

RTTV Summary Sheet

Address: PROPOSED DETACHED BUILDING AT NO. 8 MOSQUE STREET, MID-LEVELS, HONG KONG, IL 58 s.A ss.3 s.A R.P., s.B ss3, s.A ss.3 s.A ss.1 and s.B ss.2		BD Ref. No. 2/2020/15
Building Type:	Residential	
RTTV calculated by	<input checked="" type="checkbox"/> 1. Registered Professional Engineers <input type="checkbox"/> 2. Architect <input type="checkbox"/> 3. Others, please specify :	
No. of Storeys (Residential Units)	28	

Table 1

Deemed to Satisfy RTTV _{wall}							
Facade Orientation Facing	North East	East	South East	South West	North West		
Average Absorptivity	0.333	0.900	0.567	0.320	0.403		
Average Window to Wall Ratio	0.58	0.80	0.50	0.58	0.43		
Shading Coefficient of Glazing	0.33/0.68	0.68	0.33/0.68	0.33/0.68	0.68		
Average Shading Coefficient of Facade	0.45	0.68	0.43	0.45	0.68		
Visible Light Transmittance	50/51%	50%	50/51%	50/51%	50%	%	%
External Reflectance	6/19%	6%	6/19%	6/19%	6%	%	%

Table 2

RTTV _{wall}																	
Facade Orientation Facing		North East				East				South East				South West			
Wall Orientation Factor		0.924				1.072				1.051				1.092			
Total External Wall Area (Residential Units)		639.97 m ²		Window to Wall Ratio		3.65 m ²		Window to Wall Ratio		826.39 m ²		Window to Wall Ratio		636.06 m ²		Window to Wall Ratio	
Total Window Area		373.08 m ²		1 = 0.58		2.92 m ²		1 = 0.80		415.52 m ²		1 = 0.50		371.83 m ²		1 = 0.58	
Heat Conduction	Opaque Wall	0.83 W/m ²		2.71 W/m ²		2.54 W/m ²		0.92 W/m ²									
	Window	1.05 W/m ²		3.12 W/m ²		0.93 W/m ²		1.23 W/m ²									
Window	Glass Type	<input type="checkbox"/> Reflective	Area= m ²	SC=	VLT= %	ER= %	<input type="checkbox"/> Reflective	Area= m ²	SC=	VLT= %	ER= %	<input type="checkbox"/> Reflective	Area= m ²	SC=	VLT= %	ER= %	
		<input checked="" type="checkbox"/> Tinted	107.76 m ²	0.33	50 %	19 %	<input checked="" type="checkbox"/> Tinted	217.02 m ²	0.33	50 %	19 %	<input checked="" type="checkbox"/> Tinted	107.76 m ²	0.33	50 %	19 %	
		<input type="checkbox"/> Clear	Area= m ²	SC=	VLT= %	ER= %	<input checked="" type="checkbox"/> Clear	2.92 m ²	0.68	50 %	6 %	<input type="checkbox"/> Clear	Area= m ²	SC=	VLT= %	ER= %	
		Double Glazing	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
External Shading	Overhang	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No									
	Sidefin	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No									
Solar Radiation through Gazing		10.16 W/m ²		24.35 W/m ²		9.40 W/m ²		11.97 W/m ²									
Average Absorptivity		0.333		0.900		0.567		0.320									
RTTV _{wall} at each facade		12.04 W/m ²		30.18 W/m ²		12.87 W/m ²		14.12 W/m ²									
Overall RTTV _{wall}		11.72 W/m ²															

Table 3

RTTV _{Roof}						
Roof Orientation Factor		2.16				
Total Roof Area (Residential Units)		70.75 m ²				
Total Skylight Area		N/A m ²				
Heat Conduction	Roof	2.83 W/m ²				
	Skylight	N/A W/m ²				
Skylight	Glass Type	<input type="checkbox"/> Reflective	Area= m ²	SC=	VLT= %	ER= %
		<input type="checkbox"/> Tinted	Area= m ²	SC=	VLT= %	ER= %
		<input type="checkbox"/> Clear	Area= m ²	SC=	VLT= %	ER= %
	Double Glazing	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
External Shading	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Solar Radiation through Glazing		N/A W/m ²				
Average Absorptivity (roof)		0.7				
Overall RTTV _{Roof}		2.83 W/m ²				

ER = External Reflectance; SC = Shading Coefficient & VLT = Visible Light Transmittance

Notes :

- Please tick in the box as appropriate
- Window and skylight data should represent the major proportion of its use in the development.

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	<input type="checkbox"/> 2. Architect	
	<input type="checkbox"/> 3. Others, please specify :	
No. of Storeys (Residential Units)	28	

Table 1

Deemed to Satisfy RTTV _{wall}									
Facade Orientation Facing									
Average Absorptivity									
Average Window to Wall Ratio									
Shading Coefficient of Glazing									
Average Shading Coefficient of Facade									
Visible Light Transmittance		%	%	%	%	%	%	%	%
External Reflectance		%	%	%	%	%	%	%	%

Table 2

RTTV _{wall}																	
Facade Orientation Facing		North West															
Wall Orientation Factor		0.965															
Total External Wall Area (Residential Units)		238.14 m ²	Window to Wall Ratio		m ²	Window to Wall Ratio		m ²	Window to Wall Ratio		m ²	Window to Wall Ratio		m ²			
Total Window Area		101.60 m ²	1 = 0.43		m ²	=		m ²	=		m ²	=		m ²			
Heat Conduction	Opaque Wall	1.97 W/m ²		W/m ²		W/m ²		W/m ²		W/m ²		W/m ²		W/m ²			
	Window	1.50 W/m ²		W/m ²		W/m ²		W/m ²		W/m ²		W/m ²		W/m ²			
Window	Glass Type	<input type="checkbox"/> Reflective	Area= m ²	SC=	VLT= %	ER= %	<input type="checkbox"/> Reflective	Area= m ²	SC=	VLT= %	ER= %	<input type="checkbox"/> Reflective	Area= m ²	SC=	VLT= %	ER= %	
		<input type="checkbox"/> Tinted	Area= m ²	SC=	VLT= %	ER= %	<input type="checkbox"/> Tinted	Area= m ²	SC=	VLT= %	ER= %	<input type="checkbox"/> Tinted	Area= m ²	SC=	VLT= %	ER= %	
		<input checked="" type="checkbox"/> Clear	Area= 101.60m ²	SC= 0.69	VLT= 50 %	ER= 6 %	<input type="checkbox"/> Clear	Area= m ²	SC=	VLT= 50 %	ER= 6 %	<input type="checkbox"/> Clear	Area= m ²	SC=	VLT= %	ER= %	
	Double Glazing	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No			
External Shading	Overhang	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No			
	Sidefin	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Yes <input type="checkbox"/> No			
Solar Radiation through Gazing		11.69 W/m ²				W/m ²				W/m ²				W/m ²			
Average Absorptivity		0.403															
RTTV _{wall} at each facade		15.15 W/m ²				W/m ²				W/m ²				W/m ²			
Overall RTTV _{wall}		W/m ²															

Table 3

RTTV _{Roof}																
Roof Orientation Factor																
Total Roof Area (Residential Units)		m ²														
Total Skylight Area		m ²														
Heat Conduction	Roof	W/m ²														
	Skylight	W/m ²														
Skylight	Glass Type	<input type="checkbox"/> Reflective	Area= m ²	SC=	VLT= %	ER= %	<input type="checkbox"/> Reflective	Area= m ²	SC=	VLT= %	ER= %	<input type="checkbox"/> Reflective	Area= m ²	SC=	VLT= %	ER= %
		<input type="checkbox"/> Tinted	Area= m ²	SC=	VLT= %	ER= %	<input type="checkbox"/> Tinted	Area= m ²	SC=	VLT= %	ER= %	<input type="checkbox"/> Tinted	Area= m ²	SC=	VLT= %	ER= %
		<input type="checkbox"/> Clear	Area= m ²	SC=	VLT= %	ER= %	<input type="checkbox"/> Clear	Area= m ²	SC=	VLT= %	ER= %	<input type="checkbox"/> Clear	Area= m ²	SC=	VLT= %	ER= %
Double Glazing		<input type="checkbox"/> Yes <input type="checkbox"/> No														
External Shading		<input type="checkbox"/> Yes <input type="checkbox"/> No														
Solar Radiation through Glazing		W/m ²														
Average Absorptivity (roof)																
Overall RTTV _{Roof}		W/m ²														

ER = External Reflectance; SC = Shading Coefficient & VLT = Visible Light Transmittance

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