

RTTV Summary Sheet (Tower 1)

Address: No.1-11 Au Pui Wan Street, Fo Tan, STL 576, Hong Kong

BD Ref. No.

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)	37

Deemed to Satisfy RTTV _{wall}										
Facade Orientation Facing	East	North	West	South						
Average Absorptivity	0.98	0.98	0.98	0.98						
Average Window to Wall Ratio	0.22	0.07	0.48	0.72						
Shading Coefficient of Glazing	0.33	0.33	0.33	0.33						
Average Shading Coefficient of Facade										
Visible Light Transmittance	52 %	52 %	52 %	52 %						
External Reflectance	14 %	14 %	14 %	14 %						

Table 2

RTTV _{wall}										
Facade Orientation Facing	East	North	West	South						
Wall Orientation Factor	1.072	0.79	1.131	0.975						
Total External Wall Area (Residential Units)	4075.46 m ²	3466.85 m ²	4086.54 m ²	3486.6 m ²						
Total Window Area	879.58 m ²	239.91 m ²	1945.72 m ²	2493.75 m ²						
Ratio Window to Wall	= 0.22	= 0.07	= 0.48	= 0.72						
Opaque Wall	4.43 W/m ²	4.9 W/m ²	4.58 W/m ²	4.72 W/m ²						
Conduction Window	0.24 W/m ²	0.06 W/m ²	0.17 W/m ²	0.71 W/m ²						
Window										
Heat										
Window										
Glass Type										
Reflective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Area=	m ²	m ²	m ²	m ²						
SC=	%	%	%	%						
VLT=	%	%	%	%						
ER=	%	%	%	%						
Reflective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Tinted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Area=	m ²	m ²	m ²	m ²						
SC=	%	%	%	%						
VLT=	%	%	%	%						
ER=	%	%	%	%						
Tinted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Area=	m ²	m ²	m ²	m ²						
SC=	%	%	%	%						
VLT=	%	%	%	%						
ER=	%	%	%	%						
Clear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Area=	m ²	m ²	m ²	m ²						
SC=	%	%	%	%						
VLT=	%	%	%	%						
ER=	%	%	%	%						
Clear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Double Glazing	<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						
External Shading	<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						
Shading										
Solar Radiation through Glazing	2.86 W/m ²	0.75 W/m ²	6.8 W/m ²	9.55 W/m ²						
Average Absorptivity	0.98	0.98	0.98	0.98						
RTTV _{wall} at each facade	7.53 W/m ²	5.7 W/m ²	11.56 W/m ²	14.99 W/m ²						
Overall RTTV _{wall}	7.3 W/m ²									

Table 3

RTTV _{roof}										
Roof Orientation Factor	2.16									
Total Roof Area (Residential Units)	400 m ²									
Total Skylight Area										
Roof										
Heat										
Conduction										
Skylight										
Window										
Glass Type										
Reflective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Area=	m ²	m ²	m ²	m ²						
SC=	%	%	%	%						
VLT=	%	%	%	%						
ER=	%	%	%	%						
Reflective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Tinted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Area=	m ²	m ²	m ²	m ²						
SC=	%	%	%	%						
VLT=	%	%	%	%						
ER=	%	%	%	%						
Clear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
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						
External Shading	<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										
Average Absorptivity (roof)	0.7									
Overall RTTV _{roof}	1.18 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.

Appendix A
(PNAP APP-156)

RTTV Summary Sheet (Tower 2)

Address: No.1-11 Au Pui Wan Street, Fo Tan, STL 576, Hong Kong		BD Ref. No.
Residential		
RTTV calculated by		
<input checked="" type="checkbox"/> 1. Registered Professional Engineers		
<input type="checkbox"/> 2. Architect		
<input type="checkbox"/> 3. Others, please specify:		
37		
No. of Storeys (Residential Units)		

Deemed to Satisfy RTTV _{wall}									
Facade Orientation Facing									
East		North		West		South			
Average Absorptivity		0.85		0.98		0.98			
Average Window to Wall Ratio		0.05		0.79		0.18			
Shading Coefficient of Glazing		0.33		0.33		0.33			
Average Shading Coefficient of Facade		0.33		0.33		0.33			
Visible Light Transmittance		52%		52%		52%			
External Reflectance		14%		14%		14%			

Table 2

RTTV _{wall}									
Facade Orientation Facing		East		North		West		South	
Wall Orientation Factor		1.072		0.79		1.131		0.975	
Total External Wall Area (Residential Units)		3798.33 m ²		5726.63 m ²		3798.33 m ²		5722.37 m ²	
Total Window Area		194.45 m ²		2224.38 m ²		1012 m ²		1012 m ²	
Ratio		= 0.05		= 0.79		= 0.15		= 0.18	
Heat Conduction		4.70 W/m ²		2.94 W/m ²		5.03 W/m ²		4.52 W/m ²	
Window		0.06 W/m ²		0.06 W/m ²		0.15 W/m ²		0.18 W/m ²	
Glass Type		<input type="checkbox"/> Reflective <input type="checkbox"/> Tinted <input checked="" type="checkbox"/> Clear		<input type="checkbox"/> Reflective <input type="checkbox"/> Tinted <input checked="" type="checkbox"/> Clear		<input type="checkbox"/> Reflective <input type="checkbox"/> Tinted <input checked="" type="checkbox"/> Clear		<input type="checkbox"/> Reflective <input type="checkbox"/> Tinted <input checked="" type="checkbox"/> Clear	
Area = m ²		144		144		144		144	
SC = %		52		52		52		52	
ER = %		14		14		14		14	
VT = %		52		52		52		52	
Area = m ²		1012		1012		1012		1012	
SC = %		52		52		52		52	
ER = %		14		14		14		14	
VT = %		52		52		52		52	
Double Glazing		<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	
External		<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	
Shading		<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		0.76 W/m ²		4.19 W/m ²		2.13 W/m ²		2.14 W/m ²	
Average Absorptivity		0.85		0.98		0.98		0.98	
RTTV _{wall} at each facade		5.51 W/m ²		7.45 W/m ²		7.31 W/m ²		6.84 W/m ²	
Overall RTTV _{wall}		4.70 W/m ²							

Table 3

RTTV _{roof}									
Roof Orientation Factor		2.16		400 m ²		400 m ²			
Total Roof Area (Residential Units)		400 m ²		400 m ²		400 m ²			
Total Skylight Area		/		/		/			
Roof		1.20 W/m ²		1.20 W/m ²		1.20 W/m ²			
Conduction		/ W/m ²		/ W/m ²		/ W/m ²			
Skylight		/ W/m ²		/ W/m ²		/ W/m ²			
Glass Type		<input type="checkbox"/> Reflective <input type="checkbox"/> Tinted <input type="checkbox"/> Clear		<input type="checkbox"/> Reflective <input type="checkbox"/> Tinted <input type="checkbox"/> Clear		<input type="checkbox"/> Reflective <input type="checkbox"/> Tinted <input type="checkbox"/> Clear		<input type="checkbox"/> Reflective <input type="checkbox"/> Tinted <input type="checkbox"/> Clear	
Area = m ²		/		/		/		/	
SC = %		/		/		/		/	
ER = %		/		/		/		/	
VT = %		/		/		/		/	
Double Glazing		<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	
External Shading		<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		/ W/m ²		/ W/m ²		/ W/m ²		/ W/m ²	
Average Absorptivity (roof)		0.7		/		/		/	
Overall RTTV _{roof}		1.20 W/m ²							

Notes:

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

RTTV Summary Sheet (Tower 3)

Address: No.1-11 Au Pui Wan Street, Fo Tan, STTL 576, Hong Kong	
BD Ref. No.	
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)	40

Deemed to Satisfy RTTV _{wall}										
Facade Orientation Facing	East	North	West	South						
Average Absorptivity	0.98	0.98	0.98	0.98						
Average Window to Wall Ratio	0.17	0.79	0.35	0.975						
Shading Coefficient of Glazing	0.33	0.33	0.33	0.33						
Average Shading Coefficient of Facade										
Visible Light Transmittance	52%	52%	52%	52%						
External Reflectance	14%	14%	14%	14%						

Table 2

RTTV _{wall}										
Facade Orientation Facing	East	North	West	South						
Wall Orientation Factor	1.072	0.79	1.131	0.975						
Total External Wall Area (Residential Units)	4278.37 m ²	5841.02 m ²	4278.37 m ²	5849.93 m ²						
Total Window Area	710.12 m ²	830.74 m ²	1698.92 m ²	1668.31 m ²						
Ratio	0.17	0.79	0.35	0.975						
Opaque Wall	5.28	2.63	6.10	2.67						
Window	0.18	0.12	0.21	0.28						
Window Glass Type	<input type="checkbox"/> Reflective Area= m ² SC= % ER= % VLT= %	<input type="checkbox"/> Reflective Area= m ² SC= % ER= % VLT= %	<input type="checkbox"/> Reflective Area= m ² SC= % ER= % VLT= %	<input type="checkbox"/> Reflective Area= m ² SC= % ER= % VLT= %						
Double Glazing	<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						
External Shading	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
Solar Radiation through Glazing	2.34 W/m ²	1.54 W/m ²	5.58 W/m ²	3.28 W/m ²						
Average Absorptivity	0.98	0.98	0.98	0.98						
RTTV _{wall} at each facade	7.8	4.28	11.90	6.23						
Overall RTTV _{wall}	5.29 W/m ²									

Table 3

RTTV _{roof}										
Roof Orientation Factor	2.16									
Total Roof Area (Residential Units)	405.28									
Total Skylight Area										
Roof	1.42									
Skylight										
Skylight Glass Type	<input type="checkbox"/> Reflective Area= m ² SC= % ER= % VLT= %	<input type="checkbox"/> Tinted Area= m ² SC= % ER= % VLT= %	<input type="checkbox"/> Clear Area= m ² SC= % ER= % VLT= %	<input type="checkbox"/> Clear Area= m ² SC= % ER= % VLT= %						
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						
External Shading	<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										
Average Absorptivity (roof)	0.7									
Overall RTTV _{roof}	1.42 W/m ²									

Notes:

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

RTTV Summary Sheet (Tower 5)

Address: No.1-11 Au Pui Wan Street, Fo Tan, S.T.L. 576, Hong Kong		BD Ref. No.
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)		40

Deemed to Satisfy RTTV _{wall}										
Facade Orientation Facing	East	North	West	South						
Average Absorptivity	0.98	0.98	0.98	0.98						
Average Window to Wall Ratio	0.17	0.14	0.35	0.29						
Shading Coefficient of Glazing	0.33	0.33	0.33	0.33						
Average Shading Coefficient of Facade										
Visible Light Transmittance	52 %	52 %	52 %	52 %						
External Reflectance	14 %	14 %	14 %	14 %						

Table 2

RTTV _{wall}										
Facade Orientation Facing	East	North	West	South						
Wall Orientation Factor	1.072	0.79	1.131	0.975						
Total External Wall Area (Residential Units)	3824.3 m ²	5221.1 m ²	3824.3 m ²	5229.06 m ²						
Total Window Area	711.69 m ²	832.79 m ²	1507.48 m ²	1436.61 m ²						
Ratio	= 0.17	= 0.14	= 0.35	= 0.29						
Opaque Wall	5.91 W/m ²	2.88 W/m ²	6.84 W/m ²	3.02 W/m ²						
Conduction Window	0.20 W/m ²	0.13 W/m ²	0.46 W/m ²	0.27 W/m ²						
Window	Area = m ²	Area = m ²	Area = m ²	Area = m ²						
Class Type	Reflective	Reflective	Reflective	Reflective						
Glass Type	Area = m ²	Area = m ²	Area = m ²	Area = m ²						
Double Glazing	Area = m ²	Area = m ²	Area = m ²	Area = m ²						
External Glazing	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
Shading	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 checked="" type="checkbox"/> No	Sidefin <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
Solar Radiation through Glazing	2.63 W/m ²	1.72 W/m ²	5.63 W/m ²	3.17 W/m ²						
Average Absorptivity	0.98	0.98	0.98	0.98						
RTTV _{wall} at each facade	8.75 W/m ²	4.73 W/m ²	13.93 W/m ²	6.47 W/m ²						
Overall RTTV _{wall}	5.45 W/m ²									

Table 3

RTTV _{roof}										
Roof Orientation Factor	2.16									
Total Roof Area (Residential Units)	421.37 m ²									
Total Skylight Area	/									
Roof	1.33 W/m ²									
Heat	/									
Conduction	Skylight									
Skylight	Area = m ²	Area = m ²	Area = m ²	Area = m ²	Area = m ²	Area = m ²	Area = m ²	Area = m ²	Area = m ²	Area = m ²
Class Type	Reflective	Reflective	Reflective	Reflective	Reflective	Reflective	Reflective	Reflective	Reflective	Reflective
Double Glazing	Area = m ²	Area = m ²	Area = m ²	Area = m ²	Area = m ²	Area = m ²	Area = m ²	Area = m ²	Area = m ²	Area = m ²
External Shading	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Overhang <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Solar Radiation through Glazing	W/m ²									
Average Absorptivity	0.7									
Overall RTTV _{roof}	1.33 W/m ²									

Notes:

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