DESIGN REFERENCE GUIDE

Retail

Version 1.0

January 2024

Contents

1. About GreenRE

GreenRE Sdn Bhd is a wholly owned subsidiary of the Real Estate and Housing Development Association (REHDA). The GreenRE rating tool has been developed for the purposes as mentioned herein and may be subject to updating and/or modification in the future.

GreenRE Sdn Bhd
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2. Introduction

The GreenRE assessment scheme was established in 2013 and is a recognized green building rating system tailored for the tropical climate. GreenRE sets parameters and establishes indicators to guide the design, construction and operation of buildings towards increased energy effectiveness and enhanced environmental performance.

The intent of this Design Reference Guide for Retail (referred to as “this Guideline”) is to establish environmentally friendly practices for the planning, design and construction of retail, which would help to mitigate the environmental impact of building interior for new offices, existing operating offices and existing offices undergoing renovation. This tool is dedicated for retail other than supermarket and hospitality.

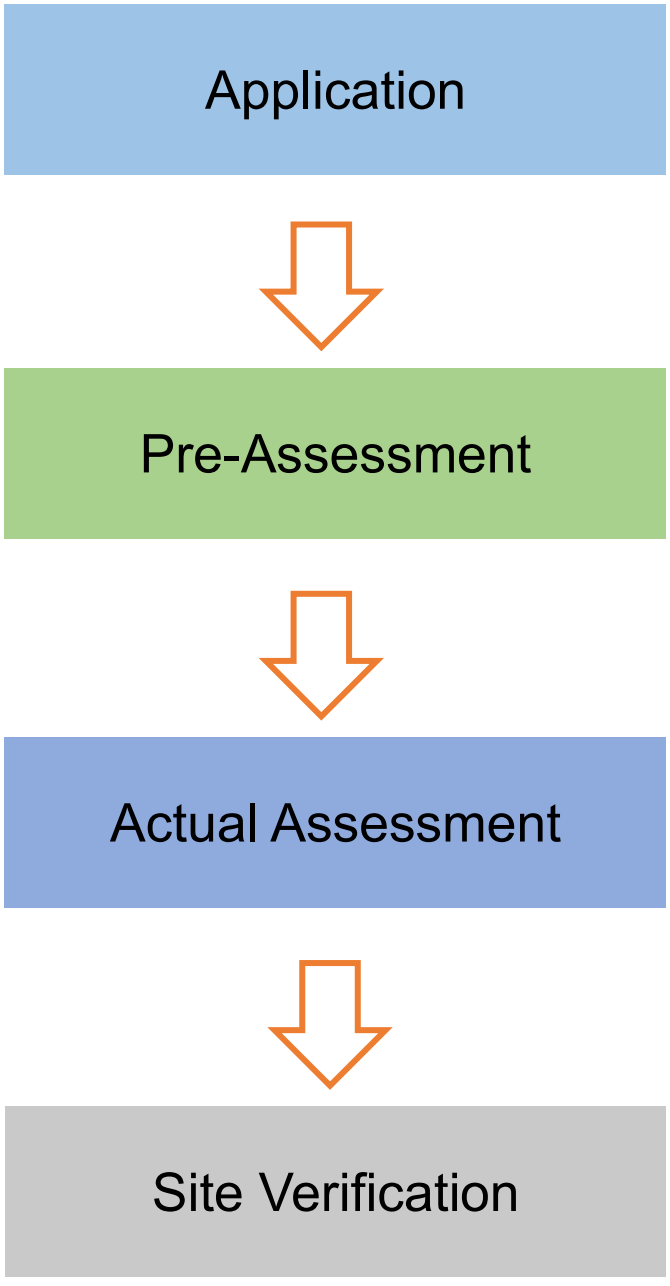
This Guideline is not intended to abridge safety, health, environmental or related requirements contained in other applicable laws, codes or policies administered by relevant authorities. Where there is a conflict between a requirement of this Guideline and such other regulations affecting the design, construction and operation of the project, the building regulations shall take precedence.

3. Revision Log

Revision	Description	Date Effective
1.0	Issued for Implementation	June 2023
1.0	Revised for Implementation	January 2024

4. GreenRE Assessment Stages

The GreenRE Retail certification process is as follows:



Submittal of application with relevant supporting documents for certification upon strategic inception of infrastructure project.

A pre-assessment can be conducted (optional) to give the project team a better understanding of the criteria and evaluation of the certification level sought. This should be performed upon selection of suitable design option to allow teams to identify and maximise opportunities at the earliest stages of the project.

Actual assessment to be conducted once the design and documentary evidences (e.g., approved plan) are ready. After the actual assessment, our assessors will review the documents submitted.
Assessment process includes design and documentary reviews to verify if the infrastructure project meets:

(i) The intents of the criteria
(ii) The pre-requisite requirement for GreenRE Bronze, Silver, Gold and Platinum rating where applicable.

Provisional Certificate will be issued upon completion of this stage.

Site verification to be conducted upon project completion.

Final Certificate will be issued upon completion of this stage.

5. GreenRE Retail Rating System

Overview:

This tool is applicable to new and existing standalone and building integrated retail outlets operated by entity seeking certification.

The GreenRE retail rating system is divided into six (6) sections as follows:

Part 1 - Energy Efficiency: This category focuses on the approach that can be used in the building design and system selection to optimise the energy efficiency of buildings.

Part 2 - Water Efficiency: This category focuses on the selection of fittings and strategies enabling water use efficiency during construction and building operation.

Part 3 – Sustainable Awareness & Operation: This category focuses on the design, sustainable management and operation that would reduce the environmental impacts of interior.

Part 4 - Indoor Environmental Quality: This category focuses on the design strategies that would enhance the indoor environmental quality which include air quality, thermal comfort, acoustic control, and daylighting.

Part 5 - Other Green Features: This category focuses on the adoption of green practices and new technologies that are innovative and have potential environmental benefits.

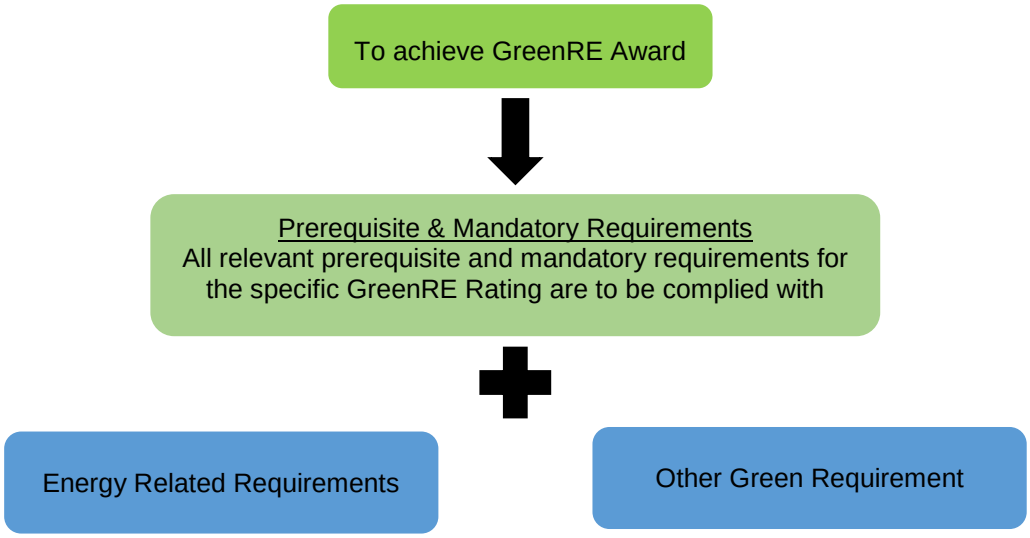
Part 6 - Carbon Emission of Development: This category focuses on the use of carbon calculator to calculate the carbon emission of the development.

These environment impact categories are broadly classified under two main groups namely (I) Energy Related Requirements and (II) Other Green Requirements.

Energy Related Requirements consist of Part 1- Energy Efficiency where credits are allocated for the various energy efficient designs, practices and features used.

Other Green Requirements consist of Part 2 - Water Efficiency; Part 3 - Sustainable Awareness & Operation; Part 4 - Indoor Environmental Quality & Part 5 - Other Green Features and Part 6 – Carbon Emission of Development. Credits are allocated for the water efficient features, environmentally friendly design practices, innovative green features used and carbon emission of development.

Framework:



Elective Requirement for Energy Improvement

Part 1 – Energy Efficiency
RT 1-1 Thermal Performance of Building Envelope (OTTV)
RT 1-2 Air-Conditioning
RT 1-3 Refrigerant System
RT 1-4 Lighting System Efficiency
RT 1-5 Energy Efficient Equipment
RT 1-6 Energy Efficient Features

Elective Requirement for Other Areas

Part 2 - Water Efficiency
RT 2-1 Water Efficient Fittings
RT 2-2 Water Usage
RT 2-3 Water Efficiency Management Plan
RT 2-4 Water Efficient Practices

Part 3 – Sustainable Awareness & Operation
RT 3-1 Sustainable Retail Design
RT 3-2 Sustainable Fit-out
RT 3-3 Sustainable Operation
RT 3-4 Sustainable Business Activities
RT 3-5 Waste Management
RT 3-6 Environmental Sustainability Practices

Part 4 - Indoor Environmental Quality
RT 4-1 Indoor Air Quality (IAQ) Performance
RT 4-2 Lighting Quality
RT 4-3 Thermal Comfort

Part 5 – Other Green Features
RT 5-1 Green Features & Innovations

Part 6 – Carbon Emission of Development
RT 6-1 Carbon Emission of Development

Credit Allocation:

Category		Credits Allocation
(I)	**Energy Related Requirements**	
Minimum 10 credits	**Part 1: Energy Efficiency**	
	RT 1-1 Thermal Performance of Building Envelope (OTTV)	5
	RT 1-2 Air-Conditioning	14
	RT 1-3 Refrigerant System	21
	RT 1-4 Lighting System Efficiency	39
	RT 1-5 Energy Efficient Equipment	5
	RT 1-6 Energy Efficient Features	8
	Category Score for Part 1 – Energy Efficiency	**92**
(II)	**Other Green Requirements**	
No Minimum credit	**Part 2: Water Efficiency**	
	RT 2-1 Water Efficiency Fittings	9
	RT 2-2 Water Usage	3
	RT 2-3 Water Efficiency Management Plan	1
	RT 2-4 Water Efficient Practices	4
	Category Score for Part 2 – Water Efficiency	**17**
	Part 3: Sustainable Awareness & Operation	
	RT 3-1 Sustainable Retail Design	10
	RT 3-2 Sustainable Fit-out	17
	RT 3-3 Sustainable Operation	2
	RT 3-4 Sustainable Business Activities	8
	RT 3-5 Waste Management	8
	Category Score for Part 3 – Sustainable Awareness & Operation	**45**
	Part 4: Indoor Environmental Quality	
	RT 4-1 IAQ Performance	6
	RT 4-2 Lighting Quality	3
	RT 4-3 Thermal Comfort	2
	Category Score for Part 4: Indoor Environmental Quality	**11**
	Part 5: Other Green Features	
	RT 5-1 Green Features & Innovations	10
	Category Score for Part 5: Other Green Features	**10**
	Part 6 : Carbon Emission of Development	
	RT 6-1 Carbon Emission of Development	3
	Category Score for Part 6: Carbon Emission Development	**3**
	Category Score for Part 2 to Part 5 – Other Green Requirements	**86**
GreenRE Non-Residential Building Score:		**180 (MAX)**

*For retail tenants operating with no provision of water or toilets, Part 2 – Water Efficiency may be excluded in the computation. The score for other parts will be pro-rated accordingly. E.g., Total points = (Summation of points from Part 1, 3, 4 & 5) X 1.1

6. GreenRE Retail Rating System Scoring

Score	Rating
96 and above	GreenRE Platinum
86 to < 95	GreenRE Gold
76 to < 85	GreenRE Silver
50 to < 75	GreenRE Bronze

Retail Type	Description
Supermarket	
Fashion	Clothing, Shoes, Apparel, Inner wear, etc
Speciality	Jewellery, Watch, Electrical, IT and Optical
General	Convenient Store, Hairdresser, Chemist, Book, and Media (DVD, Music) shops, Medical Suites, Bank and News-agent etc
Restaurant	Standalone Restaurant, drive through outlet and building integrated restaurant

7. GreenRE Retail Rating System Criteria

Pre-requisites:

1. Building Envelope – OTTV and Roof U-Value
   Only applicable for new standalone retail units i.e., drive thru

   Case by case, as part of UBBL38A to comply with Overall Thermal Transfer Value (OTTV) and Roof U-Value requirements.

2. Energy Efficiency Compliance
   Option 1 only applicable where air-conditioning system is provided by retail operator.
   Option 2 can exclude air-conditioning load if not provided by retail operator.

   Projects shall demonstrate the stipulated performance through either option listed below;

   Option 1 - Minimum System Efficiency (Fixed Metrics)

   Minimum Design System Efficiency/Operating System Efficiency (DSE/OSE)

   (i) For buildings using Water-Cooled Chilled Water Plant

GreenRE Rating	Building Cooling Load (RT)	
	< 500	≥ 500
	Efficiency (kW/RT)	
Bronze	0.85	0.75
Silver	0.80	0.70
Gold	0.75	0.68
Platinum	0.70	0.65

   (ii) For buildings using Air-Cooled Chilled Water Plant

GreenRE Rating	Building Cooling Load (RT)	
	< 500	≥ 500
	Efficiency (kW/RT)	
Bronze	1.1	1.0
Silver	1.0	1.0
Gold	0.85	Case by case(i)
Platinum	0.78	

   (iii) For retail unit using unitary air conditioning system
   - For Gold and Platinum provide 5-star rating air conditioner.

Option 2 - Energy Saving Requirement

For new retail unit, energy savings to be calculated from the other similar size of retail type in the company portfolio and the proposed design of the retail or benchmarked to suitable industry standard (e.g MS-1525 etc).

For existing retail unit, energy saving to be calculated from Business as Usual (BAU) pre-retrofit and verified post-retrofit via on-site measurements or benchmarked to suitable industry standard (e.g MS-1525 etc).

Following savings to be demonstrated:

GreenRE Rating	Energy Savings Required (%)
Gold	25
Platinum	30

3. Lighting System Efficiency

Retail type	Platinum	Gold
Retail (General)	≤ 7 W/m^2	≤ 10 W/m^2
Jewellery	≤ 19 W/m^2	≤ 23 W/m^2
Furniture, clothing & accessories, cosmetics, art	≤ 14 W/m^2	≤ 18 W/m^2
Supermarket , vehicle, sporting goods, stationary, hardware	≤ 11 W/m^2	≤ 15 W/m^2

For Gold and Platinum – no incandescent lightings or magnetic ballasts to be used

4. Refrigerant System

For supermarket or other retail outlets, where the refrigeration load is > 50% of the building electrical load.

For Gold & Platinum, the refrigeration system efficiency should be optimized by complying with the following requirements:

- The compressor(s) of each refrigeration system to be installed with variable speed drives.
- Expansion valves of the refrigeration system to be of electronic type to achieve optimal regulation of refrigerant to the evaporator.
- ≥ 75% of remote refrigerated display cabinets/ showcases to be fitted with doors.

5. Sustainable Fit-out

For Gold and Platinum rating – use of low VOC paint and low VOC adhesive glue for renovation works (to comply with 3-2 (d) & (e))

6. Sustainable Operation

(ii) For Platinum rating – participation in green promotional activities annually (to comply with 3-4(b))

(iii) To assign at least one dedicated 'Green' checkout lane to serve only consumers with their own recycle bags; sales of recycle bags can be an alternative to the consumers using the 'Green' lanes

10. Waste Management

For Gold & Platinum – dedicated containers for recycling and to set up recycling program (to comply with 3-5 (a) & (b))

11. IAQ Audit

For buildings in operation for more than one (1) year, full IAQ audit to be performed once in three (3) years that complies with Code of Practice on Indoor Air Quality, Department of Occupational Safety and Health, Ministry of Human Resources Malaysia (2010) including "Guidance Note on Ventilation and Indoor Air Quality for Non-Residential setting during Covid-19 Pandemic"

12. To provide Sustainable Operation Manual as required in the RT 3-3(a) & (b)

Additional Pre-requisites for Restaurant

1. Water Efficiency

Demonstrate at least two (2) water efficient practices:

1. To place frozen food in the refrigerator the night before using it for thawing purposes.
2. To display water conservation posters.
3. To inform patrons that water will only be served upon request

2. Sustainable management & operation, indoor environment quality

i. Demonstrate use of (i) at least two (2) types of environmentally friendly products in renovation and (ii) at least two (2) types cleaning products recognised under local certification bodies.

OR

At least three (3) sustainable consumable materials (e.g., packaging, wrappers, cups, utensil, napkins etc.)

ii. Provision of recycling facilities for food waste and used frying oil

OR

To display SOP to ensure good indoor environment through proper cleaning practice, schedule, and hygiene practice in kitchen

iii. Good access to nearest MRT/LRT or bus stops

OR

Provide customer feedback survey form to gather feedback on services, environment, etc.

iv. Food safety management (accredited to ISO 22000)

<table>
<tr><th>PART 1 - ENERGY EFFICIENCY</th><th>GreenRE Credits</th></tr>
<tr><td><u>RT 1-1 THERMAL PERFORMANCE OF BUILDING ENVELOPE – OTTV</u>

Enhanced overall thermal performance of building envelope to minimise heat gain thus reducing the overall cooling load requirement

Baseline:

Maximum permissible OTTV = 50 W/sqm
Only applicable for standalone retail units (e.g., drive thru, shop lots etc.)</td><td>1 credit for every reduction of 1 W/sqm in OTTV from baseline

(Up to 5 credits)</td></tr>
<tr><td><u>RT 1-2 AIR-CONDITIONING</u>

Encourage the use of better efficient air-conditioning to minimize energy consumption

(a) A/C system efficiency

i. Encourage the use of better efficiency air-conditioning equipment to minimize the energy consumption. (System efficiency in kW/ton)

Note: For base building using district cooling can score full credit if air-side efficiency to meet fan power limitations stated.</td><td>(i) For tenants in building using Water Cooled Chilled - Water Plant

<table>
<tr><th colspan="2">Water-Cooled Chilled Water Plant Building Cooling Load (RT)</th><th rowspan="3">Credit</th></tr>
<tr><th>< 500</th><th>≥ 500</th></tr>
<tr><th colspan="2">Efficiency (kW/RT)</th></tr>
<tr><td>0.85</td><td>0.75</td><td>2</td></tr>
<tr><td>0.80</td><td>0.70</td><td>4</td></tr>
<tr><td>0.75</td><td>0.68</td><td>6</td></tr>
<tr><td>0.70</td><td>0.65</td><td>8</td></tr>
</table>

(ii) For tenants in building using Air Cooled Chilled- Water Plant

<table>
<tr><th colspan="2">Building Cooling Load (RT)</th><th rowspan="3">Credit</th></tr>
<tr><th>< 500</th><th>≥ 500</th></tr>
<tr><th colspan="2">Efficiency (kW/RT)</th></tr>
<tr><td>1.1</td><td>1.0</td><td>2</td></tr>
<tr><td>1.0</td><td rowspan="3">Not applicable</td><td>4</td></tr>
<tr><td>0.85</td><td>6</td></tr>
<tr><td>0.78</td><td>8</td></tr>
</table>
</td></tr>
</table>

ii. Air Distribution system:

- Air Handling units (AHUs)
- Fan Coil Units (FCUs)

2 credits

Fan System Input Power

To comply on the fan system input power as ASHRAE 90.1:2010 Clause 6.5.3.1 as prescribed below;

Baseline Air Distribution System Type	Allowable Fan System Input Power	
	($kW/m^3/s$)	(W/CMH)
AHUs / FCUs ≥ 4kW (Constant Volume)	1.5	0.42
AHUs ≥ 4kW (Variable Volume)	2.1	0.58
Fan systems with nameplate motor power < 4kW	0.6	0.17

iii. For unitary air-conditioning systems:

Efficiency of air-conditioning system to be as per Suruhanjaya Tenaga or equivalent.

Energy Efficiency Rating	Credit
4 Star	6
5 Star	8

Note:

i) Pre-requisite requirement for Gold and Platinum to provide 5-star rating air conditioner
ii) This can be prescribed and enforced via DMC and green fit out guidelines to unit owner / tenant if not installed by developer

(b) Zoning and controls

Encourage the use of air-conditioning design practices that offer greater flexibility and making it easier to serve area with different usage efficiently, such as:

i. Zoning of air-conditioning system to serve areas with different usage / occupancies needs

2 credits

ii. Scheduling control to switch on and/or off the air-conditioning with some localized overwrite control where air-conditioning is

2 credits

needed beyond the scheduled period iii. Areas with specialty occupancies having control capable of sensing space use and respond to space demand (Demand controlled ventilation)	2 credits (Up to 6 credits)
RT 1-3 REFRIGERANT SYSTEM Encourage the use of energy efficient refrigeration system. a) Optimize the efficiency of the refrigeration system condensingunits with the following energy efficient design considerations: i) The compressor(s) of each refrigeration system to beinstalled with variable speed drives and ii) Expansion valves of the refrigeration system to be of electronic type to achieve optimal regulation of refrigerant tothe evaporator. iii) For water-cooled refrigeration system, the fans of coolingtower to be installed with variable speed drives for water-cooled refrigeration system. or For air-cooled refrigeration system, the electronically commutated (EC) fans of the condensing units to be installed with variable speed drives. iv) The refrigerant saturated condensing temperature for water-cooled refrigeration system to be no higher than 36 ºC. or The refrigerant saturated condensing temperature for air- cooled refrigeration system to be no higher than 40 ºC basing on the assumption of 32 °C outdoor ambient air temperature.	6 credits 1 credit 1 credit

For other outdoor ambient air temperatures specified, the
ΔT – temperature difference between the condensingtemperature and the ambient air is to be ≤ 8 °C.

v) The pressure transducers monitoring the evaporative and condensing temperature to be monitored remotely by the refrigeration system management/ monitoring system. — 1 credit

vi) All suction pipes of the refrigeration system are to be insulated with rigid material of U-value ≤ 0.48 W/m^{2}K and clad with galvanized iron sheet. — 1 credit

b) Optimize the efficiency of the refrigeration system evaporators through the following energy efficient design consideration

(i) Fin spacing of the evaporators in the freezer rooms to be noless than 7 mm. — 1 credit

(ii) Fin spacing of the evaporators in the chiller rooms to be noless than 4 mm. — 1 credit

(iii) All remote refrigerated display cabinets/ showcases to befitted with anti-sweat controllers. — 1 credit

(iv) Highly efficient electronically commutated (EC) fans for all remote refrigerated display cabinets/ showcases. — 1 credit

(v) All remote refrigerated display cabinets/ showcases to be certified by independent certification body. — 1 credit

(vi) Remote refrigerated display cabinets/ showcases, to be fitted with doors.

Percent of remote refrigerated display cabinets fitted with doors	**Credits Allocation**
≥ 25%	0.5
≥ 50%	1
≥ 75%	2

(vii) All remote refrigerated display cabinets/ showcases to be fitted with LED lightings.

1 credit

(viii) Hot gas defrosting system for low temperatures remote display cabinets/ showcases

1 credit

(ix) Refrigerated display cabinets to be cooled remotely by central refrigeration plant with condensers installed outside the air- conditioner spaces

Percent of remote refrigerated display cabinets	Credits Allocation
≥ 70%	0.5
≥ 80%	1
≥ 90%	2

RT 1-4 LIGHTING SYSTEM EFFICIENCY

To encourage optimization of lighting system efficiency;

(a) Lighting power budget Baseline

0.6 credit for every percentage improvement above the baseline

Credits awarded = 0.6 x (% improvement)

(Up to 30 credits)

Retail type	Baseline
General	≤ 15.0 W/m^2
Jewellery	≤ 35.0 W/m^2
Furniture, clothing & accessories, cosmetic & art	≤ 25.0 W/m^2
Supermarket, vehicle, sporting goods, stationary, & hardware	≤ 20.0 W/m^2

(b) Photo/Motion sensors for non-retail area (e.g., Store, fitting rooms, etc.)

3 credits

(c) Controllability of lighting system

Encourage the use of lighting control circuits to minimize energy usage, such asprovision of the following control strategies

I. Zoning of lighting for different usage/ Location

2 credits

II. Dual circuit shop front (1 circuit with high intensity lights with a separate circuit for partial lighting of shop front after hours) or Timer switches on shop front lighting.

2 credits

III. Lighting control on general shop lighting (e.g., controls balancing lighting with ambient lighting levels.

2 credits

RT 1-5 ENERGY EFFICIENT EQUIPMENT Encourage the use of energy efficient equipment such as: ▪ Computers & monitors ▪ Laptops ▪ Fax machine ▪ Printers & copiers ▪ Inverter based refrigeration ▪ LED, LCD television or AV display ▪ Audio equipment ▪ Other energy efficient features ▪ Deep Fryers ▪ Grills ▪ Ovens	Credits awarded based on numbers of energy efficient equipment (Up to 5 credits)
RT 1-6 ENERGY EFFICIENT FEATURES (a) Computation of energy consumption in theform of Energy Usage Index (EUI) (b) Encourage and recognize designs that provide good level of day lighting into retail areas. All daylit spaces should be integrated with automatic electric lighting control systems e.g., photocells Use of on-site renewable energy system tooffset operating costs.	1 credit 2 credits 1 credit for every 1% energy saving over the total retail's energy consumption (Up to 5 credits)
PART 1- ENERGY EFFICIENCY CATEGORY SCORE	Sum of GreenRE credits obtained from RT 1-1 to 1-6

<table>
<tr><th>PART 2 – WATER EFFICIENCY
*For tenants with no water usage, please see notes at pg. 1</th><th>GreenRE Credits</th></tr>
<tr><td><u>RT 2-1 WATER EFFICIENT FITTINGS</u>

Encourage the use of water efficient fittings under Water Efficiency Labeling Scheme (WEPLS) or adopt equivalent water efficient flow-rate/flush volumes for water fittings.

▪ Basin taps and mixers
▪ Flushing Cistern
▪ Showers
▪ Sink/Bib taps and mixers
▪ Urinals</td><td><table><tr><td colspan="3">Rating Based on Water Efficiency Products Labelling Scheme (WEPLS)</td></tr><tr><td>Efficient
*</td><td>Highly Efficient
**</td><td>Most Efficient
***</td></tr><tr><td>3 credits</td><td>6 credits</td><td>9 credits</td></tr></table>
Credits awarded based on the number and water efficiency rating of the fitting type used

(Up to 9 credits)</td></tr>
<tr><td><u>RT 2-2 WATER USAGE</u>

Encourage the design of system that monitor and manage water consumption

(a) Provision of meter to monitor the water usage

(b) Monitoring of water consumption</td><td>

2 credits

1 credit</td></tr>
<tr><td><u>RT 2-3 WATER EFFICIENCY MANAGEMENT PLAN</u>

Establish baseline water consumption performance and targets for improvements over the baseline. To show intent, measures and implementation strategies of water efficiency improvement plans over the next three years. Committed water savings accrued from proposed measures should be quantified.</td><td>1 credit</td></tr>
<tr><td><u>RT 2-4 WATER EFFICIENT PRACTICES</u>

Adopt water efficient practices such as:
• Placing frozen food in the refrigerator the night before using it for thawing purposes;
• Displaying water conservation posters in the premises;</td><td>Up to 4 credits</td></tr>
</table>

• Involvement of patrons by displaying water conservation cards that inform patrons that water will only be served on request • Re-adjusting cooking practices to reduce water usage	
PART 2- WATER EFFICIENCY CATEGORY SCORE:	Sum of GreenRE credits obtained from RT 2-1 to 2-4

<table>
<tr><th>PART 3 - SUSTAINABLE AWARENESS & OPERATION</th><th>GreenRE Credits</th></tr>
<tr><td><u>RT 3-1 SUSTAINABLE RETAIL DESIGN</u>

Encourage the selection of more sustainable base building and the adoption of retail designs and materials that is environmentally friendly and sustainable.

(a) Building is awarded with GreenRE certified or higher award.

(b) Renovation consists of retaining at least 50% (by area) of the existing finishing for walls, flooring, and ceilings. For heritage or renovation refit works.</td><td><table><tr><th>GreenRE Rating</th><th>Credits</th></tr><tr><td>Bronze</td><td>1 credit</td></tr><tr><td>Silver</td><td>3 credits</td></tr><tr><td>Gold</td><td>5 credits</td></tr><tr><td>Platinum</td><td>7 credits</td></tr></table>
3 credits</td></tr>
<tr><td><u>RT 3-2 SUSTAINABLE FIT-OUT</u>

(a) Use of sustainable products in renovation such as:

• Environmentally friendly products that are certified by approved local certification body or equivalent

• Products with at least 30% recycled content by weight

(b) Green procurement policy

Adoption of sustainable and environmental-friendly procurement and purchasing policy in the operation. (E.g., Reducing transport distances, packaging, or controlling packaging types by preselecting aware wholesale sources of supply.)

(c) Sustainable consumable materials

Selection of consumable materials that is environmentally friendly and sustainable such as the use of those materials which are recyclable/ recycled / non-disposable or readily degradable nature (E.g., Packaging, food wrappers, cups, utensils, napkins, etc.)

(d) Use of low VOC paints for renovation works

(e) Use of low VOC adhesives glue for renovation works

(f) Supply extra exhaust capacity and makeup air for areas where hazardous gases or chemicals may be present or used (e.g., nail salons, hair salons, etc.)</td><td>Credits awarded per feature item
2 credits for high impact item
1 credit for low impact item
(Up to 6 credits)

1 credit

2 credits awarded per feature item
(up to 6 credits)

1 credit

1 credit

2 credits</td></tr>
</table>

RT 3-3 SUSTAINABLE OPERATION	
(a) Operational Excellence: Produce a manual detailing shop opening, daily running and shut down procedures that minimize energy consumption. Policies regarding store supplied packaging and recycling procedures and policy	1 credit
(b) The plans and manual must be disseminated, actively implemented, and regularly reviewed.	1 credit
RT 3-4 SUSTAINABLE BUSINESS ACTIVITIES	
(a) Sustainable Marketing: Use of recycled collaterals or incorporating sustainability values in marketing strategies.	2 credits
(b) Sustainability promotional activities - committed to Earth Hour Day or World Environment Day activities in the mall, or another publicity activity of similar kind, would not include just turning off lightson earth hour day.	2 credits
(c) Include environmentally friendly products as part of sales product lineup	2 Credits
(d) Privileges for customers who bring their own shopping bags	2 credits
RT 3-5 WASTE MANAGEMENT	
(a) Installation of a dedicated container readily accessible by staff and customers to facilitate recycling. For restaurant, provision of recycling facilities for food waste and used frying oil	2 credits
(b) Promote and encourage waste minimization and recycling among staff and customers through various avenues including regular briefings, meetings, putting up waste minimization and recycling posters at strategic locations. Needs to set up comprehensive recycling and reuse program with proper documentation of efforts.	2 credits
(c) In store packaging management - Giving customers the options of no packaging or supplying packaging from recycled product	2 credits
(d) Provision of organic waste composting system to facilitate the reduction in volume of compostable organic waste going directly to landfill.	2 credits
PART 3- SUSTAINABLE AWARENESS & OPERATION CATEGORY SCORE:	Sum of GreenRE credits obtained from RT 3-1 to 3-5

PART 4 – INDOOR ENVIRONMENTAL QUALITY	GreenRE Credits
RT 4-1 IAQ PERFORMANCE Encourage and recognize good indoor air quality (IAQ) to ensure the comfort and well-being of office occupants. (a) IAQ Audit - to conduct a full IAQ audit that complies with Code of Practice on Indoor Air Quality, Department of Occupational Safety and Health, Ministry of Human Resources Malaysia (2010) including "Guidance Note on Ventilation and Indoor Air Quality for Non-Residential setting during Covid-19 Pandemic" (b) Ensure compliance to Guidance Note on Ventilation and Indoor Air Quality for Non-Residential setting during Covid-19 Pandemic" for fresh air intake requirement	4 credits 2 credits
RT 4-2 LIGHTING QUALITY To encourage good workplace lighting quality to promote productivity and comfort of occupants. (a) Design for proper lighting level. Baseline: Luminance level stated in MS 1525:2019 (b) High frequency ballasts **OR** use of driver with output frequency < 200Hz and < 30% flicker for LED lighting	All applicable areas in the entire retail area thatare served by fluorescent luminaries >60%-1 credit >90%-2 credits (Up to 2 credits) 1 credit
RT 4-3 THERMAL COMFORT Air-conditioning system is designed to allow for cooling load variations due to fluctuations in ambient air temperature to ensure consistent indoor conditions for thermal comfort. (a) Indoor temperature between 23°C to 26°C Relative Humidity between 50% to 70% (b) Provision of room temperature and humidity displays equipment	1 credit 1credit
PART 4 – INDOOR ENVIRONMENTAL QUALITY CATEGORY SCORE:	Sum of GreenRE credits obtained from RT 4-1 to 4-3

PART 5 – OTHER GREEN FEATURES	GreenRE Credits
RT 5-1 GREEN FEATURES & INNOVATIONS To encourage the use of other green features whichare innovative or/and have positive environmental impact. Examples: • Use of greenery to create a more conducive environment • Innovations with demonstrable carbon orenergy reducing outcomes. • Innovation encapsulating social sustainabilityvalues. • Educational corners / Green Corners • Sponsor other external sustainability event • CO2 monitoring of kitchen area to detect leakage of CO2 from CO2 cylinders used in making carbonated drinks • Air sterilization system to limit the level of bacteria, mold, and other bio-contaminants • Treatment of kitchen exhaust with green technologies such as UVC emitters, electronic air filtration, etc. • Technologies that also incorporate noise dampeners will be considered. • For restaurants where guests self-cook at the table e.g., Hotpot, BBQ, use of green technologies that exhausts oil content, smoke, and odor before discharging out as a “noiseless” and energy efficient system. • Replacement of labor with technology e.g., Self-service ordering via tablets, cashless payments at table.	Credits awarded for each item: 2 credits for high impact item 1 credit for medium impact item 0.5 credits for low impact item (Up to 10 bonus credits)
PART 5 – OTHER GREEN FEATURES CATEGORY SCORE:	Sum of GreenRE credits obtained from RT 5-1

Part 6 - Carbon Footprint of Development	GreenRE Credits
RT 6-1 CARBON FOOTPRINT OF DEVELOPMENT (a) Recognise the carbon emission based on operational carbon footprint computation of the building comprising energy and water consumption	1 credit
(b) To identify carbon debt and quantify environmental impact and embodied energy.	0.25 credits for every material declared up to 2 credits (Finishes, raw renovation material).
PART 6 - CARBON FOOTPRINT OF DEVELOPMENT **CATEGORY SCORE:**	Sum of GreenRE credits obtained from RT 6-1

GreenRE Score (Retail)

GreenRE Score (RT) = ∑Category score [(Part 1-Energy Efficiency) +
(Part 2-Water Efficiency) +
(Part 3- Sustainable Awareness & Operation) +
(Part 4-Indoor Environmental Quality) +
(Part 5-Other Green Features)] +
(Part 6 Carbon footprint of development)]