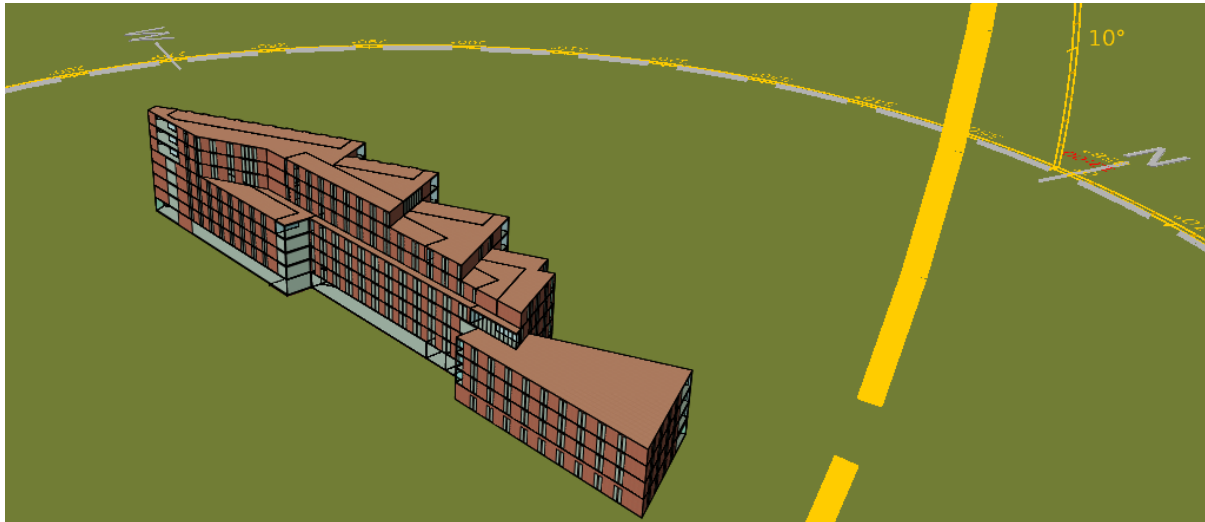


Regiment Section J Assessment:

Thermal modelling was undertaken to demonstrate Building Fabric and Glazing compliance with the Performance Requirement for JP1 of Section J, BCA 2016, Volume 1. Energy simulation was conducted in accordance with BCA 2016, Volume 1 JV3 requirements and the calculation method of the ABCA Protocol.



Note: This IES model is the depiction of Regiment building. It does not indicate all the architectural detail but the necessary feature has been included.

As per JV3 Verification Method Provisions of **BCA 2016** Volume 1, compliance with Part J1 and J2 can be met subject to the following specifications:

Part J1 Building Fabric

<i>Building Elements</i>	Regiment building
	<i>Total R-value required</i>
Roof/exposed ceiling	R2.5
Roof/wall color	Medium
External walls	R2.0
Internal walls separating conditioned and non-conditioned space (as mentioned in Attachment-B)	R1.0

Part J2 Glazing

<i>Building (All external glazing system)</i>	<i>U-value</i>	<i>SHGC</i>	<i>Comments</i>
Regiment (all orientation)	2.5	0.30	Double glazed PerformaTech™ Clear 206 - VFloat Clear

Results:

Annual Energy Consumption	(kWh/m2.annum)
Reference Building	105.54
Proposed Building JV3 (a)(ii)	103.23

The Annual Energy Consumption of the Proposed Building is less than Annual Energy Consumption of Reference Building. Therefore, **the Building Fabric and Glazing of the Proposed Building is compliant with JP1.**

Modelling Inputs

Regiment:

Element			Reference Building		Proposed Building
External Wall (Total R-value)			R2.8		R2.0
Roof (Total R-value)-Medium color			R3.7		R2.5
Internal walls separating conditioned and non-conditioned space			R1.0		All SOU
Floor above basement			R1.0		-
Glazing:					
Level	Building class	Orientation	U-value	SHGC	All external glazing system U Value-2.5 SHGC-0.30 Suitable glass: (6 + 12 +6) Performa Tech™ Clear 206 (#2) VFloat Clear (UVal-1.7 SHGC-0.33)
Level-1	Class-3&9b	Northeast	4.7	0.13	
		Northwest	5.0	0.20	
		East	5.0	0.09	
		West	1.2	0.08	
		South	2.7	0.75	
		Southwest	1.8	0.10	
		Southeast	1.5	0.08	
		Internal	4.5	0.70	
Level-2-4	Class-3	Northeast	5.0	0.14	
		Northwest	5.0	0.28	
		East	2.1	0.1	
		West	2.1	0.1	
		South	4.8	0.75	
		Southwest	1.8	0.10	
Level-5	Class-3	Northeast	5.0	0.14	
		Northwest	2.5	0.25	
		East	2.1	0.1	
		South	3.8	0.75	
		Southwest	1.6	0.10	
Level-6	Class-3	Northeast	5.0	0.19	
		Northwest	2.5	0.25	
		Southwest	1.6	0.10	
		South	5.0	0.75	
		Southeast	2.5	0.25	
Level-7	Class-3	Northeast	5.0	0.18	
		Northwest	2.5	0.25	
		Southwest	1.6	0.10	
		South	5.0	0.75	
		Southeast	2.5	0.25	
Level-8	Class-3	Northeast	5.0	0.14	
		Northwest	2.5	0.20	
		Southwest	1.6	0.10	
		South	4.8	0.75	
		Southeast	2.5	0.25	