

RTTV Summary Sheet

Address: Proposed Development at No. 74 Waterloo Road, Kowloon		BD Ref. No. 2/4053/16
Building Type:	Residential	
RTTV calculated by	<input checked="" type="checkbox"/> 1. Registered Professional Engineers <i>YAU KIN PUI</i> <input type="checkbox"/> 2. Architect <input type="checkbox"/> 3. Others, please specify :	
No. of Storeys (Residential Units)	24 Storeys , 3/F-30/F (4/F, 13/F, 14/F & 24/F Excluded)	



Table 1

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-West				North-East				South-East				South-West							
Wall Orientation Factor		0.965				0.924				1.051				1.092							
Total External Wall Area (Residential Units)		1971.35 m <sup>2</sup>		Window to Wall Ratio = 0.31		1634.41 m <sup>2</sup>		Window to Wall Ratio = 0.19		1366.83 m <sup>2</sup>		Window to Wall Ratio = 0.31		1049.78 m <sup>2</sup>		Window to Wall Ratio = 0.25					
Total Window Area		614.53 m <sup>2</sup>				308.58 m <sup>2</sup>				427.87 m <sup>2</sup>				260.81 m <sup>2</sup>							
Heat Conduction	Opaque Wall	4.11 W/m <sup>2</sup>				4.74 W/m <sup>2</sup>				4.44 W/m <sup>2</sup>				5.04 W/m <sup>2</sup>							
	Window	1.00 W/m <sup>2</sup>				0.58 W/m <sup>2</sup>				1.09 W/m <sup>2</sup>				0.90 W/m <sup>2</sup>							
Window	Glass Type	<input checked="" type="checkbox"/> Reflective	Area= 614.53 m <sup>2</sup>	SC= 0.70	VLT= 58 %	ER= 15 %	<input checked="" type="checkbox"/> Reflective	Area= 308.58 m <sup>2</sup>	SC= 0.70	VLT= 58 %	ER= 15 %	<input checked="" type="checkbox"/> Reflective	Area= 427.87 m <sup>2</sup>	SC= 0.70	VLT= 58 %	ER= 15 %	<input checked="" type="checkbox"/> Reflective	Area= 260.81 m <sup>2</sup>	SC= 0.70	VLT= 58 %	ER= 15 %
		<input type="checkbox"/> Tinted	Area= m <sup>2</sup>	SC=	VLT= %	ER= %	<input type="checkbox"/> Tinted	Area= m <sup>2</sup>	SC=	VLT= %	ER= %	<input type="checkbox"/> Tinted	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= %	<input type="checkbox"/> Clear	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 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	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 Glazing		8.79 W/m <sup>2</sup>				5.10 W/m <sup>2</sup>				9.62 W/m <sup>2</sup>				7.93 W/m <sup>2</sup>							
Average Absorptivity		0.85				0.88				0.86				0.87							
RTTV <sub>wall</sub> at each facade		13.90 W/m <sup>2</sup>				10.42 W/m <sup>2</sup>				15.15 W/m <sup>2</sup>				13.87 W/m <sup>2</sup>							
Overall RTTV <sub>wall</sub>		Refer to page 2 for continuous												W/m <sup>2</sup>							

VLT > 50%  
ER < 20%

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"/> Reflective	Area= m <sup>2</sup>	SC=	VLT= %	ER= %
		<input type="checkbox"/> Tinted	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= %	<input type="checkbox"/> Clear	Area= m <sup>2</sup>	SC=	VLT= %	ER= %
Double Glazing		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No									
External Shading		<input checked="" 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>									

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.

RTTV Summary Sheet

Address:	Proposed Development at No. 74 Waterloo Road, Kowloon	BD Ref. No.	2/4053/16
Building Type:	Residential		
RTTV calculated by	<input checked="" type="checkbox"/> 1. Registered Professional Engineers <i>Ming YAU KIN PUI</i> <input type="checkbox"/> 2. Architect <input type="checkbox"/> 3. Others, please specify :		
No. of Storeys (Residential Units)	24 Storeys, 3/F-30/F (4/F, 13/F, 14/F & 24/F Excluded)		



Table 1

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	South				West											
Wall Orientation Factor	0.975				1.131											
Total External Wall Area (Residential Units)	724.32 m <sup>2</sup>	Window to Wall Ratio = 0.34	121.37 m <sup>2</sup>	Window to Wall Ratio = 0	m <sup>2</sup>	Window to Wall Ratio =	m <sup>2</sup>	Window to Wall Ratio =	m <sup>2</sup>	Window to Wall Ratio =	m <sup>2</sup>	Window to Wall Ratio =				
Total Window Area	243.85 m <sup>2</sup>		0 m <sup>2</sup>													
Heat Conduction	Opaque Wall	4.01 W/m <sup>2</sup>		7.10 W/m <sup>2</sup>		W/m <sup>2</sup>		W/m <sup>2</sup>		W/m <sup>2</sup>		W/m <sup>2</sup>				
	Window	1.09 W/m <sup>2</sup>		0 W/m <sup>2</sup>		W/m <sup>2</sup>		W/m <sup>2</sup>		W/m <sup>2</sup>		W/m <sup>2</sup>				
Window	Glass Type	<input checked="" type="checkbox"/> Reflective	Area= 243.85 m <sup>2</sup>	SC= 0.70	VLT= 58 %	ER= 15 %	<input type="checkbox"/> Reflective	Area= m <sup>2</sup>	SC=	VLT= %	ER= %	<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"/> Tinted	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= %	<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 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		<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		<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		<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	9.59 W/m <sup>2</sup>		0 W/m <sup>2</sup>		W/m <sup>2</sup>		W/m <sup>2</sup>		W/m <sup>2</sup>		W/m <sup>2</sup>		W/m <sup>2</sup>			
Average Absorptivity	0.85		0.9													
RTTV <sub>wall</sub> at each facade	14.69 W/m <sup>2</sup>		7.10 W/m <sup>2</sup>		W/m <sup>2</sup>		W/m <sup>2</sup>		W/m <sup>2</sup>		W/m <sup>2</sup>		W/m <sup>2</sup>			
Overall RTTV <sub>wall</sub>			13.28 W/m <sup>2</sup>													

VLT > 50%  
ERC 20%

< 14 W/m<sup>2</sup>

Table 3

RTTV <sub>roof</sub>						
Roof Orientation Factor	2.16					
Total Roof Area (Residential Units)	161.83 m <sup>2</sup>					
Total Skylight Area	0 m <sup>2</sup>					
Heat Conduction	Roof	3.97 W/m <sup>2</sup>				
	Skylight	0 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 checked="" type="checkbox"/> No					
External Shading	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Solar Radiation through Gazing	0 W/m <sup>2</sup>					
Average Absorptivity (roof)	0.7					
Overall RTTV <sub>roof</sub>	3.97 W/m <sup>2</sup>					

< 4 W/m<sup>2</sup>

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

Notes :

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