in the table above assumes there will be no reduction in the added insulation to accommodate exhaust fans, flues or an insulation free area required for recessed downlights.

However, if such a reduction is necessary for the reasons above, the remaining insulation R-Value must be increased to compensate for this loss. The table below shows the adjusted figure for the required insulation, dependent on the percentage of insulation free area.

Percentage of ceiling area	0.5% to less than	1.0% to less than	1.5% to less than	2.0% to less than	2.5% to less than	3.0% to less than	>4%
uninsulated	1.0%	1.5%	2.0%	2.5%	3.0%	4.0%	
Adjusted	1.070	1.070	2.070	2.070	0.070	4.070	
minimum							Not
required	3.4	3.6	3.9	4.2	4.6	5.7	permitted
insulation to be added							

# 5.2 J1.4: ROOF LIGHTS

# 5.1.1 Roof light performance requirement

This Part is not applicable as there are no roof lights planned over the conditioned zones.

### 5.3 J1.5: WALLS: NEW EXTERNAL WALLS.

### 5.3.1 Requirement

Each part of an external wall that is part of the envelope must satisfy Table J1.5 of the NCC. The 'envelope' of a building separates a conditioned space or habitable room from the **exterior** of the building or a non-conditioned space.

The 'conditioned' spaces are indicated in Figure 5.1 with light blue shading. The walls surrounding this required to reach a minimum R-Value of **2.8** in climate zone 6.

The external wall construction is as follows:

- i) Ground to Level 3: The external walls are constructed of face brick, cavity & 120mm AFS.
- ii) Level 4: 6mm fibre sheet cladding, 90mm stud frame, 10mm plaster.

	i) Wall type: Face brick, cavity & 120mm AFS.	R-Value
1	Outdoor air film (7m/s)	0.04
2	Masonry (110mm clay brick: 1690 kg/m <sup>3</sup> )	0.17
3	Cavity & air space (20mm to 50mm, non-reflective and unventilated)	0.17
4	6mm fibre cement (1360 kg/m <sup>3</sup> )	0.03
5	108mm solid core concrete	0.08*
6	6mm fibre cement (1360 kg/m <sup>3</sup> )	0.03
7	Indoor air film (still air)	0.12
	Total <i>R-Value</i>	0.64

**NB**: \*This is calculated from table J1.5(d) NCC where 125mm of solid concrete provides an R-Value of 0.09. For 108mm solid concrete, this equates to an R-Value of 0.08.

The following options in table 5.3a below will achieve compliance:

#### Table 5.3a:

Insulation Provided by Construction	Required R-Value	#Reduced by R0.5	Required Action to Achieve Compliance
0.64	<b>2.8</b> Required. Additional R-Value is 2.8 – 0.64 = <b>2.16</b>	2.16 – 0.5 = <b>1.66</b>	Add minimum insulation of <b>R1.66</b>
If the insulation fills the air space between the brick and AFS (air space = 0.17). <b>0.64 - 0.17 = 0.47</b>	<b>2.8</b> Required. Additional R-Value is 2.8 – 0.47 = <b>2.33</b>	2.33 – 0.5 <b>= 1.83</b>	Addition minimum insulation of <b>R1.83</b>

**# NB**: The minimum *Total R-Value* in is reduced for a wall with a surface density of not less than 220 kg/m<sup>2</sup> by 0.5. As this wall is cavity brick and AFS wall, this is greater than 220 kg/m<sup>2</sup>.

	<ul> <li>ii) Wall Type: Timber Wall – external 6mm fibre sheet cladding, 90mm stud frame, 10mm plaster</li> </ul>	R-Value (heat flow direction: downwards)
1	Outdoor air film (7m/s)	0.04
2	Fibre-cement (6mm)	0.03
3	Air gap (90mm non-reflective and unventilated)	0.17
4	Plasterboard, gypsum	0.06
5	Indoor air film	0.12
	Total <i>R-Value</i>	0.42

The following table outlines the action required to achieve compliance:

R-Value for Wall Construction	Insulation R-Value Requirements	Action to Achieve Compliance
0.42	<b>2.8</b> Required. Additional R-Value is 2.8 - 0.42 = <b>2.38</b>	Add minimum insulation of <b>R2.38</b> .
Assuming the insulation fills the air space between the plasterboard and fibre cement (air space = 0.17). 0.42 - 0.17= <b>0.25</b>	<b>2.8</b> Required. Additional R-Value is 2.8 - 0.25 = <b>2.55</b>	Addition minimum insulation of <b>R2.55</b>

#### 5.4 J1.5: WALLS: WALLS OTHER THAN AN EXTERNAL WALL

#### 5.3.1 Requirement:

This part of the NCC is for walls that separate a conditioned space from a non-conditioned space **excluding an external wall**. This applies to the party walls separating the habitable rooms with the fire stairs and lifts.

This wall must satisfy Table J1.5b of the NCC. Where the adjacent enclosed space has ventilation of not more than 1.5 air changes per hour of outside air changes during occupied hours and any glazing in the external fabric as required by Part J2 is required to achieve a minimum R-Value of **1.0** in climate zone 6.

The party walls that <u>divide the habitable rooms with the lift & stairwells</u> are constructed of 200mm concrete, a stud frame and lined internally with plasterboard. According to Figure 2 in specification J1.5 of the NCC, the typical R-Value of this wall is 0.53.

w	all type: AFS 200mm on a stud frame and lined internally with plasterboard	R-Value
1	Outdoor air film	0.04
2	200mm solid core concrete	*0.14
3	Cavity & air space (20mm to 50mm, non-reflective and unventilated)	0.17
4	Plasterboard gypsum (10mm)	0.06
5	Indoor air film (still air)	0.12
	Total <i>R-Value</i>	0.53

**NB**: \*This is calculated from table J1.5(d) NCC where 125mm of solid concrete provides an R-Value of 0.09. For 200mm solid concrete, this equates to an R-Value of 0.14.

The following options in table 5.3a below will achieve compliance:

#### Table 5.3a:

Insulation Provided by Construction	Required R-Value	Required Action to Achieve Compliance
0.53	<b>R1.0</b> Required. Additional R-Value is 1.0 - 0.53 = <b>0.47</b>	Install minimum insulation of <b>R0.47</b>

#### 5.5 J1.6: FLOORS

#### 5.5.1 Floor insulation requirement

Table J1.6 of NCC shows the minimum total R-Value for floors of conditioned spaces.

a) Suspended Concrete Floor: As per the NCC (Table J1.6), a suspended floor without an in-slab heating or cooling system where the non-conditioned space is unenclosed and where mechanically ventilated by more than 1.5 air changes per hour is required to achieve an R-Value of 2.0 in the downward direction in climate zone 6.

This would apply to:

- All ground floor rooms above the unenclosed basement car park.
- Level 1 rooms above open air and carpark entry: Rooms 107, 108, 109 & parts of units 104, 105 & 106.

	Floor type: Concrete suspended floor	R-Value
1	Indoor air film	0.16
2	Solid Concrete (150mm, 2400 kg/m <sup>3</sup> )	0.10
3	Outdoor air film	0.04
	Total <i>R-Value</i>	0.30

The following options in table 5.3a below will achieve compliance:

#### Table 5.3a:

Insulation Provided by Construction	Required R-Value	Required Action to Achieve Compliance
0.30	<b>R2.0</b> Required. Additional R-Value is	Addition minimum insulation of <b>R1.7</b> .
	2.0 - 0.30 = <b>1.70</b>	

b) The remaining rooms on level 1, 2, 3 & 4 contain a suspended **floor above conditioned space** (which is therefore not required to be insulated).

#### 6 PART J2: GLAZING

#### 6.1 Glazing calculator

The NCC Volume 1 glazing calculator (last issued with 2014) has been used to demonstrate compliance of the glazing with Section J.

The glazing calculator spreadsheets below show the maximum area of glass that can be used on each façade, the type of glass and the shading devices that have been included in the calculations.

			imum ents (incl. me)	Additional Shading Devices Required	
Level	Orientation	U-Value	SHGC		#Typical Glazing
Ground	N	7.0	0.35	None	Single glazed low-e tinted
	S	5.9	0.60		Single glazed clear
	W	4.9	0.35		Single glazed low-e tinted
L1, L2 & L3	N, S & E	7.0	0.70		Single glazed clear
	W	2.5	0.25		Double glazed low-e tinted
L4	N, E & S	7.0	0.70		Single glazed clear
	W	4.3	0.35		Single glazed low-e tinted

# The performance figures & specifications are indicative only and may vary depending on the chosen manufacturer & supplier.

\*The glazing manufacturer must provide performance data to show that the selected glazing complies with the values in the table through the WERS certification.

**NB**: The following links to the WERS website provides information on the window manufacturers which are certified under WERS and the energy rating of each of their glazing products: http://www.wers.net/

	NCC VOLUME ONE GLAZING CALCULATOR (first issued with NCC 2014)	GLAZ	ZING C	ALCU	ILATC	JR (für	st issi	ued w	ith NC	C 201	(4)				НЕГР
g droue: 102 Broundial S.C abranation NEW 2166     Class 3	Building name/description	LUME ONE		OLUME ONE	≫:	VOLUME 0	y an		E ONE		Appl	ication	LUME ONE	≫ª	Climate zone
Factor energy       Color	<b>Boarding House: 102 Broomfie</b>	eld St Cat	oramatta	<b>NSW 216</b>	9						Cla	ss 3			9
Option 1     Number of the second secon	Storey VOLUME ONE	Facade ar	eas	OLUME ONE	>	VOLUME 0	NE Á	NOLUMI	E ONE	Voli					
Opino A Copino B Copino B Copino B         54.Tm² 1.1.         30.5m² 2.1m²         30.5m² 2.1m²         30.5m² 2.1m²         30.5m² 2.1m²           Copino B Copino B         1.1.         8.1.2m²         8.1.2m²         8.1.2m²         8.1.2m²           Copino B         1.1.         0.1.0.1.         8.1.2m²         8.1.2m²         8.1.2m²           Copino B         1.1.         0.1.0.1.         0.1.0.1.         0.1.0.1.         0.1.0.1.           Constrained Internet Interne	Ground	z	NE	ш	SE	s	SW	8	MM	internal					
Option B         Option B         Image: Stand and and and and and and and and and	Option A	54.7m <sup>2</sup>				55.1m <sup>2</sup>		30.9m <sup>2</sup>							
Glazing area (a) 79.4m <sup>3</sup> B12m <sup>3</sup>	Option B									n/a					
Inclusion     12     (a current) displayed)       circular terminant     circular terminant     circular terminant       circular terminant     circular terminant </td <td>Glazing area (A)</td> <td></td> <td></td> <td></td> <td></td> <td>8.12m²</td> <td></td> <td>6.48m<sup>2</sup></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Glazing area (A)					8.12m²		6.48m <sup>2</sup>							
Target normal matrices     12     a curranty activity       a currant of activity     a currant     a currant     a currant       a currant     a currant     a currant     a currant     a currant       a currant     a currant     a currant     a currant     a currant     a currant       a currant     a currant     a currant     a currant     a currant     a currant     a currant       a currant     a currant     a currant     a currant     a currant     a currant     a currant     a currant     a currant       a currant     a currant     a currant     a currant     a currant     a currant     a currant     a currant     a currant       a currant     a currant     a currant     a currant     a currant     a currant     a currant     a currant     a currant       a currant     a currant     a currant     a currant     a currant     a currant     a currant     a currant     a currant       a contant     a currant       a contant     a currant       a contant     a currant															
GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       SIADING       CALCULATED OUTCOMES OK (finputs are valid)         GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       SIADING       CALCULATED OUTCOMES OK (finputs are valid)         CLAZING ELEMENTS, ORIENTATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       SIADING       CALCULATED OUTCOMES OK (finputs are valid)         Clazing element       Facing       Performance	Number of rows preferred in table belov	M	12	(as current	ly displaye	d)									
Glazing element         Facing sector         Size         Performance         Path or device         Stading         Multipliers         Size         Outnomes           Description         Description         Description         Description         Performance         Path or device         Stading         Multipliers         Size         Outnomes           Description         Description         Option A         Opti A         <	GLAZING ELEMENTS, ORIEN	NTATION SI	ECTOR, SIZ	E and PERI	ORMANC	E CHARAC	TERISTICS		SHAL	DING	CALCI	ILATED OL	ITCOMES	OK (if inp	outs are valid)
Total         Total         Total         Total         Total         Total         Stem	Glazing element	Facing	sector		Size		Perfor	mance	P&H or	device	Shading	_	tipliers	Size	Outcomes
Description         Option         Reduction         Option         Reduction         Name         System         System <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th>Total</th><th>Total</th><th></th><th></th><th>-</th><th></th><th></th><th></th><th></th></t<>							Total	Total			-				
(optional)         facades         facades         (m)	Description	Option A		Height	Width	Area	system U-Value	system	٩	Ξ					LIEMENT SNARE of % of
0         3.00         7.0         0.35         0.000         2.600         0.100         1.00         1.00         1.00         1.00           0         2.60         7.0         0.35         0.800         2.600         0.31         0.20         0.35         6.20           0         2.00         7.0         0.35         0.800         2.600         0.31         0.20         0.32         2.80           0         2.00         7.0         0.35         0.800         1.600         0.31         0.20         0.32         2.80           0         2.00         7.0         0.35         0.800         2.600         0.31         0.20         0.72         2.80           0         2.00         7.0         0.35         0.800         2.600         0.31         0.20         0.72         2.80           0         2.00         0.31         0.20         0.31         0.20         0.35         5.76           0         2.00         3.75         0.20         0.97         0.85         5.76           0         2.00         3.75         0.20         0.90         1.00         1.00         1.00         1.00         2.86 <th< th=""><th></th><th>facades</th><th>facades</th><th>(<u>u</u>)</th><th>(E)</th><th>(m²)</th><th>(AFRC)</th><th>(AFRC)</th><th>(<b>m</b>)</th><th>(<u>E</u>)</th><th>E</th><th></th><th></th><th>(m²)</th><th>allowance used</th></th<>		facades	facades	( <u>u</u> )	(E)	(m²)	(AFRC)	(AFRC)	( <b>m</b> )	( <u>E</u> )	E			(m²)	allowance used
0         2.60         7.0         0.35         0.800         2.600         0.31         0.20         0.97         0.85         6.24         34% of 99%           0         2.00         7.0         0.35         0.800         1.600         0.50         0.32         0.80         11% of 99%           0         2.00         7.0         0.35         0.800         1.600         0.50         0.92         0.72         2.80         11% of 99%           0         2.00         7.0         0.35         0.800         1.600         5.0         0.31         0.20         2.80         11% of 99%           0         2.00         0.31         0.35         0.800         2.600         0.31         0.20         2.80         11% of 99%           0         2.00         0.31         0.20         0.31         0.20         0.92         31% of 99%           0         2.00         0.30         2.60         0.31         0.20         0.30         34% of 99%           0         2.00         0.30         3.75         0.20         0.20         2.80         34% of 99%           0         1.20         0.30         0.50         0.50         0.50         <	1 G03	z		09.0	3.00		7.0	0.35	0.000		0.0			1.80	13% of 99%
0         2.00         7.0         0.35         0.800         1.600         0.50         0.22         0.72         2.80         11% of 99%           0         2.00         7.0         0.35         0.800         1.600         0.50         0.20         0.22         2.80         11% of 99%           0         2.00         7.0         0.35         0.800         2.600         0.31         0.20         0.92         0.72         2.80         11% of 99%           0         2.00         5.9         0.600         2.600         0.31         0.20         0.28         34% of 99%           0         2.00         5.9         0.600         3.000         2.600         0.315         0.20         0.28         34% of 99%           0         2.00         0.00         0.00         0.800         3.75         0.20         0.26         34% of 99%           0         1.20         1.20         0.50         0.000         2.05         0.90         0.76         0.76         34% of 99%           0         1.80         3.75         0.20         0.64         0.60         0.70         2.80         34% of 99%           1.80         1.80         0.35	2 Communal	z		2.40	2.60		7.0	0.35	0.800	2.600					34% of 99%
0         2.00         7.0         0.35         0.800         1.600         0.50         0.22         0.72         2.80         11% of 99%           0         2.40         7.0         0.35         0.800         2.600         0.31         0.20         0.97         0.85         5.76         31% of 99%           0         2.00         5.9         0.600         0.000         2.600         0.31         0.20         0.97         0.85         5.76         31% of 99%           0         2.00         0.59         0.600         0.000         2.600         3.75         0.20         0.07         1.80         34% of 99%           0         1.20         5.9         0.60         0.000         0.800         3.75         0.20         0.71         10%         2.80         34% of 99%           0         1.20         5.9         0.60         0.800         3.75         0.20         0.61         0.00         2.80         34% of 99%           0         1.80         5.9         0.60         0.800         1.600         0.84         0.76         2.16         33% of 100%           1.80         1.80         0.35         0.900         1.600         0.56		z		1.40	2.00		7.0	0.35	0.800	1.600				2.80	`
1         2.40         7.0         0.35         0.800         2.600         0.31         0.20         0.97         0.85         5.76         31% of 99%           0         2.00         5.9         0.600         0.000         7         0         1         0         1         0         2.80         34% of 99%           0         2.00         5.9         0.60         0.000         7         0         1         0         2         0         34% of 99%           0         1.20         5.9         0.60         0.000         7         0         1<0	4 Communal	z		1.40	2.00		7.0	0.35	0.800					2.80	11% of 99%
0         2.00         5.9         0.60         0.000         5.7         0.00         1.00         2.80         34% of 99%         34% of 100%	5 G04	z		2.40	2.40		7.0	0.35	0.800	2.600					
0         2.00         5.9         0.60         0.000         3.75         0.00         1.00         2.80         34% of 99%           0         1.20         5.9         0.60         3.000         0.800         3.75         0.20         0.64         0.60         0.72         10% of 99%           0         1.20         5.9         0.60         0.000         5.6         0.40         1.80         2.16         33% of 100%           1         1.80         4.9         0.35         0.900         1.600         0.56         0.40         0.84         0.76         2.16         33% of 100%           1         1.80         4.9         0.35         0.900         1.600         0.56         0.40         0.84         0.76         2.16         33% of 100%           1         1.80         4.9         0.35         0.900         1.600         0.56         0.40         0.76         2.16         33% of 100%           1         1.80         4.9         0.35         0.900         1.600         0.56         0.40         0.76         2.16         33% of 100%           1         1.80         0.84         0.76         0.84         0.76         2.16	6 G04	s		1.40	2.00		5.9	0.60	0.000		0.0		-	2.80	34% of 99%
0         1.20         5.9         0.60         3.000         0.800         3.75         0.20         0.64         0.60         0.72         10% of 99%           0         3.00         5.9         0.60         0.000         *         >         0         1.00         1.80         22% of 99%         0         0         0         1.00         1.80         22% of 99%         0         0         1.80         0         1.80         22% of 90%         0         0         0         0         1.00         1.80         22% of 90%         0         0         0         0         0         0         0         0         1.80         23% of 100%         0 <t< td=""><td>7 G04</td><td>s</td><td></td><td>1.40</td><td>2.00</td><td></td><td>5.9</td><td>0.60</td><td>0.000</td><td></td><td>0.0</td><td></td><td></td><td>2.80</td><td>34% of 99%</td></t<>	7 G04	s		1.40	2.00		5.9	0.60	0.000		0.0			2.80	34% of 99%
0         3.00         5.9         0.60         0.000         1.60         0.100         1.80         2.8% of 99%           0         1.80         4.9         0.35         0.900         1.600         0.56         0.40         0.84         0.76         2.16         33% of 100%           0         1.80         4.9         0.35         0.900         1.600         0.56         0.40         0.84         0.76         2.16         33% of 100%           0         1.80         4.9         0.35         0.900         1.600         0.56         0.40         0.84         0.76         2.16         33% of 100%           1         1.80         1.80         0.355         0.900         1.600         0.56         0.40         0.84         0.76         2.16         33% of 100%           celoping a better understanding of glazing energy efficiency parameters.         if inputs are valid         2.16         33% of 100%         100%		s		0.60	1.20		5.9	0.60	3.000	0.800				0.72	10% of 99%
0         1.80         4.9         0.35         0.900         1.600         0.56         0.40         0.84         0.76         2.16         33% of 100%           0         1.80         4.9         0.35         0.900         1.600         0.56         0.40         0.84         0.76         2.16         33% of 100%           0         1.80         4.9         0.35         0.900         1.600         0.56         0.40         0.84         0.76         2.16         33% of 100%           0         1.80         1.80         0.500         1.600         0.56         0.40         0.84         0.76         2.16         33% of 100%           cloping a better understanding of glazing energy efficiency parameters.         0.900         1.600         0.56         0.40         0.84         0.76         2.16         33% of 100%           cloping a better understanding of glazing energy efficiency parameters.         if inputs are valid         if inputs are valid         807 100%	9 G01	s		0.60	3.00		5.9	0.60	0.000		0.0			1.80	22% of 99%
0         1.80         4.9         0.35         0.900         1.600         0.56         0.40         0.76         2.16         33% of 100%           0         1.80         1.80         0.35         0.900         1.600         0.56         0.40         0.84         0.76         2.16         33% of 100%           Colspan="5">Colspan="5"         Colspan="5">Colspan="5">Colspan="5">Colspan="5"         Colspan="5">Colspan="5"         Colspan="5"         Colspan="5">Colspan="5"         Colspan="5"         Colspa="5"	10 G01	3		1.20	1.80		4.9	0.35	0.900	1.600					
0     1.80     4.9     0.35     0.900     1.600     0.56     0.40     0.84     0.76     2.16     33% of 100%       G CALCULATOR     if inputs are valid       veloping a better understanding of glazing energy efficiency parameters.     if inputs are valid       vill produce accurate results, it is provided "as is" and without any representation     if inputs are valid       BCB accepts no liability of any kind.     BCB accepts no liability of any kind.	11 G02	≥		1.20	1.80		4.9	0.35	0.900	1.600	ļ				
G CALCULATOR veloping a better understanding of glazing energy efficiency parameters. vill produce accurate results, it is provided "as is" and without any representation chantable quality, or functions as intended or at all. BCB accepts no liability of any kind.	12 G03	8		1.20	1.80		4.9	0.35	0.900	1.600	0	0		2.	33% of 100%
	IMPORTANT NOTICE AND DISCLAIME The Glazing Calculator has been develo	ER IN RESPE	ECT OF THE	GLAZING sist in devel	CALCULA	TOR ter underst	anding of g	lazino ener	ov efficienc	ov paramet	S OF	Ë,	inputs a	re valid	
	While the ABCB believes that the Glazin	ng Calculator	, if used col	rrectly, will	produce ac	curate resi	ults, it is pro	ovided "as i	s" and with	out any rep	resentation	No.			
	Your use of the Glazing Calculator is en	ntirely at you	r own risk a	and the ABC	B accepts	no liability (	of any kind.		UNE C						

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Image: construction         Application         Application <th>description           Class 3            Class 3     <!--</th--><th>iding name/description arding House: 10. rrey wel 1 6/a G/a G/a Mber of rows preferret Glazing elem</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th>	description           Class 3            Class 3 </th <th>iding name/description arding House: 10. rrey wel 1 6/a G/a G/a Mber of rows preferret Glazing elem</th> <th></th>	iding name/description arding House: 10. rrey wel 1 6/a G/a G/a Mber of rows preferret Glazing elem																
Intro photometal SIC Calconated SIC Ca	Integrition         Class 3         Class 3 <th c<="" th=""><th>irey rrey rrey rvel 1 c c c c c c c c c c c c c c c c c c c</th><th></th><th></th><th>×</th><th></th><th></th><th></th><th></th><th>NOLUM</th><th></th><th></th><th>Apt</th><th>vlication</th><th></th><th>) à</th><th>Climate zone</th></th>	<th>irey rrey rrey rvel 1 c c c c c c c c c c c c c c c c c c c</th> <th></th> <th></th> <th>×</th> <th></th> <th></th> <th></th> <th></th> <th>NOLUM</th> <th></th> <th></th> <th>Apt</th> <th>vlication</th> <th></th> <th>) à</th> <th>Climate zone</th>	irey rrey rrey rvel 1 c c c c c c c c c c c c c c c c c c c			×					NOLUM			Apt	vlication		) à	Climate zone
I         Teache areas           I         Option A         I	1         Teache areas           1         Option 5         1	a - a - a - a - a - a - a - a - a - a -	2 Broomfie	ld St Cab	oramatta	NSW 21	99						Ŭ	iss 3			و	
N         Intent of Atm         Star         V         IN         Intent of Atm         Intent of Atm           94.6m <sup>2</sup> Intent of Atm         94.0m <sup>2</sup> 96.4m <sup>2</sup> 36.4m <sup>2</sup> N         N         Intent of Atm         Intent of Atm         Intent of Atm           10.4m <sup>2</sup> Intent of Atm         91.9m <sup>2</sup> 36.4m <sup>2</sup> 36.4m <sup>2</sup> N         N         Intent of Atm         Intent Atm         Intent Atm         Intent of Atm<	N         Internal (0.4m²)         E         SE         SV         W         N/V         Internal (0.4m²)           94,6m²         42m²         96,4m²         36,4m²         36,4m²         Multiplication           10.4m²         1.11m²         9.19m²         36,4m²         36,4m²         Multiplication           10.4m²         9.19m²         1.11m²         9.19m²         1.41m²         Multiplication           10.4m²         9.19m²         1.41m²         9.19m²         1.41m²         Multiplication           10.4m²         9.19m²         1.41m²         1.41m²         Multiplication         Multiplication           ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS         RADING         Performance         Performance         Performance         Multiplication           ATION RECTOR, SIZE and PERFORMANCE CHARACTERISTICS         Total         Total         Performance         Performance         Performance         Multiplication           ATION N         0.000	wel 1		Facade an	eas	NO ENTITO	>	NOLUME d	S and	MULON (	S ONE	Vold						
94.6m²         1         96.4m²         36.4m²	94.6m <sup>2</sup> 42m <sup>2</sup> 96.4m <sup>2</sup> 36.4m <sup>2</sup> 36.4m <sup>2</sup> 36.4m <sup>2</sup> 36.4m <sup>2</sup> mass           10.4m <sup>2</sup> 111m <sup>2</sup> 9.19m <sup>2</sup> 1.1m <sup>2</sup> 1.1m <sup>2</sup> 1.1m <sup>2</sup> 10.4m <sup>2</sup> 1.11m <sup>2</sup> 9.19m <sup>2</sup> 1.1m <sup>2</sup> 1.1m <sup>2</sup> 1.1m <sup>2</sup> 10.4m <sup>2</sup> 1.11m <sup>2</sup> 9.19m <sup>2</sup> 1.1m <sup>2</sup> 1.1m <sup>2</sup> 1.1m <sup>2</sup> 10.4m <sup>2</sup> 1.11m <sup>2</sup> 9.19m <sup>2</sup> 3.4m <sup>2</sup> Molitibility         Molitibility           Arising sector         Steam         Performance         Pel or device         Andmol on 0.00         1.00         1.00         1.00           No         0.90         1.20         0.70         0.000         0.00         1.00         1.00         1.00           No         0.90         1.20         7.0         0.70         0.000         0.00         1.00 <t< th=""><th>Glazing elem</th><th>ABCB</th><th>z</th><th>NE</th><th>ш</th><th>SE</th><th>s</th><th>SW</th><th>M</th><th>NWN</th><th>internal</th><th></th><th></th><th></th><th></th><th></th></t<>	Glazing elem	ABCB	z	NE	ш	SE	s	SW	M	NWN	internal						
10 4m²       matrix         10 4m²       14 1m²         11 1m²       9 19m²       14 1m²         11 as currently displayed)         ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       SHADING       CALULATED OUTCOMES OK (11 mg/10)         Facing sector       SIADING       CALULATED OUTCOMES OK (11 mg/10)         Facing sector       Stating sector       SIADING         Facing sector       SIADING       CALULATED OUTCOMES OK (11 mg/10)         Interving colspan="6">SIADING       CALULATED OUTCOMES OK (11 mg/10)         Interving colspan= 5%       SIADING       CALULATED OUTCOMES OK (11 mg/10)         Interving colspan= 5%       SIADING <th colsp<="" td=""><td>10-4m<sup>2</sup> 11 m<sup>2</sup> 9 19m<sup>2</sup> 14 m<sup>2</sup> 10-4m<sup>2</sup> 12 m<sup>2</sup> 14 m<sup>2</sup> 14 m<sup>2</sup> 10-4m<sup>2</sup> 12 m<sup>2</sup> 14 m<sup>2</sup> 14</td><td>Glacing elem</td><td>Option A</td><td>94.6m<sup>2</sup></td><td></td><td>42m²</td><td></td><td>96.4m<sup>2</sup></td><td></td><td>36.4m<sup>2</sup></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th>	<td>10-4m<sup>2</sup> 11 m<sup>2</sup> 9 19m<sup>2</sup> 14 m<sup>2</sup> 10-4m<sup>2</sup> 12 m<sup>2</sup> 14 m<sup>2</sup> 14 m<sup>2</sup> 10-4m<sup>2</sup> 12 m<sup>2</sup> 14 m<sup>2</sup> 14</td> <td>Glacing elem</td> <td>Option A</td> <td>94.6m<sup>2</sup></td> <td></td> <td>42m²</td> <td></td> <td>96.4m<sup>2</sup></td> <td></td> <td>36.4m<sup>2</sup></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	10-4m <sup>2</sup> 11 m <sup>2</sup> 9 19m <sup>2</sup> 14 m <sup>2</sup> 10-4m <sup>2</sup> 11 m <sup>2</sup> 9 19m <sup>2</sup> 14 m <sup>2</sup> 10-4m <sup>2</sup> 11 m <sup>2</sup> 9 19m <sup>2</sup> 14 m <sup>2</sup> 10-4m <sup>2</sup> 11 m <sup>2</sup> 9 19m <sup>2</sup> 14 m <sup>2</sup> 10-4m <sup>2</sup> 11 m <sup>2</sup> 9 19m <sup>2</sup> 14 m <sup>2</sup> 10-4m <sup>2</sup> 12 m <sup>2</sup> 14 m <sup>2</sup> 14 m <sup>2</sup> 10-4m <sup>2</sup> 12 m <sup>2</sup> 14	Glacing elem	Option A	94.6m <sup>2</sup>		42m²		96.4m <sup>2</sup>		36.4m <sup>2</sup>							
10 4m <sup>3</sup> 11 11m <sup>3</sup> 10 as currantly displayed)         ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       SHADING       CALCULATED OUTCOMES OK (If impliers)         ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       SHADING       CALCULATED OUTCOMES OK (If impliers)         ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       SHADING       CALCULATED OUTCOMES OK (If impliers)       Size         ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       SHADING       CALCULATED OUTCOMES OK (If impliers)       Size         Option 8       NUMINIPUES       SHADING       CALCULATED OUTCOMES OK (If impliers)       Size         NI       Outcome       Performance       Performance       Performance       Performance       Partor         No       Option 100       OUTCOMES OK (If impliers)       Size         No       Performance       Performance       Performance       Performance       Performance       Performance	10 4m <sup>3</sup> 11 11m <sup>3</sup> 11 11m <sup>3</sup> 9.19m <sup>3</sup> 11 11m <sup>3</sup> ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       SHADING       CALOUNTEDOUTCOMES OK (Filmonic Solution)         ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       SHADING       CALOUNTEDOUTCOMES OK (Filmonic Solution)         Fertions and PERFORMANCE CHARACTERISTICS       SHADING       CALOUNTEDOUTCOMES OK (Filmonic Solution)         Fertions and PERFORMANCE CHARACTERISTICS       SHADING       CALOUNTEDOUTCOMES OK (Filmonic Solution)         Fertions Muttipliers       Shading       Mattripliers       Sisterm         Option 8       Muttipliers       Sisterm       Sisterm       Sisterm       Sisterm         N       TO 0.700       Option 100       Colong 100       Sisterm         N       Colspan= Sisterm       Sisterm       Sisterm       Sisterm         N       Colspan= Sisterm       Sisterm       Sisterm <th< td=""><td>Gla mber of rows preferret GLAZING ELET Glazing elem</td><td>Option B</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>B/U</td><td></td><td></td><td></td><td></td><td></td></th<>	Gla mber of rows preferret GLAZING ELET Glazing elem	Option B									B/U						
19 as currently displayed)           ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS         SHADING         CALCULATED OLICOMES ORF           Facing sector         STACI           Facing sector         Size         Performance         Performance         Performance         STACILIATED OLICOMES ORF           Facing sector         Size         Derformance         PRI         Colspan="6">CALCULATED OLICOMES ORF         State           N         0.090         1.20         0.70         0.000         0.000         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.	J <sup>2</sup> as currently displayed)         ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       SHADING       CALCULATED OUTCOMES OK (if inplates strate)         ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       SHADING       CALCULATED OUTCOMES OK (if inplates)         ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       SHADING       CALCULATED OUTCOMES OK (if inplates)         Facing sector       State       Parlormance       Parlormance       Parlormance       Adding       Multipliers       Size         Option       Option       Parlormance       Parlormance       Parlormance       Adding       Antiopiers       Size         Option       Option       Option       Option       Option       Adding       Antiopiers       Size         N       Option       Option       Option       Option       Option       Adding       Adding         N       Option       Option       COLICULATED OUTCOMESO KIT INP	mber of rows preferred GLAZING ELEI Glazing elem	azing area (A)			1.11m <sup>2</sup>		. 9.19m <sup>2</sup>		14.1m <sup>2</sup>								
19 (as currently displayed)           ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS         SHADING         CALOULATED OUTCOMES OK (If India to the participation of the partipation of the participation of the participation of	19 as currently displayed)           AntiON SECTOR, SIZE and PERFORMANCE CHARACTERISTICS         SHADING         CALCULATED OUTCOMES OK (If Integrating sector           Facing sector         Size         Performance         PRI or device         Shading         Multipliers         Size           Pair         Option IB         Height         Witth         Area         Usatem         System	mber of rows preferred GLAZING ELEI Glazing elem																
19 (as currently displayed)           ATTON SECTOR, SIZE and PERFORMANCE CHARACTERISITCS         SHADING         CALCULATED OUTCOMES OK (frimplemestic)           ATTON SECTOR, SIZE and PERFORMANCE CHARACTERISITCS         SHADING         CALCULATED OUTCOMES OK (frimplemestic)           ATTON SECTOR, SIZE and PERFORMANCE CHARACTERISITCS         SHADING         CALCULATED OUTCOMES OK (frimplemestic)           ATTON SECTOR, SIZE and PERFORMANCE CHARACTERISITCS         SHADING         CALCULATED OUTCOMES OK (frimplemestic)           ATTON SECTOR, SIZE and PERFORMANCE CHARACTERISITCS         SHADING         CALCULATED OUTCOMES OK (frimplemestic)           ATTON SECTOR, SIZE and PERFORMANCE CHARACTERISITCS         SHADING         CALCULATED OUTCOMES OK (frimplemestic)           ATTON SECTOR, SIZE and PERFORMANCE CHARACTERISITCS         SHADING         PERFORMANCE CHARACTERISITCS           ATTON         OUTON OUTON         Size         Size         Size           N         OUTON         TO OUTON         ATTON         CALCULATED OUTCOMES OK (frimplemestic)           N         OUTON         TO OUTON         ATTON           N         OUTON <th colsp<="" td=""><td>19 (as currently displayed)           ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICs         SHADING         CALCULATED OUT COMES OK (if inputed sector)           Facing sector          Performance         PRION         CALCULATED OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)           N         0.060         1.00         0.010         0.000         0.010         0.000</td><td>mber of rows preferred GLAZING ELEN Glazing elem</td><td></td><td></td><td>Alice</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th>	<td>19 (as currently displayed)           ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICs         SHADING         CALCULATED OUT COMES OK (if inputed sector)           Facing sector          Performance         PRION         CALCULATED OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)           N         0.060         1.00         0.010         0.000         0.010         0.000</td> <td>mber of rows preferred GLAZING ELEN Glazing elem</td> <td></td> <td></td> <td>Alice</td> <td></td>	19 (as currently displayed)           ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICs         SHADING         CALCULATED OUT COMES OK (if inputed sector)           Facing sector          Performance         PRION         CALCULATED OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)         Size         Performance         PAIL OUT COMES OK (if inputed sector)           N         0.060         1.00         0.010         0.000         0.010         0.000	mber of rows preferred GLAZING ELEN Glazing elem			Alice												
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Image: classing element         Facing sector         Size         Performance         Rift or device         Shading         Multipliers         Size           fazing element         facing sector         Size         Total         Total         Total         Facing sector         Size         Siz	Glazing eternert         Facing sector         Size         Performance         Reh or device         Shading         Multipliers         Size           Description         Description         Coption al         Incluit         Total         Total         Total         Total         Multipliers         Size           Description         Coption al         Option al         Incluit         Area         System         System         Pin         C         Multipliers         Size         Size         Size         Multipliers         Multip	Glazing elem	MENTS, ORIER	VTATION SE	ECTOR, SIZ	ZE and PEF	RORMANC	E CHARAC	TERISTICS		SHAL	ING	CALC	ULATED O	UTCOMES	OK (if in	outs are valid)	
Total         Total         Total         Total         Total         Total         Total         N         Ph         E         Ph	Total         Total         Total         Total         Total         Total         Name         Nam         Name         Name		ent	Facing	sector		Size		Perfor	mance	P&H or (	levice	Shading		Itipliers	Size	Outcomes	
Total         Total <th< th=""><th>Total         Total         <th< th=""><th>- Description</th><th>tion</th><th>Ontion A</th><th></th><th>Heinht</th><th>Width</th><th>Area</th><th>Total System</th><th>Total System succ</th><th>•</th><th>I</th><th></th><th></th><th>ta Cooline</th><th></th><th>Element shar</th></th<></th></th<>	Total         Total <th< th=""><th>- Description</th><th>tion</th><th>Ontion A</th><th></th><th>Heinht</th><th>Width</th><th>Area</th><th>Total System</th><th>Total System succ</th><th>•</th><th>I</th><th></th><th></th><th>ta Cooline</th><th></th><th>Element shar</th></th<>	- Description	tion	Ontion A		Heinht	Width	Area	Total System	Total System succ	•	I			ta Cooline		Element shar	
3.00       7.0       0.70       0.000       5       0.00       1.00       1.00       1.00       1.00         1.80       7.0       0.70       0.000       5       0.00       1.00       1.00       1.00       1.00         1.80       7.0       0.70       0.000       5       0.00       1.00       1.00       1.00       1.00         1.80       7.0       0.70       0.70       0.000       5       5       0.00       1.00       1.00       1.00       1.00         1.80       7.0       0.70       0.700       0.700       0.700       0.700       1.00       1.00       1.00       1.00         1.80       7.0       0.70       0.700       0.700       0.700       0.700       0.70       0.70         1.80       7.0       0.70       0.700       0.700       0.700       1.00       1.00       1.62         1.80       7.0       0.70       0.700       0.700       0.700       1.00       1.00       1.62         1.80       7.0       0.70       0.70       0.70       0.70       1.00       1.62       0.71         1.80       7.0       0.70       0.70	3.00         7.0         0.70         0.000          0         1.00 <th1.00< th=""> <th1.00< th=""> <th1.00< th=""></th1.00<></th1.00<></th1.00<>		(IBI	facades		Ê	(E	( <mark>"</mark> Ľ	(AFRC)	(AFRC)	Ē	Ē			(Sc)		allowance use	
1.80         7.0         0.70         0.000         ×         0.00         1.00         1.00         1.00         1.00           1.80         7.0         0.70         0.700         0.700         ×         ×         0.00         1.00         1.00         1.00         1.00           1.80         7.0         0.70         0.700         0.700         ×         ×         0.00         1.00         1.00         1.00         1.00         1.00           1.80         7.0         0.70         0.700         0.700         ×         ×         0.00         1.00         1.00         1.00         1.00         1.00           1.80         7.0         0.70         0.700         ×         ×         0.00         1.00	1.80         7.0         0.70         0.000          0         1.00         1.00         1.00         1.60           1.80         7.0         0.70         0.700         0.000          0         1.00         1.00         1.60           1.80         7.0         0.70         0.700         0.000          0         1.00         1.00         1.60           1.20         7.0         0.70         0.700         0.000          0         0         1.00         1.00         1.60           1.20         7.0         0.70         0.700         0.000          0         0.00         1.00         1.00         1.60           1.20         7.0         0.70         0.700         0.000           0         0.00         1.00         1.00         1.00         1.60           1.20         7.0         0.70         0.700         0.700         0.700         1.00         1.00         1.60           1.20         7.0         0.70         0.700         0.70         0.70         1.00         1.00         1.60           1.20         7.0         0.70         0.70			z		09.0			7.0	0.70	0.000		0					
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1.20         7.0         0.70         0.000         ×         0.000         1.00         1.00         1.00         0.00           1.20         7.0         0.70         0.700         0.700         0.700         1.00         1.00         1.00         0.70           1.80         7.0         0.70         0.700         0.700         0.700         0.700         1.00         1.00         1.00         1.00         0.70           1.80         7.0         0.70         0.700         0.700         0.700         0.700         1.00         1.00         1.00         1.00         1.00           1.80         7.0         0.70         0.700         0.700         0.700         1.0	1.20         7.0         0.70         0.700         0.700         1.00         1.00         1.00         1.00         0.70           1.20         7.0         0.70         0.700         0.70         0.700         1.00         1.00         1.00         0.70           1.80         7.0         0.70         0.70         0.700         0.70         0.700         1.00         1.00         1.00         0.70           1.80         7.0         0.70         0.70         0.700         0.70         0.700         1.00         1.00         1.00         1.00           1.80         7.0         0.70         0.70         0.700         0.70         0.700         1.00         1.00         1.00         1.00           1.80         7.0         0.70         0.70         0.700         2.600         0.46         0.20         0.70         0.70           1.80         7.0         0.70         2.600         0.800         3.25         0.20         0.60         0.70           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.60         0.70           1.28         7.0         0.70         2.600	3 105		z		06.0			7.0	0.70	0.000		.0					
1.20         7.0         0.70         0.000         F         0.00         1.00         1.00         1.00         0.70           1.80         7.0         0.70         0.000         F         0.00         1.00         1.00         1.00         1.62           1.80         7.0         0.70         0.000         F         F         0.00         1.00         1.00         1.62           1.80         7.0         0.70         0.700         0.000         F         F         0.00         1.00         1.60         1.62           1.20         7.0         0.70         0.700         0.700         0.700         1.60         1.60         1.62           1.20         7.0         0.70         0.700         2.600         0.800         3.25         0.20         0.700         1.70           1.28         7.0         0.70         0.700         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800	1.20         7.0         0.70         0.000         ×         1.00         1.	4 105		z		09.0			7.0	0.70	0.000		0.					
1.80         7.0         0.70         0.000         ×         0.00         1.00         1.00         1.00         1.00           1.80         7.0         0.70         0.700         0.000         ×         ×         0.00         1.00         1.00         1.00         1.62           1.80         7.0         0.70         0.700         0.000         ×         ×         0.00         1.00         1.00         1.60         1.62           1.20         7.0         0.70         0.700         0.700         2.600         0.800         3.25         0.20         0.90         0.71           1.21         7.0         0.70         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.70 <t< td=""><td>1.80         7.0         0.70         0.000         ×         0.00         1.00         1.00         1.00         1.00           1.80         7.0         0.70         0.000         ×         &gt;         0.00         1.00         1.00         1.00         1.62           1.80         7.0         0.70         0.000         ×         &gt;         0.00         1.00         1.00         1.00         1.62           1.20         7.0         0.70         0.700         0.000         ×         &gt;         0.00         1.00         1.00         1.62           1.20         7.0         0.70         0.70         0.700         0.700         0.700         1.00         1.00         1.62           1.28         7.0         0.70         0.700         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0</td><td></td><td></td><td>z</td><td></td><td>09.0</td><td></td><td></td><td>7.0</td><td>0.70</td><td>0.000</td><td></td><td>0.</td><td></td><td>÷</td><td></td><td></td></t<>	1.80         7.0         0.70         0.000         ×         0.00         1.00         1.00         1.00         1.00           1.80         7.0         0.70         0.000         ×         >         0.00         1.00         1.00         1.00         1.62           1.80         7.0         0.70         0.000         ×         >         0.00         1.00         1.00         1.00         1.62           1.20         7.0         0.70         0.700         0.000         ×         >         0.00         1.00         1.00         1.62           1.20         7.0         0.70         0.70         0.700         0.700         0.700         1.00         1.00         1.62           1.28         7.0         0.70         0.700         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0			z		09.0			7.0	0.70	0.000		0.		÷			
1.80         7.0         0.70         0.000         ×         0.00         1.00         1.00         1.00         1.00           1.20         7.0         0.70         0.000         ×         ×         0.00         1.00         1.00         1.00         1.00         1.00         1.62           1.20         7.0         0.70         0.700         0.000         ×         ×         0.00         1.00         1.00         1.00         1.62           1.23         7.0         0.70         0.700         2.600         0.800         3.25         0.20         0.91         0.70         0.71           1.28         7.0         0.70         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71 </td <td>1.80         7.0         0.70         0.000         ×         0.00         1.00         1.00         1.00         1.00           1.20         7.0         0.70         0.000         ×         ×         0.00         1.00         1.00         1.00         1.00           1.20         7.0         0.70         0.000         ×         ×         0.00         1.00         1.00         1.00         1.00           1.21         7.0         0.70         0.700         0.700         2.600         0.800         3.25         0.20         0.86         4.32           1.28         7.0         0.70         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.20         7.0</td> <td></td> <td></td> <td>z</td> <td></td> <td>0.00</td> <td></td> <td></td> <td>7.0</td> <td>0.70</td> <td>0.000</td> <td></td> <td>0.</td> <td></td> <td>1</td> <td></td> <td></td>	1.80         7.0         0.70         0.000         ×         0.00         1.00         1.00         1.00         1.00           1.20         7.0         0.70         0.000         ×         ×         0.00         1.00         1.00         1.00         1.00           1.20         7.0         0.70         0.000         ×         ×         0.00         1.00         1.00         1.00         1.00           1.21         7.0         0.70         0.700         0.700         2.600         0.800         3.25         0.20         0.86         4.32           1.28         7.0         0.70         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.20         7.0			z		0.00			7.0	0.70	0.000		0.		1			
1.20         7.0         0.70         0.000         ×         0.00         1.00         1.00         1.00         0.70           1.23         7.0         0.70         0.700         0.000         ×         0.00         1.00         1.01         1.11           1.80         7.0         0.70         0.700         2.600         0.46         0.20         0.864         0.60         1.11           1.80         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.80         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.80         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.29         7.0         0.70         2.600         0.800 <t< td=""><td>1.20         7.0         0.70         0.000         5.0         0.00         1.00         1.00         1.00         1.00         1.01         1.01         0.101           1.23         7.0         0.70         0.000         5.00         0.46         0.20         0.100         1.11           1.80         7.0         0.70         0.700         2.600         0.800         3.25         0.20         0.91         0.86         4.32           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.201         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.201         2.600         0.800         3.25</td><td>7 107</td><td></td><td>z</td><td></td><td>0.00</td><td></td><td></td><td>7.0</td><td>0.70</td><td>0.000</td><td></td><td>0.</td><td></td><td><del>,</del></td><td></td><td></td></t<>	1.20         7.0         0.70         0.000         5.0         0.00         1.00         1.00         1.00         1.00         1.01         1.01         0.101           1.23         7.0         0.70         0.000         5.00         0.46         0.20         0.100         1.11           1.80         7.0         0.70         0.700         2.600         0.800         3.25         0.20         0.91         0.86         4.32           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.201         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.201         2.600         0.800         3.25	7 107		z		0.00			7.0	0.70	0.000		0.		<del>,</del>			
1.23         7.0         0.70         0.000         ×         0.00         1.00         1.00         1.00         1.01           1.80         7.0         0.70         0.700         2.600         0.860         0.46         0.20         0.91         0.86         4.32           1.80         7.0         0.70         1.200         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.80         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.290         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.201         2.600         0.800	1.23         7.0         0.70         0.000         5.0         0.00         1.00         1.00         1.00         1.01           1.80         7.0         0.70         0.700         2.600         0.46         0.20         0.91         0.86         4.32           1.80         7.0         0.70         1.200         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.201         2.610         0.800         3.25         0.20         0.64         0.60         0.71           1.201         2.600         0.800         3.25         0.20         0.64			z		09.0			7.0	0.70	0.000		0.				-	
1.80         7.0         0.70         1.200         2.600         0.46         0.20         0.91         0.86         4.32           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           3.00         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.20         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.20         2.600         0.800         3.25         0.20	1.80         7.0         0.70         1.200         2.600         0.46         0.20         0.91         0.86         4.32           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           3.00         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           3.00         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.20         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.20         7.0         0.70         2.600         0.800         3.25	9 104		ш		0.90			7.0	0.70	0.000		0.			-	100% of 23%	
1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           3.00         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           3.01         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           3.02         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.23         2.5         0.20         0.800         3.25         0.20         1.00         1.00         1.10         1.80           1.280         2.50         0.20         0.260         0.46	1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           3.00         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           3.00         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         0.700         1.200         1.20         3.25         0.20         1.80         1.80         1.10         1.80           1.28         0.25         1.200         2.600         0.46         0.20         0.82         4.32           1.80         2.5         0.25         1.200         2.600	10 109		s		2.40			7.0	0.70	1.200					4	45% of 80%	
1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.70           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           3.00         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           3.00         7.0         0.70         0.700         2.600         0.800         3.25         0.20         0.70         1.00         1.00         1.80           1.23         0         2.5         0.25         0.20         0.800         3.25         0.20         1.80         1.80           1.80         2.5         0.25         1.200         2.600         0.46         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.82	1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           3.00         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           3.00         7.0         0.70         0.700         2.600         0.800         3.25         0.20         0.64         0.60         0.77           1.23         7.0         0.70         0.700         0.000         7.0         0.00         1.00         1.00         1.10         1.80           1.23         0.25         0.25         1.200         2.600         0.46         0.20         0.82         4.32           1.80         2.55         0.25         1.200         2.600         0.46         0.20         8.8         0.82         4.32           1.80         2.55         0.25         1.200	11 107		s		09.0			7.0	0.70	2.600				0		9% of 80%	
1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           3.00         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.77           3.00         7.0         0.70         0.700         2.600         0.800         3.25         0.20         1.00         1.00         1.00         1.80           1.23         2.5         0.25         0.20         0.600         4.2         0.00         1.40         1.80         1.43           1.80         2.5         0.25         1.200         2.600         0.46         0.20         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         4.32	1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.70           3.00         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.70           3.00         7.0         0.70         0.700         0.000         7.0         0.700         1.00         1.00         1.80           1.23         0         2.5         0.25         1.200         2.600         0.46         0.20         1.40         1.41           1.80         2.5         0.25         1.200         2.600         0.46         0.20         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         3.83         4.32           1.80 <t< td=""><td></td><td></td><td>s</td><td></td><td>09.0</td><td></td><td></td><td>7.0</td><td>0.70</td><td>2.600</td><td></td><td></td><td></td><td></td><td>Ö</td><td>9% of 80%</td></t<>			s		09.0			7.0	0.70	2.600					Ö	9% of 80%	
1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.70         0.71           3.00         7.0         0.70         0.70         0.000         7.0         0.70         1.00         1.00         1.00         1.80           1.23         0.25         0.25         0.000         7.0         2.600         0.46         0.20         1.80         1.80           1.23         2.5         0.25         1.200         2.600         0.46         0.20         1.80         1.10         1.10         1.10           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.55         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.55	1.28         7.0         0.70         2.600         0.800         3.25         0.20         0.64         0.60         0.71           3.00         7.0         0.70         0.70         0.000         7.0         0.00         1.00         1.00         1.00         1.80           1.123         7.0         2.55         0.255         0.000         7.0         0.00         1.00         1.00         1.80           1.130         2.5         0.255         1.200         2.600         0.46         0.20         0.83         0.82         4.32           1.80         2.55         0.255         1.200         2.600         0.46         0.20         0.83         0.82         4.32           1.80         2.55         0.255         1.200         2.600         0.46         0.20         0.83         0.82         4.32           1.80         2.55         0.255         1.200         2.600         0.46         0.20         0.83         0.82         4.32           1.80         2.55         0.255         1.200         2.600         0.46         0.20         0.83         0.82         4.32           1.80         2.55         0.255         1.200<	13 105		s		09.0			7.0	0.70	2.600					0	9% of 80%	
3.00         7.0         0.70         0.000         5.0         1.00         1.00         1.00         1.80           1.23         2.5         0.25         0.000         7         0.00         1.00         1.00         1.00         1.10           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32	3.00         7.0         0.70         0.000         5.0         1.00         1.00         1.00         1.00         1.80           1.23         2.5         0.25         0.000         5.00         0.00         1.00         1.00         1.00         1.10           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         <	14 104		s		09.0			7.0	0.70	2.600						9% of 80%	
1.23         2.5         0.25         0.000         2.600         0.000         1.00         1.00         1.00         1.01           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32	1.23         2.5         0.25         0.000         2.60         0.100         1.00         1.00         1.01           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.82         4.32           CALCULATOR         2.5         0.25         1.200         2.600         0.46         0.20         0.82         4.32	15 101		s		09.0			7.0	0.70	0.000		0					
1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32	1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           CALCULATOR         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           Ioping a better understanding of glazing energy efficiency parameters.         1.800         1.465         1.475	16 108		3		06.0			2.5	0.25	0.000		0.				9% of 100%	
1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           CALCULATOR         1.80         1.200         2.600         0.46         0.20         1.80         3.43	1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           CALCULATOR         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           loping a better understanding of glazing energy efficiency parameters.         if inputs are valid         if inputs are valid	17 101		3		2.40			2.5	0.25	1.200							
1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           CALCULATOR         if inputs are valid	1.80         2.5         0.25         1.200         2.600         0.46         0.20         0.88         0.82         4.32           CALCULATOR         if inputs are valid         of glazing energy efficiency parameters.         of and the standing of glazing energy efficiency parameters.         of an of a setter understanding of glazing energy efficiency parameters.	18 102		3		2.40			2.5	0.25	1.200	-		Ö		4		
CALCULATOR	CALCULATOR loping a better understanding of glazing energy efficiency parameters.	19 103		M		2.40			2.5	0.25	1.200			0		4		
	loping a better understanding of glazing energy efficiency parameters.	PORTANT NOTICE AN	D DISCLAIME	R IN RESPE	CT OF THE	E GLAZING		VTOR						>	f innuts a	are valid	Ì	

Job Number: 1323

NC	C V	NCC VOLUME ONE GLAZING CAL	GLAZ	SING C		LATC	R (für	st issu	w beu	CULATOR (first issued with NCC 2014)	C 201	(4)					НЕГР
Building	name/de	Building name/description		ABCA		ABG		2				4	Application		[		Climate zone
Board	ling Ho	Boarding House: 102 Broomfield St Cabramatta NSW	old St Cat	oramatta	NSW 2166	9						0	Class 3			>	9
Storey	8	Pece I	Facade areas	cas		ARG		8									
Level 2	2		z	NE	ш	SE	s	SW	M	NW	internal						
		Option A	94.6m <sup>2</sup>		4Zm <sup>2</sup>		96.4m <sup>2</sup>		36.4m <sup>2</sup>		n/a						
		Cleving eres (A)	40 Am <sup>2</sup>		1 11m <sup>2</sup>	8	0 10m <sup>2</sup>		11 1m2		ING						
		Glazing area (A)				Par	- 1181-16		14. IIII								
Number	of rows	Number of rows preferred in table below	N	19	19 (as currently displayed)	ly displaye	a)										
	GLAZ	GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE and	NTATION SE	ECTOR, SIZ		FORMANC	E CHARAC	PERFORMANCE CHARACTERISTICS		SHADING	ING	CAL	CULATED	OUTCOM	AES OK (i	if inputs	CALCULATED OUTCOMES OK (if inputs are valid)
•	Glazi	Glazing element	Facing	Facing sector		Size		Perfor	Performance	P&H or device	evice	Shading		Multipliers		Size	Outcomes
								Total System	Total System						A	Area	Element share
0 Fr		Description (optional)	Option A facades	Option B facades	Height	Width (m)	Area (m²)	U-Value (AFRC)	SHGC (AFRC)	∎ Ē	≖ Ê	HIA	G Heatir (m) (S <sub>H</sub> )	Heating Cooling (S <sub>H</sub> ) (S <sub>c</sub> )		used (m²) al	of % of allowance used
-	1 203		z		0.60	3.00		0.7	0.70	0.000		0	0.00 1.	1.00 1.	1.00	1.80 1	17% of 91%
2	2 204		z		0.00	1.80		7.0	0.70	0.000		0	0.00 1.	1.00 1.	1.00 1	1.62 10	16% of 91%
3	205		z		06.0	1.80		7.0	0.70	0.000		0	0.00 1.	.00 1.	1.00 1	1.62 10	16% of 91%
4	4 205		z		0.60	1.20		7.0	0.70	0.000		0	0.00 1.	1.00 1.	1.00 0		7% of 91%
9			z		0.60	1.20		7.0	0.70	0.000		0	0.00 1.	.00		-	7% of 91%
9	206		z		0.90	1.80		7.0	0.70	0.000		0	0.00 1.	.00 1.	00.	<u>`</u>	16% of 91%
7	207		z		0.90	1.80		7.0	0.70	0.000		0		1.00 1.	1.00	1.62 1	16% of 91%
80	207		z		0.60	1.20		7.0	0.70	0.000		0		8		-	7% of 91%
6	204		ш		0.90	1.23		7.0	0.70	0.000			-	8		Ŧ	100% of 23%
	5		s		2.40	1.80		2.0	0.70	1.200						8	45% of 80%
			<b>~</b>		0.60	1.28		0.7	0./0	2.600	0.800		_			2	<u>9% of 80%</u>
5   <del>1</del>	12 205		n u		0.60	1 28		0.7	0.70	2,600	0.800	3.25 0	0.20	0.64 0.	0.60 0		9% of 80% 9% of 80%
4	14 204		s		0.60	1.28		7.0	0.70	2.600	-		-	_	<b>_</b>	0.77 9	9% of 80%
15	201		s		0.60	3.00		0.7	0.70	0.000		-	0.00 1.	1.00 1.	1.00 1	1.80	18% of 80%
16	16 208		>		0.00	1.23		2.5	0.25	0.000		-	0.00 1.	1.00 1.	1.00 1	1.11 99	9% of 100%
17	17 201		×		2.40	1.80		2.5	0.25	1.200	2.600	0.46 0	0.20 0.	0.88 0.	0.82 4	4.32 30	30% of 100%
18	18 202		N		2.40	1.80		2.5	0.25	1.200					82		30% of 100%
19	203		N		2.40	1.80		2.5	0.25	1.200	2.600	0.46 0.	.20 0.	88 0.	82	4.32 30	30% of 100%
IMPOR.	TANT NC	IMPORTANT NOTICE AND DISCLAIMER IN RESPECT OF THE GLAZING CALCULATOR	ER IN RESPE	CT OF THE	GLAZING	CALCULA	TOR						All Co	if input	if inputs are valid	alid	
While th	izing can le ABCB	Ine Giazing calculator has been developed by the ABCB to assist in developing a better understanding of giazing energy efficiency parameters. While the ABCB believes that the Giazing Calculator, if used correctly, will produce accurate results, it is provided "as is" and without any representation	g Calculator	ABUB TO as: , if used con	rectly, will	oping a per	ter undersu curate resu	anding or g ults, it is pro	lazing ener ivided "as k	developing a better understanding of glazing energy efficiency parameters, v, will produce accurate results, it is provided "as is" and without any repres	y paramen	ers. vresentati	2			»	
or warr	anty of a	or warranty of any kind, including that it is fit for any purpose or of merchantable quality, or functions as intended or at all	t is fit for an	y purpose o	r of mercha	intable qua	ity, or func	tions as inte	ended or at	all.							
Your us	se of the	Your use of the Glazing Calculator is entirely at your own risk and the ABCB accepts no liability of any kind.	ntirely at you	r own risk a	IND THE ADU	CB accepts	no liability (	ot any king.								Ś	

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NC	C VOL	NCC VOLUME ONE GLAZING CAL	E GLA	SING C		JLATC	DR (fir	CULATOR (first issued with NCC 2014)	ued w	ith NC	C 20	14)					НЕГР
Building	Building name/description	ption	DLUME ONE		NO EMNTO		VOLUME O	7	MULLON V	E ONE	Tox 🏠	AF	Application	VOLUME	ONE		Climate zone
Board	ling House	Boarding House: 102 Broomfield St Cabramatta NSW	eld St Cal	oramatta	<b>NSW 2166</b>	36						0	Class 3				9
Storey	ANDLINE		Facade areas	eas	NO SMULO	>	VOLUME O	27 11	NOLUMI	S ONE	Not						
Level	3		z	NE	ш	SE	s	SW	M	NWN	internal						
		Option A	94.6m <sup>2</sup>		42m²		96.4m²		36.4m²		- 1-						
		Option of the	40 Am2		4 44m2		0 10m2		4.1 4m2		DNI						
		Giazing area (A)		1	11111	1	3.1311	~	14.1111								
Number	of rows pre	Number of rows preferred in table below	w	19	(as currer	19 (as currently displayed)	(D)										
	GLAZING	GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE and	INTATION S	ECTOR, SI2	CE and PER	FORMANC	E CHARAC	PERFORMANCE CHARACTERISTICS		SHADING	ING	CAL	CULATED	OUTCON	AES OK (	(if input	CALCULATED OUTCOMES OK (if inputs are valid)
•	Glazing element	element	Facing	Facing sector		Size		Perfor	Performance	P&H or device	levice	Shading		Multipliers		Size	Outcomes
	ć	a origination	Ontion	Cotico B	Heinht	Width	Area	Total System	System Succ	•	-	HO		Heating Cooling		Area	Element share
Q F		(optional)	facades		m (m)	Ê	(m²)	(AFRC)	(AFRC)	Ē	= <u></u>		(L) (S)	(S <sub>H</sub> ) (S			allowance used
-	303		z		09.0	3.00		0.7	0.70	0.000		0	0.00 1	1.00 1.	1.00	1.80 1	17% of 91%
2	304		z		06.0	1.80		7.0	0.70	0.000		0	0.00 1	.00	1.00	1.62 1	16% of 91%
e	305		z		06.0	1.80		7.0	0.70	0.000		0	0.00 1	.00	1.00	1.62 1	16% of 91%
4	4 305		z		09.0	1.20		7.0	0.70	0.000			0.00 1	.00	1.00	0.72 7	7% of 91%
9	306		z		09.0	1.20		7.0	0.70	0.000		0	0.00 1	.00		0.72 7	7% of 91%
9	306		z		0.00	1.80		7.0	0.70	0.000		0	0.00 1	.00	00	1.62	16% of 91%
7	7 307		z		0.00	1.80		7.0	0.70	0.000		0	0.00 1	.00	1.00	1.62 1	16% of 91%
80	307		z		09.0	1.20		7.0	0.70	0.000		0	0.00 1	.00		0.72 7	7% of 91%
6	304		ш		0:00	1.23		7.0	0.70	0.000		0	0.00	.00	1.00	1.11	100% of 23%
9	10 309		S		2.40	1.80		7.0	0.70	1.200	2.600	0.46 0		91		4.32 4	45% of 80%
7	11 307		s		0.60	1.28		7.0	0.70	2.600	0.800			2	_	1	9% of 80%
12	12 306		s		0.60	1:28		7.0	0.70	2.600	0.800						9% of 80%
13	13 305		~		0.60	1.28		0.1	00	2.600	0.800				_		9% of 80%
14	14 304		s		0.60	1.28		2.0	0.70	2.600	0.800	3.25					9% of 80%
15	15 301		s		0.60	3.00		0.7	0.70	0.000					1.00		18% of 80%
16	16 308		2		0:00	1:23		2.5	0.25	0.000							9% of 100%
17	17 301		3		2.40	1.80		2.5	0.25	1.200						23	30% of 100%
₽	18 302		3		2.40	1.80		2.5	0.25	1.200	-			88	82		30% of 100%
19	19 303		×		2.40	1.80		2.5	0.25	1.200	2.600	0.46 0	0.20 0.	.88 0.	82	4.32 8	30% of 100%
IMPOR	TANT NOTIC	IMPORTANT NOTICE AND DISCLAIMER IN RESPECT OF THE GLAZING CALCULATOR	IER IN RESPI	ECT OF TH	E GLAZING	CALCULA	TOR							if inpu	if inputs are valid	valid	
The Gla While th	Izing Calculat te ABCB belie	The Glazing Calculator has been developed by the ABCB to assist in developing a better understanding of glazing energy efficiency parameters. While the ABCB believes that the Glazing Calculator. if used correctly. will produce accurate results. it is provided "as is" and without any represented on the context of the co	loped by the no Calculator	ABCB to as . if used co	sist in deve rrectly, will	loping a be produce at	tter underst sourate res	developing a better understanding of glazing energy efficiency parameters. . will produce accurate results. it is provided "as is" and without any representation	lazing ener wided "as is	gy efficienc s" and witho	y paramet	ers. presentati	5				
or war	anty of any k	or warranty of any kind, including that it is fit for any purpose or of merchantable quality, or functions as intended or at all	it is fit for an	y purpose (	or of merch	antable qua	lity, or func	tions as inte	ended or at	all	No.	UME ONE				>	
Your us	se of the Glaz	Your use of the Glazing Calculator is entirely at your own risk and the ABCB accepts no liability of any kind.	entirely at you	ır own risk	and the AB	CB accepts	no liability	of any kind.								ARCS	

Job Number: 1323

Colton         Calconnication NSW 2166         Calcondication NSW 2106         Calcondication NSW 2106 <th calcondication="" colspa="6" n<="" th=""><th>SE         S/V         W/V         Total         Class 3           I 2.5m<sup>2</sup>         21.2m<sup>2</sup>         N/V         N/V         N/V         N/V           I 54m<sup>2</sup>         21.2m<sup>2</sup>         21.2m<sup>2</sup>         N/V         N/V         N/V         N/V           displayed)         1.54m<sup>2</sup>         21.2m<sup>2</sup>         N/V         N/V         N/V         N/V         N/V           displayed)         1.54m<sup>2</sup>         21.2m<sup>2</sup>         N/V         N/V</th><th>Application         Class 3         State and performance 12.5m²       21.2m²       Application         State and performance 12.5m²       State and performance 12.5m²       Class 3         State and performance charact class 12.5m²       State and performance performa</th><th>a aciation</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th>	<th>SE         S/V         W/V         Total         Class 3           I 2.5m<sup>2</sup>         21.2m<sup>2</sup>         N/V         N/V         N/V         N/V           I 54m<sup>2</sup>         21.2m<sup>2</sup>         21.2m<sup>2</sup>         N/V         N/V         N/V         N/V           displayed)         1.54m<sup>2</sup>         21.2m<sup>2</sup>         N/V         N/V         N/V         N/V         N/V           displayed)         1.54m<sup>2</sup>         21.2m<sup>2</sup>         N/V         N/V</th> <th>Application         Class 3         State and performance 12.5m²       21.2m²       Application         State and performance 12.5m²       State and performance 12.5m²       Class 3         State and performance charact class 12.5m²       State and performance performa</th> <th>a aciation</th> <th></th>	SE         S/V         W/V         Total         Class 3           I 2.5m <sup>2</sup> 21.2m <sup>2</sup> N/V         N/V         N/V         N/V           I 54m <sup>2</sup> 21.2m <sup>2</sup> 21.2m <sup>2</sup> N/V         N/V         N/V         N/V           displayed)         1.54m <sup>2</sup> 21.2m <sup>2</sup> N/V         N/V         N/V         N/V         N/V           displayed)         1.54m <sup>2</sup> 21.2m <sup>2</sup> N/V	Application         Class 3         State and performance 12.5m²       21.2m²       Application         State and performance 12.5m²       State and performance 12.5m²       Class 3         State and performance charact class 12.5m²       State and performance performa	a aciation														
State         State         Class 3         Operation           State         State         NUV         Internal         Class 3         Operation           State         State         NUV         NUV         Internal         Operation         Operati	SE         S/V         N/V         Internal         Class 3         Clas 3         Clas 3         Clas 3	SE         S/V         WV         Internal         Class 3         Clas 3         Clas 3         Clas 3	puon		0		9909		ASCB		9909		A	pplication			Climate zone	
T1.5m²         Si SiV W         NIME         E         S: SiV W         NIME         E         S: SiV W         NIME         T1.5m³         T1.5m³         Z1.2m³         NIME         S: SiV W         NIME         NIME         SIL           7.2m²         1.11m²         1.5fm²         21.2m³         Anticipation	Sum         SV         W         NV         internal           5m²         SV         W         NV         internal           5m²         21.2m³         NV         internal           5m²         Stanta         Analysis         Analysis         Analysis           Analysis         Stanta         Stanta         Mutipliers         Size           Analysis         Performance         Performance         Pah or device         Shading         Mutipliers         Size           Analysis         Fortal         Total         Mutipliers         Size         Mutipliers         Size           Total         Total         Mutipliers         Size         Mutipliers         Size         Mutipliers         Size           Total         Total         Mutipliers         Size         Mutipliers         Size         Mutipliers         Size           Total         Total         Total         Mutipliers         Size         Mutipliers         Size         Mutipliers         Size           Total         Total         Total         Mutipliers         Size         Mutipliers         Size         Mutipliers         Size           Total         Mutipliers         Size <t< th=""><th>Sim         SV         W         NV         internal           5m<sup>2</sup>         21.2m<sup>3</sup>         NV         internal           5m<sup>2</sup>         21.2m<sup>3</sup>         NV         internal           4m<sup>2</sup>         21.2m<sup>3</sup>         not         not           4m<sup>2</sup>         21.2m<sup>3</sup>         not         not           Amount         5.04m<sup>3</sup>         not         not         not           Amount         For device         Stading         Muttipliers         size           Amount         For device         Shading         Muttipliers         size           Amount         For device         Shading         Muttipliers         size           Total         Total         Muttipliers         size         not           Total         Muttipliers         Tot</th><th>a: 102 Broomfie</th><th>eld St Cab</th><th>ramatta</th><th><b>NSW 216</b></th><th>9</th><th></th><th></th><th></th><th></th><th></th><th><u>ں</u></th><th>lass 3</th><th></th><th>\$ @</th><th>9</th></t<>	Sim         SV         W         NV         internal           5m <sup>2</sup> 21.2m <sup>3</sup> NV         internal           5m <sup>2</sup> 21.2m <sup>3</sup> NV         internal           4m <sup>2</sup> 21.2m <sup>3</sup> not         not           4m <sup>2</sup> 21.2m <sup>3</sup> not         not           Amount         5.04m <sup>3</sup> not         not         not           Amount         For device         Stading         Muttipliers         size           Amount         For device         Shading         Muttipliers         size           Amount         For device         Shading         Muttipliers         size           Total         Total         Muttipliers         size         not           Total         Muttipliers         Tot	a: 102 Broomfie	eld St Cab	ramatta	<b>NSW 216</b>	9						<u>ں</u>	lass 3		\$ @	9	
N         NE         E         SE         S         SVV         W         NM         Internal Internal           72.5m²         21.8m²         72.5m²         21.2m²         N         W/V         Internal           7.5m²         21.8m²         72.5m²         21.2m²         N         W/V         Internal           7.92m²         1.11m²         21.8m²         21.2m²         N         N         Internal           7.92m²         1.11m²         5.04m²         21.2m²         N         N         Internal           7.92m²         1.11m²         1.11m²         1.11m²         1.11m²         1.11m²         1.11m²           7.92m²         N         N         N         N         N         N         N           7.92m²         N         N         N         N         N         N         N           7.92m²         N         N         N         N         N         N         N         N           7.92m³         N         N         N         N         N         N         N         N           Altor N         N         N         N         N         N         N         N         N<	S         S/V         W         N/V         internal           5m²         S/V         W         M/V         internal           5m²         Z1.2m²         N/V         M/V         M/V           5m²         Z1.2m²         N/V         M/V         M/V           5m²         Anal         M/V         M/V         M/V         M/V           f/m²         Z1.2m²         M/V         M/V         M/V         M/V           Anal         Performance         BADING         Anal         Multipliers         Size           Anal         Performance         Pathol of Acris         Size         Multipliers         Size           Anal         Total         Notal         Multipliers         Size         Multipliers         Size           Total         Yotan         System         System         System         Size         Multipliers         Size           Total         Total         Total         Multipliers         Size         Multipliers         Size           Total         System         System         System         System         Size         Multipliers         Size           Total         Total         M         M	S         S/V         W         Internal           5/m²         S/V         M/V         Internal           5/m²         Z1.2m²         N/V         Internal           5/m²         Z1.2m²         N/V         M/V           1/m²         Z1.2m²         N/V           1/m²         Z1.2m²         N/V         M/V           1/m²         S1ADINC         S1ADINC         ACLULATED OUTCOMES OK (If inputers)           ARACTERISTICs         S1ADINC         RAding         Multipliers         Size           Area         System         System         System         Size         Size           Total         Iotal         Iotal         Iotal         Iotal         Iotal         Iotal           Total         System         System         System         System         Size         Iotal         Iot		Facade are	as													
72.5m²         21.8m²         12.5m²         21.2m²         21.8m²         21.8m²<	5m <sup>2</sup> 21.2m <sup>2</sup> nb           idm <sup>2</sup> nb         nb           idm <sup>2</sup> nb         nb           idm <sup>2</sup> nb         nb           idm <sup>2</sup> statistical         statistical         statistical         statistical         idm           idm <sup>2</sup> 5.04m <sup>2</sup> statistical         statistica         stati         stati	5m²         21.2m²         nb           1/m²         nb         nb           1/m²         nb         nb           1/m²         nb         nb           1/m²         1.0         nb         nb           1/m²         1.0         nb         nb           1/m²         1.0         1.0         1.0         1.0           AAATERISTICS         SHADING         SHADING         SHADING         Shading         nb           ARACTERISTICS         SHADING         SHADING         Shading         Nutripliers         Size           ARACTERISTICS         SHADING         PH of device         Shading         Mutripliers         Size           Area         Note         Nutripliers         Size         Nutripliers         Size           Note         Nutripliers         Size         Nutripliers         Size         Nutripliers         Size           Note         Nutripliers         Size         Nutripliers         Size         Nutripliers         Size           Note         Nutripliers         Size         Nutripliers         Size         Nutripliers         Size           No         Nutripliers         Nutripliers         Size		z	NE	ш	SE	s	SW	3	NW	internal						
T. J2(m2       I. 111/m2       I. 54(m2)       I. 5.04/m2       I. 5.04/m2         T. VI       Iterating displayed)       5.04/m2       Iterating displayed)         ATTON SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       5.04/m2       ATOUNCOMES OK (IFINDE)         ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS       SHADING       CALCULATED OUTCOMES OK (IFINDE)         Atticates       fiscades	Idm <sup>2</sup> 5.04m <sup>2</sup> MB           ARACTERISTICs         SHADING         CALCULATED OUTCOMES OK (If implicing in the implication in the implicating in the implication in the implication in the implic	Idm <sup>2</sup> 5.04m <sup>2</sup> All           AACTERISTICs         SHADING         CALCULATED OUTCOMES OK (If inputers)           ARACTERISTICs         SHADING         Analia           ARACTERISTICs         SHADING         Analia           ARACTERISTICs         SHADING         Muttipliers           ARACTERISTICs         SHADING         Analia           Aracteristics         Shading         Muttipliers           Iotal         Votal         Nutipliers         Size           System         System         PRH of 400         0.40         0.41         162           Total         Votal         Nu         Nutipliers         Size         Nutipliers         Size           Votal         Votal         Nu         Nutipliers         Size         Nutipliers         Size           Votal         Votal         Nu         Nu         Nu         Size         Size           Votal         Votal         Votal         Nu         Nu         Size         Size           Votal         Votal         Votal         Votal         Nu         Size         Size           Votal         Votal         Votal         Votal         Votal         Votal         V	Option A	72.5m <sup>2</sup>		21.8m <sup>2</sup>		72.5m <sup>2</sup>		21.2m <sup>2</sup>								
7.92m <sup>2</sup> 1.11m <sup>2</sup> 5.04m <sup>2</sup> 7.92m <sup>2</sup> 1.11m <sup>2</sup> 5.04m <sup>2</sup> ATT       I.11m <sup>2</sup> 5.04m <sup>2</sup> ATT       I.11m <sup>2</sup> 5.04m <sup>2</sup> ATT       I.11m <sup>2</sup> 5.04m <sup>2</sup> ATT       State       Performance       SHAINS       CALCUATED OUTCOMES OK fit input to the state of th	idm <sup>2</sup> S04m <sup>2</sup> ARACTERISTICS       SHADING       CALCULATED OUTCOMES OK (if inputers structuration of it inputers.	Idm <sup>2</sup> 5.04m <sup>2</sup> StADING       AALCULATED       Muttipliers       Size         ARACTERISTICs       SHADING       Shading       Muttipliers       Size         ARACTERISTICs       SHADING       Shading       Muttipliers       Size         ARACTERISTICs       SHADING       Shading       Muttipliers       Size         ARACTERISTICs       Statem       PRI-OUTCOMES OK (ff inpution)       Size       Size         ARACTERISTICs       Total       Total       Muttipliers       Size         Value       System       System       Size       Size       Size         Value       System       System       Size       Size       Size       Size         Total       Otal       Otal       Otal       Otal       Otal       Size       Size         Total       System       System       System       Size       Size       Size       Size         Total       Otal       Otal       Otal       Otal       Otal       Size       Size         Total       System       System       Size       Size       Size       Size       Size       Size       Size         Total       Otal       Otal	Option B									B/U						
11 (as currently displayed)           ATTON SECTOR, SIZE and PERFORMANCE CHARACTERISTICS         SHADING         CALGULATED OUTCOMES OF if input loss of if input loss of if input loss of if input loss of it input l	ARACTERISTICS         SHADING         CALCULLATED OUTCOMES OK (if inputed in the second	ARACTERISTICS         SHADING         CALCULATED OUTCOMES OK (if inputed in the section of the secti	Glazing area (A)		anna C	1	S vou	1.54m <sup>2</sup>		. 5.04m²	>	VOLUME						
11         (as currently displayed)           ATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS         SHADING         CALCUATED OUTCOMES OF (If inpute)           Facing sector         Size         Performance         PALOTINE COMMANCE CHARACTERISTICS         SHADING         CALCUATED OUTCOMES OF (If inpute)           Facing sector         Size         Performance         PRH of device         Shading         Multipliers         Size           Option B         Height         Width         Area         Porto         Total         Total         Total         Total         Multipliers         Size           N         Option B         Height         Width         Area         U-Value         State         PM         C         Heating         Cooling         used           N         Option B         Height         Width         Area         U-Value         State         PM         C         Heating         Cooling         used           N         Option B         Height         Width         Area         U-Value         State         PM         C         Area         U-Value         State	ARACTERISTICS         SHADING         CALCULATED OUTCOMES OK (if inputed in the section of the secti	ARACTERISTICS         SHADING         CALCULATED OUTCOMES OK (ff inputers)           ARACTERISTICS         SHADING         CALCULATED OUTCOMES OK (ff inputers)           Performance         P&H or device         Shading         Multipliers         Size           Total         Total         PM         PM         G         Multipliers         Size           Total         System         System         Performance         Pah (m)         P/H         G         Multipliers         Size           Total         System         System         PH         P/H         G         Multipliers         Size           Total         System         System         PH         P/H         G         Multipliers         Size           Total         System         System         PH         P/H         G         Multipliers         Size           Total         O.70         1.400         1.300         1.08         0.40         0.41         1.62           Total         O.70         1.400         1.300         1.08         0.41         0.41         1.62           Total         O.70         1.400         1.300         1.300         0.32         0.71         0.71           To																
SHADING         CALCULATED OUTCOMES OK (if inputational conditional conditenal conditional conditi conditinal conditional conditi	ARACTERISTICS         SHADING         CALCULATED OUTCOMES OK (if finduation)           Performance         P&H or device         Shading         Multipliers         Size           Total         Total         Total         Total         Nultipliers         Size           System         System         System         System         System         Size           Total         Total         Total         Nultipliers         Size           Markin         System         System         System         Size           System         System         System         System         Size           To         0.70         1.400         1.300         1.08         0.41         0.41         1.62           T.O         0.70         1.400         1.300         1.08         0.41         0.72         0.71         0.72           T.O         0.70         1.400         1.300         1.08         0.40         0.41         1.62           T.O         0.70         1.400         1.700         0.82         1.10         0.72           T.O         0.70         2.700         1.00         2.300         1.300         1.02         0.71         0.72 <td< th=""><th>ARACTERISTICS         SHADING         CALCULATED OUTCOMES OK (if inputed in the state of the s</th><th>eferred in table belo</th><th></th><th>1</th><th>(as current</th><th>ly displaye</th><th>()</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>	ARACTERISTICS         SHADING         CALCULATED OUTCOMES OK (if inputed in the state of the s	eferred in table belo		1	(as current	ly displaye	()										
nance         P&H or device         Shading         Multipliers         Size           Total         F         H         P         H         G         Multipliers         Size           System         P         H         P/H         G         Multipliers         Size           System         P         H         P/H         G         Nultipliers         Size           SHGC         (m)         (m)         (m)         (m)         (m)         Size         Meading           (AFRC)         (m)         (m)         (m)         (m)         (m)         Size         Meading           (AFRC)         (m)         (m)         (m)         (m)         (m)         Meading         Meading           (AFRC)         (m)         (m)         (m)         (m)         (m)         Meading           (AFRC)         (m)         (m)         (m)         (m)         (m)         Meading           (AFRC)         (m)         (m)         (m)         (m)         (m)         Meading           (AFRC)         1.400         1.300         1.08         0.40         0.48         0.71         0.72           0.70         1.400	Performance         P&H or device         Shading         Multipliers         Size           Total         Total         System         System         System         System         Size         Area           n')         (AFRC)         (m)         (m)         (m)         (m)         (m)         Multipliers         Size           n')         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)         Multipliers         Size           n')         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)         Multipliers         Size           n')         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)           n')         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)         (m)	Performance         P&H or device         Shading         Multipliers         Size           Total         Total         System         System         System         Size         Size           Total         System         System         System         System         System         Size         Area           m <sup>T</sup> )         (AFRC)         (m)         (m)         (m)         (m)         (m)         Si,         (m)           m <sup>T</sup> )         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)         (m)           m <sup>T</sup> )         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)         (m)           maintipliers         Sige         H         (m)         (m)         (m)         (m)         (m)         (m)           maintipliers         (m)         (m)         (m)         (m)         (m)         (m)         (m)         (m)           maintipliers         (m)         (m)         (m)         (m)         (m)         (m)         (m)           maintipliers         (m)         (m)         (m)         (m)         (m)         (m)         (m)         (m)	G ELEMENTS, ORIE	NTATION SE	CTOR, SIZ	E and PERF	FORMANCI	E CHARAC	TERISTICS		SHAD	ING	CAL	CULATED	OUTCOM	ES OK (if in	puts are valid)	
n         Option A         Meta         Frequence         Total         System         System <th>Total System         Total System         Total System         Total System         Total System         Total System         Area           n°)         System         System         System         System         System         Area           n°)         J-Value         System         System         System         System         Area           n°)         AFRC)         (m)         (m)         (m)         (m)         (m)         (m)           n°)         0.70         1.400         1.300         1.08         0.40         0.41         1.62           n°)         0.70         1.400         1.300         1.08         0.40         0.41         1.62           n°)         0.70         1.400         1.300         1.08         0.40         0.41         1.62           n°)         0.70         1.400         1.300         1.92         0.40         0.71         0.72           n°)         0.70         0.70         1.400         1.300         1.92         0.41         1.62           n°)         0.70         0.70         0.70         0.71         0.71         0.72           n°)         0.70         2.500         1.300         1.92<th>Total System         Total System         Total System         Total System         Total System         Area           n°)         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)           n°)         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)           n°)         (AFRC)         (AFRC)         (m)         (m)         (m)         (S<sub>n</sub>)         (S<sub>c</sub>)         (m<sup>2</sup>)           n°)         (AFRC)         (m)         (m)         (m)         (S<sub>n</sub>)         (S<sub>c</sub>)         (m<sup>2</sup>)           n°)         (AFRC)         (m)         1.400         1.300         1.08         0.410         0.41         1.62           n°)         0.70         1.400         1.300         1.08         0.40         0.41         1.62           n°)         0.70         1.400         1.300         1.92         0.40         0.71         0.72           n°)         0.70         1.400         1.300         1.92         0.40         0.41         1.62           n°)         1.00         1.300         1.92         0.40         0.71         0.72           n°)         0.70         2.500&lt;</th><th>a element</th><th>Facing</th><th>sector</th><th></th><th>Size</th><th></th><th>Perfor</th><th>mance</th><th>P&amp;H or c</th><th>levice</th><th>Shadi</th><th>Bu</th><th>Aultipliers</th><th>Size</th><th>Outcomes</th></th>	Total System         Total System         Total System         Total System         Total System         Total System         Area           n°)         System         System         System         System         System         Area           n°)         J-Value         System         System         System         System         Area           n°)         AFRC)         (m)         (m)         (m)         (m)         (m)         (m)           n°)         0.70         1.400         1.300         1.08         0.40         0.41         1.62           n°)         0.70         1.400         1.300         1.08         0.40         0.41         1.62           n°)         0.70         1.400         1.300         1.08         0.40         0.41         1.62           n°)         0.70         1.400         1.300         1.92         0.40         0.71         0.72           n°)         0.70         0.70         1.400         1.300         1.92         0.41         1.62           n°)         0.70         0.70         0.70         0.71         0.71         0.72           n°)         0.70         2.500         1.300         1.92 <th>Total System         Total System         Total System         Total System         Total System         Area           n°)         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)           n°)         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)           n°)         (AFRC)         (AFRC)         (m)         (m)         (m)         (S<sub>n</sub>)         (S<sub>c</sub>)         (m<sup>2</sup>)           n°)         (AFRC)         (m)         (m)         (m)         (S<sub>n</sub>)         (S<sub>c</sub>)         (m<sup>2</sup>)           n°)         (AFRC)         (m)         1.400         1.300         1.08         0.410         0.41         1.62           n°)         0.70         1.400         1.300         1.08         0.40         0.41         1.62           n°)         0.70         1.400         1.300         1.92         0.40         0.71         0.72           n°)         0.70         1.400         1.300         1.92         0.40         0.41         1.62           n°)         1.00         1.300         1.92         0.40         0.71         0.72           n°)         0.70         2.500&lt;</th> <th>a element</th> <th>Facing</th> <th>sector</th> <th></th> <th>Size</th> <th></th> <th>Perfor</th> <th>mance</th> <th>P&amp;H or c</th> <th>levice</th> <th>Shadi</th> <th>Bu</th> <th>Aultipliers</th> <th>Size</th> <th>Outcomes</th>	Total System         Total System         Total System         Total System         Total System         Area           n°)         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)           n°)         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)           n°)         (AFRC)         (AFRC)         (m)         (m)         (m)         (S <sub>n</sub> )         (S <sub>c</sub> )         (m <sup>2</sup> )           n°)         (AFRC)         (m)         (m)         (m)         (S <sub>n</sub> )         (S <sub>c</sub> )         (m <sup>2</sup> )           n°)         (AFRC)         (m)         1.400         1.300         1.08         0.410         0.41         1.62           n°)         0.70         1.400         1.300         1.08         0.40         0.41         1.62           n°)         0.70         1.400         1.300         1.92         0.40         0.71         0.72           n°)         0.70         1.400         1.300         1.92         0.40         0.41         1.62           n°)         1.00         1.300         1.92         0.40         0.71         0.72           n°)         0.70         2.500<	a element	Facing	sector		Size		Perfor	mance	P&H or c	levice	Shadi	Bu	Aultipliers	Size	Outcomes	
Option A facadesOption A facadesHeight (m)Width (m)Area (M)System (M)System (M)PH 	System         System         System         System         System         Area           r <sup>T</sup> )         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)           r <sup>T</sup> )         (AFRC)         (m)         (m)         (m)         (m)         (S <sub>H</sub> )         (S <sub>C</sub> )         (m <sup>2</sup> )           r <sup>T</sup> )         (AFRC)         (m)         (m)         (m)         (S <sub>H</sub> )         (S <sub>C</sub> )         (m <sup>2</sup> )           r <sup>T</sup> )         0.70         1.400         1.300         1.08         0.40         0.41         1.62           r <sup>T</sup> )         0.70         1.400         1.300         1.08         0.40         0.41         1.62           r <sup>T</sup> )         0.70         1.400         1.300         1.08         0.40         0.41         1.62           r <sup>T</sup> )         0.70         1.400         1.300         1.92         0.40         0.71         0.72           r <sup>T</sup> )         0.70         1.400         1.300         1.92         0.40         0.71         0.72           r <sup>T</sup> )         0.70         1.400         1.300         1.92         0.40         0.71         0.72           r <sup>T</sup> )         0.70         2.700	System bill         System System SHGC (M)         PIH (M)         G (M)         PIH (M)         G (M)         Areal (M)         Areal (M)           r <sup>T</sup> )         (AFRC)         (M)         (M)         (M)         (S <sub>H</sub> )         (S <sub>C</sub> )         (m <sup>2</sup> )           r <sup>T</sup> )         (AFRC)         (M)         (M)         (M)         (M)         (S <sub>H</sub> )         (S <sub>C</sub> )         (m <sup>2</sup> )           r <sup>T</sup> )         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62           r <sup>T</sup> )         0.70         1.400         1.300         1.08         0.40         0.41         1.62           r <sup>T</sup> )         0.70         1.400         1.300         1.08         0.40         0.41         1.62           r <sup>T</sup> )         0.70         1.400         1.300         1.92         0.41         0.71         0.72           r <sup>T</sup> )         0.70         2.500         1.300         1.92         0.40         0.41         1.62           r <sup>T</sup> ,0         0.70         2.700         1.90         2.70         0.40         0.61         0.71         0.71           r <sup>T</sup> ,0         0.70         2.700         1.90         2.70         0.40							Total	Total						-		
Option A         Option B         Height Width Midth Midth         Area         U-Value SHGC         P         H         P/H         G         Heating Cooling Used           facades         (m)         (m)         (m)         (m)         (m)         (m)         (m)         (m)         (m)           N         (m)         (m) <t< th=""><th>Integration         Undate SHGC         P         H         P/H         G         Heating         Cooling         used           min         (AFRC)         (m)         (m)</th><th>Tole         SHGC         P         H         P/H         G         Heating         Cooling         used           m<sup>1</sup>)         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)         (m)           7.0         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62           7.0         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72           7.0         0.70         1.400         1.700         0.82         1.10         0.72         0.71         0.72           7.0         0.70         2.5500         1.300         1.92         0.40         0.64         0.60         0.71           7.0         0.70         2.700         1.920         1.92         0.71         0.72         0.71         0.72           7.0         0.70         2.700         1.90</th><th></th><th></th><th></th><th></th><th></th><th></th><th>System</th><th>System</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>	Integration         Undate SHGC         P         H         P/H         G         Heating         Cooling         used           min         (AFRC)         (m)	Tole         SHGC         P         H         P/H         G         Heating         Cooling         used           m <sup>1</sup> )         (AFRC)         (m)         (m)         (m)         (m)         (m)         (m)         (m)           7.0         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62           7.0         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72           7.0         0.70         1.400         1.700         0.82         1.10         0.72         0.71         0.72           7.0         0.70         2.5500         1.300         1.92         0.40         0.64         0.60         0.71           7.0         0.70         2.700         1.920         1.92         0.71         0.72         0.71         0.72           7.0         0.70         2.700         1.90							System	System								
N0.901.807.00.701.4001.3001.080.400.480.411.62N0.901.801.807.00.701.4001.3001.080.400.480.411.62N0.901.807.00.701.4001.7000.821.100.930.711.62N0.601.201.207.00.701.4001.7000.821.100.930.711.62N0.601.207.00.701.4001.7000.821.100.930.711.62N0.901.807.00.700.701.4001.7000.821.100.930.711.62N0.901.807.00.700.701.4001.7000.821.100.930.711.62N0.901.807.00.700.701.4001.7000.821.100.930.711.62N0.901.807.00.702.5001.7001.902.900.710.73F0.901.807.00.702.7001.902.700.910.700.710.71N0.901.287.00.702.7001.902.700.910.910.710.931.60N0.601.287.00.702.7001.902.700.910.702.700.910.710.70 <th>7.0         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62           7.0         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72           7.0         0.70         1.400         1.300         1.92         0.40         0.48         0.41         1.62           7.0         0.70         2.500         1.300         1.92         0.40         0.71         0.72           7.0         0.70         2.700         1.300         1.92         0.40         0.71         0.72           7.0         0.70         2.700         1.300         2.70         0.40         0.64         0.60         0.71           7.0         0.70         2.700         2.700         2.70</th> <th>T.0         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62           7.0         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         1.62           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72           7.0         0.70         1.400         1.300         1.92         0.40         0.43         0.41         1.62           7.0         0.70         2.500         1.300         1.92         0.40         0.71         0.72           7.0         0.70         2.500         1.300         1.92         0.40         0.71         0.72           7.0         0.70         2.700         1.300         2.70         0.40         0.64         0.60         0.71         1.62           7.0         0.70         2.700         2.700</th> <th>Description (optional)</th> <th>Option A facades</th> <th>Option B facades</th> <th>Height</th> <th>Width (m)</th> <th>Area (m²)</th> <th>U-Value (AFRC)</th> <th>SHGC (AFRC)</th> <th>∎ ĝ</th> <th>≖ Ē</th> <th>HI</th> <th></th> <th>ting Cool</th> <th></th> <th>of % of allowance used</th>	7.0         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62           7.0         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72           7.0         0.70         1.400         1.300         1.92         0.40         0.48         0.41         1.62           7.0         0.70         2.500         1.300         1.92         0.40         0.71         0.72           7.0         0.70         2.700         1.300         1.92         0.40         0.71         0.72           7.0         0.70         2.700         1.300         2.70         0.40         0.64         0.60         0.71           7.0         0.70         2.700         2.700         2.70	T.0         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62           7.0         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         1.62           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72           7.0         0.70         1.400         1.300         1.92         0.40         0.43         0.41         1.62           7.0         0.70         2.500         1.300         1.92         0.40         0.71         0.72           7.0         0.70         2.500         1.300         1.92         0.40         0.71         0.72           7.0         0.70         2.700         1.300         2.70         0.40         0.64         0.60         0.71         1.62           7.0         0.70         2.700         2.700	Description (optional)	Option A facades	Option B facades	Height	Width (m)	Area (m²)	U-Value (AFRC)	SHGC (AFRC)	∎ ĝ	≖ Ē	HI		ting Cool		of % of allowance used	
0.90         1.80         7.0         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62         1           0.60         1.20         1.20         7.0         0.70         1.400         1.70         0.82         1.10         0.93         0.71         0.72         1           0.60         1.20         7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           0.60         1.20         7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         1         1         0.72         1         1         0.72         1         1         1         0         1         0         1         0         1         0         1         1         0         1         1         1         1         1         1         1         1         1         1         1         1         1	7.0         0.70         1.400         1.300         1.08         0.40         0.48         0.41         1.62         1           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         1         1         1         0         1         0         1         0         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1	7.0         0.70         1.400         1.300         1.08         0.40         0.418         0.41         1.62         1           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         0.72         1         1         1         0.72         1         1         1         0.72         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1 <td></td> <td>z</td> <td></td> <td>0.00</td> <td>1.80</td> <td></td> <td>7.0</td> <td>0.70</td> <td>1.400</td> <td>1.300</td> <td></td> <td></td> <td>0</td> <td>-</td> <td></td>		z		0.00	1.80		7.0	0.70	1.400	1.300			0	-		
0.60         1.20         7.0         0.71         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           0.60         1.20         7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           0.60         1.20         7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           0.90         1.80         7.0         0.70         1.400         1.300         1.92         0.40         0.41         1.62         1           0.90         1.80         7.0         0.70         2.500         1.300         1.92         0.40         0.41         1.62         1           0.90         1.23         7.0         0.70         2.500         1.300         1.92         0.41         1.62         1	7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.300         1.08         0.40         0.41         1.62         1           7.0         0.70         2.500         1.300         1.92         0.40         0.07         0.71         1.62         1           7.0         0.70         2.500         1.300         1.92         0.40         0.17         0.72         1 <t< td=""><td>7.0         0.70         1.400         1.700         0.82         1.10         0.71         0.72         1           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.300         1.92         0.40         0.48         0.41         1.62         1           7.0         0.70         2.5500         1.300         1.92         0.40         0.02         0.31         1.62         1           7.0         0.70         2.5500         1.300         1.92         0.40         0.17         0.33         1.11         1           7.0         0.70         2.700         1.300         ####         0.40         0.17         0.36         0.11         1           7.0         0.70         2.700         1.300         2.700         0.40         0.64         0.60         0.71         1           7.0         0.70         0.40         0.71         0.71         0.71         1</td><td></td><td>z</td><td></td><td>0.90</td><td>1.80</td><td></td><td>7.0</td><td>0.70</td><td>1.400</td><td>1.300</td><td></td><td>-</td><td>0</td><td></td><td></td></t<>	7.0         0.70         1.400         1.700         0.82         1.10         0.71         0.72         1           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.300         1.92         0.40         0.48         0.41         1.62         1           7.0         0.70         2.5500         1.300         1.92         0.40         0.02         0.31         1.62         1           7.0         0.70         2.5500         1.300         1.92         0.40         0.17         0.33         1.11         1           7.0         0.70         2.700         1.300         ####         0.40         0.17         0.36         0.11         1           7.0         0.70         2.700         1.300         2.700         0.40         0.64         0.60         0.71         1           7.0         0.70         0.40         0.71         0.71         0.71         1		z		0.90	1.80		7.0	0.70	1.400	1.300		-	0			
0.60         1.20         7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           0.90         1.80         7.0         0.70         1.400         1.300         1.92         0.40         0.41         1.62         1           0.90         1.80         7.0         0.70         1.400         1.300         1.92         0.40         0.41         1.62           0.90         1.80         7.0         0.70         2.500         1.300         1.92         0.40         0.31         1.62           0.90         1.23         7.0         0.70         2.500         1.300         1.92         0.41         0.56         1.11           0.90         1.23         0.70         2.700         1.300 $\frac{1.90}{2.70}$ 0.70         0.71         0.77         0.71         0.77           0.60         1.28         7.0         0.70         2.700         1.300         2.70         0.40         0.64         0.60         0.77         0           0.60         1.28         7.0         0.70         2.700         1.300         2.70         0.40         0.64         0.60 <td>7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.300         1.92         0.40         0.41         1.62         1           7.0         0.70         2.500         1.300         1.92         0.40         0.23         1.162         1           7.0         0.70         2.500         1.300         1.92         0.40         0.03         1.162         1           7.0         0.70         23.000         1.300         1.92         0.40         0.17         0.36         1.11         1           7.0         0.70         23.000         1.300         1.92         0.40         0.17         0.36         1.11         1           7.0         0.70         2.700         1.300         2.70         0.40         0.64         0.60         0.77         5           7.0         0.70         2.700         1.000         2.70         0.40         0.78         0.77         5           7.0         0.71         0.71         0.70         2.700         1.000         2.70         0.43         5         4.32</td> <td>7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.300         1.98         0.40         0.41         1.62         1           7.0         0.70         2.500         1.300         1.92         0.40         0.31         1.62         1           7.0         0.70         2.500         1.300         1.92         0.40         0.36         1.162         1           7.0         0.70         23.000         1.300         ####         0.40         0.36         1.116         1           7.0         0.70         23.000         1.300         ####         0.40         0.77         0.36         1.111           1         1         0.2         0.00         2.700         1.300         2.70         0.40         0.64         0.60         0.77         5           1         1         0.35         1.900         2.700         1.12         0.71         0.77         5         1         1         1         5         1         1         1         1         1         1         1         1         1</td> <td></td> <td>z</td> <td></td> <td>09.0</td> <td>1.20</td> <td></td> <td>7.0</td> <td>0.70</td> <td>1.400</td> <td>1.700</td> <td>0.82</td> <td></td> <td>o</td> <td>11 0.72</td> <td>14% of 35%</td>	7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.300         1.92         0.40         0.41         1.62         1           7.0         0.70         2.500         1.300         1.92         0.40         0.23         1.162         1           7.0         0.70         2.500         1.300         1.92         0.40         0.03         1.162         1           7.0         0.70         23.000         1.300         1.92         0.40         0.17         0.36         1.11         1           7.0         0.70         23.000         1.300         1.92         0.40         0.17         0.36         1.11         1           7.0         0.70         2.700         1.300         2.70         0.40         0.64         0.60         0.77         5           7.0         0.70         2.700         1.000         2.70         0.40         0.78         0.77         5           7.0         0.71         0.71         0.70         2.700         1.000         2.70         0.43         5         4.32	7.0         0.70         1.400         1.700         0.82         1.10         0.93         0.71         0.72         1           7.0         0.70         1.400         1.300         1.98         0.40         0.41         1.62         1           7.0         0.70         2.500         1.300         1.92         0.40         0.31         1.62         1           7.0         0.70         2.500         1.300         1.92         0.40         0.36         1.162         1           7.0         0.70         23.000         1.300         ####         0.40         0.36         1.116         1           7.0         0.70         23.000         1.300         ####         0.40         0.77         0.36         1.111           1         1         0.2         0.00         2.700         1.300         2.70         0.40         0.64         0.60         0.77         5           1         1         0.35         1.900         2.700         1.12         0.71         0.77         5         1         1         1         5         1         1         1         1         1         1         1         1         1		z		09.0	1.20		7.0	0.70	1.400	1.700	0.82		o	11 0.72	14% of 35%	
	7.0         0.70         1.400         1.300         1.08         0.40         0.41         1.62         1           7.0         0.70         2.500         1.300         1.92         0.40         0.31         1.62         1           7.0         0.70         2.500         1.300         1.92         0.40         0.02         0.31         1.62         1           7.0         0.70         23.000         1.300         ####         0.40         0.17         0.36         1.11         1           7.0         0.70         2.700         1.300         ####         0.40         0.17         0.36         1.11         1           7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           4.3         0.35         1.900         2.700         1.10         2.70         0.40         0.64         0.60         0.77         5           4.3         0.35         1.900         2.700         1.12         1.10         0.77         5         1           4.3         0.35         1.900         2.800         0.68         0.40         0.69         0.77	7.0         0.70         1.400         1.300         1.08         0.40         0.41         1.62           7.0         0.70         2.500         1.300         1.92         0.40         0.43         1.62         1           7.0         0.70         2.500         1.300         1.92         0.40         0.017         0.36         1.11         1           7.0         0.70         2.700         1.300         ####         0.40         0.07         0.36         1.11         1           7.0         0.70         2.700         1.300         ####         0.40         0.17         0.36         1.11         1           7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           4.3         0.35         1.900         2.700         1.10         0.71         0.72         6         7.7         5         1           4.3         0.35         1.900         1.70         1.12         1.10         0.77         6         0		z		09.0	1.20		7.0	0.70	1.400	1.700		10	o	71 0.72	14% of 35%	
	7.0         0.70         2.500         1.300         1.92         0.40         0.02         0.31         1.62         1           7.0         0.70         23.000         1.300         ####         0.40         0.17         0.36         1.11         1           7.0         0.70         23.000         1.300         ####         0.40         0.17         0.36         1.11         1           7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           4.3         0.35         1.900         2.700         1.000         2.70         0.40         0.73         0.77         5           4.3         0.35         1.900         2.800         0.68         0.40         0.70         4.32         8           4.3         0.35         1.900         1.70         1.12         1.10         0.77         0.72         1	7.0         0.70         2.500         1.300         1.92         0.40         0.02         0.31         1.62         1           7.0         0.70         23.000         1.300         ####         0.40         0.17         0.36         1.11         1           7.0         0.70         2.700         1.000         2.70         0.40         0.17         0.36         1.11         1           7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           4.3         0.35         1.900         2.700         1.000         2.70         0.40         0.73         6         0.77         5           4.3         0.35         1.900         2.700         1.12         1.10         0.77         6         0.77         5           6         0.35         1.100         2.700         1.12         1.10         0.77         5         1		z		0.90	1.80		7.0	0.70	1.400	1.300			0		-	
0.90         1.23         7.0         0.70         23.000         1.300         ###         0.40         0.17         0.36         1.11         1           0         0.60         1.28         7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           0         0.60         1.28         7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           0         0.60         1.28         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           2.40         1.80         0.700         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           2.40         1.80         0.70         2.700         2.800         0.68         0.40         0.70         4.32         5           0.60         1.20         2.700         1.900         2.70         0.40         0.78         0.70         4.32         5           0.10         1.20         1.900         2.700         1.10         0.77	7.0         0.70         23.000         1.300         ####         0.40         0.17         0.36         1.11         1           7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           4.3         0.35         1.900         2.70         1.000         2.70         0.40         0.64         0.60         0.77         5           4.3         0.35         1.900         2.800         0.68         0.40         0.77         0.77         5           4.3         0.35         1.900         2.800         0.68         0.70         4.32         8           4.3         0.35         1.900         1.70         1.12         1.10         0.77         0.69         0.72         1.72           A.33         8         1.700         1.12         1.10         0.77         0.72         1.72	7.0         0.70         23.000         1.300         ####         0.40         0.17         0.36         1.11         1           7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77         5           4.3         0.35         1.900         2.800         0.68         0.40         0.78         0.77         5           4.3         0.35         1.900         2.800         0.68         0.70         4.32         8           64         0.35         1.700         1.12         1.10         0.77         0.72         1.32         8           64         0.35         1.700         1.12         1.10         0.77         0.73         1.32         8           64         0.35         1.700         1.12         1.10         0.77         0.73         1.32         1.32         1.32         1.32 <td< td=""><td></td><td>z</td><td></td><td>0.00</td><td>1.80</td><td></td><td>7.0</td><td>0.70</td><td>2.500</td><td>1.300</td><td></td><td></td><td>0</td><td></td><td>-</td></td<>		z		0.00	1.80		7.0	0.70	2.500	1.300			0		-	
0.60         1.28         7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.71           0.60         1.28         7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77           1.00         2.40         1.28         7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77           2.40         1.80         0.70         2.700         1.000         2.800         0.64         0.60         0.77           0.60         1.80         2.800         0.68         0.40         0.78         0.70         4.32           0.60         1.200         1.900         2.800         0.68         0.70         0.77         0.70         4.32	7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.71           7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.71           4.3         0.35         1.900         2.800         0.68         0.40         0.78         0.70         4.32           4.3         0.35         1.900         2.800         0.68         0.40         0.78         0.70         4.32           4.3         0.35         1.900         2.700         1.12         1.10         0.77         0.79         0.72           4.3         0.35         1.900         2.700         1.12         1.10         0.77         0.79         0.72           filtize are valid         1.12         1.10         0.77         0.69         0.72	7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.71           7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.77           4.3         0.35         1.900         2.800         0.68         0.40         0.78         0.70         4.32           4.3         0.35         1.900         2.800         0.68         0.70         4.32           64.3         0.668         0.70         0.77         0.69         0.72           4.3         0.35         1.900         1.700         1.12         1.10         0.77         0.69         0.72           aderstanding of glazing energy efficiency parameters.         1.12         1.10         0.77         0.69         0.72		ш		0.00	1.23		7.0	0.70	23.000	1.300	####		0	-	100% of 28%	
0.60         1.28         7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.71           2.40         1.80         4.3         0.35         1.900         2.800         0.68         0.47         0.70         4.32           0.60         1.20         1.900         2.800         0.68         0.40         0.70         4.32           0.60         1.20         1.700         1.12         1.10         0.77         0.69         0.72	7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.71           4.3         0.35         1.900         2.800         0.68         0.40         0.78         0.70         4.32           4.3         0.35         1.900         2.800         0.68         0.40         0.78         0.70         4.32           4.3         0.35         1.900         1.700         1.12         1.10         0.77         0.69         0.72           derstanding of glazing energy efficiency parameters. <i>if inputs are valid if inputs are valid if inputs are valid</i>	7.0         0.70         2.700         1.000         2.70         0.40         0.64         0.60         0.71           4.3         0.35         1.900         2.800         0.68         0.40         0.78         0.70         4.32           4.3         0.35         1.900         2.800         0.68         0.40         0.78         0.70         4.32           1.12         1.12         1.12         1.10         0.77         0.69         0.72           nderstanding of glazing energy efficiency parameters.         if inputs are valid         if inputs are valid         10		s		09.0	1.28		7.0	0.70	2.700	1.000	2.70			0.77	50% of 20%	
2.40         1.80         4.3         0.35         1.900         2.800         0.68         0.40         0.78         0.70         4.32           0.60         1.20         1.20         1.900         1.700         1.12         1.10         0.77         0.69         0.77         0.69         0.72	4.3         0.35         1.900         2.800         0.68         0.40         0.78         0.70         4.32           4.3         0.35         1.900         1.700         1.12         1.10         0.77         0.69         0.72           nderstanding of glazing energy efficiency parameters.         6.40         0.78         0.70         4.32         1.300	4.3         0.35         1.900         2.800         0.68         0.40         0.78         0.70         4.32           4.3         0.35         1.900         1.700         1.12         1.10         0.77         0.69         0.72           inderstanding of glazing energy efficiency parameters.         if inputs are valid         if inputs are valid         if inputs are valid		s		09.0	1.28		7.0	0.70	2.700	1.000	2.70				50% of 20%	
<b>0.60 1.20 4.3 0.35 1.900 1.700</b> 1.12 1.10 0.77 0.69 0.72	4.3         0.35         1.900         1.700         1.12         1.10         0.77         0.69         0.72           if inputs are valid	4.3         0.35         1.900         1.700         1.12         1.10         0.77         0.69         0.72           inderstanding of glazing energy efficiency parameters.         if inputs are valid         if inputs are valid		8		2.40	1.80		4.3	0.35	1.900	2.800			0			
	nderstanding of glazing energy efficiency parameters.	nderstanding of glazing energy efficiency parameters.		M		0.60	1.20		4.3	0.35	1.900	1.700	1.12	1.10 0	77 0	39 0.72	14% of 100%	

#### 7 PART J3: BUILDING SEALING

#### 7.1 J3.1: APPLICATION OF PART

The deemed-to-satisfy provisions of this Part apply to elements forming the envelope of a Class 2 to 9 building, other than:

a) a building in climate zones 1, 2, 3 and 5 where the only means of air-conditioning is by using an evaporative cooler; or

b) a permanent building opening, in a space where a gas appliance is located, that is necessary for the safe operation of a gas appliance; or

c) a building or space where the mechanical ventilation required by Part F4 provides sufficient pressurisation to prevent infiltration; or

d) parts of buildings that cannot be fully enclosed

#### 7.2 J3.4: EXTERNAL WINDOWS AND DOORS

A seal to restrict air infiltration must be fitted to each edge of a new door, openable window or the like forming part of the envelope of a conditioned space or the external fabric of a habitable room or public area.

Above requirements do not apply to:

- a) Windows complying with AS2047 (Windows in Buildings Selection and Installation) or
- b) A fire door or smoke door or
- c) A roller shutter door, roller shutter grill or other security or device installed only for out-of-hours security

The seal on the bottom of an external swing door must be a draft protection device and for the other edges of an external door or edges of an openable window may be foam or rubber compression strip, fibrous seal or the like. As per Clause J3.4d, an entrance to a building, if leading to a conditioned space must have an air lock, self-closing door, revolving door or the like. If the floor space of the conditioned space where the entrance door leads is less than 50m2, then this clause does not apply.

#### 7.3 J3.5: EXHAUST FANS

As required by F4.5 of Volume 1 NCC, each "sanitary compartment, bathroom or shower" must have natural ventilation or mechanical ventilation or an air-conditioning system complying with AS 1668.2 and AS/NZS 3666.1.

A miscellaneous exhaust fan, such as a bathroom or domestic kitchen exhaust fan, must be fitted with a sealing device such as a self-closing damper or the like when serving a conditioned space or a habitable room in climate zone 6.

#### 7.4 J3.6: CONSTRUCTION OF ROOFS, WALLS AND FLOORS

Roofs, ceilings, walls, floors and any opening such as a window frame, door frame, roof light frame or the like must be constructed to minimise air leakage when forming part of the envelope or the internal fabric of a habitable room or a public area in climate zones 4 to 8. This must be constructed by:

- enclosing by internal lining systems that are close fitting at ceiling, wall and floor junctions or,
- sealed by caulking, skirting, architraves, cornices or the like.

Penetrations for wiring, piping etc forming part of the building envelope must also be sealed against air leakage.

#### 8 PART J4

This part is blank as it was removed by the NCC in a previous version.

# 9 PART J5: AIR CONDITIONING AND VENTILATION SYSTEMS

Refer to the Mechanical Engineer's documentation for compliance requirements for air-conditioning.

#### 10 PART J6: ARTIFICIAL LIGHTING AND POWER

#### J6.2 Artificial Lighting

For artificial lighting, the aggregate design illumination power load must not exceed the sum of the allowances obtained by multiplying the 'area' of each space by the adjusted 'illumination power density' (IPD) – see last column on the following page for the total maximum Watts allowable for each room. This excludes any emergency lighting, signage or display cabinet lighting.

#### Table A:

Unit No.	Level	Unadjusted IPD	Area (per unit)	Adjusted IPD	*Control Factor	#Max Power (W) Per Unit
Basement Carpark	Basement 2	6	628.0	5.5	0.9	3842
Services	Basement 2	5	9.3	8.6	1.0	80
Basement Carpark	Basement 1	6	624.0	5.4	0.9	3715
Services	Basement 1	5	12.8	8.2	1.0	105
Managers Room (G04)	Ground	9	31.0	14.0	1.0	435
Communal Lounge	Ground	10	26.5	15.5	1.0	410
Corridor	Ground	8	26.0	8.0	0.7	297
Room G01, G02	Ground	5	23.0	7.8	1.0	179
Room G03	Ground	5	25.0	7.7	1.0	192
Room 101, 102	Level 1	5	23.0	7.8	1.0	179
Room 103	Level 1	5	25.0	7.7	1.0	192
Room 104	Level 1	5	26.0	7.7	1.0	200
Room 105, 106	Level 1	5	23.0	7.6	1.0	176
Room 107	Level 1	5	22.0	7.7	1.0	170
Room 108	Level 1	5	22.0	7.8	1.0	171
Room 109	Level 1	5	24.0	8.0	1.0	191
Corridor	Level 1	8	51.0	8.0	0.7	583
Room 201, 202	Level 2	5	23.0	7.8	1.0	179
Room 203	Level 2	5	25.0	7.7	1.0	192
Room 204	Level 2	5	26.0	7.7	1.0	200
Room 205, 206	Level 2	5	23.0	7.6	1.0	176
Room 207	Level 2	5	22.0	7.7	1.0	170
Room 208	Level 2	5	22.0	7.8	1.0	171
Room 209	Level 2	5	24.0	8.0	1.0	191
Corridor	Level 2	8	51.0	8.0	0.7	583
Room 301, 302	Level 3	5	23.0	7.8	1.0	179
Room 303	Level 3	5	25.0	7.7	1.0	192
Room 304	Level 3	5	26.0	7.7	1.0	200
Room 305, 306	Level 3	5	23.0	7.6	1.0	176
Room 307	Level 3	5	22.0	7.7	1.0	170
Room 308	Level 3	5	22.0	7.8	1.0	171
Room 309	Level 3	5	24.0	8.0	1.0	191
Corridor	Level 3	8	51.0	8.0	0.7	583

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Room 401	Level 4	5	23.0	7.8	1.0	179
Room 402	Level 4	5	26.0	7.8	1.0	203
Room 403, 404	Level 4	5	23.0	7.8	1.0	179
Room 405	Level 4	5	25.0	7.7	1.0	193
Corridor	Level 4	8	35.0	8.0	0.7	400

# J 6.3 INTERIOR ARTIFICIAL LIGHTING AND CONTROL

Artificial lighting of a room or space must be individually operated by a switch or other control device. An artificial lighting switch must be located in a visible position, in the room or space being switched or in an adjacent room or space from where the lighting being switched is visible.

An occupant activated device such as a room security device, a motion detector in accordance with Specification J6, or the like, must be provided in sole occupancy units of Class 3, other than where the accommodation is for people with a disability or the aged, in order to cut power of the artificial lighting, air conditioning, local exhaust fans and bathroom heaters when the sole occupancy unit is unoccupied.

#### J 6.4 INTERIOR DECORATIVE AND DISPLAY LIGHTING

Interior decorative and display lighting, such as for a foyer mural or art display, must be controlled-

- a) Separately from other artificial lighting; and
- b) By a manual switch for each area other than when the operating times of the displays are the same in an area, in which case they may be combined.
- c) By a time switch in accordance with Specification J6 where the display exceeds 1Kw.

# J6.5 ARTIFICIAL LIGHTING AROUND THE PERIMETER OF A BUILDING

This provision specifies that artificial lighting to the perimeter of a building must:

- i) be controlled by:
  - a) a daylight sensor or
  - b) a time switch that is capable of switching on and off electric power to the system at variable preprogrammed times and on variable pre-programmed days; and
- ii) when the total perimeter lighting loads exceeds 100W:
  - a) have an average light source efficacy of not less than 60 Lumens/W or,
  - b) be controlled by a motion detector in accordance with Specification J6, and
- iii) when used for decorative purposes, such as façade lighting or signage lighting, have a separate time switch in accordance with Specification with J6.

The requirements in ii) above do not apply to emergency lighting in accordance with Part E4.

#### 11 PART J7: HOT WATER SUPPLY

If a new hot water system is being installed for food preparation or sanitary purposes, other than a solar hot water system, then it must be designed and installed in accordance with Part B2 of NCC Volume 3 – Plumbing Code of Australia.

#### 12 PART J8: FACILITIES FOR ENERGY MONITORING

#### 12.1 J8.3: FACILITIES FOR ENERGY MONITORING

A building or sole occupancy unit with a floor area of more than 500 m<sup>2</sup> must have the facility to record the consumption of gas and electricity.

A building with a floor area of more than 2,500 m<sup>2</sup> must have the facility to record individually the energy consumption of:

- a) Air conditioning plant
- b) Artificial lighting
- c) Appliance power
- d) Central hot water supply &
- e) Internal transport devices including lifts, escalators and travelators where there is more than one serving the building &
- f) Other ancillary plant

The provisions above do not apply to a Class 2 building with a floor area of more than  $2,500m^2$  where the total area of the common areas is less than  $500m^2$ .

#### 13 **DEFINITIONS**

The following definitions from the 2016 NCC (Volume 1) are relevant to this Section J Report:

#### Envelope

Parts of a building's fabric that separate a conditioned space or habitable room from -

- (a) the exterior of the building; or
- (b) a non-conditioned space including -
  - (i) the floor of a rooftop plant room, lift-machine room or the like; and
  - (ii) the floor above a carpark or warehouse; and
  - (iii) the common wall with a carpark, warehouse or the like.

#### Habitable room

Means a room used for normal domestic activities, and:

(a) includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom; but

(b) excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes-drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.

#### **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, but does not include:

- (a) a non-habitable room of a Class 2 building or Class 4 part of a building in which a heater with a capacity of not more than 1.2 kW or 4.3 MJ/hour provides the air-conditioning; or
- (b) a space in a Class 6, 7, 8 or 9b building where the input power to an air-conditioning system is not more than 15 W/m2 or 15 J/s.m2 (54 KJ/hour.m2)
- (c) a lift shaft

#### **Air-conditioning**

A service that actively cools or heats the air within a space, but does not include a service that directly cools or heats cold rooms, hot rooms or; maintains specialised conditions for equipment or processes, where this is the main purpose of the service.

#### **Bulk Insulation**

Has a high resistance to the flow of heat by conduction. It includes Fibreglass, Rockwool, Glass Wool, Polyester, expanded or extruded polystyrene or other similar materials.

# R-Value (m<sup>2</sup>. K/W)

Means the thermal resistance of a component calculated by dividing its thickness by its thermal conductivity.

# End of report