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31 August 2023

TSA

Level 4, 25 Watt Street

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Attention: N.Babik

Dear Nora,

**RE: National Construction Code (NCC) 2019 Volume One
Amendment 1 Section J Part J1 Statement of Compliance**

JOB NO.: 210296

REV. NO.: FINAL B

SUBJECT PREMISE: Uniting Charlestown

This NCC Section J Part J1 statement has been prepared to demonstrate design compliance for the proposed Uniting Charlestown Building C development located at 27 Tiral Street, Charlestown.

The proposed development is located in climate **Zone 5** as defined by the NCC.

The table below shows the areas assessed, NCC building classification and the method of compliance.

Building Area Description	NCC Classification	Method of Compliance
Building C Clubhouse	9b	DTS

The assessment is based on the architectural drawings listed below.

Architectural Drawings

Plus Architecture
Project no. 20456
Issued 18/08/2023

Building	Title	Drawing No	Revision
Building C	FLOOR PLAN - BASEMENT	00100	[05]
	FLOOR PLAN - LOWER GROUND	00101	[05]
	FLOOR PLAN - UPPER GROUND	00102	[05]
	FLOOR PLAN - LEVEL 01	00103	[05]
	FLOOR PLAN - LEVEL 02-03	00104	[05]
	FLOOR PLAN - LEVEL 04	00105	[05]
	FLOOR PLAN - LEVEL 05-06	00106	[05]
	FLOOR PLAN - LEVEL 07	00107	[05]
	FLOOR PLAN - LEVEL 08	00108	[05]
	FLOOR PLAN - LEVEL 09	00109	[05]
	FLOOR PLAN - LEVEL 10	00110	[05]
	FLOOR PLAN - LEVEL 11	00111	[05]
	FLOOR PLAN - LEVEL 12	00112	[05]
	ROOF PLAN	00113	[05]
	NORTH ELEVATION JAMES ST	00200	[05]
	SOUTH ELEVATION TIRAL ST	00201	[05]
	BUILDING A EAST & WEST ELEVATION	00202	[05]
	BUILDING B EAST & WEST ELEVATION	00203	[05]
	BUILDING C EAST & WEST ELEVATION	00204	[05]
	BUILDING D EAST & WEST ELEVATION	00205	[05]

As per the Deemed-to-Satisfy Provisions of **NCC 2019 Volume One Amendment 1**, design compliance with Part J1 can be met subject to the following specifications:

Part J1 Building Fabric

Required **total R-value** including allowance for **thermal bridging**:

Elements	Total Construction R-value	Notes
All Roof	R3.7 (Downward, SA < 0.45)	<ul style="list-style-type: none"> It is a total system performance value and NOT the insulation. The impact of Thermal Bridging must be included in the building envelope total system R-value calculations.
Envelope Walls	R1.4	
Envelope Suspended External Floors	R2.0 (Downward)	

Required total system **U-value** and **SHGC**:

Location	Azimuth	Window Assembly (Glass & Frame)		Description
		U-value	SHGC	
C Clubhouse	All	5.8	0.27	Single Low-e Tinted Glazing

Please refer to Attachment A for the facade calculator demonstrating compliance, and Attachment B for the mark-ups of the building fabrics thermal construction requirements.

Additional Section J Compliance Notes

Note project needs to adhere to the following NCC2019 Section J construction requirements as applicable:

- J1.2 (a-d) Thermal Construction – general installation requirements for insulations
- J1.2 (e) – The required total R-value and total system U-value, including thermal bridging calculation.

JHA recommend the following general construction requirements from Section J of the NCC 2019 be included in the architectural specification and drawings to ensure compliance.

Part J3 – Building Sealing

- J3.2 Chimneys and flues
- J3.3 Roof lights
- J3.4 Windows and doors
- J3.5 Exhaust fans
- J3.6 Construction of ceilings, walls and floors
- J3.7 Evaporative coolers

Full Name of Designer: Ivan Miao
Qualifications: B. Mechanical Eng (Honours)
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Name of Employer: JHA

Yours sincerely,



Ivan Miao
Sustainability Engineer

Disclaimer

This statement is prepared for the nominated recipient only and relates to the specific scope of work and agreement between JHA and the client (the recipient). It is not to be used or relied upon by any third party for any purpose.

Revision History

REV	DATE	Amendment
Draft V1	16/08/22	
Final A	24/08/22	
Final B	31/08/23	Final doc for CC drawings

Attachment A – Facade Calculator:

The total representative Air-Conditioning energy value of the proposed building is 8.98 (less than 8.98) and total System U-value is 1.95 (less than 2.00). Therefore, the proposed building façade complies with Part J1 via *Method 2*.

Project 210296 - C Club house

Climate Zone	CZ 5
Class	Other
Azimuth	18

Exposure	Total Wall-Glazing Area				Walls		Windows				
	Reference Wall Type	External Envelope	Internal Envelope	Excluded Area	Sum	R-Value	A*U-Value	Exposure	U-Value	SHGC	A*U-Value
North	1	14.0		0.0	14.0	1.40	10.0	N1	5.8	0.27	0.0
	1				0.0		0.0	N2			0.0
	1				0.0		0.0	N3			0.0
	1				0.0		0.0	N4			0.0
East	1	32.2		0.0	32.2	1.40	11.8	E1	5.8	0.27	91.0
	1				0.0		0.0	E2			0.0
	1				0.0		0.0	E3			0.0
	1				0.0		0.0	E4			0.0
South	1	13.6		0.0	13.6	1.40	4.9	S1	5.8	0.27	39.2
	1				0.0		0.0	S2			0.0
	1				0.0		0.0	S3			0.0
	1				0.0		0.0	S4			0.0
West	1	32.2		0.0	32.2	1.40	23.0	W1	5.8	0.27	0.0
	1				0.0		0.0	W2			0.0
	1				0.0		0.0	W3			0.0
	1				0.0		0.0	W4			0.0

Exposure	Façade Area				Solar Admittance				U-value		R-value	
	Total [m ²]	Wall [m ²]	Window [m ²]	Wall Glazing Ratio	Max SA	Achieved SA	Max Er	Achieved Er	Max. U-Value	Achieved U-Value	Min. R-Value	Achieved R-Value
N	14.0	14.0	0.0	100%	0.13	0.00	0.00	0.00	2.0	0.71	1.4	1.40
E	32.2	16.6	15.7	51%	0.13	0.13	7.21	7.29	2.0	3.19	1.0	1.40
S	13.6	6.9	6.8	51%	0.13	0.12	1.77	1.69	2.0	3.23	1.0	1.40
W	32.2	32.2	0.0	100%	0.13	0.00	0.00	0.00	2.0	0.71	1.4	1.40
SUM						8.98		8.98	2.0	1.95		

Description	Level	Window Exposure	Reference Wall Type	Window			P [m]	H [m]	P/H	G/H	Shading Multiplier	A*S*SHGC
				Height [m]	Width [m]	Area [m ²]						
1		S1	1	2.70	2.50	6.8	0.30	2.70	0.11	0.00	0.93	169
2		E1	1	2.20	4.80	10.6	0.20	2.20	0.09	0.00	1.00	2.85
3		E1	1	2.70	1.90	5.1	0.20	2.70	0.07	0.00	1.00	139

Attachment B – Building Fabric Requirements

DRAWING TO BE READ IN CONJUNCTION WITH A0000 LEGEND, RELEVANT SCHEDULES AND PROJECT SPECIFICATION.



NCC 2019 Section 2.1.0.5
Building Fabric Required total system R-Values

Roof & Ceiling - R1 3.7 (Downward)
 Envelope Walls - R1 1.4

Note:
 1) All R-values must account for the impact of Thermal Bridging.
 2) The R-value is a total system performance value and NOT insulation.
 3) The above construction are only to be applied to non-glazed portions of the envelope and external panels; glazing must be installed as per the architectural layouts with its thermal performance pursuant to the respective glazing specifications noted in the Section 2.1 report.

Glazing (Glass + Frame) requirements:
 1) (Classhouse) performance glazing with U-value 5.8 SHGC 0.27

DATE	BY	CHK	NO.
18/08/2022	MA	GD	05



FOR APPROVAL

DATE	REVISION	BY	CHK	NO.	DATE	REVISION	BY	CHK	NO.
18/09/2021	ISSUE	AC	GD	C	5/08/2022	FOR INFORMATION	AC	GD	V
12/11/2021	ISSUE	AC	GD	D	18/08/2022	FOR INFORMATION	AC	GD	X
10/12/2021	FOR INFORMATION	AC	GD	E	19/08/2022	FOR APPROVAL	SH	GD	01
27/05/2022	FOR INFORMATION	AC	GD	K	26/08/2022	FOR APPROVAL	SH	GD	02
7/06/2022	FOR INFORMATION	AC	GD	L	26/08/2022	FOR APPROVAL	SH	GD	03
17/06/2022	FOR INFORMATION	AC	GD	N	12/10/2022	FOR APPROVAL - RFI	SH	GD	04
29/06/2022	FOR INFORMATION	AC	GD	P	20/07/2023	FOR COORDINATION	MA	GD	AA
21/07/2022	FOR INFORMATION	AC	GD	S	31/07/2023	FOR COORDINATION	MA	GD	AB
26/07/2022	FOR INFORMATION	AC	GD	T	15/08/2023	FOR COORDINATION	MA	GD	AC
2/08/2022	FOR INFORMATION	AC	GD	U	18/08/2023	FOR APPROVAL	MA	GD	05

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PROJECT
**27 TIRAL STREET,
 CHARLESTOWN**

DRAWING TITLE
FLOOR PLAN - LEVEL 01

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SCALE 1:400 @A1	REVISION 05	
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