



# RTTV Summary Sheet

Notes:  
 ER = External Reflectance  
 SC = Shading Coefficient  
 VLT = Visible Light Transmittance  
 Window and skylight data should represent the major proportion of its use in the development.

PNAP  
**APP-156**  
 Appendix **A**

Address: <b>Proposed Site J Development at Area 86, TKOTL RP, Tseung Kwan O, New Territories</b>		BD Ref. No. <b>2/7192/97/6(J)</b>
Building Type:	Residential <b>(Tower 1) (Sheet 1 of 3)</b>	
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)	<b>56</b>	

Table 1 (N/A)

Deemed to Satisfy RTTV <sub>Wall</sub>									
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 <sub>Wall</sub>																					
Facade Orientation Facing		East					Southeast					South									
Wall Orientation Factor		1.072					1.051					1.051			0.975						
Total External Wall Area (Residential Units)		701.5 m <sup>2</sup>		Window to Wall Ratio = 0			2058.2 m <sup>2</sup>		Window to Wall Ratio = 0.614			2058.2 m <sup>2</sup>		Window to Wall Ratio = 0.614			129.6 m <sup>2</sup>		Window to Wall Ratio = 0.681		
Total Window Factor		0 m <sup>2</sup>					3268.6 m <sup>2</sup>					3268.6 m <sup>2</sup>					277.4 m <sup>2</sup>				
Heat Conduction	Opaque Wall	4.53 W/m <sup>2</sup>					1.38 W/m <sup>2</sup>					1.38 W/m <sup>2</sup>			0.56 W/m <sup>2</sup>						
	Window	0 W/m <sup>2</sup>					1.05 W/m <sup>2</sup>					1.05 W/m <sup>2</sup>			0.69 W/m <sup>2</sup>						
Window	Glass Type	<input type="checkbox"/> Reflective	Area=	SC=	VLT=	ER=	F1 - Curtain Wall IGU Glass with Double Low-E Coating	Area=	SC=	VLT=	ER=	F6 - Glass Door (6mm Tempered Glass)	Area=	SC=	VLT=	ER=	F1 - Curtain Wall IGU Glass with Double Low-E Coating	Area=	SC=	VLT=	ER=
		<input type="checkbox"/> Tinted	m <sup>2</sup>		%	%	F2 - Glass for Sliding Door (10mm Crystal Grey)	1916	0.33	50	14	2.85	0.96	88.63	6.80	50	14	277	0.33	50	14
		<input type="checkbox"/> Clear	m <sup>2</sup>		%	%	F3 - Window Glass (6mm Clear YR-F02 + 12AG + 6mm)	817.3	0.66	50	6										
	Double Glazing	<input type="checkbox"/> Yes <input type="checkbox"/> No																			
External Shading	Overhang	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			<input checked="" type="checkbox"/> Yes <input 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 Glazing		0 W/m <sup>2</sup>					11.21 W/m <sup>2</sup>					11.21 W/m <sup>2</sup>			9.15 W/m <sup>2</sup>						
Average Absorptivity		0.500					0.529					0.529			0.500						
RTTV <sub>Wall</sub> at each facade		4.53 W/m <sup>2</sup>					13.64 W/m <sup>2</sup>					13.64 W/m <sup>2</sup>			10.41 W/m <sup>2</sup>						
Overall RTTV <sub>Wall</sub>		11.62 W/m <sup>2</sup>																			

Table 3

RTTV <sub>Roof</sub>									
Roof Orientation Factor		2.16							
Total Roof Area (Residential Units)		342 m <sup>2</sup>							
Total Skylight Area		/ m <sup>2</sup>							
Heat Conduction	Roof	1.62 W/m <sup>2</sup>							
	Skylight	/ W/m <sup>2</sup>							
Skylight (N/A)	Glass Type	<input type="checkbox"/> Reflective	Area=	m <sup>2</sup>	SC=	VLT=	%	ER=	%
		<input type="checkbox"/> Tinted	Area=	m <sup>2</sup>	SC=	VLT=	%	ER=	%
		<input type="checkbox"/> Clear	Area=	m <sup>2</sup>	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 <sup>2</sup>							
Average Absorptivity (roof)		0.5							
Overall RTTV <sub>Roof</sub>		1.62 W/m <sup>2</sup>							



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 Window and skylight data should represent the major proportion of its use in the development.

**PNAP  
APP-156**

**Appendix A**

Address: <b>Proposed Site J Development at Area 86, TKOTL RP, Tseung Kwan O, New Territories</b>		BD Ref. No. <b>2/7192/97/6(J)</b>
Building Type:	Residential ( <b>Tower 1</b> ) (Sheet 2 of 3)	
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)	<b>56</b>	

**Table 1 (N/A)**

Deemed to Satisfy RTTV <sub>Wall</sub>									
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 <sub>Wall</sub>																			
Facade Orientation Facing		Southwest				Southwest				West				Northwest					
Wall Orientation Factor		1.092				1.092				1.131				0.965					
Total External Wall Area (Residential Units)		1711.8 m <sup>2</sup>		Window to Wall Ratio = 0.619		1712 m <sup>2</sup>		Window to Wall Ratio = 0.619		1488.1 m <sup>2</sup>		Window to Wall Ratio = 0		1369.5 m <sup>2</sup>		Window to Wall Ratio = 0.588			
Total Window Factor		2775.8 m <sup>2</sup>				2776 m <sup>2</sup>				0 m <sup>2</sup>				1951.7 m <sup>2</sup>					
Heat Conduction	Opaque Wall	1.18 W/m <sup>2</sup>				1.18 W/m <sup>2</sup>				4.94 W/m <sup>2</sup>				1.82 W/m <sup>2</sup>					
	Window	1.06 W/m <sup>2</sup>				1.06 W/m <sup>2</sup>				0 W/m <sup>2</sup>				0.95 W/m <sup>2</sup>					
Window	Glass Type	F1 - Curtain Wall IGU Glass with Double Low-E Coating		Area= 1733 m <sup>2</sup>	SC= 0.33	VLT= 50 %	ER= 14 %	F5 - Glass Wall (12mm + 1.52 PVB + 12mm Clear Tempered Laminated Glass)		Area= 7.5 m <sup>2</sup>	SC= 0.78	VLT= 81 %	ER= 8 %	F1 - Curtain Wall IGU Glass with Double Low-E Coating		Area= 1168 m <sup>2</sup>	SC= 0.33	VLT= 50 %	ER= 14 %
		F2 - Glass for Sliding Door (10mm Crystal Grey)		Area= 628 m <sup>2</sup>	SC= 0.66	VLT= 50 %	ER= 6 %			Area= m <sup>2</sup>	SC=	VLT= %	ER= %	F2 - Glass for Sliding Door (10mm Crystal Grey)		Area= 528 m <sup>2</sup>	SC= 0.66	VLT= 50 %	ER= 6 %
		F3 - Window Glass (5mm Clear YR-FG02 + 12AS + 6mm Clear)		Area= 407 m <sup>2</sup>	SC= 0.35	VLT= 53 %	ER= 14 %			Area= m <sup>2</sup>	SC=	VLT= %	ER= %	F3 - Window Glass (5mm Clear YR-FG02 + 12AS + 6mm Clear)		Area= 255 m <sup>2</sup>	SC= 0.35	VLT= 53 %	ER= 14 %
		Double Glazing		<input type="checkbox"/> Yes <input 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		<input type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input 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		<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 checked="" type="checkbox"/> No		<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		<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No			
Solar Radiation through Glazing		11.53 W/m <sup>2</sup>				11.53 W/m <sup>2</sup>				0 W/m <sup>2</sup>				9.99 W/m <sup>2</sup>					
Average Absorptivity		0.501				0.501				0.500				0.657					
RTTV <sub>Wall</sub> at each facade		13.78 W/m <sup>2</sup>				13.78 W/m <sup>2</sup>				4.94 W/m <sup>2</sup>				12.75 W/m <sup>2</sup>					
Overall RTTV <sub>Wall</sub>		11.62 W/m <sup>2</sup>																	

**Table 3**

RTTV <sub>Roof</sub>										
Roof Orientation Factor										
Total Roof Area (Residential Units)	m <sup>2</sup>									
Total Skylight Area	m <sup>2</sup>									
Heat Conduction	Roof	W/m <sup>2</sup>								
	Skylight	W/m <sup>2</sup>								
Skylight	Glass Type	<input type="checkbox"/> Reflective	Area= m <sup>2</sup>	SC=	VLT= %	ER= %				
		<input type="checkbox"/> Tinted	Area= m <sup>2</sup>	SC=	VLT= %	ER= %				
		<input type="checkbox"/> Clear	Area= m <sup>2</sup>	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 <sup>2</sup>									
Average Absorptivity (roof)										
Overall RTTV <sub>Roof</sub>	W/m <sup>2</sup>									



Address: <b>Proposed Site J Development at Area 86, TKOTL RP, Tseung Kwan O, New Territories</b>		BD Ref. No. <b>2/7192/97/6(J)</b>
Building Type:	Residential (Tower 1) (Sheet 3 of 3)	
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)	<b>56</b>	

Table 1 (N/A)

Deemed to Satisfy RTTV <sub>Wall</sub>										
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 <sub>Wall</sub>																	
Facade Orientation Facing		North					Northeast										
Wall Orientation Factor		0.79					0.924										
Total External Wall Area (Residential Units)		422.5 m <sup>2</sup>		Window to Wall Ratio = 0.807			1650.9 m <sup>2</sup>		Window to Wall Ratio = 0.153			m <sup>2</sup>		Window to Wall Ratio =			
Total Window Factor		1766.5 m <sup>2</sup>					297.9 m <sup>2</sup>					m <sup>2</sup>					
Heat Conduction	Opaque Wall	0.16 W/m <sup>2</sup>					3.75 W/m <sup>2</sup>					W/m <sup>2</sup>					
	Window	1.10 W/m <sup>2</sup>					0.15 W/m <sup>2</sup>					W/m <sup>2</sup>					
Window	Glass Type	F1 - Curtain Wall IGU Glass with Double Low-E Coating	Area= 989 m <sup>2</sup>	SC= 0.33	VLT= 50 % ER= 14 %	F1 - Curtain Wall IGU Glass with Double Low-E Coating	Area= 219 m <sup>2</sup>	SC= 0.33	VLT= 50 % ER= 14 %	<input type="checkbox"/> Reflective	Area= m <sup>2</sup>	SC=	VLT= % ER= %	<input type="checkbox"/> Reflective	Area= m <sup>2</sup>	SC=	VLT= % ER= %
		F2 - Glass for Sliding Door (10mm Crystal Grey)	Area= 521 m <sup>2</sup>	SC= 0.66	VLT= 50 % ER= 6 %	F3 - Window Glass (6mm) Clear YR-F02 + 12AS + 6mm Clear)	Area= 79 m <sup>2</sup>	SC= 0.35	VLT= 53 % ER= 14 %	<input type="checkbox"/> Tinted	Area= m <sup>2</sup>	SC=	VLT= % ER= %	<input type="checkbox"/> Tinted	Area= m <sup>2</sup>	SC=	VLT= % ER= %
		F3 - Window Glass (6mm) Clear YR-F02 + 12AS + 6mm Clear)	Area= 257 m <sup>2</sup>	SC= 0.35	VLT= 53 % ER= 14 %		Area= m <sup>2</sup>	SC=	VLT= % ER= %	<input type="checkbox"/> Clear	Area= m <sup>2</sup>	SC=	VLT= % ER= %	<input type="checkbox"/> Clear	Area= m <sup>2</sup>	SC=	VLT= % ER= %
Double Glazing		<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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Overhang		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Overhang		<input type="checkbox"/> Yes <input type="checkbox"/> No			
		Sidefin		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Sidefin		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Sidefin		<input type="checkbox"/> Yes <input type="checkbox"/> No			
Solar Radiation through Glazing		11.45 W/m <sup>2</sup>					1.98 W/m <sup>2</sup>					W/m <sup>2</sup>					
Average Absorptivity		0.500					0.546										
RTTV <sub>Wall</sub> at each facade		12.71 W/m <sup>2</sup>					5.88 W/m <sup>2</sup>					W/m <sup>2</sup>					
Overall RTTV <sub>Wall</sub>		11.62 W/m <sup>2</sup>															

Table 3

RTTV <sub>Roof</sub>										
Roof Orientation Factor										
Total Roof Area (Residential Units)										m <sup>2</sup>
Total Skylight Area										m <sup>2</sup>
Heat Conduction	Roof									W/m <sup>2</sup>
	Skylight									W/m <sup>2</sup>
Skylight	Glass Type	<input type="checkbox"/> Reflective	Area=	m <sup>2</sup>	SC=	VLT=	%	ER=	%	
		<input type="checkbox"/> Tinted	Area=	m <sup>2</sup>	SC=	VLT=	%	ER=	%	
		<input type="checkbox"/> Clear	Area=	m <sup>2</sup>	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 <sup>2</sup>
Average Absorptivity (roof)										
Overall RTTV <sub>Roof</sub>										W/m <sup>2</sup>