BCA Green Mark Score Calculator

User Guide Version 1.0

SUMMARY OF DOCUMENTATION CHANGES

Version No	Date Revised	Summary of Changes
1.0.0	06 th July 2009	-

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1 Green Mark Score Calculator – Home Page







Notes.

- Clicking <u>*Home*</u> will show the home page
- Clicking <u>New Worksheet</u> will open the new work sheet section in a new window.
- Clicking <u>Open Worksheet</u> will open the Open Worksheet section in a new window.
- Clicking <u>RB Criteria (in PDF)</u> will open the PDF file containing the information about BCA Green Mark for Residential Building Version RB/3.0
- Clicking <u>NRB Criteria (in PDF)</u> will open the PDF file containing the information about BCA Green Mark for Non-Residential Building Version NRB/3.0
- Clicking Contact Us will show the Subject Matter along with Contact persons with contact details in a new window.

Clicking <u>Help</u> will open the User Guide for BCA Green Mark Score Calculator
 Please note that this website is **BEST VIEWED IN INTERNET EXPLORER VER 6.0 AND** 7.0;RESOLUTION:1024 BY 768;TEXT SIZE:MEDIUM

Please note that pop-ups from this website should be allowed in order to generate PDF files.

2 Residential Buildings (Version 3.0)

2.1. New Worksheet

File Ref							
	erence No.	Projec	t Description			_	
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0	0	0		0	0	0	Calcula
gy efficiency •	water Efficiency ~	Environmental Prote	ection V Indoor Environm	ental Quality V Ut	ner Green reatures V	Summary	Score
(3 × RET W/m²; №	V); Max Permissible F 1ax 15 points	RETV=25	key in RETV Value)	L		<u>×</u>	
RB 1-2 I Crite	welling Unit Indoo ria Info click here	r Comfort → Co	mpute Points	n design as in item ((a)(i) or item (a)(ii) res	nectively	
(u) 050 G	reen Mark Points A	vailable	Commentary Evidence Value Evidence	e / Points Score	Remarks	poontory	
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condi condi Energ	ly Labelling Scheme.						
condi condi Energ	n Mark Points : 2 Ticks	s – 2 points; 3					

• Clicking <u>New Worksheet</u> from the home page will open this page.

2.2. Open Worksheet

eccentrix areenmark Score Calculato	Singapore Government Integrity • Service • Excellence
Home Contact Us Help	
Sel	ect File Name Browse Import Existing Worksheet File
Terms of Use	© 2009 Building & Construction Authority. All Rights Reserved
	Building and Construction Authority We shape a safe, high quality, sustainable and friendly built environment.



- Clicking *Open Worksheet* from the home page will open this page.

2.3. RB Criteria (in PDF)



window from http://www.bca.gov.sg/GreenMark/others/gm_resiv3.pdf, this PDF file contains the information about BCA Green Mark for Residential Building Version RB/3.0

2.4. New Worksheet

me Green Mark Score Calculato New Worksheet Open Worksheet Export Worksheet Preview Worksheet	or - Contact U Residential I (Ver 3.0) Non Resider Criteria (Ver	s Help Building Criteria ntial Building * 3.0)	n			<	
Print Worksheet			▲ Hide			1	
Close		0	0		0	15	Calculat
RETV value Green Mark Points : Poin (3 × RETV); Max Permiss W/m ² ; Max 15 points	ts scored = 75 - iible RETV=25	2 W (key in R	/m ² ETV Value)	15		~ >	
RB 1-2 Dwellina Unit II	ndoor Comfort	Compute P	oints				
Criteria Info Click her (a) Use of better energy Green Mark Poir (i) For development v conditioners Use of er conditioners certified Energy Labelling Sche	re efficient air-cord its Available vith provision of a lergy efficient ar under the Singab ime.	itioners or good r Comm Va air- ore	natural ventilation desig entary Evidence / Ilue Evidence VV OVVV VVV N/A	n as in item (Points Scored O	(a)(i) or item (a)(ii) re: s Remarks d	spectively.	

- Hovering on <u>New Worksheet</u>, will display the criteria sections as sub menus, when click on any of these will open the page in new window.
- Initially, the page is loaded with all the sub sections under the section <u>Energy</u>
 <u>Efficiency.</u>

To view particular sub section

				▲ Hide			*	
27	0		0	C)	0	27	Calcula
Energy Efficiency 🔻	Water Effic	iency 🔻 Environme	ental Protection 🔻	Indoor Environme	ntal Quality 🔻	Other Green Features	7 Summar y	Score
All			Compute Dair	+-				
1–1 Building Envelo	pe – RETV	velope – RETV → vria	Compute Poir	its				
1-2 Dwelling Unit I	ndoor	ints Available	Comment	ary Evidence /	Points	Remarks		
1-3 Natural Ventila	tion in		2	, LAIGENCE	15		~	
Common Areas		Points scored = 75	5 -	W/m ²			1000	
1-4 Lighting		nissible RETV=25	(key in	RETV Value)				
1-5 Ventilation In	Carparks							
1-6 Lifts								
1-7 Energy Efficien	t Features	1						
1-8 Renewable Ene	rgy							
Reset								
Terms of Use					© 2009 Build	ina & Construction Authority	. All Rights Reser	ved
						,		
						Buil	ding and Constructio	n H Auth
						We shape a safe, high quality, su	stainable and trien	dly built environ

Upon clicking <u>1-1 Building Envelope – RETV</u> in <u>Energy Efficiency</u> section, will display the particular sub section alone. This can be done for all sections and sub sections.

Calculate Score & Compute Points:



- <u>Calculate Score</u> will calculate and show the GM score for all the sections

Summary Page:

File Refe	erence No.	Project Descripti	on		1000		
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			📥 Hide				
27	0	0	0	0		27	Calculat
rgy Efficiency 🔻	Water Efficiency⊽	Environmental Protection 🔻 I	ndoor Environmental Quality 🔻 Othe	r Green Featu	res 🔻 Sum	mary	Score
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cutegory rec					Allocated	Scored	1
(I) Energy R	elated Requiremen	ts					
Part 1: Energ	gy Efficiency						
RB 1-1 Buildin	g Envelope - RETV				15	15	
RB 1-2 Dwellir	ng Unit Indoor Comfo	rt			16	12	
RB 1-3 Natura	l Ventilation in Comm	on Areas			2	0	
RB 1-4 Lightin	g				15	0	
RB 1-5 Ventila	ition in Carparks				8	0	
RB 1-6 Lifts					2	0	
RB 1-7 Energy	Efficient Features				7	0	
Sub-Total fo	r Part 1 - For Item	s RB 1-1 to 1-7:			65	27	
Sub-Total fo	r Part 1 - For Item	s RB 1-1 to 1-7 (Max 50 point	(s):			27	
RB 1-8 Renew	able Energy <i>(Bonus P</i>	oints)			20	0	
Category Sco	ore for Part 1 - {Su	b-Total for Part 1 (Max 50 p	oints) Item RB 1-8(Bonus Points)};	(Min 30		27	

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Notes:

When clicked "Summary" will present the scores obtained in each sub category under a particular category.

Reset Score for RB

Before Reset:

02.	ce No.	Project D	Description				
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inergy Efficiency 🔻 ₩	ater Efficiency⊽ En	vironmental Protect	ion 🔻 Indoor Environm	ental Quality 🔻 (Other Green Features	▼ Summary	Sco
All		Compute	Pointe				
1-1 Building Envelope	- RETV Blope - R ja	ETV - Compare	Fonits				
1-2 Dwelling Unit Ind Comfort	oor nts Availa	able Comm V	alue Evidence /	Points Scored	Remarks		
1-3 Natural Ventilatio	n in		2	15		~	
1-4 Lighting	ints score issible RET	α = 75 - N=25 (ke	W/m² ey in RETV Value)			~	
1-5 Ventilation In Ca	rparks						
1–6 Lifts		<u> </u>					
1-7 Energy Effici <u>ent F</u>	eatures Indoor C	comfort 🔸 🔤 Com	pute Points				
	lere						
1-8 Renewable Energy	jy efficient	t air-conditioners or	good natural ventilatior	n design as in iten	n (a)(i) or item (a)(ii)	respectively.	
1-8 Renewable Energy Reset	yy efficient pints Ava	t air-conditioners or ilable C	good natural ventilatior ommentary Evidenc Value Evidence	n design as in iten e / Poin Scor	n (a)(i) or item (a)(ii) ts Remarks ed	respectively.	_
1-8 Renewable Energy Reset conditione conditione Energy La	veropment with prov srs Use of energy eff rs certified under th ubelling Scheme.	t air-conditioners or ilable C vision of air- ficient air- le Singapore	good natural ventilatior ommentary Evidence Value Evidence V V O VW • VV O N/A	n design as in iten e / Poin Scor 12	n (a)(i) or item (a)(ii) ts Remarks ed	respectively.	
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1-8 Renewable Energy Reset conditione conditione Energy La e: ms of Use	veropment with pro- rrs Use of energy efficient ers certified under th ibelling Scheme.	t air-conditioners or ilable C vision of air- ficient air- ie Singapore	good natural ventilatior ommentary Evidence Value Evidence V V V V VV N/A	n design as in iter e / Poin Scor 12	n (a)(i) or item (a)(ii) ts Remarks ed g & Construction Authorit	respectively.	ved
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I-8 Renewable Energy Reset Conditione Conditione Energy La e ms of Use	veropment with pro- ints Ava res Use of energy eff ars certified under th abelling Scheme.	t air-conditioners or ilable C vision of air- ficient air- e Singapore	good natural ventilation ommentary Evidence Value Evidence V V V V V V N/A	n design as in iter e / Poin Scor 12 © 2009 Buildin	n (a)(i) or item (a)(ii) ts Remarks ed g & Construction Authorit Bu	respectively.	ved n Aly built envir

After Reset:

	Residential Building Version RB/3.0	g Criteria			Sing Integ	apore G	overnmer e • Excellence
Home	Green Mark Score Calculator 👻	Contact Us Help					
	File Reference No.	Project De	scription			< >	
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	0 0	0)	0	0	Calculate
	RETV value Green Mark Points : Points scoi (3 x RETV); Max Permissible RL W/m ² ; Max 15 points	red = 75 - ETV=25 (key	W/m ² in RETV Value)	0		~	
	 RB 1-2 Dwelling Unit Indoor Criteria Info click here (a) Use of better energy efficie Green Mark Points Av (i) For development with pr conditioners Use of energy conditioners use of energy Energy Labelling Scheme. 	Comfort + Compu nt air-conditioners or g ailable Co ovision of air- fficient air- the Singapore	ite Points ood natural ventilation mmentary Evidence Value Evidence Value Solution Verification	design as in iter / Poir Scor 0	n (a)(i) or item (a)(ii) res I ts Remarks red	pectively.	
erms of L	Jse			© 2009 Buildin	ng & Construction Authority. A	ll Rights Reser	ved
				Ň	bunung Ve shape a safe, high quality, susta i	inable and friend	built environmen



After reset in **Energy Efficiency** section, the scores have been refreshed to zero.

2.4.1. Export Worksheet



- Wł
 - When clicked <u>**Export Worksheet**</u>, will open a download window showing the encrypted file name, which contains the input entered in project details and criteria section. This file can be saved in local system and can be opened / imported when needed using "Open Worksheet" feature.

2.4.2. Preview Worksheet

Residentia Version RB/3.0	I Building Criteria			Singapore Integrity • Ser	Government vice • Excellence
Home Green Mark Score (Calculator 🚽 Contact Us	Help			
File Reference N	0.	Project Description		< >	
15 Energy Efficiency⊽ Water	O File Down Efficiency En Do you	nload want to open or save this file?	-	0 15 Features⊽ Summary	Calculate Score
RB 1-1 Building Criteria Info Green Marl RETV value	Envelope – RI criteria « Points Availa	Name: RB_633806702704062500.pdf Type: Adobe Acrobat Document, 140 From: minds20 Open Save	KB Cancel	Remarks	A
Green Mark Point (3 x RETV); Max W/m ² ; Max 15 pc	is : Points scored Permissible RET pints	While files from the Internet can be useful, so harm your computer. If you do not trust the so save this file. <u>What's the risk?</u>	ime files can potentially surce, do not open or	\sim	
(a) Use of better Green Ma	click here energy efficient air-condition rk Points Available	oners or good natural ventilation desi Commentary Evidence / Value Evidence	gn as in item (a)(i) or ite Points Rema Scored	m (a)(ii) respectively. I rks	
(i) For develo conditioners U conditioners c Energy Labelli	pment with provision of air se of energy efficient air- ertified under the Singapor ng Scheme.	- ○ √√ ○ √√√ e ○ √√√√	0		
Terms of Use			© 2009 Building & Construction	on Authority. All Rights Res	served
				Building and Construc	tion Authority
			We shape a safe, hi	igh quality, sustainable and fri	endly built environment.

Notes:

- Upon clicking *Preview Worksheet* will generate the PDF file containing the project detail section inputs and criteria section inputs and outputs.

 Above shown window, contains the download window containing the PDF file for RB, which can be saved in the local system.

2.4.3. Print Worksheet

Residential Build	ling Criteria		Sin Inte	gapore G	overnment e • Excellence
Home Green Mark Score Calculator	👻 Contact Us Help				
New Worksheet	Project Decorin	tion			
Open Worksheet		uon		~	
Export Worksheet					
Preview Worksheet		A 184-		×.	
Drint Morksheat		Alide	0	0	
Liose Energy Efficiency V Water Efficience	U Environmental Protection V	U Indoor Environmental Quality 💌	U	Summary	Calculate
Criteria Info criteria Green Mark Points RETV value Green Mark Points : Points (3 x RETV); Max Permissik W/m ² ; Max 15 points RB 1-2 Dwelling Unit Info Criteria Info click here (a) Use of better energy e Green Mark Point (conditioners certified ur Energy Labelling Schem Green Mark Points : 2 1	Available scorpd = 75 le RATV=25 This will pr Compute P ficient air-conditioners or good n s Available th provision of air- rgy efficient air- der the lingapore ie. This will pr Compute P Compute	int your worksheet, do you wish to cor Yes No oints ntarural ventilation design as in its entary Evidence Po lue Evidence Sco V O VIII VIII O VIII O VIII O N/A	Remarks	spectively.	
Notes	s:		Build We shape a safe, high quality, sus t	ing and Constructior tainable and triend	Authority built environment

- Upon clicking <u>Print Worksheet</u> will ask for confirmation, whether to print the worksheet.
- When clicked 'yes', will then calculate the GM score to check whether it meets minimum requirement score or not.
- When clicked 'No', will cancel the print option.
- When clicked 'yes', the system check is shown below.

Green Mark Score Calculator 👻 C	ontact Us Help				
New Worksheet	Project Desc	ription			
Open Worksheet				~	
Export worksheet				122	
Print Worksheet		A Hide		×	
Close	0	0	0	0	
av Efficiency ▼ Water Efficiency ▼ Env	ironmental Protection	✓ Indoor Environmental Quality ⁵	✓ Other Green Features ▼	Summary	Score
RB 1-1 Building Envelope – RE Criteria Info Green Mark Poir (3 × RETV); Max W/m ² ; Max 15 p	T¥ → Compute Poi lark Score for Residential Bi Features (Part 1) and for	nts uilding Criteria (Ver 3.0) does not meet t Other Green Related Requirement (Part Yes No	he minimum requirement for Ene 2 to Part 5), do you like to proc	eed?	
RB 1-1 Building Envelope - RE Criteria Info Green Mar VBScript RETV value Green Mark Poir (3 × RETV); Max W/m ² ; Max 15 p RB 1-2 Dwelling Unit Indoor Co	TV + Compute Poi	nts uilding Criteria (Ver 3.0) does not meet t Other Green Related Requirement (Part Yes No Points	he minimum requirement for Ene 2 to Part 5), do you like to proc	eed?	
RB 1-1 Building Envelope - RE Criteria Info Green Mar VBScript RETV value Green Mark Poir (3 × RETV); Max W/m ² ; Max 15 p RB 1-2 Dwelling Unit Indoor Co Criteria Info click here	TV + Compute Poi lark Score for Residential B Features (Part 1) and for [umfort + Compute	nts uilding Criteria (Ver 3.0) does not meet t Other Green Related Requirement (Part Yes No Points	he minimum requirement for Ene 2 to Part 5), do you like to proc	eed?	
RB 1-1 Building Envelope - RE Criteria Info Green Mar VBScript RETV value Green Mark Poir (3 × RETV); May W/m ² ; Max 15 p RB 1-2 Dwelling Unit Indoor Co Criteria Info click here (a) Use of better energy efficient Green Mark Points Avail () For development with provi	TV + Compute Poi lark Score for Residential Bi Features (Part 1) and for (comport + Compute air-conditioners or goo able Com sion of air-	uilding Criteria (Ver 3.0) does not meet t Other Green Related Requirement (Part Yes No Points d natural ventilation design as in i mentary Evidence / P Value Evidence Sc ✓ ✓ ○ ✓ ✓	he minimum requirement for Ene 2 to Part 5), do you like to proc 2 to Part 5), do you like to proc o to Part 5 term (a)(i) or item (a)(ii) re o to to to 0	eed?	
RB 1-1 Building Envelope - RE Criteria Info Green Mar RETV value Green Mark Poir (3 × RETV); Max W/m ² ; Max 15 c RB 1-2 Dwelling Unit Indoor Co Criteria Info click here (a) Use of better energy efficient Green Mark Points Avail (i) For development with provi conditioners Use of energy efficient the Energy Labelling Scheme.	TV - Compute Poi lark Score for Residential Bi Features (Part 1) and for for for for for for for for	uilding Criteria (Ver 3.0) does not meet t Other Green Related Requirement (Part Yes No Points d natural ventilation design as in i mentary Evidence / P Value Evidence Se ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	he minimum requirement for Ene 2 to Part 5), do you like to proc itern (a)(i) or itern (a)(ii) re oints Remarks cored 0	ergy eed?	
RB 1-1 Building Envelope - RE Criteria Info Green Mark RETV value Green Mark Point (3 × RETV); Max W/m ² ; Max 15 p RB 1-2 Dwelling Unit Indoor Co Criteria Info click here (a) Use of better energy efficient . Green Mark Points Avail (i) For development with provi conditioners Use of energy effi- conditioners Use of energy effi- conditioners use of energy effi- conditioners certified under the Energy Labelling Scheme. Green Mark Points : 2 Ticks - 2	TY - Compute Poi lark Score for Residential Bi Features (Part 1) and for features (Part 1) and for Compute air-conditioners or goo able Com sion of air- cient air- Singapore (uilding Criteria (Ver 3.0) does not meet t Other Green Related Requirement (Part Yes No e Points d natural ventilation design as in i mentary Evidence / P Value Evidence So ✓✓✓ ✓ ✓✓ ✓✓✓ ● N/A	he minimum requirement for Ene 2 to Part 5), do you like to proc item (a)(i) or item (a)(ii) re oints Remarks cored 0	eed?	



Notes:

- This message describes that, the GM score in part 1 and part 2 to 5, does not meet minimum requirement, and has asked for the confirmation, whether to proceed printing the worksheet.
- Similarly, when part 1 score is < 30, then the message is prompted as "Green Mark Score for Residential Building Criteria (Ver. 3.0) does not meet the minimum requirement for Energy Efficient Features (Part 1), do you like to proceed?"
- Similarly, when part 2 to 5 score is < 20 then the message is prompted as "Green Mark Score for Residential Building Criteria (Ver. 3.0) does not meet the minimum requirement for Other Green Related Requirement (Part 2 to Part 5), do you like to proceed?"
- Whether both meet or do not meet the minimum requirement, system will generate the PDF file containing the project detail section inputs and criteria section inputs and outputs and opens the PDF file in a new window.

2.4.4. Close

Version RB/3.0 ome Green Mark Score Calculator - Co New Worksheet -	ntact Us Help	ription		V Integ	nty • Servic	e • Excellenc
Open Worksheet Export Worksheet Preview Worksheet					~	
Print Worksheet	0	Hide		0	27	1
ergy Efficiency 🔽 Water Efficiency 🔽 Envi	ronmental Protection	7 Indoor Environmental (Juality 🔽 Other G	u reen Features 🔽	Summary	Calculate Score
RB 1-1 Building Envelop: - RET Criteria Info criteria Green Mark Points Availab	•v → Compu le Com	en Mark Score Ca	lculator	Remarks		
RETV value Green Mark Points : Points stored (3 × RETV); Max Permissible RETV W/m ² ; Max 15 points	= 75 - =25 (Yes No	Cancel		~ ~	_
 RB 1-2 Dwelling Unit Indoor Con Criteria Info click here (a) Use of better energy efficient a Green Mark Points Availa (i) For development with pravis conditioners Use of energy effic conditioners certified under the Energy Labelling Scheme. 	nfort + Compute ir-conditioners or good ble Comp ion of air- ient air- Singapore (Points	n as in item (a)(i) Points Scored 12	or item (a)(ii) res Remarks	pectively.	
Green Mark Points : 2 Ticks – 2	points; 3					
erms of Use		Ø	2009 Building & Cons	truction Authority. A	II Rights Reserv	ed
Notes:			We shape a	Buildin safe, high quality, susta	g and Construction inable and friund	Authori built environme

- Upon clicking <u>Close</u> will ask for saving the worksheet
- When clicked <u>Yes</u>, will export the worksheet by encrypting the project details section and criteria section.
- When clicked <u>No</u>, will redirect the page to <u>Home Page</u>.
- When clicked <u>Cancel</u>, will not perform any action, which means that the user has cancelled the "close" process.

2.5. Open Worksheet

Greenmar Score Calco	k _{ulator}	Singapore Government Integrity • Service • Excellence
Home Contact Us Help		
	Select File Name	Browse
Terms of Use	© 2009	9 Building & Construction Authority, All Rights Reserved
Notes:		Building and Construction Authority We shape a safe, high quality, sustainable and friendly built environment.
 Upon clicking encrypted file 	Browse button will open the saved before, which is shown	file open dialog, to fetch the n below.



Select the encrypted file from the location saved and then click <u>Open.</u> Then click <u>Import Existing Worksheet File</u>, upon clicking the <u>Import Existing</u> <u>Worksheet File</u> button, will determine the criteria section and opens the corresponding page by retrieving the inputs entered and scores obtained. Further data can be entered and exported again.

After "Import Existing Worksheet File"

No. O r Efficiency⊽ Environ	Project Des	A Hide		2		
O r Efficiency⊽ Environ	0	▲ Hide		8		
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0 r Efficiency⊽ Enviro	0	n				
r Efficiency 🔻 Enviror		U		0	27	Calcu
	nmental Protection	▼ Indoor Environmental	Quality 🔽 Other	Green Features 🔻	Summary	Sco
ig Envelope – RETV o criteria irk Points Available	Compute Po Commen	ints tary Evidence (nints	Remarks		
	Valu	e Evidence S	cored	Kemarka		
	2		15		~	
nts : Points scored = x Permissible RFTV=2	75 - 25 (kevi	W/m ²			~	
points	- (KC) II					
g Unit Indoor Comf click here r energy efficient air- lark Points Availab lopment with provisio Use of energy efficien	fort → Comput conditioners or goo le Com n of air- ngapore	e Points od natural ventilation desi omentary Evidence / Value Evidence O VV O VVV To VVV O N/A	gn as in item (a)(i Points Scored 12	i) or item (a)(ii) resp Remarks	ectively.	
certified under the Si lling Scheme.						
certified under the Si lling Scheme. Points : 2 Ticks – 2 pc	pints; 3					
certified under the Si Iling Scheme. Points : 2 Ticks – 2 pc	pints; 3	(D 2009 Building & Co	nstruction Authority. All	l Rights Reserv	ed
	ag Envelope - RETY o criteria rk Points Available ints : Points scored = × Permissible RETV=2 points ag Unit Indoor Comf o click here er energy efficient air- fark Points Availab	ag Envelope – RETY + Compute Po o criteria rk Points Available Commen 2 ints : Points scored = 75 – × Permissible RETV=25 (key in points ag Unit Indoor Comfort + Compute o click here er energy efficient air-conditioners or goor fark Points Available Com	ag Envelope - RETV + Compute Points o criteria rk Points Available Commentary Evidence / Points rk Points Available Commentary Evidence S ints : Points scored = 75 - 2 2 ints : Points scored = 75 - W/m ² (key in RETV Value) points Compute Points Decick here ag Unit Indoor Comfort + Compute Points Compute Points b click here Commentary Evidence / Value /	ag Envelope - RETV + Compute Points o criteria rk Points Available Commentary Evidence / Points rk Points Available Commentary Evidence Scored 2 15 ints : Points scored = 75 - W/m ² x Permissible RETV=25 (key in RETV Value) points Compute Points ag Unit Indoor Comfort + Compute Points b click here Compute Points er energy efficient air-conditioners or good natural ventilation design as in item (a)(if fark Points Available Commentary Evidence / Points b click here Value Evidence Scored comment with provision of air- V 12	ag Envelope - RETV + Compute Points o criteria rk Points Available Commentary Evidence / Points Remarks value Evidence Scored 15 2 ints : Points scored = 75 - W/m ² 15 x Permissible RETV=25 W/m ² (key in RETV Value) points Compute Points 0 ag Unit Indoor Comfort + Compute Points 0 b click here Compute Points 0 er energy efficient air-conditioners or good natural ventilation design as in item (a)(i) or item (a)(ii) resp. Remarks fark Points Available Commentary Evidence / Points Value Evidence Scored 12	ag Envelope - RETY + Compute Points o criteria rk Points Available rk Points Available Commentary Evidence / Scored 2 15 Is a standard or composition of air- Compute Points Compute Points Remarks Remar

RB page opens by retrieving the inputs given and the scores obtained for those inputs

3 Non-Residential Buildings (Version 3.0)

3.1. New Worksheet

Non-Residential Building Criteria Version NRB/3.0		🌮 S	Singapore Governmen ntegrity • Service • Excellence
Home Green Mark Score Calculator 👻 Contact Us Help			
File Reference No.	Non-Residential Floor Area	Floor Area in m ²	% Floor Area
Project Description	Air-conditioned spaces	1000	50
	Non Air-conditioned spaces	1000	50
v	Total	2000	Next
A	Hide		
Terms of Use	© 2009 Build	ling & Construction Authori	ity. All Rights Reserved
		В	uilding and Construction Authority
		We shape a safe, high quality,	sustainable and triendly built environment



- Clicking <u>New Worksheet</u> from the home page will open this page.

3.2. Open Worksheet

Greenmark Score Calculator	Singapore Government Integrity • Service • Excellence
Home Contact Us Help	
Sele	ct File Name Browse Import Existing Worksheet File
Terms of Use	© 2009 Building & Construction Authority. All Rights Reserved
	Building and Construction Authority We shape a safe, high quality, sustainable and friendly built environment.

Notes:

- Clicking *Open Worksheet* from the home page will open this page.

3.3. NRB Criteria (in PDF)



3.4. New Worksheet

GREENMARK	Non-Residential Bu Version NRB/3.0	ilding Criteria		?	Singapore Governme Integrity • Service • Exceller
lome	Green Mark Score Calculator 👻	Contact Us Help			
File Ret	erence No.		Non-Residential Floor Area	Floor Area in m ²	% Floor Area
Project	Description		Air-conditioned spaces	1000	50
			Non Air-conditioned spaces	1000	50
			Total	2000	Next
			A Hide		
rms of l	ise		© 2009 Buili	ting & Construction Author	tity. All Rights Puserved wilding and Construction Auth sustainable and triendly built environ
	Notes:				

air-conditioned spaces and click <u>Next</u> will display the criteria section.

After clicking "Next"

Non-Residential Building Criteria				Sing Integ	apore G	overnme e • Excellen
iome Green Mark Score Calculator 👻 Contact Us Help						
File Reference No.		Non-Residential Floor Area	Floor Area in m	2 % Flo	or Area	
Project Description		Air-conditioned spaces	1000	50%		
		Non Air-conditioned spaces	1000	50%		
	~	Total	2000m ²		Edit F	oor Area
	A Hid	le			,	
0 0 0		0	0	1	0	Calculat
Green Mark Points Available TTV value Prem Mark Points : Points scored = 100 - (2 × ETTV); Maximum Permissible ETTV=50 W/m ² ; Max 15 points	Con Ev Valu (key ir	nmentary vidence / w/m ² n ETTV Value)	Points Scored O	R	emarks	<
IRB 1-2 Air-Conditioning System → Compute Points Criteria Info click here Green Mark Points Available	C I Va	ommentary Evidence / lue Evidence	Points Scored	Re	emarks	
Note : Where there is a combination of centralized air-con syste system with the larger aggregate capacit	≀m with u ty - centr	nitary air-con system alized air-con system	, the computation is or unitary air-con s	r based on t rystem.	he air-condi	tioning
 a)(i) Air-Conditioned Plant (Max 20 points) % improvement in equipment efficiency for chiller and pumps 1.45 points for every percentage improvement) 	⊙ (ir	0 (key in % of nprovement)	0			~
& improvement in equipment performance for cooling tower 0.05 points for every percentage improvement)	(ir	0 (key in % of nprovement)				
			•			



Notes:

- While clicking "Next", system checks for air-conditioned and non-air conditioned spaces for displaying the sub-section from (1-1 to 1-4) in the section "Energy Efficiency".
- When air-conditioned spaces input is >=500 m² and non-air conditioned spaces is >= 10%, then the subsection (1-1 to 1-4) gets enabled.
- When air-conditioned spaces input is >=500 m² and non-air conditioned spaces is < 10%, then the subsection (1-1 & 1-2) gets enabled, subsection (1-3 & 1-4) gets disabled.
- When air-conditioned spaces input is < 500 m² and non-air conditioned spaces is >= 10%, then the subsection (1-1 & 1-2) gets disabled, subsection (1-3 & 1-4) gets enabled.
- When air-conditioned spaces input is < 500 m² and non-air conditioned spaces is < 10%, then the subsection (1-1 & 1-2) gets disabled, subsection (1-3 & 1-4) gets disabled.

To view particular sub section

file Reference No.				P	lon-Residential Floor Area	Floor Area in	n m ² % Flo	or Area	
Project Description				A	Air-conditioned paces	1000	50%		
				N	Ion Air-conditioned paces	1000	50%		
					Fotal	2000m ²		Edit F	oor Area
				📥 Hide					_
7.5	0		0		0		0	7.5	Calculat
ficiency Labelling Schem	ne (WELS).			Rating					
		WELS Rating Total No. of Fittings (A)	Excellent 0	Very Good	Good N	o Approved Rating			~
		WELS Rating Total No. of Fittings (A) Weightage (B)	Excellent 0 8	Very Good	Good N 0 4	o Approved Rating 0			~
		WELS Rating Total No. of Fittings (A) Weightage (B) Total	Excellent	Very Good 0 6 0	Good N 0 4 0	o Approved Rating 0 0 0			×
ireen Mark Points : Max	8 points.	WELS Rating Total No. of Fittings (A) Weightage (B) Total	Excellent 0 8 0	Very Good 0 6 0	Good N 0 4 0 0	o Approved Rating 0 0 0 Compute			>
ireen Mark Points : Max	8 points.	WELS Rating Total No. of Fittings (A) Weightage (B) Total	Excellent 0 0	Very Good 6 0	Good N 0 0 4 0 0 0	o Approved Rating 0 0 Compute			×
reen Mark Points : Max	8 points.	WELS Rating Total No. of Fittings (A) Weightage (B) Total	Excellent 0 0 0	Yery Good 6 0	Good N 0 4 0 0	o Approved Rating 0 0 Compute			×



Notes:

Upon clicking NRB <u>2-1 Water Efficient Fittings</u> in <u>Water Efficiency</u> section, will display the particular sub section alone. This can be done for all sections and sub sections.

Calculate Score & Compute Points:

File Reference No.	Non-Residential	Floor Area in m ²	% Floor Area
Project Description	Air-conditioned	1000	50%
	Non Air-conditioned spaces	1000	50%
	Total	2000m ²	Edit Floor Area
	📥 Hide		
7.5 0 0	0	0	7.5 Calcula
Green Mark Points Available ITV value reen Mark Points : Points scored = 100 - (2 × ETTV) Maxim ermissible ETTV=50 W/m ² ; Max 15 points	Commentary Evidence / Value Evidence 2 w/m ² (key in ETTV Value)	Points Scored 15	Remarks
RB 1-2 Air-Conditioning System Compute Points Criteria Info click here Green Mark Points Available Note : Where there is a combination of centralized air-con	Commentary Evidence / Value Evidence system with unitary air-con system	Points Scored	Remarks
system with the larger aggregate ca a)(i) Air-Conditioned Plant (Max 20 points) is improvement in equipment efficiency for cliller and pumps 1.45 points for every percentage improvement)	(key in % of improvement)	n or unitay, air-con sys	tem.
improvement in equipment performance for cooling tower 0.05 points for every percentage improvement)	(key in % p		
	improventinc)		



Notes:

- Will have all the scores blank and can input values in Energy Efficiency, Water Efficiency, Environmental Protection, Indoor Environmental Quality, Other Green Features and can calculate GM Score by using <u>Compute Points</u> and / or <u>Calculate Score</u> buttor.
- <u>Compute Points with</u> calculate and show the GM score only for that particular section
- <u>Calculate Score</u> will calculate and show the GM score for all the sections

Summary Page:

e Reference No.				Non-Residential Floor Area	Floor Area in m ²	% Floor	Area	
oject Descriptior	n			Air-conditioned	1000	50%		
			<u>~</u>	Non Air-conditioned	1000	50%		
			×	Total	2000m ²		Edit Flo	or Area
			🔺 Hi	de	1			
12.5	0	0		0	0		12.5	Calcula
rgy Efficiency 🔻	Water Efficiency 🔻 E	nvironmental Protection	▼ Indoo	r Environmental Qualit	y 🔻 Other Green Fo	atures 🔻 🛛 Su	mmary	Score
Category Iten	ns					Allocated	Score	ed l
(I) Energy Re	lated Requirements	10					5101	
Part 1: Energy	v Efficiency							
NRB 1-1 Buildin	a Envelope - ETTV					15	15	
NRB 1-2 Air Co	nditioning System					27	10	
Sub-Total (A)	- For Items NRB 1-	1 to 1-2:				42	25	
Prorate Sub-1	Fotal(A):						12.	5
Prorate Sub-T NRB 1-3 Buildin	Fotal(A): 1a Envelope - Desian/1	hermal Parameters				29	12.9	5
Prorate Sub-T NRB 1-3 Buildin NRB 1-4 Natura	F otal(A): 1g Envelope - Design/1 11 Ventilation (exclude	hermal Parameters carparks)				29 13	12. 0	5
Prorate Sub-1 NRB 1-3 Buildin NRB 1-4 Natura Sub-Total (B)	Fotal(A): ig Envelope - Design/1 il Ventilation (exclude - For Items NRB 1-	hermal Parameters carparks) 3 to 1-4:				29 13 42	12. 0 0	5
Prorate Sub-T NRB 1-3 Buildin NRB 1-4 Natura Sub-Total (B) Prorate Sub-T	Fotal(A): Ig Envelope - Design/J I Ventilation (exclude - For Items NRB 1- Fotal (B):	hermal Parameters carparks) 3 to 1-4:				29 13 42	12.! 0 0 0	5
Prorate Sub-T NRB 1-3 Buildin NRB 1-4 Natura Sub-Total (B) Prorate Sub-T NRB 1-5 Artifici	Fotal(A): Ing Envelope - Design/1 In Ventilation (exclude - For Items NRB 1- Fotal (B): al Lighting	hermal Parameters carparks) 3 to 1-4:				29 13 42	12.: 0 0 0 0	5
Prorate Sub-T NRB 1-3 Buildin NRB 1-4 Natura Sub-Total (B) Prorate Sub-T NRB 1-5 Artifici	rotal(A): ng Envelope - Design/1 I Ventilation (exclude - For Items NRB 1- Fotal (B): al Lighting ation in Carparks	hermal Parameters carparks) 3 to 1-4:				29 13 42 12	12. 0 0 0 0	5
Prorate Sub-T NRB 1-3 Buildin NRB 1-4 Natura Sub-Total (B) Prorate Sub-T NRB 1-5 Artifici NRB 1-6 Ventila NRB 1-7 Ventila	rotal(A): ng Envelope - Design/1 I Ventilation (exclude - For Items NRB 1- rotal (B): al Lighting ation in Carparks ation in Carparks	hermal Parameters carparks) 3 to 1-4:				29 13 42 12 5 5	12.5 0 0 0 0 0 0 0	5
Prorate Sub-T NRB 1-3 Buildin NRB 1-4 Natura Sub-Total (B) Prorate Sub-T NRB 1-5 Artifici NRB 1-6 Ventila NRB 1-7 Ventila NRB 1-8 Lifts ar	Total(A): Ing Envelope - Design/1 Ventilation (exclude - For Items NRB 1- Total (B): al Lighting ation in Carparks ation in Common Area nd Escalators	hermal Parameters carparks) 3 to 1-4: 5				29 13 42 12 5 5 3	12. 0 0 0 0 0 0 0 0 0 0 0	5
Prorate Sub-T NRB 1-3 Buildin NRB 1-4 Natura Sub-Total (B) Prorate Sub-T NRB 1-5 Artifici NRB 1-6 Ventila NRB 1-7 Ventila NRB 1-8 Lifts ar NRB 1-9 Energy	Total(A): Ing Envelope - Design/1 I Ventilation (exclude - For Items NRB 1- Total (B): al Lighting ation in Carparks ation in Carparks ation in Common Area nd Escalators y Efficient Practices & I	Thermal Parameters carparks) 3 to 1-4: 5 5 Features				29 13 42 12 5 5 3 12	12. 0 0 0 0 0 0 0 0 0 0 0 0	5
Prorate Sub-T NRB 1-3 Buildin NRB 1-4 Natura Sub-Total (B) Prorate Sub-T NRB 1-5 Artifici NRB 1-6 Ventila NRB 1-7 Ventila NRB 1-9 Energy Sub-Total (C)	Total(A): Ing Envelope - Design/1 I Ventilation (exclude - For Items NRB 1- Total (B): al Lighting ation in Carparks ation in Carparks ation in Common Area nd Escalators y Efficient Practices & I - For Items NRB 1-	Thermal Parameters carparks) 3 to 1-4: s 5 5 5 5 to 1-9:				29 13 42 12 5 5 3 12 37	12. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5
Prorate Sub-T NRB 1-3 Buildin NRB 1-4 Natura Sub-Total (B) Prorate Sub-T NRB 1-5 Artifici NRB 1-6 Ventila NRB 1-8 Lifts ar NRB 1-9 Energy Sub-Total (C)	Total(A): Ing Envelope - Design/1 I Ventilation (exclude - For Items NRB 1- Total (B): al Lighting ation in Carparks ation in Common Area and Escalators y Efficient Practices & I - For Items NRB 1- Part 1 - Prorate Su	hermal Parameters carparks) 3 to 1-4: 5 5 5 6 5 to 1-9: b-Total (A) + Prorate	Sub-Tot	al (B) + Sub-Total(C):	29 13 42 12 5 5 3 12 37 79	12.: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Prorate Sub-T NRB 1-3 Buildin NRB 1-4 Natura Sub-Total (B) Prorate Sub-T NRB 1-5 Artifici NRB 1-6 Ventila NRB 1-7 Ventila NRB 1-7 Ventila NRB 1-8 Lifts ar NRB 1-9 Energy Sub-Total (C) Sub-Total for	Total(A): Ing Envelope - Design/T I Ventilation (exclude - For Items NRB 1- Fotal (B): al Lighting ation in Carparks ation in Carparks ation in Common Area nd Escalators y Efficient Practices & I - For Items NRB 1- Part 1 - Prorate Su Part 1 - Prorate Su	hermal Parameters carparks) 3 to 1-4: 5 5 6 6 7 6 7 6 7 7 6 7 7 7 7 7 7 7 7 7	Sub-Tot Sub-Tot	al (B) + Sub-Total(C al (B) + Sub-Total(C):); (Max 50 points)	29 13 42 12 5 5 3 12 37 79	12.: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5
Prorate Sub-T NRB 1-3 Buildin NRB 1-4 Natura Sub-Total (B) Prorate Sub-T NRB 1-5 Artifici NRB 1-6 Ventila NRB 1-7 Ventila NRB 1-8 Lifts ar NRB 1-9 Energy Sub-Total for Sub-Total for Sub-Total for	Total(A): Ing Envelope - Design/T I Ventilation (exclude - For Items NRB 1- Fotal (B): al Lighting ation in Carparks ation in Carparks ation in Common Area Ind Escalators y Efficient Practices & I - For Items NRB 1- Part 1 - Prorate Su Wable Energy (Bonus (Bonus)	hermal Parameters carparks) 3 to 1-4: 5 5 5 5 5 5 5 to 1-9: 5 5 to 1-2 5 5 to 1-2 5 5 5 to 1-2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Sub-Tot Sub-Tot	al (B) + Sub-Total(C al (B) + Sub-Total(C):); (Max 50 points)	29 13 42 12 5 5 5 3 12 79 79 20	12.! 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 5 5



Notes:

When clicked "summary" will present the scores obtained in each sub category under a particular category.

Reset Score for NRB

Before Reset:



Upon clicking <u>**Reset**</u> in <u>**Energy Efficiency**</u> section, will reset all the inputs and outputs produced in the corresponding section and also the <u>**Top Score**</u> obtained for the corresponding section, which is also shown below. All the sections has got <u>**Reset**</u> to reset their corresponding sections.

After Reset:

File Reference No.			1	Non-Residential Floor Area	Floor Area	in m ²	% Flo	or Area	
Project Description			·	Air-conditioned	1000		50%		
				Non Air-conditioned	1000		50%		
			<u></u>	Fotal	2000m ²			Edit F	loor Area
			🔺 Hide	1					
0	0	0		0		0		0	Calcula
ergy Efficiency 🔻 ¥	Vater Efficiency∨ E	nvironmental Protecti	on V Indoor E EVI	nvironmental Quali Tence /	ty V Uther Gr Scored	een Featu	ures 🗸	Summary	Score
TTV uslus			Value	Evidence	0	-			
CLU VAILLE			0		U				1
14 10/00			lo.	W/m ⁺					
reen Mark Points : I	Points scored = 100	- (2 x ETTV); Maximul	יסן m (keyin	W/m² ETTV Value)					
reen Mark Points : I ermissible ETTV=50 RB 1-2 Air-Condit Criteria Info dick	Points scored = 100 W/m ² ; Max 15 poin ioning System →	- (2 x ETTV); Maximui ts Compute Points	77 (keyin	W/m² ETTV Value)					~
reen Mark Points : I ermissible ETTV=50 RB 1-2 Air-Condit Criteria Info click Gi Note : Where ther	Points scored = 100 W/m ² ; Max 15 poin ioning System + there reen Mark Points 4 re is a combination o system with the	- (2 x ETTV); Maximul ts Compute Points Available f centralized air-con s a larger aggregate cap	n (key in co Co vstem with un acity - centrai	W/m ² ETTV Value) mmentary vidence / ue Evidence itary air-con system lized air-con system	Points Scored o, the computat or unitary air-	tion is ba- con syste	Re sed on th em.	marks	itioning
ireen Mark Points : I ermissible ETTV=50 IRB 1-2 Air-Condit Criteria Info dick Gu Note : Where ther a)(1) Air-Conditione improvement in ec 1.45 points for every	Points scored = 100 W/m ² ; Max 15 poin ioning System + there reen Mark Points # re is a combination o system with the d Plant (Max 20 poir quipment efficiency f / percentage improv	- (2 x ETTV); Maximus ts Compute Points Available f centralized air-con s a larger aggregate cap of chiller and pumps ement)	n (key in Co Et Yalu vstem with un acity - central (k im	W/m ² ETTV Value) widence / ie Evidence itary air-con system ized air-con system 0 or in % of provement)	Points Scored In the computation or unitary air- O	tion is ba: con syste	Re sed on tl em.	marks	tioning
reen Mark Points : I ermissible ETTV=50 RB 1-2 Air-Condit Criteria Info click Gr Note : Where ther a)(i) Air-Conditione improvement in ec 1.45 points for every improvement in ec 0.05 points for every	Points scored = 100 W/m ² ; Max 15 poin ioning System + chere reen Mark Points <i>I</i> reen Mark Points <i>I</i> reen Mark Points <i>I</i> reen Mark Points <i>I</i> recentation of <i>system with the</i> d Plant (Max 20 poin quipment efficiency f <i>percentage improv</i> <i>quipment performance</i> <i>percentage improv</i>	- (2 x ETTV); Maximus ts Compute Points wailable f centralized air-con s a larger aggregate cap wts) or chiller and pumps ement) ce for cooling tower ement)	n (key in Co E Valt vstern with un acity - centrai (k imj (k	W/m ² ETTV Value) mmentary vidence / ise Evidence itary air-con system ized air-con system 0 ey in % of provement) 0 ey in % of provement)	Points Scored o, the computat or unitary air- 0	tion is ba. .con syste	Re sed on tl em.	marks	itioning

Notes:

After reset in <u>Energy Efficiency</u> section, the scores have been refreshed to zero.

Open worksneet		Non-Residential		2 9/0	Floor Area	
Export Worksheet		Floor Area Air-conditioned				
Preview/Morksheet		spaces	1000	504	%0	
		Non Air-conditioned spaces	1000	509	%	
Cluse		Total	2000m ²		Edit Fl	oor Area
	File Download					
12.5 0				0	12.5	Calcula
ergy Efficiency▼ Water Eff ciency▼ En	Do you want to open or	save this file?		n Features 🤊	⁷ Summary	Score
Criteria Info click here	Name: 63380	06888011562500.Encrypt				
Green Mark Points Ava	Type: Unkno	own File Type			Remarks	
TV value	From: minds	20				~
een Mark Points ' Points scored = 100 -		Open Save	Cancel			
ermissible ETTV=50 W/m ² ; Max 15 points						~
VB 1-2 Air-Conditioning System + Criteria Info click here Green Mark Points Av Note : Where there is a combination of c	While files from the harm your compute save this file. What entralized air-con system	Internet can be useful, some files r. If you do not trust the source, d <u>(s the risk?</u> ance concernence with unitary air-con system	can potentially o not open or , the computatio	on is based o	Remarks	itioning
system with the la	arger aggregate capacity ·	- centralized air-con system	or unitary air-c	on system.		
)(i) Air-Conditioned Plant (Ma) 20 points, improvement in equipment efficiency for .45 points for every percentage improven) chiller and pumps ment)	 (key in % of improvement) 	7.5			< >
improvement in equipment perprmance .05 points for every percentage mproven	for cooling tower nent)	5 (key in % of improvement)				
Representative and a statistical sector and the sector			122/20			





Notes:

When clicked *Export Worksheet*, will open a download window showing the encrypted file name, which contains the input entered in project details and criteria section. This file can be saved in local system and can be opened / imported when needed.

3.4.2. Preview Worksheet

File Reference No.			Non-Residential Floor Area	Floor Area	in m ²	% Flo	or Area	
Project Description			Air-conditioned	1000		50%		
			Non Air-conditioned spaces	1000		50%		
			≚ Total	2000m ²	2		Edit Fl	oor Area
		File Download						7
12.5 Energy Efficiency ▼ 1	0 Water Efficiency⊽ En NVEIODE - ETTV →	Do you want to open or sa	ave this file?		0 n Featu	ures 🔻	12.5 Summary	Calculate Score
Criteria Info did Gre ETTV value Green Mark Points : .	chere en Mark Points Ava Points scored = 100 -	Name: NRB_63: Type: Adobe A From: minds20	3806890511250000.pdf crobat Document, 158 KB Dpen Save	Cancel		Re	emarks	
NRB 1-2 Air-Condit Criteria Info clicl Gi	tioning System +	While files from the In harm your computer. I save this file. <u>What's</u>	ternet can be useful, some files f you do not trust the source, do <u>the risk?</u>	can potentially o not open or	_	Re	marks	
Note : Where the	re is a combination of system with the	centralized air-con system wi arger aggregate capacity - c	entralized air-con system	, the computat or unitary air-	tion is ba. con syste	sed on th em.	ie air-condi	tioning
(a)(i) Air-Conditione % improvement in e (1.45 points for ever	ed Plant (Max 20 point: quipment efficiency for v percentage improver	:) • chiller and pumps ment)		7.5				~
% improvement in e (0.05 points for ever	quipment performance v percentage improve	for cooling tower ment)	5 (key in % of improvement)					
(a)(ii)Air Distribut	ion System		5	2.5				



Notes:

- Upon clicking <u>Preview Worksheet</u> will generate the PDF file containing the project detail section inputs and criteria section inputs and outputs.
- Above shown window, contains the download window containing the PDF file for NRB, which can be saved in the local system.

To turn on "pop-up blocker" (so as to allow Print worksheet)

	reen Mar	k e-Pl	anning	Portal	- Microsoft	nterr	net Exploi	er								
File	Edit Vie	ew F	avorites	Tools	Help		_									
G	Back 🝷	Θ	- 🗙	Mail Pop-	and News -up Blocker	•	h Turn Or	Pop-up B	Blocker		R	W	•		3	
Addre	ss 🙆 http	p://ww	w.bca.gov	Man Sync Wind	age Add-ons thronize tows Undate		Pop-up	Blocker Se	ettings PA							
	V	Ť	Resi Version	Sun	Java Console		riteria	1								
	Hom	e	Green M	Rese Inter	et Web Settings rnet Options		Contact	Us H	lelp							
			File Ref	erence	No.			Project	Descrip	otion						
										▲ Hie	le					
		2	7		0			0		▲ Hic	le	0)			
	Ener	2 gy Efi	7 ficiency `	▼ Wat	0 er Efficiency	Env	vironment	0 al Prote	ction 🔻	▲ Hie Indoor	le • Enviro	C) ental	Quality		Other

3.4.3. Print Worksheet

New Worksheet									
File Re Export Worksheet			Non-Residential Floor Area	Floor Area in m ²	% Floo	or Area			
Preview Worksheet					Air-conditioned spaces	1000	50%		
Print Worksheet					Non Air-conditioned spaces	1000	50%		
			Total	2000m ²		Edit Fl	oor Area		
		🔺 Hid	e				-		
12.5	0		0	0		12.5	Calcula		
Green Mark Points Availab TV value reen Mark Points : Points score(= 100 - (2 x	VBScript	Con vill print your v	nmentary worksheet, do you wish to	points d continue?	Re	emarks	~		
ermissible ETTV=50 W/m ² ; Max 5 points			-				×.		
Criteria Info click here Green Mark Ponts Availa	able	Co	No No	Points Scored	Rei	marks			
RB 1-2 AIF-Londitioning System + Con Criteria Info click here Green Mark Points Availa Note : Where there is a combination of cent system with the large	m <mark>i</mark> a ble ralized air-con sys er aggregate capad	Tes Co Val item with ur city - centra	No mmentary vidence / ue Evidence hitary air-con system, alized air-con system	Points Scored , the computation is or unitary air-con s	Rei based on the ystem.	marks e air-condii	tioning		
KB 1-2 AIF-Conditioning system + Conditioning System + Criteria Info click here Green Mark Points Availa Note : Where there is a combination of cent system with the large (i) Air-Conditioned Plant (Max 20 points) improvement in equipment efficiency for chi .45 points for every percentage implovement	ni able ralized air-con sys er aggregate capad ller and pumps t)	Cc E Val tem with city - centra ((im	No pommentary vidence / ue Evidence nitary air-con system, litzed air-con system 5 key in % of pprovement)	Points Scored the computation is or unitary air-con s 7.5	Rei based on the ystem.	marks e air-condi	tioning		
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Notes:

- Upon clicking <u>Print Worksheet</u> will ask for confirmation, whether to print the worksheet.
- When clicked 'yes', will then calculate the GM score to check whether it does not meet minimum requirement score.
- When clicked 'No', will cancel the print option.
- When clicked 'yes', the system check is shown below.

Home Green Mark Score Calculator					
New Worksheet	•				
Open Worksheet File Re Export Worksheet		Non-Residential Floor Area	Floor Area in m ²	% Floor Area	
Projec Preview Worksheet		Air-conditioned spaces	1000	50%	
Print Worksheet		Non Air-conditioned spaces	1000	50%	
0.036		Total	2000m ²	Edit F	loor Area
		📥 Hide			
12.5 0	0	0	0	12.5	Calculate
Energy Efficiency 🔻 Water Efficiency	Environmental Protection	Indoor Environmental Quali	ty 🔻 Other Green Fea	tures 🔻 Summary	Score
NKD 1-1 DURUNY ERVERUPE - ETT	• •				^
Green Mark Point	s Available	Commentary	Points	Remarks	
Green Mark Points : Poi Permissible ETTV=50 W	een Mark Score for Non-Residential icient Features (Part 1) and for Oth	Building Criteria (Ver 3.0) does not n er Green Related Requirement (Part Yes No	reet the minimum requirem : 2 to Part 5), do you like ti	ent for Energy o proceed?	~
Green Mark Poir	nts Available	Commentary Evidence / Value Evidence	Points Scored	Remarks	
Note : Where there is a combinati system wit	on of centralized air-con syste h the larger aggregate capacit	m with unitary air-con system y - centralized air-con system	, the computation is b or unitary air-con sys	ased on the air-condi tem.	tioning
(a)(i) Air-Conditioned Plant (Max 20 % improvement in equipment efficier (1.45 points for every percentage imp	points) icy for chiller and pumps provement)		7.5		~
% improvement in equipment perform (0.05 points for every percentage im,	mance for cooling tower provement)	5 (key in % of improvement)			
(a)(ii)Air Distribution System % improvement in efficiency of air di	stribution System	5	2.5		~
Terms of Use		© 2009	Building & Construction A	uthority. All Rights Reser	ved



Notes:

- This message describes that, the GM score in part 1 and part 2 to 5, does not meet minimum requirement, and has asked for the confirmation, whether to proceed printing the worksheet.
- Similarly, when part 1 score is < 30, then the message is prompted as "Green Mark Score for Residential Building Criteria (Ver 3.0) does not meet the minimum requirement for Energy Efficient Features (Part 1), do you like to proceed?"
- Similarly, when part 2 to 5 score is < 20 then the message is prompted as "Green Mark Score for Residential Building Criteria (Ver 3.0) does not meet the minimum requirement for Other Green Related Requirement (Part 2 to Part 5), do you like to proceed?"
- Whether both meet the minimum requirement or not, system will generate the PDF file containing the project detail section inputs and criteria section inputs and outputs and opens the PDF file in a new window.

3.4.4. Close

ome Green Ma New Works	rk Score Calcu theet	lator 🚽 C	Contact Us	ныр							
Open Work	(sheet rksheet	J624	4-001c			Non-Residential Floor Area	Floor Area	in m ²	% Floo	or Area	
Projec Preview Wo	orksheet					Air-conditioned	1000		90.919	%o	
part bl <mark>o)</mark>	-kaat	(i es	(unable to print- eset 2 export prev			Non Air-conditioned	100		9.09%	_	
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					📥 Hide						
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Criteria Info c C	g Envelope - lick here Green Mark I	- ETTV → L Points Ava	Compute P	Do you	ı want to	o save your Work	sheet?	Г	Re	emarks	~
Criteria Info c C TTV value reen Mark Points ermissible ETTV=	g Envelope - slick here Green Mark - : Points stor :50 W/m ² ; M	- ETTV → Points Ava ed = 100 - x 15 points	Compute P iilable (2 × ETTV); M	Do you	y want to Yes	o save your Work	isheet?		Re	emarks	< >
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Criteria Info c CTTV value reen Mark Points ermissible ETTV= RB 1-2 Air-Con Criteria Info c Note : Where t Note : Where t a)(i) Air-Conditio improvement ir .45 points for ev	g Envelope - Jick here Sreen Mark : : Points sion :50 W/m ²) % ditioning Sy dick here Green Mar here is a com syste sined Plant (M equipment e very percenta	- ETTY + Points Ava red = 100 - ax 15 points stem + c Points Av bination of of in with the l ax 20 points diciency for gr improver	Compute P ilable (2 × ETTV); M Compute Poi vailable centralized air larger aggreg. s) r chiller and pr ment)	Do you axit nts -con system -con system -con system -con system -con system	Yes Co Yes Valu n with un c - central (k im	Mo Co mmentary vidence / itery air-con system lized air-con system lized air-con system itery in % of provement)	Points Scored n, the computa n or unitary air 15	tion is ba	Re Re sed on th em.	emarks marks	tioning



- Upon clicking <u>Close</u> will ask for saving the worksheet When clicked <u>Yes, will export the worksheet by encrypting the project details</u>
- section and criteria section.
- When clicked <u>*No,*</u> will redirect the page to <u>*Home Page*</u>. _
- When clicked *Cancel,* will not perform any action, which means that the user _ has cancelled the "close" process.

3.5. Open Worksheet

Open worksheet page will be opened in a new window.

REACHENMARK Gre	Score Calculator	Singapore Government Integrity • Service • Excellence
Home Contact Us	Help	
	Select File Name Browse Import Existing Worksheet File	
Terms of Use	© 2009 Building & Ca	nstruction Authority. All Rights Reserved
	We shap	Building and Construction Authority a safe, high quality, sustainable and triandly built environment.

 Upon clicking <u>Browse</u> button will open the file open dialog, to fetch the encrypted file saved before. This is shown below.



Select the encrypted file from the location saved and then click <u>Open.</u> Then click <u>Import Existing Worksheet File</u>, upon clicking the <u>Import Existing</u> <u>Worksheet File</u> button, will determine the criteria section and opens the corresponding page by retrieving the inputs entered and scores obtained. Further data can be entered and exported again.

After "Import Existing Worksheet File"

				Non-Residential Floor Area	Floor Area i	n m ²	% Floo	r Area	
Project Description				Air-conditioned spaces	1000		50%		
			~	Non Air-conditioned	1000		50%		
			\sim	Total	2000m ²			Edit F	oor Area
			A H	ide					_
12.5	0	0		0		0		12.5	Calcula
Criteria Info <mark>clic</mark> Gre	k here een Mark Points Av	ailable	Co E Valu	ommentary vidence / ue Evidence	Points Scored		Rei	marks	
TTV value ireen Mark Points : ermissible ETTV=50	Points scored = 100) W/m ² ; Max 15 poin	- (2 x ETTV); Maxin ts	2 num (key	W/m ² in ETTV Value)	15				~ ~
UR 1-2 fir-l'ondi	tioning System	Compute Points							
IRB 1-2 Air-Londi Criteria Info dic G Note : Where the	tioning System + < here reen Mark Points I re is a combination of system with the	Compute Points Available f centralized air-con a larger aggregate c	system with apacity - cent	Commentary Evidence / alue Evidence unitary air-con system ralized air-con system	Points Scored	ion is base con system	Ren ed on the m.	m arks e air-condi	tioning
KB 1-2 AIF-Condin Criteria Info clici G Note : Where the Note : Where the A)(i) Air-Conditione (improvement in e 1.45 points for ever	tioning System + < here reen Mark Points I re is a combination o system with the ed Plant (Max 20 point quipment efficiency for y percentage improv	Compute Points Available f centralized air-con a larger aggregate o ots) or chiller and pump: ement)	s system with apacity - cent	Commentary Evidence / alue Evidence unitary air-con system ralized air-con system 5 (key in % of improvement)	Points Scored , the computati or unitary air-o 7.5	ion is base con system	Ren ed on the m.	narks = air-condi	tioning
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NRB page opens by retrieving the inputs given and the scores obtained for those inputs.

4 Green Mark Score Calculator – Contact Us

Subject Matter Contact Person Contact I ew Worksheet Buildings 6325 5016 Iee_sui_fong@bca. ex Criteria (in PDF) -Residential Buildings Ms Lee Sui Fung 6325 5061 ew Worksheet Buildings Green Mark Mr Thomas Pang 6325 5025 ew Worksheet Criteria Mr Thomas Pang 6325 5009 6325 5009 ew Worksheet Dr Gao Chun Ping 6325 5075 Ieew_yock_keng@ for Lee W Yock Keng On the use of Mr Leow Yock Keng 6325 775 On the use of Green Mark (GM) Ms Grace Cheok 6325 7588 Green Mark (GM) Score Calculator Ms Grace Cheok 6325 7588	Details gov.sg
ew Worksheet per Worksheet Residential Buildings ww Worksheet per Worksheet PP Worksheet PP Worksheet PP Worksheet PP Orbitatie (in PDF) Criteria PD Orbita	gov.sg
Residential Buildings n 3.0) Worksheet Worksheet Criteria Solution Sol	
3.0) Buildings Green Mark Criteria Worksheet Worksheet Criteria Criteria Criteria Criteria Criteria Mr Thomas Pang Dr Gao Chun Ping Ga25 5025 thomas_pang@bca Dr Gao Chun Ping Ga25 5075 leow_yock_keng@ Ga25 5075 leow_yock_keng@ Ga25 7588 grace_cheok_chan Score Calculator Ga25 5075	gov.sg
Worksheet Criteria Non- Residential Dr Gao Chun Ping 6325 5009 gao_chun_ping@b Mr Leow Yock Keng 6325 5075 leow_yock_keng@ On the use of Green Mark (GM) Score Calculator Ms Grace Cheok 6325 7588 grace_cheok-chan	gov.sg
On the use of Green Mark (GM) Score Calculator	ca.gov.sg
On the use of Green Mark (GM) Ms Grace Cheok Grace_cheok-chan Score Calculator 6325 5075	bca.gov.sg
Score Calculator 6325 5075	@bca.gov.sg
Mr Leow Yock Keng leow_yock_keng@	bca.gov.sg
Ms Polly Chiam 6325 5026 polly_chiam@bca.	gov.sg
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