



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
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Appendix A

Address: 38 KAM SAEUNG ROAD, N.T. (HOUSE 1 TO 3)		BD Ref. No. 2/9075/14
Building Type:	Residential	
RTTV calculated by	☒ 1. Registered Professional Engineers ☐ 2. Architect ☐ 3. Others, please specify:	
No. of Storeys (Residential Units)	2	

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		SW				SE				NW				NE				
Wall Orientation Factor		1.092				1.051				0.965				0.924				
Total External Wall Area (Residential Units)		74.81 m ²		Window to Wall Ratio		70 m ²		Window to Wall Ratio		66.1 m ²		Window to Wall Ratio		71.58 m ²		Window to Wall Ratio		
Total Window Factor		28.76 m ²		= 0.384		14.62 m ²		= 0.209		19.12 m ²		= 0.289		23.93 m ²		= 0.334		
Heat Conduction	Opaque Wall	1.73 W/m ²				2.14 W/m ²				1.76 W/m ²				1.58 W/m ²				
	Window	0.73 W/m ²				0.38 W/m ²				0.48 W/m ²				0.53 W/m ²				
Window	Glass Type	☐ Reflective	Area=	SC=	VLT= %	☐ Reflective	Area=	SC=	VLT= %	☐ Reflective	Area=	SC=	VLT= %	☐ Reflective	Area=	SC=	VLT= %	
		☒ Tinted	28.76 m ²	0.66	58.3 %	☒ Tinted	14.62 m ²	0.66	58.3 %	☒ Tinted	19.12 m ²	0.66	58.3 %	☒ Tinted	23.93 m ²	0.66	58.3 %	
		☐ Clear	Area=	SC=	VLT= %	☐ Clear	Area=	SC=	VLT= %	☐ Clear	Area=	SC=	VLT= %	☐ Clear	Area=	SC=	VLT= %	
		☐ Clear	m ²		ER= %	☐ Clear	m ²		ER= %	☐ Clear	m ²		ER= %	☐ Clear	m ²		ER= %	
	Double Glazing	☒ Yes ☐ No				☒ Yes ☐ No				☒ Yes ☐ No				☒ Yes ☐ No				
	External Shading	Overhang	☐ Yes ☒ No		Overhang		☐ Yes ☒ No		Overhang		☐ Yes ☒ No		Overhang		☐ Yes ☒ No			
		Sidefin	☐ Yes ☒ No		Sidefin		☐ Yes ☒ No		Sidefin		☐ Yes ☒ No		Sidefin		☐ Yes ☒ No			
	Solar Radiation through Glazing		11.57 W/m ²				2.14 W/m ²				6.86 W/m ²				8.51 W/m ²			
	Average Absorptivity		0.6				0.6				0.6				0.6			
	RTTV _{Wall} at each facade		14.02 W/m ²				7.95 W/m ²				9.1 W/m ²				10.63 W/m ²			
Overall RTTV _{Wall}		10.51 W/m ²																

Table 3

RTTV _{Roof}									
Roof Orientation Factor		2.16							
Total Roof Area (Residential Units)		78 m ²							
Total Skylight Area		0 m ²							
Heat Conduction	Roof	2.72 W/m ²							
	Skylight	0 W/m ²							
Skylight	Glass Type	☐ Reflective	Area=	m ²	SC=	VLT=	%	ER=	%
		☐ Tinted	Area=	m ²	SC=	VLT=	%	ER=	%
		☐ Clear	Area=	m ²	SC=	VLT=	%	ER=	%
	Double Glazing	☐ Yes ☒ No							
	External Shading	☐ Yes ☒ No							
	Solar Radiation through Glazing		0 W/m ²						
Average Absorptivity (roof)		0.7							
Overall RTTV _{Roof}		2.72 W/m ²							

RTTV Summary Sheet

Notes:
ER = External Reflectance
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Window and skylight data should represent the major proportion of its use in the development.

Address: 38, KAM SHEUNG ROAD, N.T. (House 5)		BD Ref. No. 2/9045/14
Building Type:	Residential	
RTTV calculated by	☒ 1. Registered Professional Engineers ☐ 2. Architect ☐ 3. Others, please specify:	
No. of Storeys (Residential Units)	2	

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		N						W						E						S						
Wall Orientation Factor		0.79						1.131						1.072						0.975						
Total External Wall Area (Residential Units)		74.94 m ²		Window to Wall Ratio		= 0.449		73.12 m ²		Window to Wall Ratio		= 0.21		64.18 m ²		Window to Wall Ratio		= 0.239		79.98 m ²		Window to Wall Ratio		= 0.393		
Total Window Factor		33.62 m ²						15.39 m ²						15.31 m ²						31.43 m ²						
Heat Conduction	Opaque Wall	1.12 W/m ²						2.29 W/m ²						2.1 W/m ²						1.52 W/m ²						
	Window	0.61 W/m ²						0.41 W/m ²						0.44 W/m ²						0.66 W/m ²						
Window	Glass Type	☐ Reflective	Area=	SC=	VLT= %	ER= %	☐ Reflective	Area=	SC=	VLT= %	ER= %	☐ Reflective	Area=	SC=	VLT= %	ER= %	☐ Reflective	Area=	SC=	VLT= %	ER= %					
		☒ Tinted	33.62 m ²	0.66	58.3%	13.3%	☒ Tinted	15.39 m ²	0.66	58.3%	13.3%	☒ Tinted	15.31 m ²	0.66	58.3%	13.3%	☒ Tinted	31.43 m ²	0.66	58.3%	13.3%					
		☐ Clear	Area=	SC=	VLT= %	ER= %	☐ Clear	Area=	SC=	VLT= %	ER= %	☐ Clear	Area=	SC=	VLT= %	ER= %	☐ Clear	Area=	SC=	VLT= %	ER= %					
	Double Glazing		☒ Yes ☐ No		☒ Yes ☐ No		☒ Yes ☐ No		☒ Yes ☐ No		☒ Yes ☐ No		☒ Yes ☐ No													
	External Shading	Overhang	☐ Yes ☒ No		Overhang		☐ Yes ☒ No		Overhang		☐ Yes ☒ No		Overhang		☐ Yes ☒ No											
		Sidewind	☐ Yes ☒ No		Sidewind		☐ Yes ☒ No		Sidewind		☐ Yes ☒ No		Sidewind		☐ Yes ☒ No											
	Solar Radiation through Glazing		8.73 W/m ²						5.84 W/m ²						6.25 W/m ²						10.56 W/m ²					
	Average Absorptivity		0.6						0.6						0.6						0.6					
	RTTV _{Wall} at each facade		10.47 W/m ²						8.55 W/m ²						8.79 W/m ²						12.74 W/m ²					
	Overall RTTV _{Wall}		10.24 W/m ²																							

Table 3

RTTV _{Roof}									
Roof Orientation Factor		2.16							
Total Roof Area (Residential Units)		56 m²							
Total Skylight Area		0 m²							
Heat Conduction	Roof	2.69 W/m²							
	Skylight	0 W/m²							
Skylight	Glass Type	☐ Reflective	Area=	m²	SC=	VLT=	%	ER=	%
		☐ Tinted	Area=	m²	SC=	VLT=	%	ER=	%
		☐ Clear	Area=	m²	SC=	VLT=	%	ER=	%
	Double Glazing	☐ Yes ☒ No							
	External Shading	☐ Yes ☒ No							
	Solar Radiation through Glazing		0 W/m²						
Average Absorptivity (roof)		0.7							
Overall RTTV _{Roof}		2.69 W/m²							



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Appendix A

Address: 38, KAM SHEUNG ROAD, N.T. (House 6)		BD Ref. No. 219075/14
Building Type:	Residential	
RTTV calculated by	☒ 1. Registered Professional Engineers ☐ 2. Architect ☐ 3. Others, please specify:	
No. of Storeys (Residential Units)	2	

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		NE						SE						NW						SW						
Wall Orientation Factor		0.924						1.051						0.965						1.092						
Total External Wall Area (Residential Units)		74.94 m ²		Window to Wall Ratio =		0.449		73.12 m ²		Window to Wall Ratio =		0.21		64.18 m ²		Window to Wall Ratio =		0.239		79.98 m ²		Window to Wall Ratio =		0.393		
Total Window Factor		33.62 m ²						15.39 m ²						15.31 m ²						31.43 m ²						
Heat Conduction	Opaque Wall	1.31 W/m ²						2.13 W/m ²						1.89 W/m ²						1.7 W/m ²						
	Window	0.72 W/m ²						0.38 W/m ²						0.4 W/m ²						0.74 W/m ²						
Window	Glass Type	☐ Reflective	Area= m ²	SC=	VLT= %	ER= %	☐ Reflective	Area= m ²	SC=	VLT= %	ER= %	☐ Reflective	Area= m ²	SC=	VLT= %	ER= %	☐ Reflective	Area= m ²	SC=	VLT= %	ER= %					
		☒ Tinted	33.62 m ²	0.66	58.3	13.3	☒ Tinted	15.39 m ²	0.66	58.3	13.3	☒ Tinted	15.31 m ²	0.66	58.3	13.3	☒ Tinted	31.43 m ²	0.66	58.3	13.3					
		☐ Clear	Area= m ²	SC=	VLT= %	ER= %	☐ Clear	Area= m ²	SC=	VLT= %	ER= %	☐ Clear	Area= m ²	SC=	VLT= %	ER= %	☐ Clear	Area= m ²	SC=	VLT= %	ER= %					
	Double Glazing	☒ Yes ☐ No						☒ Yes ☐ No						☒ Yes ☐ No						☒ Yes ☐ No						
	External Shading	Overhang	☐ Yes ☒ No						☐ Yes ☒ No						☐ Yes ☒ No						☐ Yes ☒ No					
		Sidefin	☐ Yes ☒ No						☐ Yes ☒ No						☐ Yes ☒ No						☐ Yes ☒ No					
Solar Radiation through Glazing		20.17 W/m ²						5.43 W/m ²						5.63 W/m ²						10.49 W/m ²						
Average Absorptivity		0.6						0.6						0.6						0.6						
RTTV _{Wall} at each facade		22.19 W/m ²						7.94 W/m ²						7.91 W/m ²						12.93 W/m ²						
Overall RTTV _{Wall}		12.96 W/m ²																								

Table 3

RTTV _{Roof}									
Roof Orientation Factor		2.16							
Total Roof Area (Residential Units)		56 m ²							
Total Skylight Area		0 m ²							
Heat Conduction	Roof	2.69 W/m ²							
	Skylight	0 W/m ²							
Skylight	Glass Type	☐ Reflective	Area=	m ²	SC=	VLT=	%	ER=	%
		☐ Tinted	Area=	m ²	SC=	VLT=	%	ER=	%
		☐ Clear	Area=	m ²	SC=	VLT=	%	ER=	%
	Double Glazing	☐ Yes ☒ No							
	External Shading	☐ Yes ☒ No							
Solar Radiation through Glazing		0 W/m ²							
Average Absorptivity (roof)		0.7							
Overall RTTV _{Roof}		2.69 W/m ²							

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Appendix A

Address: 38, KAM SHEUNG ROAD, N.T. (House 7)		BD Ref. No. 219075/14
Building Type:	Residential	
RTTV calculated by	☒ 1. Registered Professional Engineers ☐ 2. Architect ☐ 3. Others, please specify:	
No. of Storeys (Residential Units)	2	

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		NE				SE				NW				SW			
Wall Orientation Factor		0.924				1.051				0.965				1.092			
Total External Wall Area (Residential Units)		74.94 m ²		Window to Wall Ratio =		64.18 m ²		Window to Wall Ratio =		73.12 m ²		Window to Wall Ratio =		79.98 m ²		Window to Wall Ratio =	
Total Window Factor		30.51 m ²		0.407		15.31 m ²		0.239		15.39 m ²		0.21		31.43 m ²		0.393	
Heat Conduction	Opaque Wall	1.41 W/m ²				2.06 W/m ²				1.96 W/m ²				1.7 W/m ²			
	Window	0.65 W/m ²				0.43 W/m ²				0.35 W/m ²				0.74 W/m ²			
Window	Glass Type	☐ Reflective	Area= m ²	SC=	VLT= % ER= %	☐ Reflective	Area= m ²	SC=	VLT= % ER= %	☐ Reflective	Area= m ²	SC=	VLT= % ER= %	☐ Reflective	Area= m ²	SC=	VLT= % ER= %
		☒ Tinted	Area= 30.51 m ²	SC= 0.66	VLT= 58.3% ER= 13.3%	☒ Tinted	Area= 15.31 m ²	SC= 0.66	VLT= 58.3% ER= 13.3%	☒ Tinted	Area= 15.39 m ²	SC= 0.66	VLT= 58.3% ER= 13.3%	☒ Tinted	Area= 31.43 m ²	SC= 0.66	VLT= 58.3% ER= 13.3%
		☐ Clear	Area= m ²	SC=	VLT= % ER= %	☐ Clear	Area= m ²	SC=	VLT= % ER= %	☐ Clear	Area= m ²	SC=	VLT= % ER= %	☐ Clear	Area= m ²	SC=	VLT= % ER= %
	Double Glazing	☒ Yes ☐ No				☒ Yes ☐ No				☒ Yes ☐ No				☒ Yes ☐ No			
	External Shading	Overhang ☐ Yes ☒ No				Overhang ☐ Yes ☒ No				Overhang ☐ Yes ☒ No				Overhang ☐ Yes ☒ No			
		Sidefin ☐ Yes ☒ No				Sidefin ☐ Yes ☒ No				Sidefin ☐ Yes ☒ No				Sidefin ☐ Yes ☒ No			
Solar Radiation through Glazing		10.37 W/m ²				6.13 W/m ²				4.98 W/m ²				10.49 W/m ²			
Average Absorptivity		0.6				0.6				0.6				0.6			
RTTV _{Wall} at each facade		12.42 W/m ²				8.62 W/m ²				7.29 W/m ²				12.93 W/m ²			
Overall RTTV _{Wall}		10.44 W/m ²															

Table 3

RTTV _{Roof}									
Roof Orientation Factor		2.16							
Total Roof Area (Residential Units)		56 m²							
Total Skylight Area		0 m²							
Heat Conduction	Roof	2.69 W/m²							
	Skylight	0 W/m²							
Skylight	Glass Type	☐ Reflective	Area=	m²	SC=	VLT=	%	ER=	%
		☐ Tinted	Area=	m²	SC=	VLT=	%	ER=	%
		☐ Clear	Area=	m²	SC=	VLT=	%	ER=	%
	Double Glazing	☐ Yes ☒ No							
	External Shading	☐ Yes ☒ No							
	Solar Radiation through Glazing		0 W/m²						
Average Absorptivity (roof)		0.7							
Overall RTTV _{Roof}		2.69 W/m²							



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Appendix **A**

Address: 38, KAM SHEUNG ROAD, N.T. (HOUSE 8 & 9)		BD Ref. No. 2/9075/14
Building Type:	Residential	
RTTV calculated by	☒ 1. Registered Professional Engineers ☐ 2. Architect ☐ 3. Others, please specify:	
No. of Storeys (Residential Units)	2	

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			NW						SW						NE						SE						
Wall Orientation Factor			0.965						1.092						0.924						1.051						
Total External Wall Area (Residential Units)			81.44 m ²		Window to Wall Ratio =		0.148		56.09 m ²		Window to Wall Ratio =		0.69		76.23 m ²		Window to Wall Ratio =		0.261		51.24 m ²		Window to Wall Ratio =		0.716		
Total Window Factor			12.12 m ²						38.71 m ²						19.9 m ²						36.67 m ²						
Heat Conduction	Opaque Wall	2.11 W/m ²						0.87 W/m ²						1.75 W/m ²						0.77 W/m ²							
	Window	0.25 W/m ²						1.3 W/m ²						0.42 W/m ²						1.3 W/m ²							
Window	Glass Type	☐ Reflective	Area= m ²	SC=	VLT= %	ER= %	☐ Reflective	Area= m ²	SC=	VLT= %	ER= %	☐ Reflective	Area= m ²	SC=	VLT= %	ER= %	☐ Reflective	Area= m ²	SC=	VLT= %	ER= %						
		☒ Tinted	12.12 m ²	0.66	58.3	13.3	☒ Tinted	38.71 m ²	0.66	58.3	13.3	☒ Tinted	19.9 m ²	0.66	58.3	13.3	☒ Tinted	36.67 m ²	0.66	58.3	13.3						
		☐ Clear	Area= m ²	SC=	VLT= %	ER= %	☐ Clear	Area= m ²	SC=	VLT= %	ER= %	☐ Clear	Area= m ²	SC=	VLT= %	ER= %	☐ Clear	Area= m ²	SC=	VLT= %	ER= %						
	Double Glazing	☒ Yes ☐ No						☒ Yes ☐ No						☒ Yes ☐ No						☒ Yes ☐ No							
	External Shading	Overhang		☐ Yes	☒ No	Overhang		☐ Yes	☒ No	Overhang		☐ Yes	☒ No	Overhang		☐ Yes	☒ No										
		Sidefin		☐ Yes	☒ No	Sidefin		☐ Yes	☒ No	Sidefin		☐ Yes	☒ No	Sidefin		☐ Yes	☒ No										
	Solar Radiation through Glazing			3.53 W/m ²						18.52 W/m ²						5.99 W/m ²						18.44 W/m ²					
	Average Absorptivity			0.6						0.6						0.6						0.6					
RTTV _{Wall} at each facade			5.89 W/m ²						20.69 W/m ²						8.16 W/m ²						20.50 W/m ²						
Overall RTTV _{Wall}			12.5 W/m ²																								

Table 3

RTTV _{Roof}									
Roof Orientation Factor		2.16							
Total Roof Area (Residential Units)		78 m²							
Total Skylight Area		0 m²							
Heat Conduction	Roof	2.69 W/m²							
	Skylight	0 W/m²							
Skylight	Glass Type	☐ Reflective	Area=	m²	SC=	VLT=	%	ER=	%
		☐ Tinted	Area=	m²	SC=	VLT=	%	ER=	%
		☐ Clear	Area=	m²	SC=	VLT=	%	ER=	%
	Double Glazing	☐ Yes ☒ No							
	External Shading	☐ Yes ☒ No							
	Solar Radiation through Glazing		0 W/m²						
Average Absorptivity (roof)		0.7							
Overall RTTV _{Roof}		2.69 W/m²							