BPD_GM02

ES Submission at As-Built Stage for Residential Buildings

These ES submission forms are to be generated from the ES Online Portal (*previously known as Green Mark (GM) E-filing Portal*). These generated submission forms are to be e-signed by the QP and appropriate practitioners before submitting via CORENET.

Sample Forms Attached for Viewing Only

Applicable for Projects with 1st Submission date for URA planning Permission on or after 1 Dec 2021

The forms spell out all the base and carbon reduction measures requirements which QPs and the other practitioners can choose for their design to meet the minimum environmental sustainability standards in complying with the Building Control (Environmental Sustainability) Regulations 2008.

QPs are only required to provide salient information pertaining to the items that are relevant to their design and the ES Online Portal (previously known as Green Mark (GM) E-filing Portal) will which compute and perform validation on those items that are required to be complied/selected.

In addition:

If there is any deviation to the last submitted template/form, please update and re-submit the template/form on building envelope (e.g. RETV), and daylight (where applicable)

Submittal of the other documents may be required and shall be made in such manner and in such form as the Commissioner of Building Control requires upon request

For more information: <u>https://www1.bca.gov.sg/buildsg/sustainability/minimum-environmental-sustainability-standard-for-new-buildings-and-existing-buildings-undergoing-major-additions-and-alterations</u>.

SUBMISSION OF ENVIRONMENTAL S Regulation 7 of the Building Control (Environmer	SUSTAINBILITY REQUIREMENTS ntal Sustainability) Regulations 2008 (Cap. 29)
Commissioner of Building Control Building & Construction Authority 52 Jurong Gateway Road, #11-01 Singapore 608550	 INSTRUCTIONS (1) Please refer to the Explanatory Notes attached before completing these forms via ES Online Portal. (2) Submit one copy of this form together with Form BPD_GM02_Appendix 1 (for residential building) and/or Form BPD_GM02_Appendix 2 (for non-residential building) with the application for approval of building plans.
Section I (To be completed by Qualified Person)	
 I confirm that I have been appointed under section 8(1)(as the qualified person in respect of the building works Project Reference No.: Description of building works: 2. I hereby declare that the building works or parts ther environmental sustainability standard that have met the specified in the Code for Environmental Sustaina BPD_GM02_Appendix 1 and/or Form BPD_GM02_Appendix 	a) or 11(1)(d)(i) of the Building Control Act (Cap 29) herein described. GM e-Filing No.:
Name & Address of Professional Firm	Name & Signature of Qualified Person
Date:	Tel No.:
Section II (To be completed by Appropriate Practitioners)	
3. We hereby declare that the building works or parts the environmental sustainability standard using the meth Sustainability of Buildings.	creof assessed are in compliance with the minimum odology specified in the Code for Environmental
Name & Address of Professional Firm	Name & Signature of Practitioner for Mechanical Works
Date:	Tel No.:
Name & Address of Professional Firm Date:	Name & Signature of Practitioner for Electrical Works Tel No.:

Appendix 1

ENVIRONMENTAL SUSTAINBILITY REQUIREMENTS FOR RESIDENTIAL BUILDINGS Regulation 7 of the Building Control (Environmental Sustainability) Regulations 2008 (Cap. 29)					
SECTION I: SUMMARY					
Project Reference No.: GM e-Filing No.:					
The Gross Floor Area (GFA	A) for the building works, where ap	plicable:			
Building Works	New GFA in m ²	Existing GFA in	n m ² (Major Retro	ofitting)	
Residential		1	Not Applicable		
Non-Residential					
Total	tal				
(I) Base Requirements	(I) Base RequirementsApplicable (Yes/No)Complian (Yes/No)				
RB01 Envelope and Roof Thermal Transfer					
RB01-1 Building Envelope					
RB01-2 Roof	B01-2 Roof				
RB02 Building Energy Performance					
RB02-1 Air-Conditioning Sy	stem				
RB02-2 Lighting System for	Common Facilities and Areas				
RB02-3 Mechanical Ventil	ation System for Carpark Areas				
RB02-4 Vertical Transportation	ion System				

 Total no. of compliances:
 No. of sustainable attributes that are not applicable:

 (Total No of compliances + No. of sustainable attributes that are not applicable = 6)

Sustainable attributes that are not applicable due to the following reasons:	

	Арре	ndix 1
Project Reference No.:	GM e-Filing No.:	
(II) Carbon Reduction Measures [Select a minimum of 2 measures from Part 2	et four (4) carbon reduction measures from 3 Parts including - Sustainable Construction]	Selected Options ($$ complied)
Part 1: Sustainable Design Strategies		
RBE01-1 Tropical Building Envelop	be Performance	
(a) Façade design with RETV of not n	nore than 20 W/m ²	
(b) Cool materials that are certified – M	Minimum coverage of 80% of external walls or roof areas	
(c) Innovative façade technology and	solutions for 20% of fenestration areas	
RBE01-2 Naturally Ventilated Build	ding Design	
(a) Building layout design - Minimum prevailing wind directions	30% of dwelling units with window openings facing	
(b) Dwelling unit design - Minimum 2 ventilation	5% of living rooms and bedrooms with effective cross	
(c) Natural ventilated design for comm common areas	non areas - Minimum coverage of 80% in at least two (2)	
RBE01-3 Effective Daylighting		
(a) For units - Minimum 25% of total	number of dwelling units in 60% of applicable areas	
(b) For common areas - Minimum cov	rerage of 80% (by number) in at least two (2) common areas	
Part 2: Sustainable Construction		
RBE02-1 Resource Efficiency Meas	ures	
(a) Existing building structures areas a floors and/or wall areas	are conserved for adaptive reuse – More than 50% of the	
(b) Concrete Usage Index of no more	than 0.50	
(c) Embodied carbon reporting for up	front carbon emission of concrete, steel and glass	
RBE02-2 Low carbon concrete		
(a) Eco-friendly cement for 80% of su	iperstructural works	
(b) Aggregate replacement that meet the formation of the	minimum usage requirement	
(c) Alternative construction materials	as replacement for standard building materials for non-	
RBE02-3 Sustainable Products		
Provision of at least three (3) environn applicable areas or building componen	nentally friendly products that are certified for 80% of ts	
Part 3: Sustainable Technologies		
RBE03-1 Renewable Energy System	1	
Minimum capacity installation of 15%	roof coverage of residential building blocks within the	
RBE03-2 Smart Technology Solutio	ns	
Provision of smart solutions and techn reduce overall energy consumption	ologies which help facilitate resource usage monitoring and	
Energy dashboard, web-based or timely information on utilities co manager	mobile application or equivalent to provide useful and onsumption and breakdown for homeowners and/or facility	
• Energy recovery system		
Lifts with regenerative function		
Occupancy sensors /controls for	lighting in private lift lobbies, staircases or common areas	
• Others, pls state	(subject to BCA's clearance)	

Total No. of Carbon Reduction Measures:

No. of Proposed Alternative Solutions:

ECTION II:	SUPPLEMENTAI	RY DETAILS					
Project Refere	ence No.:			GM	e-Filing N	o.:	
I) Base Req	uirements						
RB01 Envelo	pe and Roof The	ermal Transf	fer				Applicability
RB01-1	Building Envelo	pe					
a) The buildin (RETV) of Envelope	ng envelope desig f no more than 22 Thermal Perform	gned meet the W/m ² based ance for Build	e Residential on the methodings and the	Envelope Tran odology stated e details are as	ismittance V in the Code follows:	/alue e on	Yes Complied Not Applicable Please select one of the
Block No/Ref	Gross area external w windows	as of vall and (m^2)	Gross Heat Gain (W)	of the respective	m ²		section is not applicable in this development:
				block			Not Applicable reason:oNo Provision
DR							
DR b) The buildi espective gla	ng envelope is to zing properties	be designed v	with the follo	owing design p	parameters v	vith the	
DR b) The buildi espective gla: Window Batio (V	ng envelope is to zing properties to Wall S	be designed v	with the follo	owing design p ass	parameters v	with the	
DR b) The buildi espective gla: Window Ratio (V < 0	ng envelope is to zing properties to Wall S WWR) 30	be designed v hading Coeff (SCglass)	with the follo icients of Gla) criteria	owing design p ass	parameters v	vith the	
DR b) The buildi espective glas Window Ratio (V < 0. 0.30 to	ng envelope is to zing properties to Wall S VWR) 30 < 0.35	be designed v hading Coeff (SC_{glass}) ≤ 0 < 0	with the follo icients of Gla) criteria).67).59	owing design p ass	parameters v	vith the	
DR b) The buildi espective glas Window Ratio (V < 0. 0.30 to 0.35 to	ng envelope is to zing properties to Wall S VWR) 30 < 0.35 < 0.40	be designed v hading Coeff (SC_{glass}) ≤ 0 ≤ 0 < 0	with the follo icients of Gla) criteria).67).59).52	owing design p ass	parameters v	vith the	
DR b) The buildi espective gla: Window Ratio (V < 0. 0.30 to 0.35 to 0.40 to	ng envelope is to zing properties to Wall S VWR) 30 < 0.35 < 0.40 < 0.45	be designed v hading Coeff (SC _{glass}) ≤ 0 ≤ 0 ≤ 0 ≤ 0	with the follo ficients of Gla) criteria).67).59).52).48	owing design p ass	parameters v	with the	
DR b) The buildi espective gla: Window Ratio (V < 0. 0.30 to 0.35 to 0.40 to 0.45 to	ng envelope is to zing properties to Wall S VWR) 30 < 0.35 < 0.40 < 0.45 ≤ 0.50	be designed v hading Coeff (SC_{glass}) ≤ 0 ≤ 0 ≤ 0 ≤ 0 ≤ 0 ≤ 0	with the follo icients of Gla) criteria).67).59).52).48).43	owing design p ass	parameters v	with the	
DR b) The buildi espective gla: Window Ratio (V < 0. 0.30 to 0.35 to 0.40 to 0.45 to VWRbldg deat =	ng envelope is to zing properties to Wall S WWR) 30 < 0.35 < 0.40 < 0.45 ≤ 0.50	be designed v hading Coeff (SC_{glass}) ≤ 0 ≤ 0 ≤ 0 ≤ 0 ≤ 0	with the follo icients of Gla) criteria).67).59).52).48).43	owing design p ass	arameters v	with the	
DR b) The buildi espective gla: Window Ratio (V < 0. 0.30 to 0.35 to 0.40 to 0.45 to WWR _{bldg devt} = Proposed SC _g	ng envelope is to zing properties to Wall S VWR) 30 < 0.35 < 0.40 < 0.45 ≤ 0.50 = 	be designed v hading Coeff (SC_{glass}) ≤ 0 ≤ 0 ≤ 0 ≤ 0 ≤ 0 ≤ 0 ≤ 0	with the follo icients of Gla) criteria).67).59).52).48).43	owing design p	arameters v	vith the	
DR b) The buildi espective gla: Window Ratio (V < 0. 0.30 to 0.35 to 0.40 to 0.40 to 0.45 to Proposed SC _{gl} RB01-2	ng envelope is to zing properties to Wall S WWR) 30 < 0.35 < 0.40 < 0.45 < 0.45 < 0.50 ass range from Roof	be designed v hading Coeff (SC_{glass}) ≤ 0 ≤ 0 ≤ 0 ≤ 0 ≤ 0 ≤ 0 ≤ 0 ≤ 0	with the follo icients of Gla) criteria 0.67 0.59 0.52 0.48 0.43	owing design p	arameters v	vith the	
DR b) The buildi espective gla: Window Ratio (V < 0. 0.30 to 0.35 to 0.40 to 0.45 to VWR _{bldg devt} = Proposed SCgl RB01-2	ng envelope is to zing properties to Wall S WWR) 30 < 0.35 < 0.40 < 0.45 < 0.50 same from Roof	be designed v hading Coeff (SC_{glass}) ≤ 0 ≤ 0 ≤ 0 ≤ 0 ≤ 0 ≤ 0 ≤ 0 ≤ 0	with the follo icients of Gla) criteria 0.67 0.59 0.52 0.48 0.43	owing design p	parameters v	vith the	
DR b) The buildi espective gla: Window Ratio (V < 0. 0.30 to 0.35 to 0.40 to 0.45 to VWR _{bldg devt} = Proposed SC _{gl} RB01-2	ng envelope is to zing properties to Wall S WWR) 30 < 0.35 < 0.40 < 0.45 < 0.45 < 0.50 mass range from Roof Weight Range	be designed v hading Coeff (SC_{glass}) ≤ 0 ≤ 0	with the follo icients of Gla) criteria 0.67 0.59 0.48 0.43 	owing design p	parameters v	vith the	☐ Yes ☐ Complied ☐ Not Applicable
DR b) The buildi espective gla: Window Ratio (V < 0. 0.30 to 0.30 to 0.35 to 0.40 to 0.45 to VWR _{bldg devt} = Proposed SC _{gl} RB01-2	ng envelope is to zing properties to Wall S WWR) 30 < 0.35 < 0.40 < 0.45 < 0.50 same from Roof Weight Range (kg/m ²)	be designed v hading Coeff (SC_{glass}) ≤ 0 ≤ 0	m U-Va m (W	owing design p ass	arameters v	vith the	☐ Yes ☐ Complied ☐ Not Applicable Please select one of the following reasons if this
DR b) The buildi espective gla: Window Ratio (V < 0. 0.30 to 0.30 to 0.35 to 0.40 to 0.45 to Proposed SCg RB01-2	ng envelope is to zing properties to Wall S WWR) 30 < 0.35 < 0.40 < 0.45 ≤ 0.50 mass range from Roof Weight Range (kg/m ²) < 50	be designed v hading Coeff (SC_{glass}) ≤ 0 ≤ 0	with the follo icients of Gla) criteria 0.67 0.59 0.52 0.48 0.43 0.43 0.43 0.43 0.43	owing design p ass	arameters v	vith the	☐ Yes ☐ Complied ☐ Not Applicable Please select one of the following reasons if this section is not applicable in this dayalegement.
DR b) The buildi espective gla: Window Ratio (V < 0. 0.30 to 0.35 to 0.40 to 0.45 to VWR _{bldg devt} = Proposed SC _{gl} RB01-2	ng envelope is to zing properties to Wall S VWR) 30 < 0.35 < 0.40 < 0.45 < 0.40 < 0.45 < 0.50 mass range from Roof Weight Range (kg/m ²) < 50 < 50 to 230 > 220	be designed v hading Coeff (SC_{glass}) ≤ 0 ≤ 0	with the follo icients of Gla) criteria 0.67 0.59 0.52 0.48 0.43 	owing design p ass	parameters v	vith the	□ Yes □ Complied □ Not Applicable Please select one of the following reasons if this section is not applicable in this development:

				Appendix 1
SECTION I	II: SUPPLEMENTARY DETAILS			
Project Ref	Perence No.:	GM e-	Filing No.:	
I) Base R	equirements			
RB02 Buil	ding Energy Performance			Applicability
RB02-1	Air-conditioning System			
Provision o Single/I Variable Total num Total num Total num T Single /I rating VRF sys equivale Total ain design s Percenta requiren	of air-conditioning system that meet the follow Design System Efficiency (DSE) Multiple Split System 5 tick Refrigerant Flow (VRF) system 3 tick nbers of dwelling units:	Total number of air conditioning units in all dwelling units DSE, kW/RT	n efficiency. Total number of air conditioning units in all common facilities Estimated cooling load, RT	 Fes Complied Not Applicable Please select one of the following reasons if this section is not applicable in this development: Not Applicable reason: Air-conditioning system is not provided
Lighting sy ower budg The percen Note: Light prescribed	exstem provision of at least 40% more energy e get stated in SS530 for common facilities. tage improvement in lighting power budget = ting provision for building façade and landsca lighting power budget stated in SS 530, where	efficient than the p % pe should comply e relevant.	v with the	☐ Yes ☐ Complied ☐ Not Applicable Please select one of the following reasons if this section is not applicable in this development:
				 Not Applicable reason: Lighting system is not provided

		Appendix 1
SECTION I	I: SUPPLEMENTARY DETAILS	
Project Ref	erence No.:	GM e-Filing No.:
(I) Base R	equirements	
RB02-3	Mechanical Ventilation System	for Carpark Areas
Use of CO ventilation	detection sensor control with Varia in carpark areas.	ble Speed Drive (VSD) on mechanical Image: Pressure Complied Image: Not Applicable Please select one of the following reasons if this section is not applicable in this development: Not Applicable reason: Carpark is naturally ventilated Carpark not built for this project
RB02-4	Vertical Transportation System	1
Use of lifts equivalent a	with AC variable voltage and varia and energy efficient features such a	ble frequency (VVVF) motor drive or s sleep mode features
		Please select one of the following reasons if this section is not applicable in this development:
		Not Applicable reason: • Lift system not provided • Lift system serves less than 4 floors • The use of traction lifts is not suitable for this project

						Appendix 1
Project Refere	ence No.:			GM e-Filin	g No.:	
(II) Carbon measures from	Reduction Mo n Part 2- Susta	easures [Select inable Constru	four (4) carbon to the four four four four four four four four	reduction measure	es from 3 Parts inc	cluding a minimum of 2
Part 1: Susta	inable Design	Strategies				
RBE01-1	Tropical Bui	lding Envelop	e Performance			
(a) The I (RET Enve RET	building envelopment (∇) of no more clope Thermal $(\nabla = \nabla \nabla$	ope is designed e than 20 W/m2 Performance fo V/m ²	with Residential 2 based on the mo or Buildings	Envelope Transi ethodology stated	mittance Value in the Code on	Selected Option Complied
(b) Appl body	ication of cool for 80% of al	materials that external wall	are certified by a of residential blo	n approved local ck or roof areas	certification	Selected Option Complied
Block Description	Total areas (m2)	Total Non- Applicable Areas (m2)	Total Applicable Areas (m2)	Total Areas with cool materials (m2)	Extent of Coverage in %	
		Externa	al Wall Areas			
Residential Ploaks						
DIOCKS			OR			
		Ro	oof Areas			
Residential Blocks						
Carpark						
Common Facilities and others						
Note : Non-a, such as water be relevant. (c) Prov elect on fo	pplicable areas tanks or photov ision of innova rochromic glas or at least 20%	can include gree coltaic (PV) pane ative fenestration of the fenestration of the fenestration	en roofs, walls and els where the applic on technology or of photovoltaic m tion areas	areas beneath larg cation of cool mater solutions such as odules, parametr	e equipment rials may not the use of ic façade and so	☐ Selected Option ☐ Complied
Tota	l fenestration a	reas (in m^2) =				
Tech	hnology or solut	ion used		Façade Area, ir	n m ²	
Elec	strochromic glas	s				
Para	ametric facade	voltale modules				
Othe	ers (pls state)					
(Sub	bject to BCA's c	learance)				
Tot	al fenestration	areas with inno	ovative solutions			
Perc	centage % of fer iirements	estration area the	at meet the			

Project Referent (II) Carbon R measures from RBE01-2 1 Air flow desigr a) Buildi Total devel (b) Dwell Total units devel (c) Comm Minim Toilet Lift Le Stairca Carpar Comm RBE01-3	nce No.: Reduction <u>a Part 2- S</u> Naturall n in the d ling Layou al nos. of u relopment ling Unit 1 nos. of s in the dopment mon Areas num two t rooms /b	Image: second system Image: second system	Select four (<u>onstruction</u>] Building Do Building Do Nos of unit prevailing v No. of unit red with effect ventilation g rooms areas designed	4) carbo esign es with wi wind dire s tive inlet a	GM n reduction indow openin ctions % distribu and outlet op bedrooms	I e-Filing No.: measures from 3 Pa ngs facing tion tion wenings to facilitate % distribution		a minimum of 2 Selected Option Complied Selected Option Complied
(II) Carbon R measures from RBE01-2	Reduction <u>a Part 2- S</u> Naturall n in the d ling Layou al nos. of u relopment ling Unit l nos. of s in the dopment mon Areas num two t rooms /b	Measures [: ustainable Co y Ventilated evelopment at design units in the design Units design good cross v No. of living s (2) common as athrooms of	Select four (onstruction] Building Do Nos of unit prevailing No. of unit No. of unit ed with effect rentilation g rooms	4) carbos esign es with wi wind dire s tive inlet a	n reduction indow openir ctions % distribu and outlet op bedrooms	measures from 3 Pa		a minimum of 2 Selected Option Complied Selected Option Complied
RBE01-2 Air flow desigr a) Buildi Tota devel (b) Dwell (c) Comm Minim Toilet Lift Lu Stairca Carpa Comm	Naturall n in the d ing Layou al nos. of u relopment ling Unit nos. of in the lopment mon Area: num two t rooms /b	y Ventilated evelopment at design units in the design Units design good cross v No. of living s (2) common a	Building Do	esign ts with wi wind dire s tive inlet a	andow openir ctions % distribu and outlet op bedrooms	ngs facing tion penings to facilitate % distribution		Selected Option Complied Selected Option Complied
Air flow design a) Buildi Tota devel (b) Dwell Total units devel (c) Comm Minim Toilet Lift Le Stairca Carpa Comm RBE01-3	n in the de ling Layou al nos. of u relopment ling Unit l nos. of s in the lopment mon Areas num two t rooms /b	evelopment at design units in the design Units design good cross v No. of living s (2) common at	Nos of unit prevailing No. of unit No. of unit	is with wi wind dire s tive inlet a	indow openin ctions % distribu and outlet op bedrooms	ngs facing tion benings to facilitate % distribution		Selected Option Complied Selected Option Complied
a) Buildi Tota deve (b) Dwell Total units devel (c) Comm Minim Toilet Lift Le Stairea Carpa Comm	ing Layou al nos. of u relopment ling Unit l nos. of s in the lopment mon Areau num two t rooms /b	tt design mits in the design Units design good cross v No. of living s (2) common a	Nos of unit prevailing No. of unit No. of unit	tive inlet	indow openir ctions % distribu and outlet op bedrooms	ngs facing tion beenings to facilitate % distribution		Selected Option Complied Selected Option Complied
(c) Comm Minim (c) Comm Minim Toilet Lift Lu Stairca Carpa Comm RBE01-3	al nos. of u relopment ling Unit l nos. of s in the dopment mon Areas num two t rooms /b	design Units design good cross v No. of living s (2) common a	Nos of unit prevailing No. of unit	tive inlet a	indow openir ctions % distribu and outlet op bedrooms	ngs facing tion penings to facilitate % distribution		Selected Option Complied Selected Option Complied
(b) Dwell Total units devel (c) Comm Minim Toilet Lift Lu Stairca Carpa Comm RBE01-3	ling Unit l nos. of s in the lopment mon Area: mum two t rooms /b	design Units design good cross v No. of living s (2) common a	No. of unit	s tive inlet a	% distribu	tion penings to facilitate % distribution		Selected Option Complied
(c) Comm Minim (c) Comm Minim Toilet Lift Lo Stairca Carpa Comm	ling Unit l nos. of s in the lopment mon Area: num two t rooms /b	design Units design good cross v No. of living s (2) common a	areas designed	ive inlet a	and outlet op bedrooms	penings to facilitate % distribution		Selected Option Complied
(b) Dwell Total units devel (c) Comm Minim Toilet Lift Lo Stairca Carpa Comm RBE01-3	ling Unit l nos. of s in the lopment mon Areas num two t rooms /b	design Units design good cross v No. of living s (2) common a	red with effect ventilation g rooms	ive inlet	and outlet op	eenings to facilitate % distribution		Selected Option Complied
(c) Comm Minim (c) Comm Minim Toilet Lift Lu Stairca Carpa Comm	ling Unit l nos. of s in the dopment mon Areas num two t rooms /b	design Units design good cross v No. of living s (2) common a	ed with effect ventilation g rooms	ive inlet a	and outlet op bedrooms	eenings to facilitate % distribution		Selected Option Complied
(c) Comm Minim Toilet Lift Lo Stairca Carpa Comm	l nos. of s in the lopment mon Area num two t rooms /b	Units design good cross v No. of living (2) common a	ed with effect ventilation g rooms	No. of l	and outlet op bedrooms	enings to facilitate % distribution		Selected Option Complied
(c) Comm Minim Toilet Lift Le Stairca Carpa Comm RBE01-3	non Area num two t rooms /b	s (2) common af	rentilation grooms	No. of	bedrooms	% distribution		Compileu
(c) Comm Minim Toilet Lift Lu Stairca Carpa Comm RBE01-3	non Area num two t rooms /b	s (2) common a	areas design	100.011			-	
(c) Comm Minim Toilet Lift Lu Stairca Carpa Comm RBE01-3	non Area num two t rooms /b	s (2) common a	areas design					
(c) Comm Minim Toilet Lift Le Stairca Carpa Comm RBE01-3	non Area num two t rooms /b	s (2) common a	areas designe					
	Lobbies an cases ark non facili Effectiv	ties re Daylightin	dwelling uni		at least 80%	o natural ventilation		Selected Option Complied
Daylighting de	esign in th	e developme	nt				Ē	Selected Option
a) Habita Daylig the des bedroo matrix	able Spac ghting pro esired ligh oms, livir x provideo	es: Dwelling ovision for 25 ting level of ng room, fami 1	unit design 5% of the tota DA _{2001x, 50%} i ily room and	al numbo n 60% o . study rc	er of resider f applicable oom) based	ntial units that meets e areas (namely on daylight availabi	lity	Complied
Total	l nos. of ur	nits in the deve	lopment					
Nos c	of units me	eets the desired	l lighting leve	1				

		Appendix 1
Project Reference No.:	GM e-Filing No.:	
(II) Carbon Reduction Measures [Select four (4 measures from Part 2- Sustainable Construction]	carbon reduction measures from 3 Parts inc	eluding a minimum of 2
 b) Non- Habitable Spaces: Common Areas Minimum two (2) common areas with at comply to this measures 	least 80% with provision of daylighting to	Selected Option Complied
Toilet rooms /bathrooms of dwelling unit	s	
Lift Lobbies and Corridors		
Staircases		
Carpark		
Common facilities		

				Appendix 1	
Project Referen	ce No.:		GM e-Filing No.:		
(II) Carbon Ro measures from l	eduction Measures [Select f Part 2- Sustainable Construct	four (4) carbon tion]	n reduction measures from 3 I	Parts including a minimum of	2
Part 2: Sustain	able Construction				
RBE02-1	Resource Efficiency Meas	sures			
Design and prac	tices that optimises resource	efficiency in	building construction		
(a) Existing str and/or adap	ructures with more than oted for reuse	of flo	or and / or wall areas are cons	served Selected Complie	Option d
(b) Design with	Concrete Usage Index (CUI) of not more	than 0.50	3208 (ASN)	
Conce	rete Volume in m ³ (A)			Selected Complie	Option d
Total	Constructed Floor Area in n	n ² (B)			
$\begin{array}{c} \text{Projec} \\ \text{C} = \text{A} \end{array}$	et Concrete Usage Index (CU /B	Л),			
(c) Embodied c	arbon reporting				
Submission concrete, ste	of report on upfront carbon of and glass used in the build	emissions of th ling developm	nree key construction material nent.	ls namely,	Option d
RBE02-2	Low Carbon Concrete				
Use of sustainal	ble materials for construction	1			
(a) Eco-fri □	endly cement used: Use of concrete (up to kg/m2 for 80% of supe	grade C50/60) erstructure wor) with clinker content of less t rks	chan 400 📄 Complie	Option d
or					
	SGBC– certified concrete fo	r 80% of the s	super-structural works		
(b) Aggreg copper (that is	gate replacement: Use of rec slag (WCS) from approved 1.5% x GFA for RCA and/o	ycled concrete sources that m or 0.75 x GFA	e aggregate (RCA) and/or was neet the minimum usage requi for WCS)	irement Complie	Option d
GFA =	m^2				
	Minimum usage requirement (tons) based on GFA	Tonnage used	Meet Minimum Usage (Yes/No)		
RCA us	sed				
WCS us Granite fines us	ed ed				

		Appendix 1
Project Reference No.:	GM e-Filing No.:	
(II) Carbon Reduction Measures [Select four (4 measures from Part 2- Sustainable Construction]	4) carbon reduction measures from 3 Parts includ	ing a minimum of 2
Part 2: Sustainable Construction		
(c) Alternative construction materials that ca building materials for non-structural app	an be used as a replacement for standard lication	Selected Option Complied
Materials used:	1	
Area of Application:		
□ Footpath		
Road Construction		
□ Concrete bench for parks		
D Pavement		
Others (please specify):		
RBE02-3 Sustainable Products		
Minimum provision of three (3) environmentally Environmental Product Declaration (EPD) require certification body for 80% of the applicable areas units	friendly products that are certified with ements or two-ticks rating by an approved local or building components in relation to dwelling	Selected Option Complied
(minimum 3 product categories for 80% of applicadwelling units)	able areas or building components in relation to	

			A	ppendix 1			
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(II) Carbon Reduction Measures [Select four (4) carbon reduction measures from 3 Parts including a minimum of 2 measures from Part 2- Sustainable Construction]							
Part 3: Sustainable Technologies							
RBE03-1	Renewable Energy System						
Encourage the u minimum capaci development. A suitable monit incorporated.	☐ Selected Option ☐ Complied						
Nos of resid	os of residential blocks, (a)						
Total Roof Area (b)							
Minimum co							
Total area coverage of Photovoltaic (PV) System installed (d)							
Total PV Sy	stem installed						
RBE03-2 Smart Technology Solution							
Provision of sma and reduce overa Energy timely i facility Energy Lifts wi Goccupa facilitie Octupa	☐ Selected Option ☐ Complied						

Appendix 1

Project Reference No.:

GM e-Filing No.:

SECTION III: ADDITIONAL INFORMATION

(I) Summary of Sustainable Products used in RB02-3

List of Sustainable Products

S/No.	Description of environmentally friendly products	Certification Type (EPD/SGBC 2 Ticks)	Applicable areas or building Components	Extent of Coverage (%)
1				
2				
3				
4				
5				

(minimum 3 product categories for 80% of applicable areas or building components)