GreenRE Bulletin

Issue 10 | July - December 2023

www.greenre.org

FEATURED PROJECT :

BATTERSEA POWER STATION

RECEIVES GREENRE GOLD CERTIFICATION

Photo Credit
Brendan Bell

FEATURED PROJECT :

99 Speedmart: GreenRE's First Platinum Certified Retail Outlets

EVENTS:
3rd International Green Build Conference (GBC) 2023

FEATURED ARTICLE:
The Power of Retrofit

eISSN 2948-4685

EDITORIAL TEAM

EDITORIAL OFFICE
GreenRE Sdn Bhd
1st Floor, Wisma REHDA,
No. 2C, Jalan SS5D/6,
47301 Petaling Jaya,
Selangor.

Tel: +603-78032978
Fax: +603-78035285
Email: info@greenre.org

GreenRE Bulletin is published by GreenRE Sdn Bhd.

www.greenre.org

GreenRE Bulletin

Issue 10 | July - December 2023

Follow us on social media for the latest news & announcements:

greenresdnbhd greenresdnbhd greenremalaysia

CONTENTS.

Inside

FOREWORD.

Dear Readers,

Welcome to the year-end edition of the GreenRE Bulletin 2023.

Celebrating 10 Years
I am proud to announce that GreenRE celebrates its 10th Anniversary this year. Our journey began 10 years ago with an intent to promote sustainability and democratise the green building certification industry by offering an affordable green rating tool. We wanted to accelerate the nation's transition towards creating eco-friendly buildings that harmonise with nature where people could enjoy spaces to work-live-play more sustainably. Today, we have grown leaps and bounds, emerging as a guiding force in the industry, beyond just REHDA members, more committed than ever to our mission of fostering sustainable development.

2023: Year of Growth
This year has been a testament to our commitment towards growing sustainable real estate numbers. We have not only expanded our portfolio of certified projects and rating tools but also strengthened our relationships with our stakeholders,. Currently, GreenRE has exceeded 600 registered projects, across Malaysia and 2 international projects. The increasing number of green building certifications reflects not just the growth of our company but also the growing consciousness within our developer community towards sustainable practices.

Innovation in Sustainability:
Amidst the challenges, we have embraced innovation as a driving force. Our dedication to staying at the forefront of sustainable practices has led to expanding our rating tool portfolio and introducing new Energy Certification options to stay ahead of the curve with the implementation of the EECA. We take pride in being a catalyst for change, inspiring others to join us in building a greener, more sustainable future.

Community Engagement:
Our commitment extends beyond certification; it is a commitment to community engagement and education. This year, we have actively participated in outreach programs with our partners, ie banks, universities, associations, and industry partners to promote awareness about the benefits of green building practices. The positive response from the community reinforces our belief that sustainable living is not just a choice but a responsibility we all share.

Acknowledging Achievements:
I would like to express my deepest gratitude to our clients, industry partners, GreenRE Advisory Panel, GreenRE Technical and Training Panel for their unwavering support and dedication. The achievements of this year would not have been possible without your collaborative spirit, hard work, and shared vision for a sustainable future.

As we step into the new year, let us carry the momentum of our achievements and lessons learned. Together, let us continue to push the boundaries of sustainable development, making a lasting impact on the way we build and live.

Thank you for being a part of our journey.

Datuk Seri FD Iskandar
GreenRE Chairman

EVENT HIGHLIGHTS .

3RD INTERNATIONAL GREEN BUILD CONFERENCE (GBC 2023), 1 AUGUST 2023, ONE WORLD HOTEL

GREEN BUILD CONFERENCE 2023 AIMS TO FOSTER LONG-TERM SUSTAINABILITY

*as published in The Edge Malaysia by Priya Devan

PETALING JAYA: The third installment of the Green Build Conference (GBC) 2023, which was held on Tuesday (Aug 1), highlighted the importance of long-term sustainability in the country's real estate industry by urging stakeholders to plan their climate ambitions accurately and demonstrate their commitment and ability to take decisive climate actions.

Attended by over 300 participants, the conference was jointly organised by GreenRE Sdn Bhd and Rehda Institute. With the theme "Realising Low Carbon Real Estate", the full-day conference featured panel discussions, presentations and talks by 14 speakers from all over the world.

In his opening speech, GreenRE chairman and Glomac Bhd managing director Datuk Seri FD Iskandar said that it is without a doubt that the construction industry needs to be greener. "With buildings accounting for over 40% of carbon emissions and more than a third of electricity consumption, reducing a building's carbon emissions can go a long way in enabling us to achieve our nation's goal of net zero emissions. The actions we take this decade are critical to set us on the right path toward this target.

"Investors are progressively calling on businesses to evaluate their climate risks and plan for transitioning to a low-carbon future through mitigation and adaptation. "Building for the future" must be the mantra of the real estate sector. In tandem with heightened attention on ESG reporting and benchmarking, the property development industry can leverage on robust green building certification to sustain a high-performance lifecycle," FD Iskandar added.

Endorsing the GBC 2023, Minister of Natural Resources, Environment and Climate Change Nik Nazmi Nik Ahmad said the conference showcased the industry's commitment towards advancing sustainable real estate in the country.

"The repercussions of climate change are being seen worldwide, including recent heatwaves that have affected many Asian countries, increasing sea levels, and more regular flooding in our backyards. We're looking into revising and strengthening existing policies to orient Malaysia on the right path in combating climate change.

"We also know that energy efficiency and the wider sustainability agenda is a significant undertaking, to say the least. It cannot simply be legislated into existence. We must also acknowledge that not only consumers but even big companies and builders, to say nothing of small-and-medium enterprises (SMEs), will find the process daunting," he said.

Nik Nazmi continued, "The principles of Environmental, Social and Governance (ESG) are now imperatives for trade and investment. Malaysia must master them, but companies will have to also work hard to accommodate these demands".

The conference was segmented into three sessions: the first panel discussion titled "Pricing Carbon in Malaysia", second panel discussion titled "Energising ESG Through Green Financing" and several presentations under the theme "Building Through Innovation".

The first panel discussion focused on how setting a signal for carbon can drive the price economic case for carbon abatement, creating systemic change and accelerate progress. Panelists included The Asia Foundation (Malaysia) climate consultant and World Bank (Malaysia) climate specialist Darshan Joshi and Climate Governance Malaysia council member Gary William Theseira with United Nations Global Compact Network Malaysia; and Brunei state director (Johor) Edey Suresh as the moderator.

Panelists of the second panel discussion included International Finance Corp chief industry specialist of green buildings and climate-smart cities Prashant Kapoor, as well as United Overseas Bank (UOB) Ltd managing director and sectors solutions group head of real estate & hospitality and construction & infrastructure Jasper Wong Soong Ling, with moderator REHDA Institute chairman and UOB (Malaysia) Bhd chairman Datuk Jeffrey Ng Tiong Lip. This panel discussed the new innovations and levers that are being implemented, together with their implications for the property sector and how they will affect risk, compliance and investment.

In the "Building Through Innovation" session, six speakers took the stage to present their respective topics. This included AB Consulting Canada principal Albert Bicol, who talked about "Designing the Future of Net-Zero Energy Buildings for Resilient and Sustainable Communities"; NABERS Australia (Sydney) head of market development Magali Wardle on "Naber's Embodied Carbon Framework: How Measuring and Managing Drives World Class Performance on Buildings"; Progressture Solar co-founder and chief operating officer Ng Yew Weng on "The Future of Renewable Energy in Malaysia", as well as TSA Management Sdn Bhd regional director for South East Asia, Gandhi Suppiah, who spoke on "The Role of Zero Emission Transport for Sustainable Urban Centres Planning Management".

More speakers in the session included Frasers Property Australia (Melbourne) sustainability advisor Ruvini Silva, who shared her case study "Raising the Bar on Sustainability at the Burwood Brickworks Retail Centre Melbourne" and TR Hamzah Yeang Sdn Bhd executive director Datuk Ken Yeang, who shared on "Nature-based Green Architecture and Planning".

Meanwhile, the conference also witnessed the launch of GreenRE's Sustainable Real Estate Book in conjunction with its 10-year anniversary.

Source: https://theedgemalaysia.com/node/676888

Source: https://theedgemalaysia.com/node/676888

Source: https://theedgemalaysia.com/node/676888

Environmental · Social · Governance (ESG)
INTERNATIONAL GREEN BUILD CONFERENCE 2023
Realising Low Carbon Real Estate

CARBON FOOTPRINT REPORT

International Green Build Conference (GBC 2023)

A carbon footprint report was carried out by Climate Asia for the International Green Build Conference (IGBC) 2023, hosted at One World Hotel in Bandar Utama, Kuala Lumpur on August 1st 2023. The conference gathered a total of 386 attendees from local and international locations. Climate Asia has partnered with GreenRE Sdn Bhd for a Carbon Neutrality initiative aligned with IGBC 2023.

Climate Asia's inside scoop on the carbon footprint for IGBC 2023!

Key Carbon Scopes

Scope 1*: Direct Emissions
Scope 2: Indirect Emissions (Electricity Consumption)
Scope 3: Indirect Emissions (Others & Event-Specific Emissions)

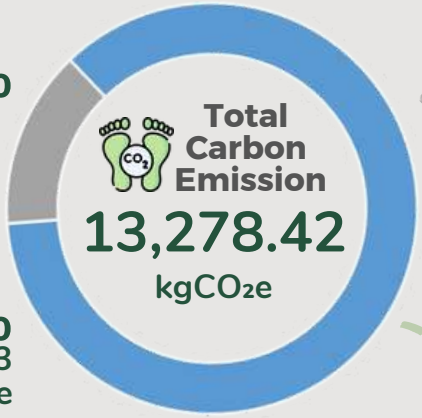
*Conference space is neither owned nor operated by the organisers. Hence, there are no Scope 1 emissions for IGBC 2023.

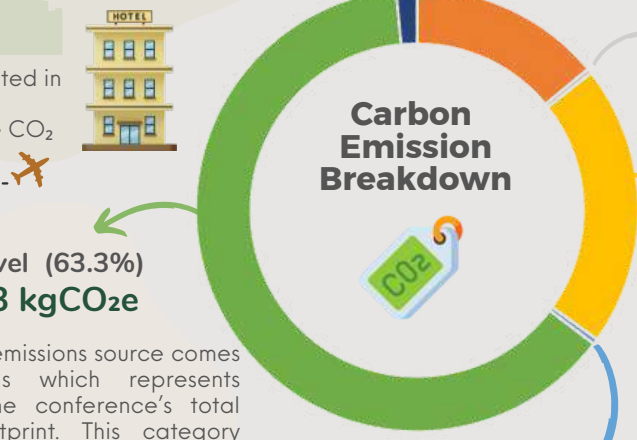
Carbon Footprint Intensity

The IGBC 2023 has a carbon footprint intensity of **34.40 kgCO2e per attendee.**

14%
Scope 2
1,865 kgCO2e

86%
Scope 3
11,414 kgCO2e





The organisers rented two ballrooms and a joint foyer space for the conference. One ballroom was reserved for the conference sessions, while all the organisations' booths and food stations are in the foyer. Electricity usage was reduced by multi-purposing the foyer and maximising the usage of the conference spaces.

Electricity (14.0%)
1,865 kgCO2e

Accommodation (1.5%)
204 kgCO2e

Guests were accommodated in the same building as the conference to reduce the CO_2 emissions from travelling.

Beverages (0.4%)
48 kgCO2e

The organizers minimized waste by using drink dispensers. Refilling bottles, as opposed to providing single-use bottles, imparts a green lifestyle and contributes toward lesser general waste produced.

Travel (63.3%)
8,403 kgCO2e

The largest emissions source comes from travels which represents 63.3% of the conference's total carbon footprint. This category covers all mobility emissions including flights taken by invited speakers & guests. Nearly a fifth of the attendees either carpooled or did not use any vehicular transportation to the conference.

Food (20.4%)
2,704 kgCO2e

Emissions of food from farm-to-table represent the event's second largest emissions source, accounting for 20.4% of the carbon footprint. This encompasses the combined values of embodied carbon from food ingredients and cooking emissions inclusive of food storage. This life cycle analysis of farm-to-table excludes emissions from the transportation of the produces to the kitchen.

Wastes (0.4%)
55 kgCO2e

Food Waste : 29.05 kgCO2e
Wastewater : 8.59 kgCO2e
General waste : 17.19 kgCO2e

The largest emissions!

Details of emissions for transportation mode on the next page.

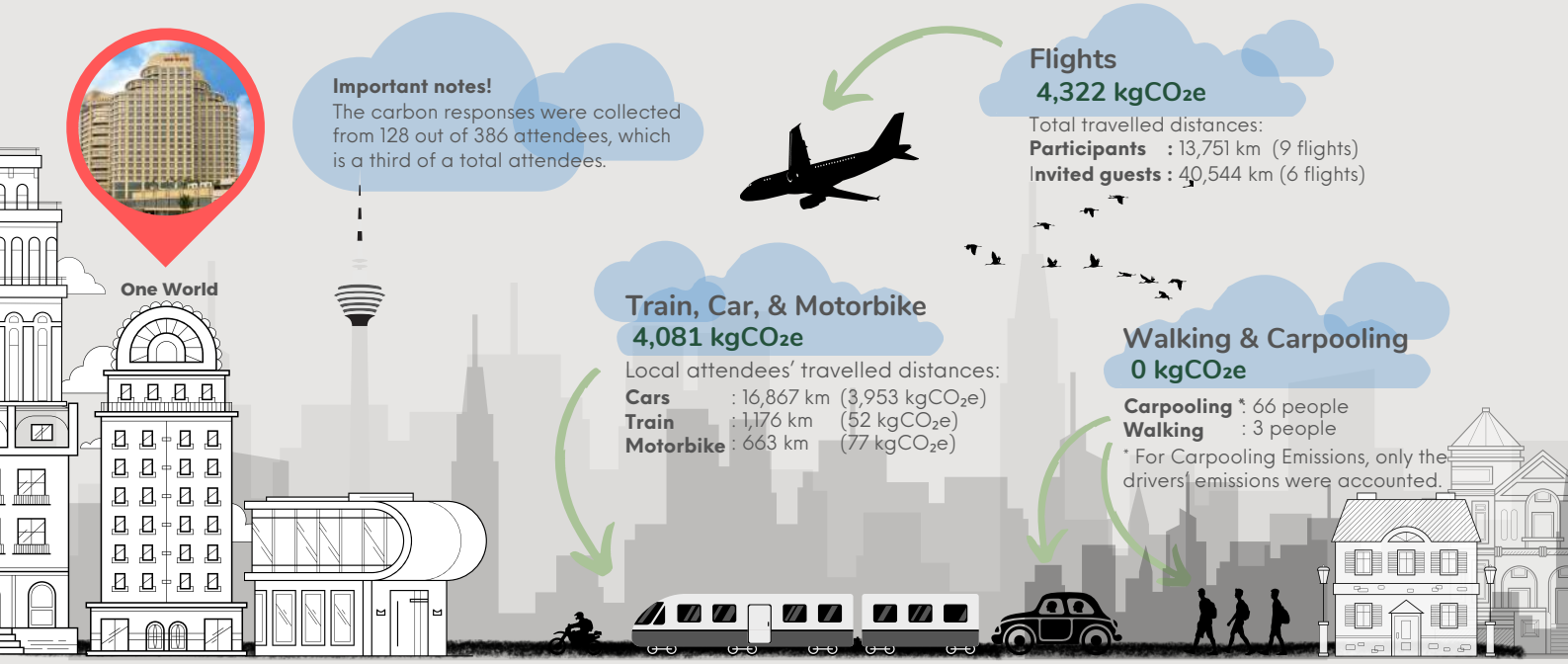
GreenRE | CLIMATE ASIA a subsidiary of BSD | climateasia.com

Environmental · Social · Governance (ESG)
INTERNATIONAL GREEN BUILD CONFERENCE 2023
Realising Low Carbon Real Estate

CARBON FOOTPRINT INSIGHTS

This section offers an extensive explanation of the technical aspects based on the carbon footprint data concluded for the IGBC 2023.

Carbon Footprint Breakdown Based on Mode of Transportation



Important notes!
The carbon responses were collected from 128 out of 386 attendees, which is a third of a total attendees.

Flights
4,322 kgCO₂e

Total travelled distances:
Participants : 13,751 km (9 flights)
Invited guests : 40,544 km (6 flights)

Train, Car, & Motorbike
4,081 kgCO₂e

Local attendees' travelled distances:
Cars : 16,867 km (3,953 kgCO₂e)
Train : 1,176 km (52 kgCO₂e)
Motorbike : 663 km (77 kgCO₂e)

Walking & Carpooling
0 kgCO₂e

Carpooling * : 66 people
Walking : 3 people
* For Carpooling Emissions, only the drivers' emissions were accounted.

Strategic Location and Conclusion

IGBC 2023 is strategically located in the heart of Bandar Utama, a central location boasting **excellent transportation connectivity**. One World Hotel is easily accessible by Mass Rapid Transit (MRT) and situated within a 400m-radius of five bus stops. The conference strongly encourages attendees to use public transportation. This initiative is in line with the conference's commitment to reduce carbon emissions.

In planning this event, careful consideration was given to **minimizing the environmental impact**. Accommodations for invited guests, as well as the food and beverage (F&B) vendor, are conveniently situated within the same building. These measures significantly reduce the carbon emissions associated with travel to and from the conference for both guests and F&B transportation. Additionally, by choosing not to outsource the F&B services, the conference effectively reduces food waste. This is achieved by freshly preparing certain dishes which are served on-demand, thus ensuring minimal wastage.

With the **existing effective strategies** and findings from the report, this has set a precedent case for the strategies to be incorporated for future upcoming events and a starting point for GreenRE's events journey toward carbon neutral.

- The path to carbon neutrality commences with establishing a baseline; Building upon past endeavors and focusing on pivotal areas sets the trajectory towards achieving this goal. -

Extended Information!

This conference is co-sponsored by GreenRE and REHDA Institute, resulting in the carbon footprint to be split equally amongst the two organisers. **Each party is to report 50% of this event's total carbon footprint.** Thus, the carbon emissions contributed by GreenRE Sdn Bhd for the International Green Build Conference (IGBC) 2023 is **6,639.21 kgCO₂e.**

GreenRE 11 YEARS DRIVING SUSTAINABLE REAL ESTATE
CLIMATE ASIA a subsidiary of BSD
climateasia.com


GreenRE
10 YEARS
DRIVING SUSTAINABLE REAL ESTATE
CELEBRATES
10
YEARS

GRESB REGIONAL HIGHLIGHTS (MALAYSIA) . WISMA REHDA

GRESB REGIONAL INSIGHTS EVENT IN KUALA LUMPUR UNVEILS SUSTAINABILITY TRENDS AND GRESB 2023 RESULTS FOR MALAYSIA

Kuala Lumpur, [4 December 2023] — GRESB, in collaboration with Zerin Habitat and GreenRE, recently conducted the annual GRESB Regional Insights Event in Kuala Lumpur. This event was held at Wisma REHDA on Wednesday, 29 November 2023, bringing together esteemed industry leaders and experts to explore pivotal topics surrounding Environmental, Social, and Governance (ESG) practices and sustainability within the Malaysian real estate sector.

The GRESB Regional Insights Event in Kuala Lumpur provided a platform to unveil the highly anticipated GRESB 2023 results for Malaysia.

These results offered comprehensive insights into the sustainability performance of real estate portfolios across the region. Notably, Malaysian real estate companies demonstrated commendable performance in specific GRESB indicators such as Targets, Data Monitoring & Review, and Stakeholder Engagement. However, areas requiring improvement were identified, including Green House Gas (GHG) Emissions, Energy Consumption, Water Consumption, and Waste Diversion. As a result, Malaysian companies, encompassing both real estate asset managers and developers, achieved scores below the global and Asian average benchmarks, indicating opportunities for enhanced sustainability practices in Malaysia.

Speakers:

- Ir. Ashwin Thurairajah, Executive Director, GreenRE Sdn Bhd
- Dr. Ken Yeoh, Senior VP, Corporate Sustainability and Governance, UOB
- Diyana Mohd Amin, Head of Sustainability & ESG, Iskandar Investment Berhad
- Roja Rani, Head of Research & Consultancy, Zerin Properties
- Rohendran Chelliah, Executive Director, Zerin Habitat
- Trey Archer, Business Development Director, GRESB
- Pooja Changani, Manager Member Relations Asia-Pacific, GRESB

The event featured a dynamic panel discussion with these distinguished speakers, offering valuable insights into the current and future landscape of sustainable real estate practices in Malaysia. Despite representing diverse backgrounds from consultants to developers, the speakers unanimously agreed on several key points:

1. ESG is not a sunk cost but rather an investment. Properly implemented ESG strategies can yield a handsome return, attracting investments, securing discounted loans, lowering operating costs, mitigating risk, enhancing brand reputation, and more.

2. Real estate companies are facing increasing pressure to adhere to ESG guidelines from regulators, investors, and peer pressure. Even small and medium-sized enterprises are recognizing the importance of sustainability for these reasons.

3. Global and local efforts must intensify to achieve better ESG results. Panelists highlighted concerns such as climate change, Malaysia lagging behind regional and global peers, technological and behavioral shifts, and the prevalence of greenwashing in the local market, as major concerns.

GreenRE's First Project in Sarawak: Sri Pertiwi and Spektra Medium Apartments (Phase 1)

Sendayan Jaya Sdn Bhd was the recipient of GreenRE's first certified project in Sarawak. Sendayan Jaya received the GreenRE Bronze (Provisional) for its upcoming affordable housing project, Sri Pertiwi and Spektra Medium Apartments (Phase 1), located in Kuching, Sarawak. This project was certified under the GreenRE Residential Building and Landed Home category (Version 3.2).

The GreenRE rating system provides a holistic approach to green homes, with a focus on six main areas: Energy Efficiency, Water Efficiency, Environmental Protection, Indoor Environmental Quality, Other Green Features, and Carbon Emission Development. Key elements included in this project were the Residential Envelope Transmittance Value (RETV), Energy Efficiency Index (EEI), and Building Concrete Usage Index (CUI).

Award Presentation in Conjunction with the SHEDA Annual Dinner (25 November 2023, Kuching)
From left: GreenRE Management Council member, Datuk Ir Tiah Oon Ling, SHEDA President Augustine C. H. Wong ,SHEDA Council Member, Mr Lawrence Law, Sendayan Group of Companies Director and SHEDA Deputy President, Mr Louis Ting, REHDA Secretary-General and GreenRE Director Ms Ping Teo, GreenRE Executive Director, Ir. Ashwin Thurairajah, REHDA President, Datuk NK Tong, and GreenRE Director Dato Rick Cheng

REHDA Institute's Asia Real Estate Leaders (AREL) Jakarta Business Study Tour

GreenRE representatives, along with 40 REHDA members, joined REHDA Institute (RI)'s Asia Real Estate Leaders (AREL) Jakarta Business Study Tour, 22-24 August 2023.

The tour provided an opportunity for the participants to explore and understand prospects in the largest economy in South East Asia, and Nusantara and Jakarta's public infrastructure planning. During the tour, the delegates visited several large-scale developments by prominent Indonesian property developers in Jakarta and its vicinity.

Among the large-scale developments visited was Bumi Serpong Damai (BSD) City developed by Sinar Mas Land, Sudirman Central Business District (SCBD) by Artha Graha Group, Pantai Indah Kapuk (PIK) and ASHTA by Agung Sedayu Group, and Jababeka City Cikarang by Jababeka Group.

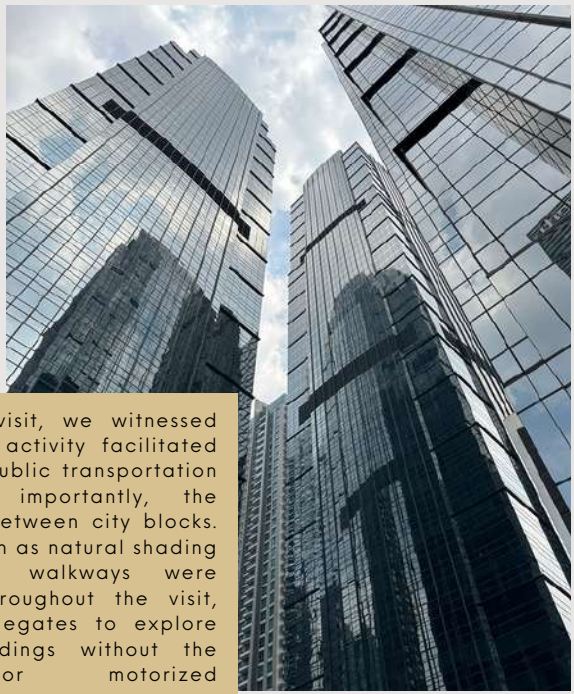
BSD City

BSD City is a smart city/township model, consisting of a 6,000- hectare (ha) residential and commercial development located in Tangerang. The delegation was provided an overview of the project, which integrates a traffic management system, infrastructure and facilities maintenance into a high speed and highly efficient system accessible by end-users via apps. The Geographic Information System (GIS) is used to ensure real-time updates are accurate and reliable. The main selling factor for the development is Live, Learn, Work and Play, which are clearly portrayed in the provision of 100 primary schools, junior and senior colleges, and universities. The township is also home to the Apple Developer Academy and few other digital schools. BSD Green Office Park also known as Jakarta Silicon Valley, is the first green district in Indonesia and hosts regional offices of Amazon and Microsoft.

Sudirman Central Business District (SCBD)

Located in the golden triangle of Jakarta city, the delegates explored ASHTA District 8 of SCBD. The commercial district is high-end mixed-use development with office towers, residential towers, 5-star hotels and shopping centres. An introduction was provided by Artha Graha Group, the owner of 45 hectares of SCBD.

This business district houses numerous conglomerate corporations, both local and international, such as the Indonesia Exchange (IDX) and Treasury Tower (the 3rd tallest tower in Indonesia).



During our visit, we witnessed the bustling activity facilitated by modern public transportation and, most importantly, the walkability between city blocks. Facilities such as natural shading and broad walkways were available throughout the visit, enabling delegates to explore several buildings without the need for motorized transportation

Jababeka City Cikarang

Located on the industrial corridor of East Jakarta, the first stop was to **Nuansa Affordable Housing Scheme**. The development, called Menara Kayana, consists of 24-storey towers with total of 868 units sitting on 2.9 hectares of land. This affordable housing scheme targets workers who commute between Jakarta and nearby districts. Nuansa was set up by Daerah Khusus Ibukota (DKI) Jakarta provincial government in 2017 to address the housing needs of DKI Jakarta residents. Potential buyers are exempt from down payments and the tenure is up to 20 years. A unique feature of this development is that there are no carparking requirements per unit; only motorcycle parking bays are provided, as the housing is located near public transportation.

Next stop was the **Jababeka Industrial Estate**, 5,600-hectare integrated township with industrial, residential and commercial components, as well as a golf course. This township is home to 1.2 million residents, including students and expatriates. The development is economically independent in terms of transportation services, power plants and wastewater treatment plants. Since the core economic activity here is industrial and commercial, with more than 2, 000 clients in its industrial estate, the township has their own port. The Cikarang Dry Port, an extension of Tanjung Priok International Port, is linked via a rail line. A dry port or inland port is an inland terminal linked to a seaport. Mattel, an internationally recognised toymaker has the largest manufacturing facilities here.

Pulau Indah Kapuk 2 (PIK 2)

PIK 2, a coastal land reclamation project in northern Jakarta by Agung Sedayu Group and Salim Group, two large conglomerates in Indonesia, will cover cover more than 6,000 hectares once completed.

PIK 2 consists of high-end bungalows and other landed residential properties, high-rise apartments and commercial hubs. The delegates had the opportunity to stop at ALOHA, a Hawaiian concept restaurant.

EVENTS AT A GLANCE.

GRE-UOB Energy Efficiency for Commercial Buildings Seminar, Wisma REHDA

In partnership with UOB, GreenRE conducted the second GreenRE-UOB Introduction to Green Buildings Seminar on 7 July 2023, at Wisma REHDA. The half-day seminar, attended by around 50 UOB invitees, covered topics such as GreenRE certification tools and process, tax incentives in Malaysia, Energy Efficiency in Buildings, and the Application of Passive design towards a zero-carbon development.

Farizan d'Avezac de Moran, (Senior Partner, GreenA Consultants Pte. Ltd.) presented on ESG Reporting for Developers

From Left : Jennifer Woo (Director Procurement & Development), KC Soon (Director Marketing & Development), Dato' Kam Kok Kow (Rivertree Group Executive Director), Dato' Simon David Leong (Rivertree Group Managing Director), Loo Jer Shen (Greenshift Solutions Managing Director), Ir. Ashwin Thurairajah (GreenRE Sdn Bhd), COO, Kelly Lee (BSD Consultancy Sdn Bhd), Steven Ooi Hock Ang (COO), Leo Ong (Director of Special Projects), Nancy Ng (Sales Director).

August 29, 2023

Rivertree's Esteem Business Park Project Certification Launch

Rivertree Group held an award ceremony for it's recently certified GreenRE project, Esteem Business Park at Rivertree UNO Sales Gallery in Bukit Raja, Klang. The project achieved a GreenRE Bronze (Provisional) under the GreenRE Industrial Facilities Rating Tool (IND).

September 6-9, 2023

Engineer Marvex Exhibition by IEM at KLCC Exhibition Centre

GreenRE was part of IEM's Engineer Marvex Exhibition, held 6-9 September 2023 at KLCC Exhibition Centre, Kuala Lumpur.

GreenRE's Senior Manager Ms. Nur Fateha Jamaluddin presented on 'Managing the Impact of Buildings on the Built Environment', at the IEM Marvex Exhibition Pocket Talk

GreenRE's Director Datuk Muztaza Mohamad and Executive Director, Ir Ashwin Thurairajah attended the award ceremony for Avaland's GreenRE certified projects held in conjunction with their Sustainability Roadmap Launch

September 7, 2023

Avaland Berhad's Sustainability Roadmap Launch

GreenRE was featured in The Edge Malaysia's article on Avaland Berhad's Sustainability Roadmap launch.

Avaland Berhad has successfully obtained GreenRE Certification for six of its projects;

- Aetas Damansara (Platinum)
- Alora Residences (Gold)
- Amika Residences (Gold)
- Alira Subang Jaya (Silver)
- Sanderling (Bronze)
- Casa Embun (Bronze)

September 20, 2023

GreenRE-SHEDA Green Building Introduction Seminar, Pullman Kuching

GreenRE in collaboration with the Sarawak Housing and Real Estate Developers' Association (SHEDA), hosted a Green Building Introduction session at Pullman Hotel Sarawak on 20 September 2023.

It was attended by over 32 SHEDA members and green consultants. The speakers for the session included GreenRE Executive Director Ir. Ashwin Thurairajah, Ar. Dr. Joseph Kong, Director of DME Solutions Sdn Bhd and Ir. Julian Saw, Technical Director of GreenQuarter. They covered topics such as an Introduction to GreenRE, Commercial Buildings, and Residential Buildings Case Studies.

Datuk Seri (Dr) Michael Yam Kong Choy, GreenRE Director presented at the SHEDA - GreenRE Green Building Introduction Session for SHEDA Members

GreenRE with Albert Lee, 99 Speedmart's, Optimisation and Sustainability Officer

September 22, 2023

99 Speedmart GreenRE Certification of Retail Outlets Launch

99 Speedmart held an award ceremony to commemorate its progress in certifying their outlets at its Headquarters, Wisma 99 Speedmart, in Klang.

99 Speedmart, proudly announced its pioneering achievement as the first retail company in Malaysia to attain GreenRE Platinum ratings. This remarkable milestone was awarded to ten of the company's outlets, underscoring their commitment to sustainable practices.

September 26, 2023

WCSC 2023 by REHDA Wilayah Persekutuan Kuala Lumpur, WPKL

GreenRE was part of the 14th World Class Sustainable Cities (WCSC) conference, held on , 26 September 2023 at M Resort & Hotel Kuala Lumpur.

The international conference centred its theme with "Resilient Urbanisation Planning Towards Malaysia Madani" focusing on exploring proactive steps required for cities to achieve resilience, sustainability and liveability.

Assoc. Prof. Ts. Dr. Vincent Woon Kok Sin from Xiamen University (GreenRE Research Partner) presented his research findings on Building a Carbon Index for Green Buildings

BSD & GreenRE team with Cycle & Carriage Representative Ir. Ts. Dominic Kong Head of Corporate Real Estate, Network Development & ESG

September 29, 2023

Cycle & Carriage Mutiara Damansara (GreenRE Silver Certificate) by Cycle & Carriage Bintang Berhad Launch

PETALING JAYA, SELANGOR - GreenRE attended the plaque handover ceremony held on 29 September 2023 to commemorate the certification of Cycle & Carriage Mutiara Damansara (GreenRE Silver Rating) by Cycle & Carriage Bintang Berhad (Cycle & Carriage Malaysia) under the Existing Non-Residential Category (ENRB).

October 4, 2023

FIABCI-Malaysia Morning Talk (Session 10)

GreenRE was invited to participate in FIABCI Malaysian Chapter's ongoing Morning Talk Series which was held on 4 October 2023 at the Bukit Kiara Equestrian & Country Resort.

Ir. Ashwin Thurairajah, GreenRE Executive Director presented on Developing Low Carbon Buildings & Townships through GreenRE Certification at the FIABCI Morning Talk (Session 10)

October 4-6, 2023

International Greentech & Eco Products Exhibition & Conference Malaysia (IGEM) Exhibition 2023, KLCC

GreenRE @ IGEM 2023, KLCC

GreenRE's Senior Manager, Ms. Nur Fateha Jamaluddin presented on Green Building: Emerging Trends in Energy Efficiency Development, at the IGEM Pocket talk.

October 5, 2023

GRE-Alliance Bank MOU Launch in conjunction with IGEM 2023

The demand for green financing products and services is on the rise, driven by a growing awareness of their not only economic but also environmental benefits. GreenRE is working together with banks in Malaysia to promote green financing and green certification as benchmarking tools for sustainable real estate.

Last September 2023, in conjunction with IGEM 2023, GreenRE and Alliance bank initiated the MOU signing with an exchange of signed copies, symbolising mutual commitment and partnership.

This MOU represents a significant partnership in advancing sustainability and green initiatives within our industry.

From Left: Dr. Aaron Sum Wei Wern, Group Chief Strategy Marketing & Business Development Officer, Alliance Bank Malaysia Berhad, Dr Hartini b Mohd Nasir, Setiausaha Bahagian Perubahan Iklim (BPI), Kementerian Sumber Asli, Alam Sekitar dan Perubahan Iklim (NRECC) and Ir. Ashwin Thurairajah, GreenRE Executive Director

GreenRE's Chairman Datuk Seri FD Iskandar was part of the UOB's Sustainability Compass Launch which was officiated by the Deputy Minister of MITI YB Liew Chin Tong

October 5, 2023

UOB Sustainainability Compass Launch Seminar

GreenRE was a strategic partner for UOB's Sustainability Compass Launch. The launch was officiated by the Deputy Minister of Investment, Trade and Industry (MITI), YB Liew Chin Tong, witnessed by GreenRE's Chairman Datuk Seri FD Iskandar.

UOB Sustainability Compass is a customised, free report tailored to each sector's sustainability readiness.

5 Key Benefits of UOB Sustainability Compass:

- Identify your Sustainability Readiness stage
- Provide customised roadmap with clear and actionable steps
- Identify regulations and standards impacting your sector
- List the government support available
- Recommends suitable sustainable financing solutions

GreenRE's Technical Panel Member and also the Managing Director of Green Quarter Sdn Bhd, Mr. Nic Chin Yee Choong presented on 'Kick Starting you ESG journey with Green Buildings' on Day 3 of UOB's Jom Transform Sustainability Accelerator Programme

October 7, 2023

MAPEX Perak 2023 by REHDA Perak

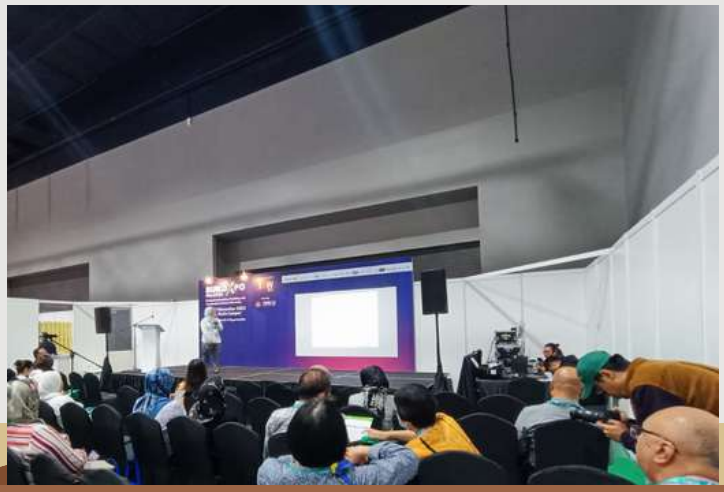
GreenRE was part of REHDA Perak's MAPEX Perak 2023 which was held on 7 October 2023 at Ipoh Parade.

GreenRE's Senior Manager, Ms. Nur Fateha Jamaluddin presented on Green Homeowner's Guide, at the Malaysia Property Expo (MAPEX) Perak 2023

October 11, 2023

Meeting with Padawan Municipal Council, Sarawak

GreenRE met with Sarawak's Padawan Municipal Council on 11 October to present on the importance of green buildings, GreenRE certification and opportunities in the state to further their sustainability goals.



GreenRE's Senior Assessor, Ts. Intan Mastor presented on Normalising Green & Sustainable Construction at the ICW Open Forum Session

November 15-17, 2023

CIDB's ICW-BuildXpo Malaysia 2023, MITEC

GreenRE was part of The Construction Industry Development Board (CIDB)'s International Construction Week (ICW) 2023, a 3-day exhibition-themed 'Leading ESG in Construction'.

November 27, 2023

1 Utama Tenant's Convention at PJPAC, 1 Utama

1 Utama recently launched a Green Lease programme aimed at onboarding all mall-wide tenants to incorporate environmental initiatives and promote sustainable materials into their fit-out, operations and retail stores as part of 1 Utama's shared ESG aspirations. Through Green Lease partnerships with new and existing tenants, 1 Utama aims to provide a more sustainable retail mall ecosystem responsibly, striving towards mutual goals on the path towards decarbonisation.

GreenRE was part of 1 Utama's 2023 Tenant's Convention at PJPAC 1, 27 November 2023

To kickstart the programme, 1 Utama held their annual Tenant's Convention, with the theme 'Driving A Sustainable Retail Ecosystem Through Impactful Green Lease Partnerships'. Tenants were provided insights into 1 Utama's Sustainability Greenprint and Retailers' Green Journey towards net zero carbon by 2050. GreenRE's Executive Director Ir. Ashwin Thurairajah presented on GreenRE and Green Building Certification.

One Utama's was recently certified under GreenRE's Existing Non-Residential Tool (ENRB), and achieved Provisional Gold.

December 7, 2023
REHDA Institute's CEO Series

GreenRE was part of REHDA Institute's annual CEO Series Conference on 7 December 2023 at Le Meridien Hotel, Petaling Jaya.

December 14, 2023
Webinar on Green Building Certification, Enhanced Passive Design of Buildings and UBBL 38A jointly organised by WWF and GreenRE for Perak Local Authorities

GreenRE, in collaboration with WWF under WWF's One Planet City Challenge (OPCC) initiative is hosting 1-day webinars for Local Authorities (LAs) on 'Green Building Certification, Enhanced Passive Design of Buildings, and UBBL 38A'. These webinars aim to engage local authorities in sustainable development and green building best practices, with a focus on energy efficient buildings. Topics covered include benefits of green building certification, overall thermal transfer values (OTTV), roof thermal transfer value (RTTV) and passive design principles.

A 1-Day webinar was held on 14 December 2023 and was attended by around 15 participants from various departments in the Perak State Council offices.

December 15, 2023
PPKM's Seminar: Building Management - The Only Constant is Change

Persatuan Pengurusan Kompleks Malaysia (PPKM) in collaboration with Building Management Association of Malaysia (BMAM) organised a 1-day seminar on developments in building management at Cititel Mid Valley City Hotel, Kuala Lumpur. The seminar covered topics such as green buildings, strata property management, the Strata Management Act (SMA), operational safety as well as the latest developments on electric vehicle charging stations etc.

GreenRE's Senior Manager Ms. Nur Fateha presented on, 'Green Building for Tomorrow' at PPKM & BMAM's seminar.

December 18, 2023

GreenRE at FIABCI-Malaysia Industry NextGen Leaders Programme 2023, 19 December, Tunku Abdul Rahman University of Management and Technology

FIABCI Malaysia has been organising a series of seminars (previously known as Brown Paper Bag Seminar, now renamed and revamped to Industry NextGen Leaders Programme) together with local universities and private colleges since 2011. The aim of the programme is to assist the undergraduate to gain practical experience and work life skills from professionals in the property industry.

GreenRE's Senior Manager, Ms. Nur Fateha Jamaluddin presented on Issues and Challenges in Managing Green Buildings: An Operation and Maintenance Management. The seminar was attended by Students from related faculties, members of FIABCI Malaysia and the public.

December 22, 2023

One Utama's Forest One Launch

1 Utama Shopping Centre - YB Nik Nazmi Nik Ahmad, Minister of Natural Resources and Environmental Sustainability, officiated 1 Utama's ForestONE. In line with 1 Utama's commitment to be at the forefront of green technology, ForestONE was designed to digitalize reforestation efforts under 1 Utama's Sustainability Greenprint. The launch event was also attended by 1 Utama Director Tan Sri Teo Chiang Kok together with ForestONE sustainability advisor GreenRE and Zero Waste Malaysia where all representatives engaged in a symbolic tree planting ceremony.

From Left: Ir. Ashwin Thurairajah, GreenRE Executive Director, YB Nik Nazmi, Minister of Natural Resources and Environmental Sustainability, and Tan Sri Teo Chiang Kok, Director 1 Utama Shopping Centre

1 Utama Shopping Centre's has also achieved the GreenRE Platinum Certificate (Provisional) under the Existing Non-Residential Category.

TRAINING HIGHLIGHTS.

GREENRE ACCREDITED PROFESSIONAL'S COURSE NO. 32 (PETALING JAYA/ONLINE) AND NO. 33 (PENANG/ONLINE)

GreenRE Accredited Professional's (GreenREAP) Course No.32 and No.33 were held in the second half of 2023. Over the course of 3 days, we delved deep into all aspects of green building certification, exploring best practices, green building theory, and existing and emerging technology. The GreenREAP courses provided an excellent platform for knowledge sharing, skill enhancement, and networking.

GreenREAP No.32 took place from 4-6 June 2023 at Wisma REHDA, Petaling Jaya, with a total of 45 participants attending both physically and virtually (via zoom).

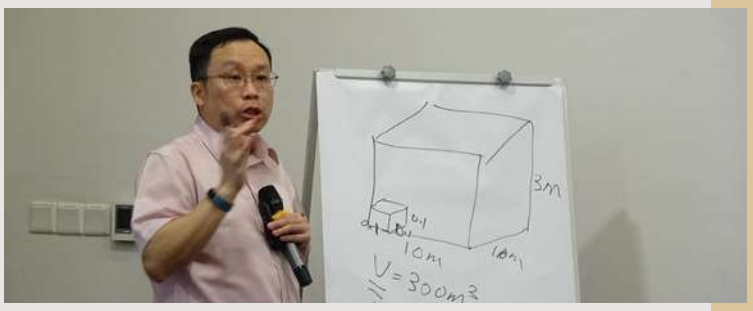
The GreenREAP course is also held out of state twice a year based on local demand. GreenREAP No.33 was conducted up north, from 17-19 October in at The Ship Campus, Batu Kawan Penang. The Ship Campus, owned by PKT Logistics (M) Sdn Bhd, was recently certified Bronze under GreenRE's Non-Residential Category. There were 20 registered participants for the GreenREAP 33 intake.

The GreenREAP course covers modules such as GreenRE Rating tools and rating process, Overall Thermal Transfer Value (OTTV) and Residential Envelope Transmittance Value (RETV), Sustainable Construction and Green Products, as well as Passive Design for Buildings, Energy Modelling and Computational Fluid Dynamics, Efficient Air-Conditioning, Daylighting and Artificial Lighting, Water Efficiency, Green Plot Ratio, Rainwater Harvesting, Solar Photovoltaic for Buildings and Township and many others related to green building and sustainable development.

Our expert trainers, including Ar. Dr. Joseph Kong (DME Solutions), Mr. S Ramesh (IJM), Ar. Axxu Hoi Jung Wai (AXA), Mr. Ken Po (BSD Singapore), Mr. Gregers Reimann (IEN Consultants), Mr. Christophe Inglin (Energetix Pte Ltd), and Mr. Choong Chow Neng (G-Energy), shared their extensive knowledge and experience, creating a dynamic learning environment.

The GreenREAP participants came from various backgrounds such as engineers, architects, facilities managers, project managers, green consultants, and academicians. This training course provided a remarkable opportunity for our members to enhance their skills, broaden their perspectives, and connect with fellow enthusiasts in our community.

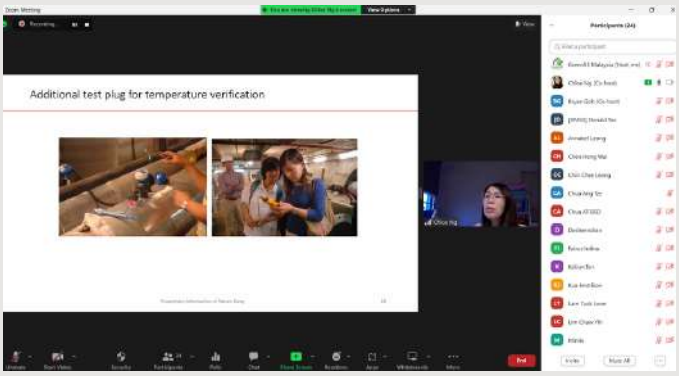
The GreenREAP courses also qualify for CPD points from Suruhanjaya Tenaga, Institute of Engineering, Malaysia (IEM), Lembaga Arkitek Malaysia (LAM), Lembaga Penilai dan Pentaksir Malaysia (LPPEH), Malaysian Board of Technologist (MBOT) as well as GreenRE.

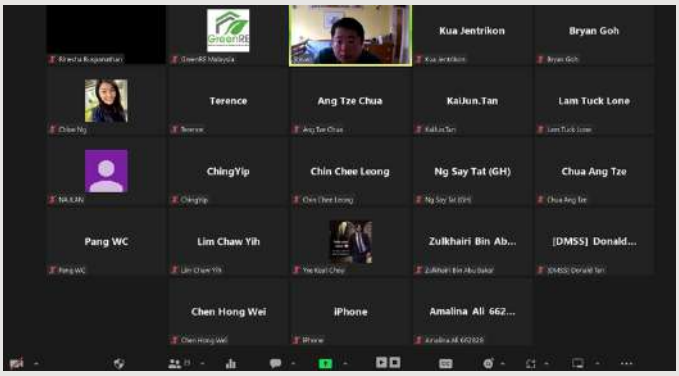


There will be four GreenREAP intakes for year 2024, two in Petaling Jaya and two in Johor Bahru and Kuching, Sarawak, respectively for the out-of-state sessions. GreenREAP No.35 will be held from 20-22 February 2024 at Wisma REHDA, Petaling Jaya.

Follow us on Facebook, LinkedIn and Instagram to stay updated on upcoming event dates, resources, and industry insights.

GREENRE TECHNICAL SEMINAR 02-2023 ON GREEN DATA CENTRE (ONLINE)



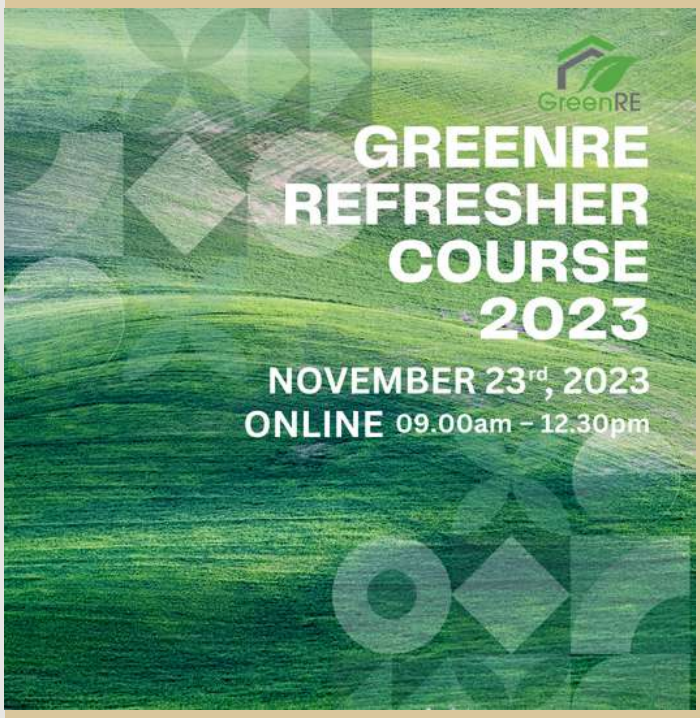


The third intake of the Green Data Centre Technical Seminar was held on 3-4 October 2023 online (via Zoom). The speakers were from Measurement & Verification Pte Ltd, Mr. Steven Kang and Ms. Chloe Ng, along with Mr. Lee Seng Wee, from i3 Solutions Group.

This technical, hands on two-day seminar equipped participants with best practices and case studies to empower them with knowledge and ideas to green their data centers. It also included the in-depth knowledge of SS 564 and GreenRE New and Existing Data Centre. There were 15 participants for this 2-day session consisting of green consultants and project teams.

GREENRE REFRESHER COURSE 2023

GreenRE annual Refresher Course was held on 23 November 2023 online via Zoom. 65 GreenREAPs participated in this half-day course. The Refresher Course provides updates on operational and technical information, including revision of GreenRE Rating Tools. The course has a weightage of GreenRE CPD points (3) and it is also a pre-requisite for GreenREAP renewal application. The speakers of the 2023 session included heads of GreenRE Assessment, Training and Marketing departments, along with one guest speaker from RWDI, Mr. Ghar Ek Lau, who presented on Wind Driven Rain in Building Design.



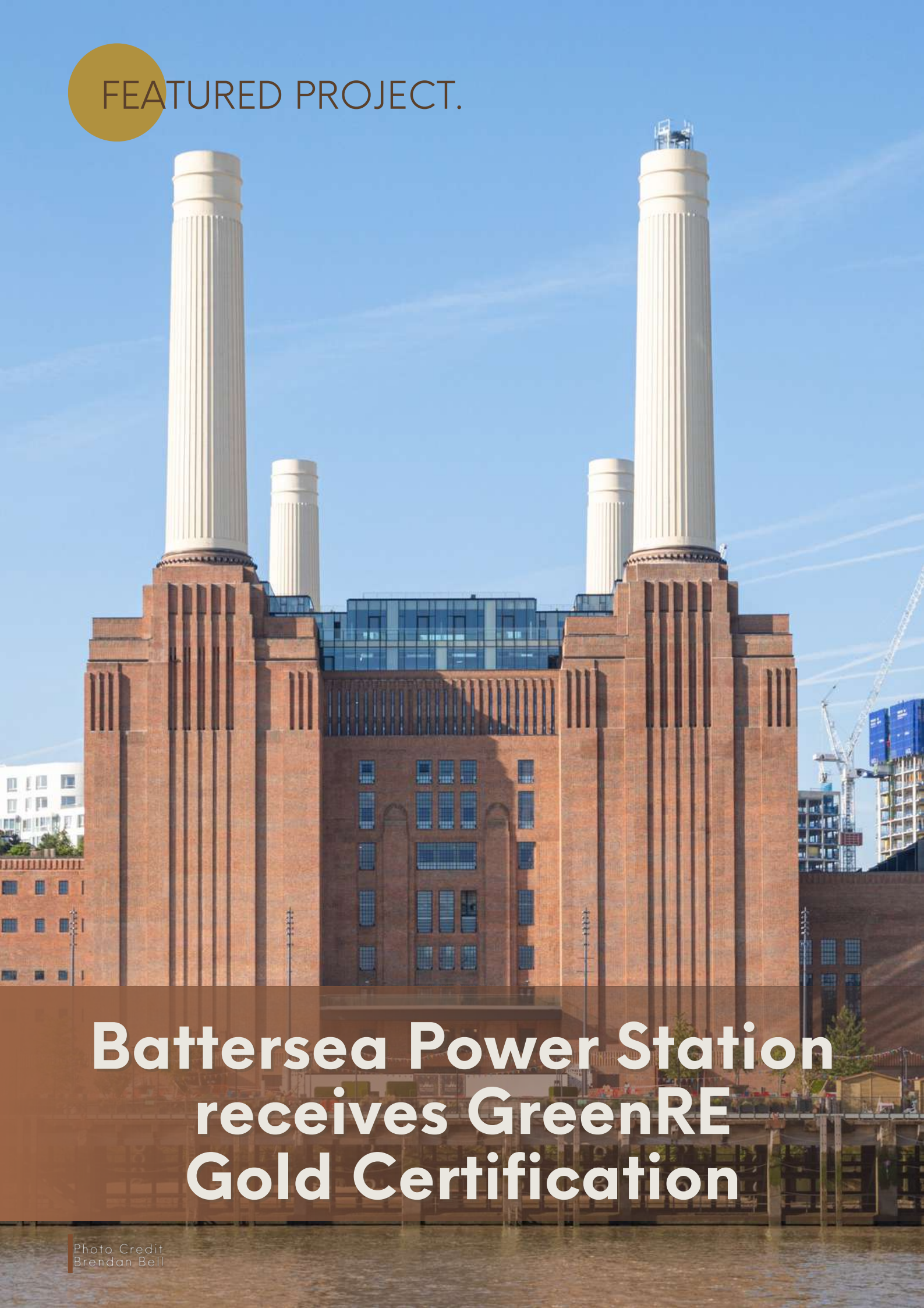
Follow us on social media:

greenresdnbhd
greenremalaysia
GreenRE Sdn Bhd
www.greenre.org

UPCOMING TRAINING.

UPCOMING TRAINING.

FEATURED PROJECT.



Battersea Power Station receives GreenRE Gold Certification

Photo Credit
Brendan Bell

BATTERSEA POWER STATION RECEIVES GREENRE GOLD CERTIFICATION

BY E JACQUI CHAN

Having seen the iconic Battersea Power Station (BPS) in its derelict from back in 2012, when it was acquired by the Malaysian consortium of SP Setia Bhd, Sime Darby Property Bhd and the Employees Provident Fund, visiting the restored building in all its former glory was gratifying, to say the least

The Power Station, now transformed into a mixed- use destination, and Electric Boulevard were opened to the public in October 2022.The former houses 254 apartments, more than 100 retail shops, an event space and Lift 109,a chimney lift experience with 360° views of London from a height of 109m.It also has 565,000 sq ft of office space, of which 500,000 sq ft is occupied by Apple. Electric Boulevard, a brand new pedestrianised high street, is part of Phase 3. Circus West Village, comprising a mix of bars, restaurants, shops, fitness and leisure facilities, a cinema and a theatre, was opened in 2017. It is now home to over 1,800 people.

On Dec 13, BPS recorded another achievement when it received a GreenRE Gold certification for its retail portion. The certification was presented to Battersea Project Holding Co Ltd chairman Tan Sri Jagan Sabapathy by GreenRE chairman Datuk Seri Fateh Iskandar Mansor (FD Iskandar) in a ceremony.

The certification is also a milestone for GreenRE, as it is its first certification for a completed international project. "BPS is an iconic project by two of Malaysia's biggest property developers. The BPS team wanted a green certification that has a more universal standard. In the UK, when dealing with a Grade II-listed landmark building, a lot more care and consideration needs to be taken into account. Kudos to the GreenRE and BPS teams for working together to find a formula to achieve this," says FD Iskandar.

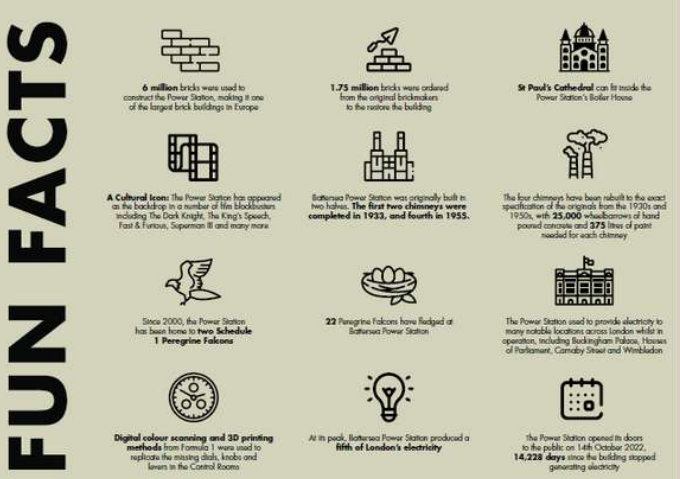
Tan Sri Jagan notes that many good things were carried out at BPS in its pursuit of the green agenda.

He says: "The journey from inception to completion has been challenging but, in the end, immensely rewarding. Today, BPS is almost always associated with Malaysia. I take great pride in it.

"We took a derelict building and restored it. The whole philosophy is changing; you take old buildings and retrofit it, make it more efficient. The certification is a wonderful recognition for everyone associated with the journey. I would like to thank FD Iskandar, GreenRE and REHDA for the recognition."

Tangible benefits

According to Battersea Power Station Development Company head of communities and sustainability Sarah Banham, the retail element had retained a lot of the original fabric of the building, which was not built to today's standards.



Tan Sri Jagan Sabapathy, chairman of Battersea Project Holding Co Ltd (right) receiving the GreenRE Gold certificate from GreenRE chairman Datuk Seri Fateh Iskandar Mansor (FD Iskandar)

Banham says: "It was a challenge for GreenRE to certify a Grade II-listed industrial building, which has areas of significance. For example, the control room is a highly significant area, and so are the turbine halls. Anything we do, even putting in the shops, we have to get the consent of Historic England as well as the planning authorities. It is quite complex." Historic England is an executive non-departmental public body of the British government sponsored by the department for Culture, Media and Sport.

One of the main things done was to create natural ventilation for the mall. "The main circulation space through the two turbine halls is not heated or cooled. It is completely passive and natural, so it becomes sort of an indoor street. It's very important to get the air flow through and that obviously has become even more important since the Covid-19 pandemic," says Banham.

Turbine Hall A has two huge windows that were bricked up during WWII, which was opened with the blessing of Historic England, to allow natural daylight to come into the building.

"This means that, during the day, particularly in the summer, we get massive savings on electricity and lighting," says Banham.

BPS has achieved a 40% improvement in energy savings from the base line and uses water management and monitoring technology, including monitored water consumption and the use of drought tolerant plants. Methods to harmonise indoor comfort and the use of low VOC (volatile organic compound) paint were also introduced, while waste recycling is encouraged, with the provision of recycle bins. Innovative green practices were adopted, including the use of renewable energy during construction, creating work opportunities for the local community and promoting wild life preservation.

Project Team

Developer:
Battersea Power Station Development Company

Contractor:
Mace Group

Architect:
WilkinsonEyre Architects

M&E Engineer:
Chapman BDSP

Structural Engineer:
Buro Happold

Quantity Surveyor:
Gardiner & Theobald

Project Management:
Turner and Townsend

ESD Consultant:
Chapman BDSP (London)
DME Solutions Sdn Bhd (Malaysia)

Battersea Power Station has been transformed into a mixed-use destination

Battersea Power Station updates

- **Visitors:** More than 11 million people have visited Battersea Power Station (BPS) since the Power Station and Electric Boulevard opened in October 2022
- **New jobs:** 20,000 new jobs will be created at BPS, and 3,500 new jobs were created with the opening of the Power Station and Electric Boulevard in October 2022
- **Affordable homes:** 386 affordable homes are being built
- **New River Bus service:** Uber Boat by Thames Clippers River Bus operates from Battersea Power Station Pier, which was opened to the public in 2017
- **New Underground Station:** BPS contributed more than £300 million to the Northern Line Extension. This new riverside neighbourhood is less than 15 minutes from the West End and the City. The Battersea Power Station Underground Station is completed and open to the public.
- **Public access:** With the redevelopment of BPS, a new 450m riverside pathway has been opened up for the first time in almost 100 years. A new six-acre park in front of the power station is now open too.
- **Community choir:** Launched in 2016, the Battersea Power Station Community Choir now has more than 100 members
- **Culture and arts:** The Turbine Theatre opened in 2019 and is a venue for generating new ideas and talent, achieving its first West End transfer in October 2022
- **Employment:** Nearly 1,000 locals have already found jobs or apprenticeships at BPS
- **NHS hours:** An on-site medical facility for construction workers has saved nearly 20,000 hours of NHS time so far
- **Local businesses:** Supports local businesses, with more than 100 shops, restaurants and cafés as well as leisure experiences available across the neighbourhood
- **NHS:** A new £13 million NHS medical facility will be built here
- **School programmes:** Yearly engagement with schools from the local community, to learn about the history and future of the power station

Banham says BPS is home to two Schedule1 species — a pair of Peregrine Falcons and Black Redstarts. "We worked very hard on the biodiversity net gain of this site. The Peregrine Falcons have been living here since before the Malaysian consortium took over. They nest on the power station because it replicates the cliff faces of their natural habitat that allows them to dive and swoop for birds.

"Because they are Schedule 1 species, we can't disturb their nests for about nine months out of a year, which was a problem for us during the construction phase. So, we built a temporary tower of the same height as their nest to encourage them to relocate. We placed mannequins on the roofs and the sound of the mannequins' jackets flapping in the wind eventually pushed the falcons to move to the temporary tower.

"When the station was finished, we put a new falcon nest box in the Northwest watch tower. We could see the female falcon coming over to investigate the space. Eventually, she started dropping dead pigeons that she caught in it. Soon, they moved to their new home and we tore the temporary tower down."

So far, the peregrines have fledged 22 juveniles. Meanwhile, the Black Redstarts have always been an annual breeder at BPS. Foraging areas have been allocated below the Peregrine Falcon nest and on the brown roofs at Circus West Village.

Banham has been with BPS for 17 years and has a deep understanding of and connection with the local community. "The local community is really emotionally tied to BPS, even though many had never set foot in the building until October last year. They felt strongly about what they wanted
it to be and how it would be repurposed," she says.

Ultimately, the biggest challenge is the building itself.

"The power station was full of oil, coal and asbestos, all of which had to go. Then there was managing the whole construction process, thinking about the design and sustainability, how to get that segregation of shopping, office and homes. BPS was known as the Everest of property development for one reason — every company before the Malaysian shareholders went bust trying to restore the building," says Banham.

The GreenRE team has certainly achieved much. As FD Iskandar says, "The team has shown that they can adapt to different conditions, weather, cultures and regulations. We have never dealt with heritage buildings before, and being able to certify an iconic building in London is something we can be proud of."

FEATURED PROJECT.

99 Speedmart: GreenRE's First Platinum Certified Retail Outlets

A SUSTAINABLE WAVE ACROSS 10 OUTLETS

CINDY KHOR
DME SOLUTIONS SDN BHD
(ESD CONSULTANT)

As a beacon of sustainability in the retail industry, 99 Speedmart represents a collective force for positive environmental change. With ten outlets actively participating in green initiatives, including

- 1617-DAYA MERU
- 1008-KLANG UTAMA
- 1497-JLN KAPAR BATU 13
- 1012-BUKIT KAPAR
- 1066-SULTAN SULAIMAN
- 1414-JALAN TEPI SUNGAI
- 1529-PELANGI SERI ALAM
- 2809-TAMAN SRI CAHAYA
- 1637-TAMAN BAHAGIA MORIB
- 2586-NS SPRINGHILL2,

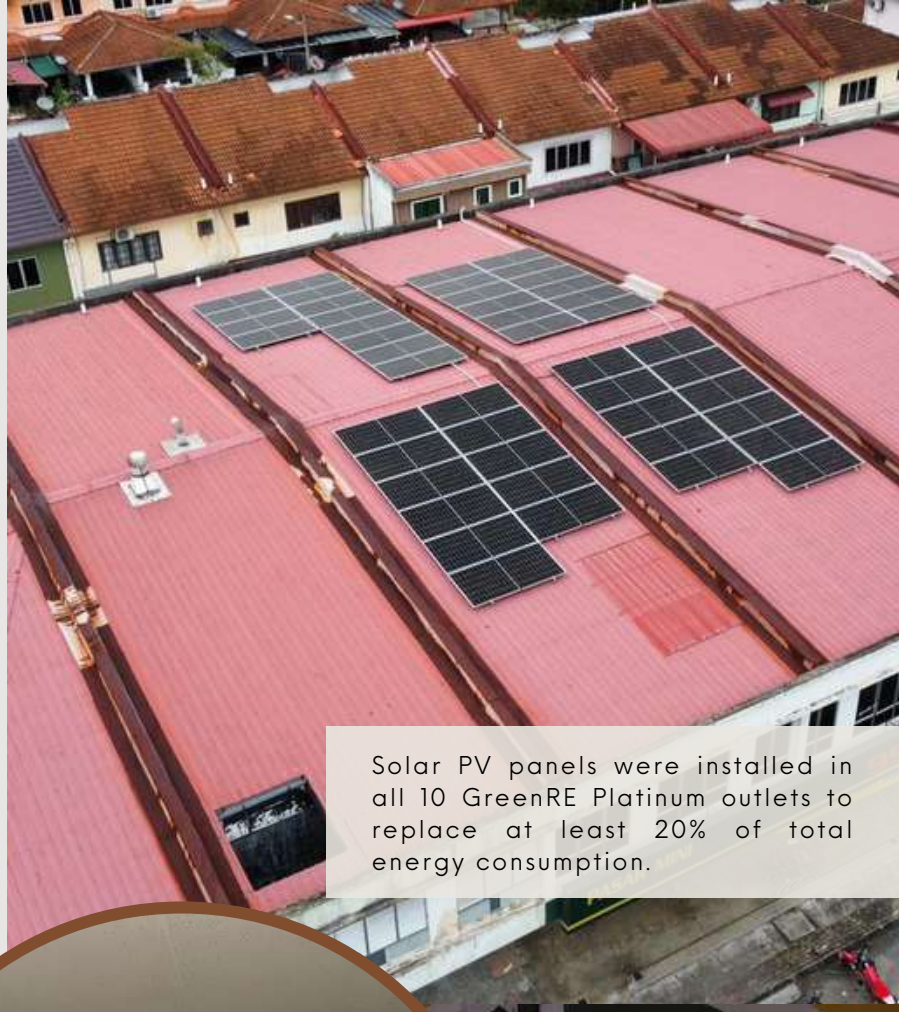
As of December 2023, 99 Speedmart has 12 outlets across Malaysia certified as GreenRE Platinum and 2 outlets certified as GreenRE Silver

99 Speedmart is making significant strides toward a more sustainable future with steps being taken for other stores to follow similar practices.

ENERGY EFFICIENCY AND RENEWABLE ENERGY:

99 Speedmart's commitment to energy efficiency and renewable energy spans across its ten outlets, each showcasing a dedication to sustainability. Implementing Suruhanjaya Tenaga 4 Star Air-conditioning systems ensures optimal cooling efficiency while minimizing energy consumption. The strategic use of lighting zoning and energy-efficient LED lighting enhances overall energy efficiency by illuminating specific sections only when necessary. Refrigerator display cabinets, equipped with non-heated doors and LED lighting, not only preserve product freshness but also contribute to the outlets' eco-friendly practices.

Additionally, each outlet invests in on-site renewable energy sources, collectively harnessing solar energy to power operations and significantly reducing carbon emissions. This holistic approach underscores 99 Speedmart's role as a sustainability leader in the retail industry.



Solar PV panels were installed in all 10 GreenRE Platinum outlets to replace at least 20% of total energy consumption.

Use of air curtain to maintain indoor temperature and avoid temperature loss to outdoor to save energy consumption.

WATER CONSERVATION, SUSTAINABLE PRACTICES AND GREEN PROCUREMENT:

With water meters installed and water efficiency management plans in place, these outlets actively contribute to responsible water usage.

During renovations, each outlet emphasizes the use of sustainable and low VOC products, fostering healthier indoor air quality. Indoor air quality audits, coupled with the integration of CO_2 and temperature & RH sensors helps maintain optimal indoor conditions. The implementation of a green procurement policy ensures that the daily use products align with environmentally friendly principles.

Efficient Freezer & Chiller with fitted doors & LED to reduce temperature loss and reduce energy consumption

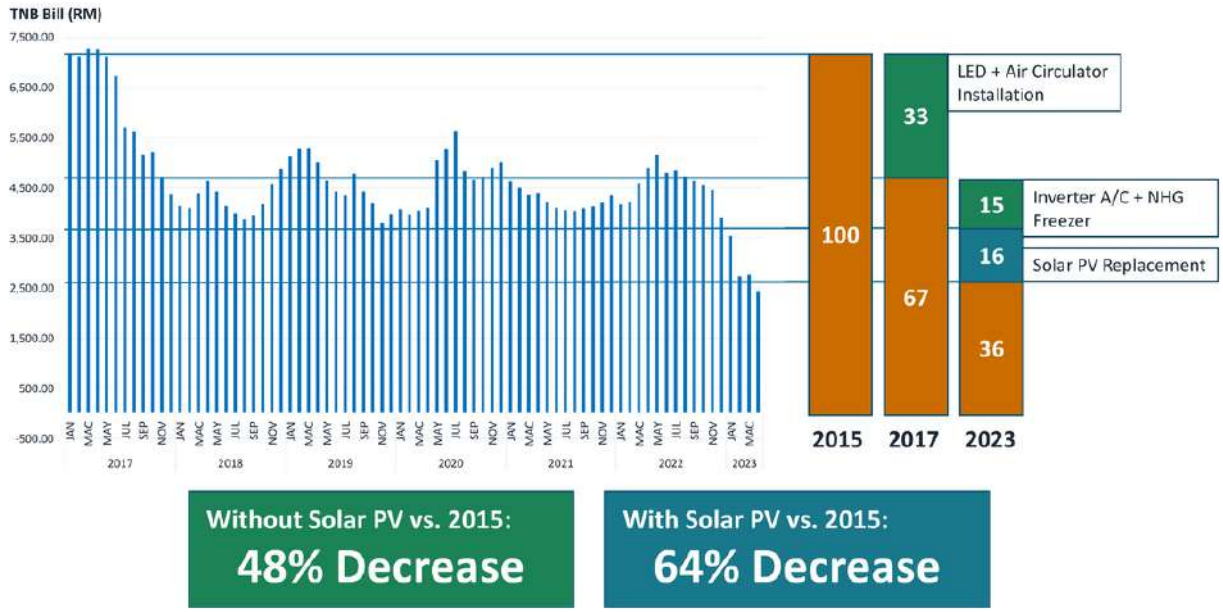
99 SPEEDMART

ENERGY EFFICIENCY DEVELOPMENTS

STAGES	2015 – EcoBreeze Circulator	Q3 2022 – Inverter A/C Retrofit	Q1 2023 – NHG Freezer Equipment
			
ADDITIONAL DETAILS			
FIT-OUT CHANGES	Outlet Lighting – From CFL T5 → E27 LED (18W) Air Circulation – Reduction of 1 3HP A/C Unit	A/C Units > 8 Years: Upgrade to MyHijau Certified Inverter Variants (HQ, DC, Outlets)	Freezer Equipment: Upright Merchandiser Freezers Upgraded to Non-Heated Glass Variant
IMPROVEMENTS	1. 40% Increase in Lighting Efficiency 2. Energy Savings in A/C Reduction	- Reduction of ~800-900kWh per Month (Each Outlet)	1. Increase of ~40% System Efficiency 2. Significantly Improved Temperatures

OUTLET ELECTRICITY TREND (EE+RE)

1497 JALAN KAMPAR BATU 13

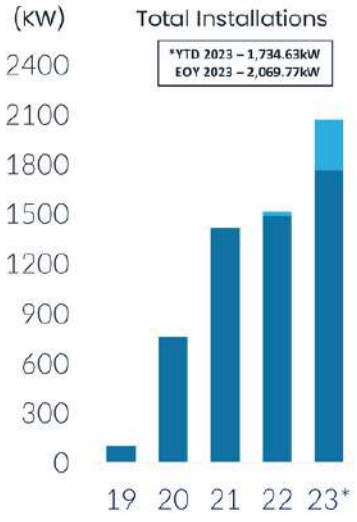


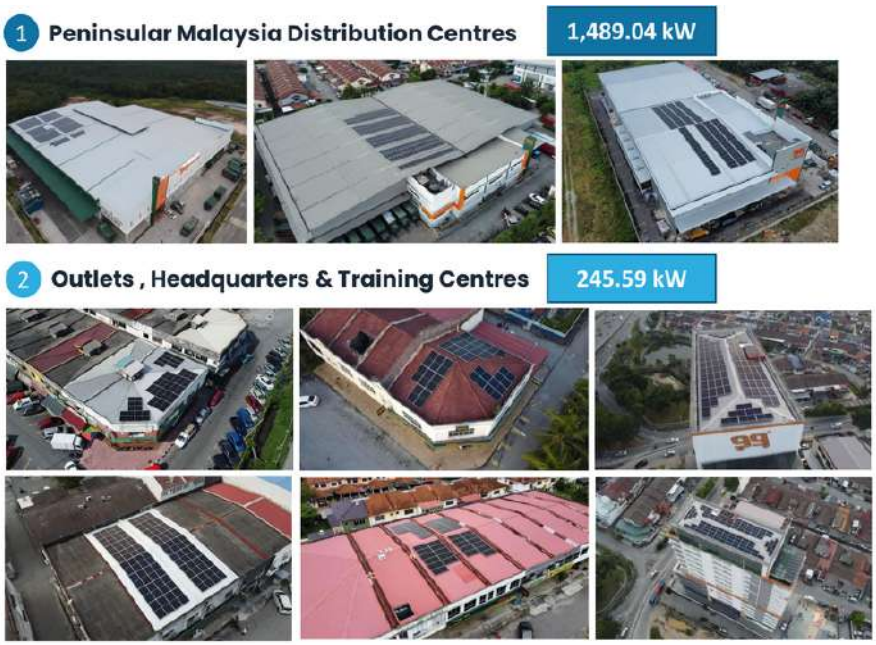
Without Solar PV vs. 2015:
48% Decrease

With Solar PV vs. 2015:
64% Decrease

99 SPEEDMART

RENEWABLES - SOLAR PV SYSTEMS





IMPACT ON CARBON EMISSIONS

UPON FULL IMPLEMENTATION OF RETROFIT (A/C + FREEZER)

Electricity Consumption Reduction

All Outlets (2360)

Monthly	Yearly
3,500,000 kWh	42,000,000 kWh

Carbon Emission Reduction*

Monthly	Yearly
1,920 tCO2e	23,000 tCO2e

*Based on TNB's Sustainability Report 2021 (0.55 tCO2e/MWH)

Equivalent to:

- Removing the average yearly emissions of 3,000 Malaysians (7.63t per capita, 2021)
- Removing the average yearly emissions of 4,700 Passenger Cars (4.9t per car, US EPA 2022)
- 6,050 Round-trips from Kuala Lumpur to London (3.8t per person, C-Level 2023)

99 Speedmart reusable bag to replace single use plastic bags.

Recycling bins are provided outside stores to encourage recycling

COMMUNITY ENGAGEMENT, ENVIRONMENTAL AWARENESS AND WASTE MANAGEMENT:

Actively participating in sustainable activities, 99 Speedmart's outlets engage with the community to spread environmental awareness. By offering environmentally friendly products and reusable bags to replace single use plastic bag, these outlets empower customers to make sustainable choices in their everyday lives. Through effective waste management practices, including recycling programs such as Careton project storage boxes to allow customers to return used drink cartons, each outlet contributes to minimizing its environmental impact.

CONCLUSION:

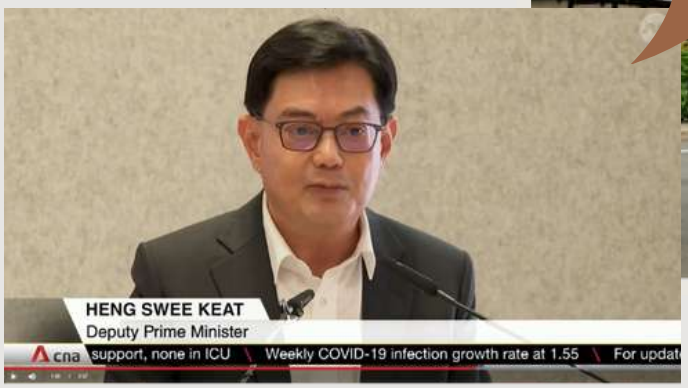
99 Speedmart's green initiatives extend beyond a single outlet, encompassing ten dedicated locations that stand a holistic implementation of environmentally sustainable operations. With such initiatives, 99 Speedmart continues to pave the way for a retail industry that is more responsible towards the planet and the overall community.

THE POWER OF RETROFIT

GREGERS REIMANN
IEN CONSULTANTS SDN BHD

With the retrofit of the 45-year old university buildings at the National University of Singapore, we managed to show the power of building retrofits, both qualitatively and quantitatively. The two retrofitted buildings, SDE1&3 (23,219 sqm), were formally launched by the Deputy Prime Minister of Singapore in February 2023, who at the time lauded the project for setting a good example for the existing building stock nationwide.

"The effort to retrofit and improve the performance of existing buildings is crucial to decarbonising Singapore's built environment and meeting its net-zero goals"



Now, one year later, a full year of performance data has been collected from SDE1&3, at end results are impressive. Both buildings underwent deep retrofitting, i.e. replacing the MEP systems, replacing the facades, and undertaking some structural changes. In this article, we look at the achieved results.

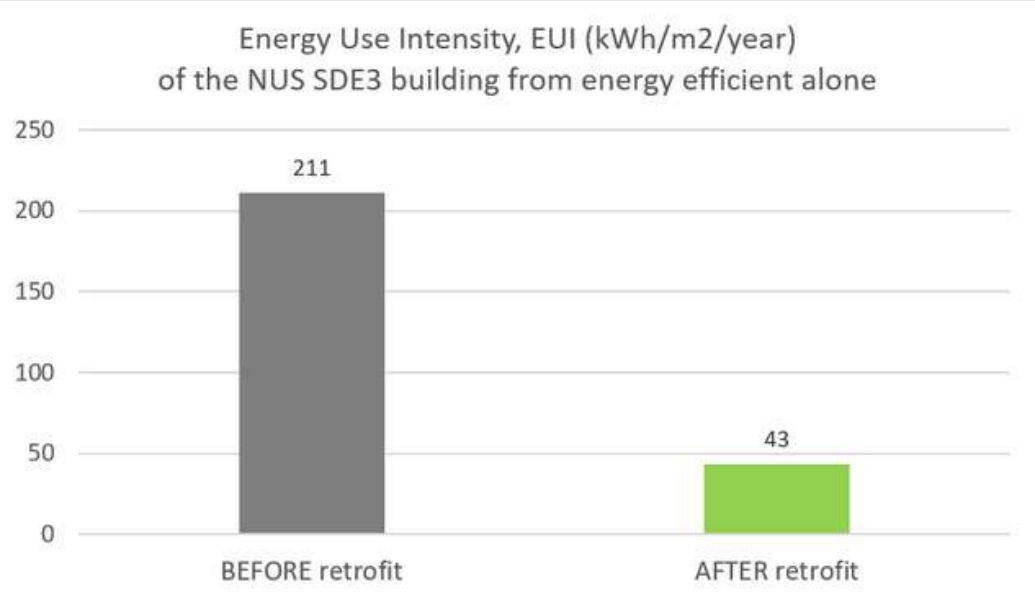
Energy Efficiency

The biggest of the two buildings, SDE3, functions mostly as teaching spaces for the department of architecture. The bottom three floors mostly consist of architectural studio spaces. The top floor consists of lecture halls. The top three energy efficient retrofits were:

- **Hybrid ventilation**
  Instead of cooling the buildings with regular air-conditioning with a temperature set-point of 23°C, but often dropping lower down, the cooling system was changed to hybrid ventilation. Hybrid ventilation combines slow moving ceiling fans with light air-conditioning, where the air temperature is kept between 26-27°C. The higher temperature saves energy while keeping the occupants thermally comfortable.

- **Efficient Cooling System**
  ·The building scrapped its old chillers and was instead connected to a highly energy efficient district cooling system (0.65 kW/ton efficiency) at the university campus.

- **Energy Management System**
  The building was equipped with a grid of occupant sensors that allowed the building systems (lighting, ceiling fans, air-conditioning) to switch off, when nobody was around. Such effective energy management was only possible thanks to the hiring of a skilled and dedicated energy manager.



The almost 5-fold drop in energy consumption is very impressive, especially considering that the measured energy savings come entirely from energy efficiency and conservation. The university has recently obtained funding for installing solar photovoltaic panels on the roof, which will make it a ZERO energy building.


SDE3. Hybrid Ventilation after retrofit. Photo by IEN Consultants

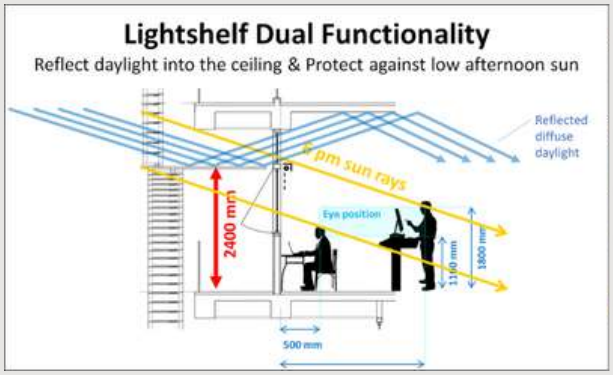
Occupant Satisfaction

The SDE1&3 buildings were built in the 1970s and its windows were heavily shaded and heavily tinted. As such, virtually none of the indoor spaces were daylit and the views were limited to a narrow strip below the heavy shading:

OLD WEST FACADE

NEW WEST FACADE

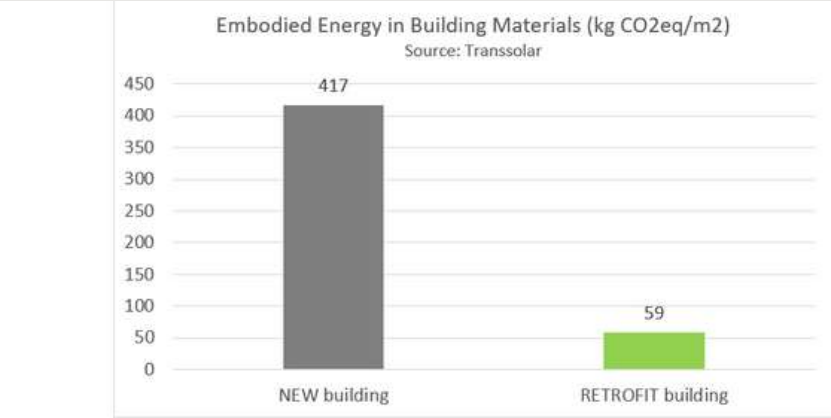
To enhance the building performance and the occupant experience, the facades were redesigned and replaced with an aesthetically pleasing high performance façade. The resultant "butterfly façade" not only helped to unleash the beauty of the 45-year old buildings, but it also ensured better daylight and views out for the occupants. No easy task, as the main façade faces West, and hence, is exposed to low angle sun on a daily basis. The resulting West façade design consisted of a 3-meter long lightshelf, which effectively shades the indoor spaces from the setting sun until 6 pm, while also reflecting diffuse daylight up to the ceiling soffit and further into the space.



Occupant surveys before and after the retrofit showed a remarkable increase in satisfaction with the indoor environment, namely up from 40% (before the retrofit) to 90% (after the retrofit).

Lower Embodied Carbon

By choosing retrofitting instead of tearing down and building new, this project saw a substantial reduction in the embodied carbon.



By retrofitting SDE1&3, a much smaller amount of building material was needed, mostly from replacing the MEP systems amounting to a carbon footprint of 59 kg CO_2 per m2 of building, as opposed to a 7-fold higher carbon footprint of 417 kg CO_2 per m2 insofar the old building had been torn down to make way for a new building.

Project Location: Clementi, Singapore

Project Size: 23,219sqm

Year:
2021 (SDE1)
2023 (SDE3)

Status: Completed

Project Team:
Client:
National University of Singapore

Contractor:
Lian Soon Construction Pte Ltd

Architect:
NUS Special Projects with (Erik L'Heureux)
CPG Consultants

ESD Consultant:
IEN Consultants (energy & daylight), WSP (GreenMark) and Transsolar (concept)

M&E Consultant:
WSP Consultancy Pte Ltd

C&S:
E2000 Pte Ltd

Landscape:
Special Projects (NUS) with Yun Hye Hwang (NUS) and DP Green. Prince's Landscape Pte Ltd.

QS:
Quants Associates

Energy Manager:
NUS (Bertrand Lasternas)

IEN Project Team Members:
. Gegers Reimann
. Joshua Chia
. Michael Hirning
. Bjorn Bull Hansen

Conclusion

This successful building retrofit case study has achieved remarkable environmental results, namely a measured 5-fold reduction in energy consumption, a 7-fold drop in the material carbon footprint and a doubling of the occupant satisfaction with the indoor environmental quality. Moreover, with the striking golden façade screen, the building emerged as a beautiful butterfly, hereby truly showing the power of retrofit.

GREEN HOMES INITIATIVE: **DESIGNING AN ENERGY PERFORMANCE BENCHMARKING (EPB) TOOL FOR MALAYSIAN RESIDENTIAL BUILDINGS, WITH EMPHASIS ON LANDED HOUSES**

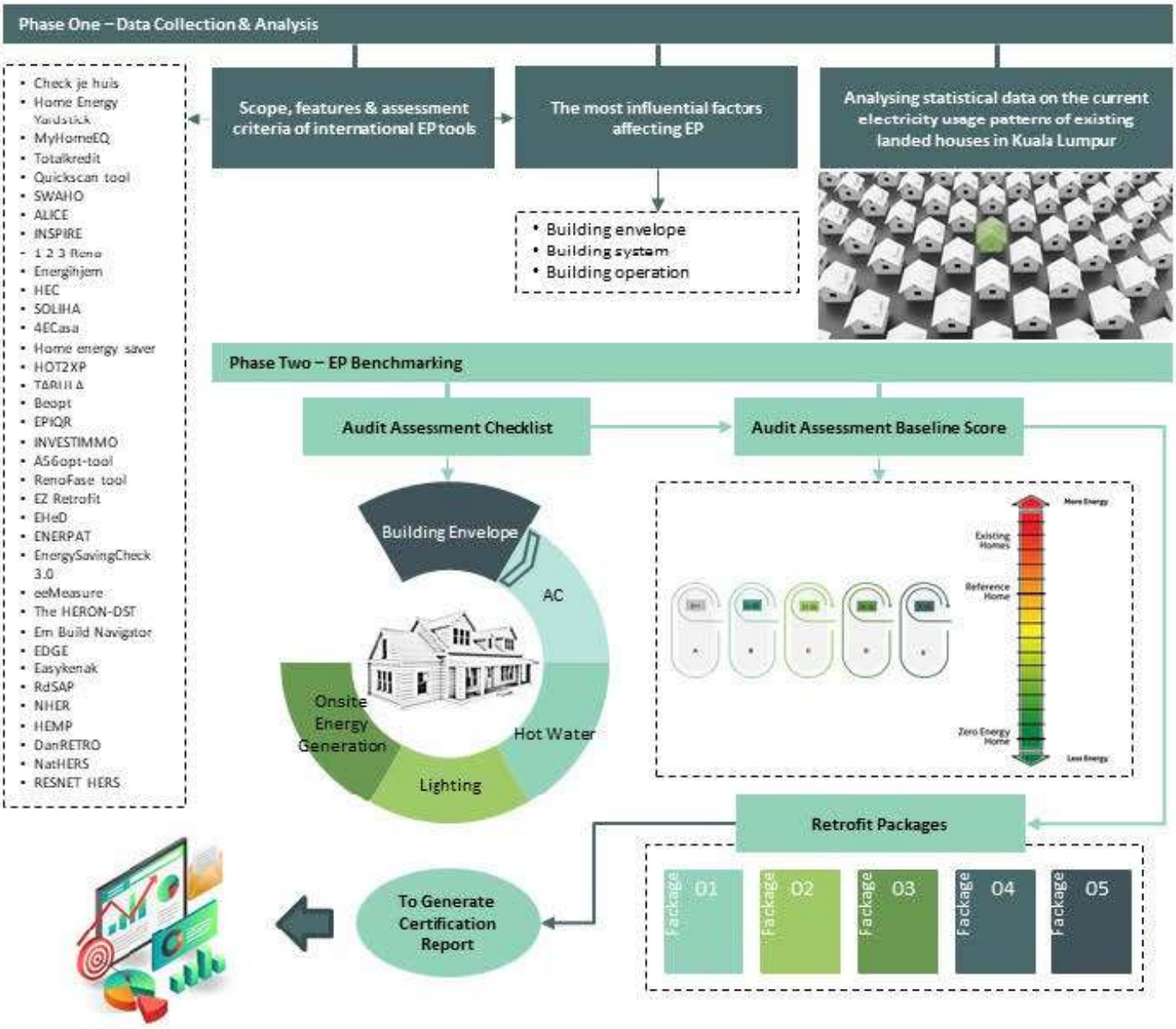
ASSOC. PROF. DR. SR. NORHAYATI MAHYUDDIN
MOZHGAN SAMZADEH
UNIVERSITI MALAYA (UM)

Aligned with the objectives of the National Energy Policy 2022-2040 (DTN), which prioritizes a 10% reduction in energy consumption for residential areas, GreenRE is undertaking a collaborative initiative with Universiti Malaya to create an Energy Performance Benchmarking (EPB) tool for existing Landed Houses. The EPB tool will facilitate the retrofit audit process for the energy assessors systematically as the initial step in decision-making process of building retrofitting towards a carbon-neutral country.

The research indicates that energy consumption in buildings aged 18 years and older is nearly 1.5 to 2 times higher compared to new buildings with similar characteristics. Considering the substantial embodied carbon in existing building stock, demolition is deemed an environmentally unfavourable option. Consequently, there is a pressing global urgency to markedly escalate retrofitting rates. Building energy consumption depends on several parameters such as building envelope, building system, and operation. Commencing this research initiative, the primary focus is on investigating the most influential factors affecting energy performance. This involves analyzing statistical data on the current electricity usage patterns of existing landed houses in Kuala Lumpur. Simultaneously, we will explore the scope, features, and assessment criteria of international in-use frameworks.

The ultimate aim is to ascertain a comprehensive minimum energy efficiency (EE) requirement stipulated by legislation, establishing a crucial baseline for the benchmarking tool.

The collected data and information from the phase one will undergo analysis to create an Assessment Checklist and Score report. This report will serve as a comprehensive tool for the energy auditor to systematically assess the current energy performance status of the house. Recommendations for appropriate retrofit packages will be provided based on the EE score obtained through the audit. This strategic advice aims to guide homeowners in making informed decisions and taking beneficial actions when investing in their housing's energy efficiency retrofit plan.


Phase One – Data Collection & Analysis
Check je huis
Home Energy Yardstick
MyHomeEQ
Totalkredit
Quickscan tool
SWAHO
ALICE
INSPIRE
1 2 3 Reno
Energihjem
HEC
SOLIHA
4ECasa
Home energy saver
HOT2XP
TABULA
Beopt
EPIQR
INVESTIMMO
AS6opt-tool
RenoFase tool
EZ Retrofit
EHeD
ENERPAT
EnergySavingCheck 3.0
eeMeasure
The HERON-DST
Em Build Navigator
EDGE
Easykenak
RdSAP
NHER
HEMP
DanRETRO
NatHERS
RESNET HERS
Scope, features & assessment criteria of international EP tools
The most influential factors affecting EP
Analysing statistical data on the current electricity usage patterns of existing landed houses in Kuala Lumpur
Building envelope
Building system
Building operation
Phase Two – EP Benchmarking
Audit Assessment Checklist
Audit Assessment Baseline Score
Building Envelope
AC
Hot Water
Lighting
Onsite Energy Generation
More Energy
Existing Homes
Reference Home
Zero Energy Home
Less Energy
Retrofit Packages
Package 01
Package 02
Package 03
Package 04
Package 05
To Generate Certification Report

BUILDING INFORMATION MODELLING (BIM)

AR. DR. LIM YAIK WAH
ASSOC. PROF. (ARCHITECTURE)
FACULTY OF BUILT ENVIRONMENT AND SURVEYING
UNIVERSITI TEKNOLOGI MALAYSIA (UTM)

Researchers from Universiti Teknologi Malaysia (UTM) collaborated with GreenRE Sdn. Bhd. on a research project titled "Computational Building Information Modelling (BIM)-based Automated Green Building Evaluation System." Funded by the Ministry of Higher Education, Malaysia (MOHE) with a grant amount of RM180,000, the research spanned from 2 August 2021 to 1 February 2024. The UTM research team is a multidisciplinary group, including researchers from the Faculty of Built Environment and Surveying, the Faculty of Computing, and the Faculty of Civil Engineering. Leading this collaborative project is Assoc. Prof. Ar. Dr. Lim Yaik Wah from the Faculty of Built Environment and Surveying, while Ir. Ashwin Thurairajah leads the GreenRE team.

The primary goal of the research is to develop a prototype for a computational BIM-based automated green building evaluation system called 'BIMGes.' Advancements in BIM technology enable the digital construction of complicated building models, featuring precise geometry and accurate information. This capability supports various project phases, including design and construction. Therefore, this research leverages BIM intelligence, integrating the computational algorithm, Non-dominated Sorting Genetic Algorithm II (NSGA-II), to streamline data management, assessment, and documentation processes for green building evaluation, referencing the GreenRE Non-residential Building (NRB) tool.

The second Prototype Testing Workshop was conducted at CIDB myBIM Centre in Kuala Lumpur on 1 Jun 2023

The project involved a series of expert reviews and prototype testing workshops with participants from GreenRE, Jabatan Kerja Raya (JKR), Construction Industry Development Board (CIDB), green building consultants, and academicians. The first prototype testing workshop took place on 29 August 2022, and the second on 1 June 2023. These sessions played a crucial role in refining and enhancing the 'BIMGes' prototype. The system functions as an add-in to Revit, automating the evaluation and optimisation of building energy performance, including aspects such as OTTV and building envelope thermal properties. Furthermore, a web-based database on building materials and products was developed to support the evaluation and optimisation process. A Memorandum of Understanding (MoU) between UTM and GreenRE was signed in March 2022 to strengthen the collaboration between the two parties in research, training, and publication. The collaboration is expected to make a significant contribution to the development of BIM and green buildings for sustainability.

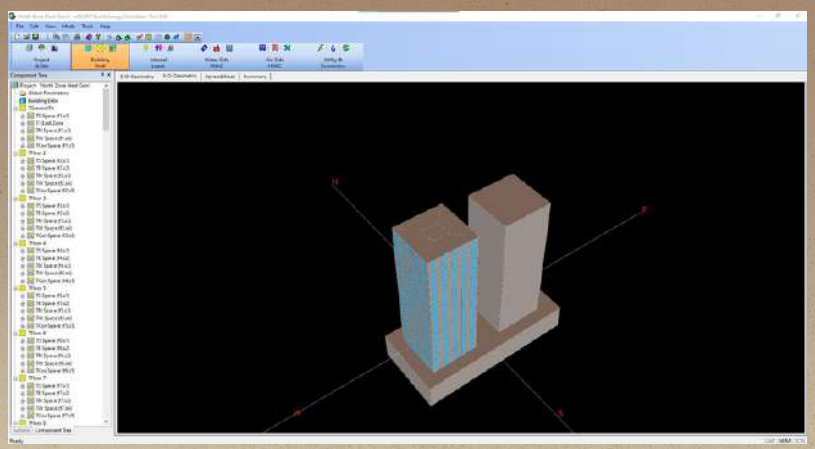
OVERALL THERMAL TRANSFER VALUE (OTTV)

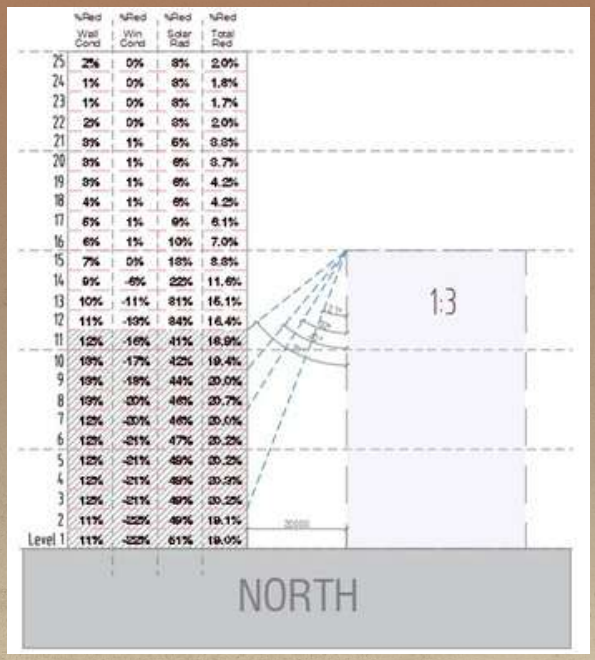
AR. DR. LIM YAIK WAH
ASSOC. PROF. (ARCHITECTURE)
FACULTY OF BUILT ENVIRONMENT AND SURVEYING
UNIVERSITI TEKNOLOGI MALAYSIA (UTM)

The research team at Universiti Teknologi Malaysia (UTM) has secured funding from GreenRE Sdn. Bhd. for a research project titled "Assessment of Building Envelope Thermal Transmittance under the Effect of Adjacent Shading and Natural Ventilation." The research is scheduled to take place from 15 March 2023 to 14 March 2024, and the project leader is Assoc. Prof. Ar. Dr. Lim Yaik Wah from the Faculty of Built Environment and Surveying, UTM.

The Overall Thermal Transfer Value (OTTV) is a crucial factor outlined in Malaysian Standard (MS) 1525 and is mandated by the Uniform Building By-law (UBBL) Amendment 2012. However, questions have arisen regarding the efficacy of the assumptions underpinning the assessment in contemporary scenarios. The current calculation method, while incorporating shading contributions from conventional shading devices, overlooks shading contributions from adjacent buildings. Additionally, the empirical substantiation of the relative contribution of naturally ventilated spaces to the OTTV or Residential Envelope Transmittance Value (RETV) performance is lacking, raising concerns about its exclusion from the by-law. Thus, the objective of this research is to present empirical studies and methods aimed at enhancing the assessment of OTTV or RETV in Malaysia.

The initial phase involved conducting an inventory of existing multi-block developments and buildings with both air-conditioned and naturally ventilated spaces. This information was then utilized to develop base models for experimentation. Subsequently, dynamic computer simulations were conducted using eQUEST software to assess the annual heat gain through building external envelopes, considering various building ratios. The simulation results were meticulously compared with the OTTV or RETV calculations for validation, leading to the establishment of correlation factors. The anticipated outcome of this research is to contribute valuable insights that will improve the standard OTTV or RETV calculation, specifically addressing the impact of adjacent shading in multi-block developments and naturally ventilated spaces within buildings.





Simulation of the heat gain through building envelope with the effect of adjacent shading

UNRAVELING THE LIFE CYCLE CARBON EMISSIONS OF GREEN OFFICE BUILDING WITH HOTSPOT-ORIENTED REGRESSION

XIAMEN UNIVERSITY MALAYSIA
厦門大學馬來西亞分校

MS. NG WAI LAM
ASSOC. PROF. TS. DR. VINCENT WOON KOK SIN
XIAMEN UNIVERSITY MALAYSIA

Buildings contribute to 38% of global energy-related CO_2 emissions, and the trend to develop green buildings with low or net-zero status has gained traction. A regression model focused on hotspots (i.e., high carbon emissions) has been developed for green-certified office buildings, utilizing Life Cycle Assessment (LCA) and Multiple Linear Regression (MLR) methods. We collected on-site data and adopted material-specific parameters contributing to the most embodied carbon (EC) and operational carbon (OC) to enhance the prediction accuracy of regression models from a life cycle perspective.

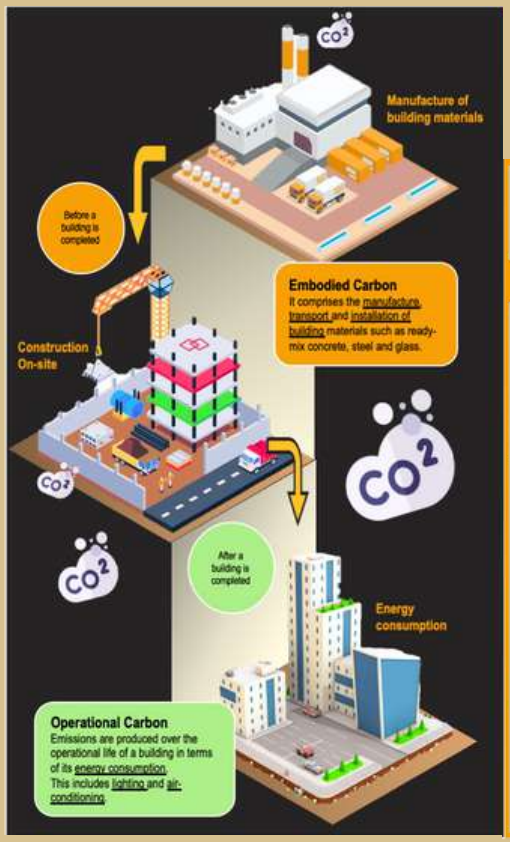
Based on the data collected and assumptions made, findings reveal that OC emissions constitute a significant portion of a building's 86-97% carbon footprint, with electricity usage as a dominant factor. Embodied carbon, accounting for 3-14% of total life cycle carbon emissions, is mainly influenced by cement and steel usage, emphasizing the importance of sustainable building materials in the green building rating system. The MLR analysis identifies key parameters for EC to offer insights into their impact on carbon emissions. Hotspot-oriented regression equations demonstrate more accurate predictions than basic building parameters (e.g., GFA and number of storeys) for embodied and operational carbon. Material-based regression equations for EC exhibit the lowest margin of error, with a 23.7-42.1% variance between the actual and predicted values, compared to GFA and the number of storeys, which provide lower carbon emissions and incur higher errors in predicting carbon emissions for green buildings. The study underscores the underestimation of carbon emissions when applying basic parameters due to material quality and quantity variations during construction. Considering diverse building designs and lifespans, material-based regression equations are essential for accurate predictions. Basic parameters also fall short in representing energy efficiency factors, such as air-conditioning, water systems, lighting, office space occupancy, and the number of users, impacting utility consumption. The regression equations for both EC and OC are shown below for reference.

$$\sqrt{EC} = -0.01 + 0.73\sqrt{x_1} + 0.28\sqrt{x_2} \qquad Eq\ (1)$$

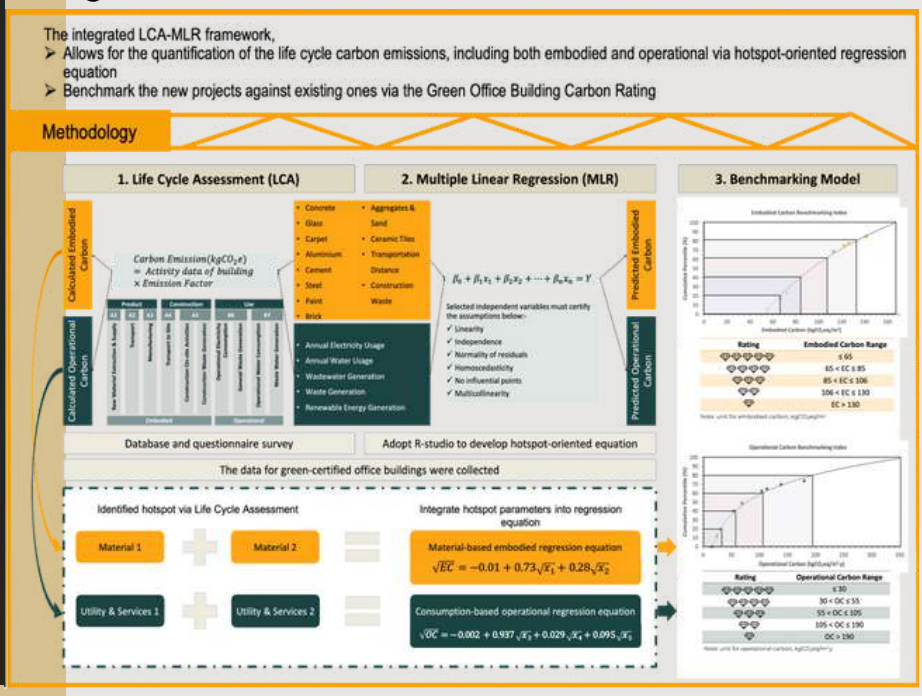
$$\sqrt{OC} = -0.002 + 0.937\sqrt{x_3} + 0.029\sqrt{x_4} + 0.095\sqrt{x_5} \qquad Eq\ (2)$$

Where EC refers to the embodied carbon emission (kgCO e/m); x refers to the cement usage for the building (kg/m); x refers to the steel usage for the building (kg/m); OC refers to the operational carbon emission (kgCO e/y); x refers to the annual electricity consumption for the building (kWh/y); x refers to the water consumption and wastewater generation from the building (m /y); x refers to the solid waste generation from the building (kg/y). The OC value is divided by the GFA of the building to have a fair comparison among the building projects.

We also developed a five-grade Green Office Building Rating System to allow stakeholders to benchmark their buildings with existing green-certified office buildings in Malaysia. Those achieving a 5-diamond carbon rating are considered the most carbon-friendly. The study enables stakeholders to predict and benchmark the carbon emission of green-certified buildings, contributing to SDGs 11 and 13, which encompasses sustainable cities and development and climate action in reducing carbon emissions.



Developing Hotspot-Oriented Regression Models and Green Office Building Carbon Rating via an Integrated LCA-MLR Framework



TECHNICAL UPDATES.

1.0 Announcement on New Tools

Effective January 2024, all listed GreenRE Tools will be adapted to the updated version as follow:

- Existing Non-Residential v3.3
- Industrial Facilities v1.1
- Existing Industrial Facilities v1.1
- Residential Building & Landed Home v3.3
- Township v2.0
- Data Centre v1.1
- Healthcare v1.1
- Retail v1.0 (*New Toolkit–Restaurant Annex will be absorbed into this tool)

For Non-Residential Buildings, Non-Residential Building Tool v3.2 can be used until further notice. Non-Residential Building Tool v4.0 will be eligible for joint certification with MyCREST.

2.0 Update on the scoring for Artificial Lighting criteria for all tools

GreenRE has revised the scoring requirement for Artificial Lighting for all tools. the revision includes 50% saving to be achieved to claim for full credits. Kindly refer to the updated tool uploaded in GreenRE website.

For retail guideline,

- Baseline for the lighting power density revised as follow:

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

- Pre-requisite requirement, 3) Lighting System Efficiency revised to the following:

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, Cosmetic & Art	≤ 14 W/m^2	≤ 18 W/m^2
Supermarket, Vehicle, Sporting Goods, Stationary, & Hardware	≤ 11 W/m^2	≤ 15 W/m^2

3.0 Update on the Residential and Landed Building Home Guideline

Revised pre-requisite requirement for Air Conditioners and Mechanical Ceiling Fans

1. To be eligible for GreenRE Platinum rating

Option 1

To perform ventilation simulation modelling and achieve minimum 60% of the selected typical dwelling units with good natural ventilation by demonstrating a wind velocity of 0.40 m/s. Common areas like staircases and lobbies (excluding those that are in basement areas) are to be designed as naturally ventilated spaces.

Option 2

Achieve ≥ 16 credits under RES 1-2 (a) Option 2 (i) and (ii)

2. For provision of energy efficient cooling system 100% of air-conditioners and / or mechanical ceiling fans used in all dwelling units and common area must be energy labelled minimum Suruhanjaya Tenaga 3-star (or equivalent) and above.

3. For Gold and Platinum projects, prescribed system efficiency of air-conditioners used in all dwelling units and common areas must be energy labelled minimum Suruhanjaya Tenaga 5-star (or equivalent).

4. For Gold and Platinum projects, prescribed system efficiency of mechanical ceiling fans used in all dwelling units and common areas must be energy labelled minimum Suruhanjaya Tenaga 4-star (or equivalent) and above.

Note (1): Points scoring and fulfilment of pre-requisite for air-conditioners will be allowed in the following scenarios:

- Provided by developer for all dwelling spaces (i.e living room and bedrooms).
- Provided by developer in either living room or bedrooms AND inclusion in building user guide.
- Not provided by developer but included as obligation to purchaser as part of sales and purchase agreement AND inclusion in building user guide.

Fulfilment of pre-requisite for air-conditioners without point scoring:

- Included in building user guide for all dwelling spaces and common areas

Note (2): Points scoring and fulfilment of pre-requisite for mechanical ceiling fans will be allowed in the following scenarios:

- Provided by developer for all dwelling spaces (i.e living room and bedrooms).
- Provided by developer in either living room or bedrooms AND inclusion in building user guide. Points will be prorated based on dwelling spaces provided with mechanical ceiling fans by developer.

Fulfilment of pre-requisite for mechanical ceiling fan without point scoring:

- Included in building user guide for all dwelling spaces and common areas

RES 1-2 (Option 2(i)(a)): Air Flow within the Dwelling Units

With reference to MS 2680:2017, rooms having single window at just one wall for single-sided ventilation, the effective room depth must be less than 6m to be considered having true cross ventilation.

RES 4-4: Indoor Air Quality in Wet Areas

Open concept kitchen (Dining + Living) will not be considered as a natural ventilated space. Only partitioned kitchens with sufficient openable windows will be considered.

RES 6-1: Operational Carbon Calculation

Operational carbon calculation must include total residential unit consumption.

4.0 Building project registration with multi-phase completion

GreenRE will allow building project registration with multi-phase completion for site verification as follows:

- Individual registration to be submitted for every phase.
- Single Actual Assessment (AA) to be conducted for entire development (design must be ready for entire development).
- Assessment fee will be calculated based on total gross floor area (GFA) of development.
- Multiple Site Verification Assessment (SVA) shall be conducted based on completion of phases.

TECHNICAL UPDATES.

1.0 Announcement on New Tools

Effective January 2024, all listed GreenRE Tools will be adapted to the updated version as follow:

- Existing Non-Residential v3.3
- Industrial Facilities v1.1
- Existing Industrial Facilities v1.1
- Residential Building & Landed Home v3.3
- Township v2.0
- Data Centre v1.1
- Healthcare v1.1
- Retail v1.0 (*New Toolkit–Restaurant Annex will be absorbed into this tool)

For Non-Residential Buildings, Non-Residential Building Tool v3.2 can be used until further notice. Non-Residential Building Tool v4.0 will be eligible for joint certification with MyCREST.

2.0 Update on the scoring for the criteria Artificial Lighting for all tools

GreenRE has revised the scoring requirement for Artificial Lighting for all tools. Kindly refer to the updated tool uploaded in GreenRE' website.

3.0 Update on the Residential and Landed Building Home Guideline

Revised pre-requisite requirement for Air Conditioners and Mechanical Ceiling Fans

1. To be eligible for GreenRE Platinum rating

Option 1

To perform ventilation simulation modelling and achieve minimum 60% of the selected typical dwelling units with good natural ventilation by demonstrating a wind velocity of 0.40 m/s. Common areas like staircases and lobbies (excluding those that are in basement areas) are to be designed as naturally ventilated spaces.

Option 2

Developer to install ceiling fans in all habitable spaces within dwelling units
and
Achieve ≥6 credits under RES 1-2 (a) Option 2 (i)

Option 3

Developer to install 5-star air conditioners (refer Note 1) and provision of requirement for ceiling fan through Building User Guide
and
Achieve ≥ 8 credits under RES 1-2 (a) Option 2 (i)

2. For provision of energy efficient cooling system 100% of air-conditioners and/or mechanical ceiling fans used in all dwelling units and common area must be energy labelled minimum Suruhanjaya Tenaga 3-star (or equivalent) and above.

3. For Gold and Platinum projects, prescribed system efficiency of air-conditioners used in all dwelling units and common areas must be energy labelled minimum Suruhanjaya Tenaga 5-star (or equivalent).

4. For Gold and Platinum projects, prescribed system efficiency of mechanical ceiling fans used in all dwelling units and common areas must be energy labelled minimum Suruhanjaya Tenaga 4-star (or equivalent) and above.

Note (1): Points scoring and fulfilment of pre-requisite for air-conditioners will be allowed in the following scenarios:

- Provided by developer for all dwelling spaces (i.e living room and bedrooms).
- Provided by developer in either living room or bedrooms AND inclusion in building user guide.
- Not provided by developer but included as obligation to purchaser as part of sales and purchase agreement AND inclusion in building user guide.

Fulfilment of pre-requisite for air-conditioners without point scoring:

- Included in building user guide for all dwelling spaces and common areas

CALENDAR OF EVENTS.

February

7 Feb 2024
GreenRE Technical Seminar 01-2024 on Optimising Urban Microclimate and Thermal Comfort Using Orbital Stack for GreenRE Townships
Wisma REHDA, Kelana Jaya

20 - 22 Feb 2024
GreenRE Accredited Professional's Course No. 34
Wisma REHDA, Kelana Jaya

March

20 - 21 March 2023
GreenRE Technical Seminar 02-2024 (Efficient Central Air-Conditioning Design and M&V Systems)
Online

23 March 2024
GreenREAPC 34 - Assessment
Wisma REHDA, Kelana Jaya

April

25 April 2024
GreenRE Technical Seminar 03-2024
(topic tbc)
Wisma REHDA, Kelana Jaya

May

14 - 16 May 2024
GreenRE Accredited Professional's Course No. 35
Sarawak / Online

June

14 June 2024
GreenREAPC 35 - Assessment
Sarawak

19 - 20 June 2024
GreenRE Technical Seminar 03-2024 (Data Centre)
Online

July

9 - 11 July 2024
GreenRE Accredited Professional's Course No. 36
Wisma REHDA, Kelana Jaya

22 July 2024
Pre-IGBCGreen Tour
(in collaboration with REHDA Youth)
Kuala Lumpur

23 July 2024
4th International Green Build Conference, IGBC 2024
Petaling Jaya

August

24 July 2024
GREENREAPC 36 - Assessment
Wisma REHDA, Kelana Jaya

September

24 - 25 Sept 2024
GreenRE Technical Seminar 05-2024
(topic tbc)
Wisma REHDA, Kelana Jaya

October

24 - 25 Sept 2024
GreenRE Accredited Professional's Course No. 37
Johor / Online

November

20 Nov 2024
GreenRE Refresher Course 2024
Online

23 Nov 2024
GreenREAPC 37 - Assessment
Johor

NEWLY CERTIFIED GREENRE PROJECTS.

Project Name & Location	Company	Design Ref	Type of Cert	Date of Cert
Platinum				
Aetas Damansara	One Residence Sdn Bhd	RES v3.2	Provisional	15/8/2023
Wisma 99 Speedmart	99 Speedmart Sdn Bhd	ENRB v3.2	Actual	29/8/2023
99 Speedmart @ 1617 Taman Daya Maju	99 Speedmart Sdn Bhd	RT v1.0	Actual	30/8/2023
99 Speedmart @ 1497 Jalan Kapar Batu 13	99 Speedmart Sdn Bhd	RT v1.0	Actual	30/8/2023
99 Speedmart @ 1012 Bukit Kapar	99 Speedmart Sdn Bhd	RT v1.0	Actual	30/8/2023
99 Speedmart @ 1008 Klang Utama 1	99 Speedmart Sdn Bhd	RT v1.0	Actual	30/8/2023
99 Speedmart @ 1414 Jalan Tepi Sungai	99 Speedmart Sdn Bhd	RT v1.0	Actual	30/8/2023
99 Speedmart @ 1066 Sultan Suleiman 1	99 Speedmart Sdn Bhd	RT v1.0	Actual	30/8/2023
99 Speedmart @ 2809 Taman Sri Cahaya	99 Speedmart Sdn Bhd	RT v1.0	Actual	30/8/2023
99 Speedmart @ 1529 Pelangi Seri Alam	99 Speedmart Sdn Bhd	RT v1.0	Actual	30/8/2023
99 Speedmart @ 1637 Taman Bahagia Morib	99 Speedmart Sdn Bhd	RT v1.0	Actual	30/8/2023
99 Speedmart @ 2585 NS Springhill 2	99 Speedmart Sdn Bhd	RT v1.0	Actual	30/8/2023
Encomas House	Encomas Sdn Bhd	NRB v1.2	Renewal 1	13/10/2023
Sunway Resort Hotel Resort Hotel	Sunway REIT Management Sdn Bhd (as attorney for RHB Trustees Berhad)	ENRB v3.2	Actual	1/11/2023
Sunway South Quay Square - Office Tower 1 (OT1)	Sunway South Quay Sdn Bhd	NRB v3.2	Provisional	9/11/2023
Semi Detached Houses (Erica)	Bukit Hitam Development Sdn Bhd	RES v3.2	Provisional	17/11/2023
UOB Plaza 1 Kuala Lumpur	UOB Properties (KL) Bhd	NRB v3.1	Actual	23/11/2023
Fera Courtyard Terraces and Senna Semi-Detached Homes (Landed 69 Units)	Persada Mentari Sdn Bhd	RES v3.2	Provisional	6/12/2023
1 Utama Shopping Centre	Bandar Utama City Sdn Bhd	ENRB v3.2	Provisional	7/12/2023
The Anton	Galaksi Bebas Sdn Bhd	RES v3.2	Provisional	15/12/2023
Naza Tower @ Platinum Park	Capital Tower Sdn Bhd	ENRB v3.3	Actual	21/12/2023

Project Name & Location	Company	Design Ref	Type of Cert	Date of Cert
Gold				
Aeon Mall Mean Chey	Aeon Mall (Cambodia) Co.Ltd	NRB v3.2	Provisional	4/7/2023
D'Mother Warehouse	Syarikat Logistik Petikmas Sdn Bhd	EIND v1.0	Actual	15/8/2023
Alora Residence (City Point 3 Phase 1 Serviced Apartment Tower 1)	One City Development Sdn Bhd	RES v3.2	Provisional	24/8/2023
Alora Residence (City Point 3 Phase 1 Serviced Apartment Tower 2)	One City Development Sdn Bhd	RES v3.2	Provisional	24/8/2023
Amika Metropark Subang	Next Delta Sdn Bhd	RES v3.2	Provisional	4/9/2023
Axis Mega Distribution Centre 2 (AMDC2)	RHB Trustees Berhad (As Trustee fro Axis Real Estate Investment Trust)	IND v1.0	Provisional	11/9/2023
Triara Residences, Ara Damansara	Sime Darby Property (Ara Damansara) Sdn Bhd	RES v3.2	Provisional	15/9/2023
UMW Lubetech Sdn. Bhd.	Lubetech Sdn Bhd	IND v1.0	Provisional	21/9/2023
Residensi PV 22	Platinum Victory Development Sdn Bhd	RES v3.2	Provisional	16/10/2023
The Opera (Parcel C, KLGCC Resort)	Sime Darby Property (Golfhome) Sdn Bhd	RES v3.3	Provisional	17/11/2023
Bloomsvale Menara Vista Petaling	Kerjaya Prospek Property Sdn Bhd	NRB v3.0	Provisional	27/11/2023
Times Square 2	Berjaya Times Square Sdn Bhd	RES v3.2	Provisional	30/11/2023
Sunway South Quay Square - Sunway University & Performing Arts Centre	Sunway South Quay Sdn Bhd	NRB v3.2	Provisional	4/12/2023
Seraiya By The Hill	Winfar Group (Seraiya Hill Sdn. Bhd.)	RES v3.2	Provisional	14/12/2023

Project Name & Location	Company	Design Ref	Type of Cert	Date of Cert
	Silver			
Residensi MH Platinum 3	MHP3 Sdn Bhd	RES v3.2	Provisional	7/8/2023
Residensi Desa Timur	Fitrah Resources Sdn Bhd	RES v3.2	Provisional	15/8/2023
99 Speedmart Sugai Petani Warehouse	99 Speedmart Sdn Bhd	IND v1.0	Provisional	25/8/2023
99 Speedmart Kapar Warehouse	99 Speedmart Sdn Bhd	EIND v1.0	Provisional	30/8/2023
Unisem Gopeng Campus	Unisem (M) Berhad	IND v1.0	Provisional	12/9/2023
Axis Facility 2 @ Bukit Raja (Axis Lion Warehouse)	RHB Trustees Berhad (As Trustee for Axis Real Estate Investment Trust)	EIND v1.0	Actual	18/9/2023
Axis Mega Distribution Centre	RHB Trustees Berhad (As Trustee for Axis Real Estate Investment Trust)	EIND v1.0	Provisional	19/9/2023
Residensi Cove @ Kota Syahbandar	KEB Properties Sdn Bhd	RES v3.2	Provisional	27/9/2023
Hype Residences, SJ7 Sentral	Sime Darby Poperty (SJ7) Sdn Bhd	RES v3.2	Provisional	27/9/2023
V50-Tower C	Dynasty Portfolio Sdn Bhd	NRB v3.2	Provisional	27/9/2023
Levia Residences	Matrix Concepts (Cheras) Sdn Bhd	RES v3.2	Provisional	18/10/2023
Sunway Onsen Suites	Sunway City (Ipoh)Sdn Bhd	RES v3.1	Actual	1/11/2023
Four Points by Sheraton, Chinatown Kuala Lumpur	Dutamas Waras Sdn Bhd	NRB v3.0	Renewal 1	28/11/2023
Residensi Tangen Kiara	Angkasa Armada Sdn Bhd	RES v3.3	Provisional	28/11/2023
The Waterfront Shoppes & Penang Waterfront Convention Centre (PWCC)	Tumpuan Azam Sdn Bhd	NRB v3.0	Provisional	29/11/2023
Bangsar Hill Park	Bangsar Hill Park Development Sdn Bhd	RES v3.2	Provisional	6/12/2023
GEE 4 Storey Warehouse	Generation Essentials Enterprise Sdn Bhd	IND v1.0	Provisional	21/12/2023
Residensi Rimbun Saujana	Saujana Development Sdn Bhd	RES v3.3	Provisional	21/12/2023
Sunway Enterprise Park Phase 2	Emerald Tycoon Sdn Bhd	IND v1.0	Provisional	26/12/2023
Wah Kong New Warehouse	Wah Kong Marketing Sdn Bhd	NRB v3.1	Actual	26/12/2023

Project Name & Location	Company	Design Ref	Type of Cert	Date of Cert
Bronze				
Cycle & Carriage Mutiara Damansara	Cycle & Carriage Bintang Berhad	ENRB v3.2	Provisional	4/7/2023
Eco Tropics (Plot 3 to 11, including Commercial Plot)	Eco Tropics Development Sdn Bhd	TS v1.0	Provisional	13/7/2023
Pusat Perdagangan ION Medini 2	CI Medini Sdn Bhd	NRB v3.2	Actual	20/7/2023
The Maple Residences, WCity OUG	WCT OUG Development Sdn Bhd	RES v3.2	Provisional	28/7/2023
Taman Akasia Phase 1B	Hektar Berlian Sdn Bhd	RES v3.2	Provisional	9/8/2023
Integrated Oncology Center (Kuala Lumpur) Sdn Bhd	Integrated Oncology Center (Kuala Lumpur) Sdn Bhd	HC v1.0	Provisional	23/8/2023
Casa Embun	Ecolake Residence Sdn Bhd	RES v3.2	Provisional	4/9/2023
Sanderling Lakefront Cyberjaya	Lakefront Residence Sdn Bhd	RES v3.2	Provisional	4/9/2023
SWNK Houze	BBCC Development Sdn Bhd	RES v3.2	Provisional	11/9/2023
ECO Botanic1	Eco Botanic Development Sdn Bhd	TS v1.0	Provisional	13/9/2023
Marriott Executive Apartments Kuala Lumpur	Richmore Development Sdn Bhd	RES v3.2	Provisional	13/9/2023
Tropicana Cenang Langkawi (Assana)	Cenang Resort Sdn Bhd	RES v3.2	Provisional	15/9/2023
Pusat Perdagangan ION Akses	CI Medini Sdn Bhd	NRB v3.2	Actual	15/9/2023
Festiva Mall Sdn Bhd (Setapak Central Mall)	Festiva Mall Sdn Bhd	ENRB v3.2	Actual	27/9/2023
NCT Smart Industrial Park (NSIP)	NCT land Sdn Bhd and NCT Consolidated Sdn Bhd	TS v1.0	Provisional	10/10/2023
Converge Comm Suites (The Light Phase 2a - Office)	Bayu Upaya Sdn Bhd	NRB v3.0	Provisional	11/10/2023
Bandar Genting Indahpura, Zone 21	Genting Property Sdn Bhd	TS v1.0	Provisional	11/10/2023
Galaxy Minyoun (The Light Phase 2a - Hotel)	Laksana Positif Sdn Bhd	NRB v3.0	Provisional	13/10/2023
Mapletree Logistics Hub Tanjung Pelepas (MLHTP)	Semangkuk 2 Berhad	EIND v1.0	Provisional	19/10/2023
Secret Recipe (Kota Damansara Plant)	Secret Recipe Manufacturing Sdn Bhd	IND v1.0	Provisional	25/10/2023
NXP Malaysia Technology Hub 1	NXP Malaysia Sdn Bhd	INT v1.0	Provisional	25/10/2023
Garden Homes (Danau Flora)	Bandar Serai Development Sdn Bhd	RES v3.2	Provisional	26/10/2023
Austin Duta Phase 11A	IJM Properties Sdn Bhd	RES v3.3	Provisional	26/10/2023
The Chapter	Sunsuria City Sdn Bhd	RES v3.2	Provisional	30/10/2023
Wisma Pastry Pro 2	Growth Concept Sdn Bhd	IND v1.0	Provisional	7/11/2023
Aurora Square (Sri Pertiwi & Spektra Medium Affordable Housing)	Sendayan Jaya Sdn Bhd	RES v3.2	Provisional	14/11/2023
Sunway GEO (Parcel CP4)	Sunway South Quay Sdn Bhd	NRB v3.0	Actual	22/11/2023
Pangsapuri Perkhidmatan Savana	Paramount Property (PW) Sdn Bhd	RES v3.2	Provisional	27/11/2023
PBWA Desa Cemerlang (CLQ Cemerlang)	Goldcoin Starhill Sdn Bhd	NRB v3.2	Provisional	28/11/2023
Camelia, Tamansari	Pinggir Mentari Sdn Bhd	RES v1.2	Actual	28/11/2023
Sutera @ S2 Heights Aman	Seremban Two Holdings Sdn Bhd	RES v3.2	Provisional	29/11/2023
Monet Meadow	Sunsuria City Sdn Bhd	RES v3.3	Provisional	12/12/2023
Nusajaya Tech Park Phase 3A	Nusajaya Tech Park Sdn Bhd	TS v1.0	Provisional	18/12/2023
The Terraces Condominium	Worldwide Ventures Sdn Bhd	RES v3.2	Provisional	21/12/2023
Millerz Square @ Old Klang Road Charlton	EXSIM Group Lim Legacy Development Sdn Bhd	RES v3.0	Actual	21/12/2023
Millerz Square, Old Klang Road Development Fasa 5, (Block A & Block B)	Lim Legacy Development Sdn Bhd	RES v3.0	Actual	21/12/2023
Ibis Hotel @ PJS 5	Luxury Alpine Sdn Bhd	NRB V3.1	Actual	26/12/2023
Nara @ Shorea Park	Aspect Potential Sdn Bhd	RES v3.3	Provisional	27/12/2023
UMW HVM Precint 1	UMW Development Sdn Bhd	TS v1.0	Actual	27/12/2023

NEWLY CERTIFIED GREENRE ACCREDITED PROFESSIONALS (GREENREAPs).

CERT NO.	NAME	COMPANY
GREENREAP0423	KAMON SUKKUMVITTAYA	GENTING PROPERTY SDN. BHD.
GREENREAP0424	NUR ASILAH BINTI HJ ISHAK	HARUL ANWAR ARCHITECT
GREENREAP0425	BONG MAI WENG	SUNWAY CITY (JB) SDN BHD
GREENREAP0426	LIEW YU HAO	GENTING PROPERTY SDN BHD
GREENREAP0427	NOOR HALIM BIN JAMALUDIN	RDC ARKITEK SDN BHD
GREENREAP0428	THEIN CHONG KIAT	BANDAR UTAMA CITY CORPORATION SDN BHD
GREENREAP0429	RAJA EZZUWAN ARIFF BIN RAJA ZAINAL ABIDIN	CI MEDINI SDN. BHD.
GREENREAP0430	SYAZMEEN FA'IZ BIN ABD SHUKOR	SUNWAY INTERGRATED PROPERTIES SDN. BHD.
GREENREAP0431	IQBAL NURFARIKQ BIN OTHMAN	SUNWAY ISKANDAR SDN BHD
GREENREAP0432	MUHAMAD FIRDAUS BIN ROSDI	CI MEDINISDN BHD
GREENREAP0433	TEH JIA MEI	ASTAR LABORATORY SDN BHD
GREENREAP0434	CHONG JI YI	NEAPOLI SDN BHD
GREENREAP0435	KOW LOONG SHING	SUNWAY SOUTHERN MANAGEMENT SDN BHD
GREENREAP0436	MASITAH BINTI MD SOFWAN	ECO WORLD GROUP SDN BHD (SOUTH)
GREENREAP0437	TAN KHAI HUA	SUNWAY INTEGRATED PROPERTIES SDN BHD
GREENREAP0438	MOHD NAJIB BIN MOHD HUSSAIN	UNIVERSITI TECHNOLOGI MARA PULAU PINANG CAMPUS
GREENREAP0439	WILFRED LEUNG WEI LIT	AKILA
GREENREAP0440	MUHAMMAD THABIT BIN ZAHARUDIN	ARKITEK KDI SDN BHD
GREENREAP0441	KHOO CHUNG WEI	BSD CONSULTANCY SDN BHD
GREENREAP0442	TS. GAN JING HAO	LOW YAT GROUP
GREENREAP0443	TS. HAU HAN YOU	ARUP JURURUNDING SDN. BHD.
GREENREAP0444	CHOOI YAN WEI	ECO MAJESTIC DEVELOPMENT SDN BHD & BBCC DEVELOPMENT SDN BHD
GREENREAP0445	IR. CHIN YOON WEI	BOARD OF ENGINEER MALAYSIA (BEM)
GREENREAP0446	AIDA SYAFIQAH BINTI AHMAD SURYADI	GREENSCAPES SDN. BHD.
GREENREAP0447	AZIRA BINTI MISMAN	BSD CONSULTANCY SDN BHD
GREENREAP0448	LOW JOO YIN	VERITAS DESIGN GROUP
GREENREAP0449	ABDUL AZIZ BIN ABDULL RASHID	ZERIN PROPERTIES URUS HARTA SDN BHD
GREENREAP0450	WAN SITI SARAH BINTI WAN NIZAM	EXYTE MALAYSIA SDN. BHD
GREENREAP0451	NUR AZLIN BIN AHMAD ZAINUDIN	SIRIM BERHAD
GREENREAP0452	PEH KER NENG	RDC ARKITEK SDN BHD
GREENREAP0453	MOHAMMAD FARID JEFRIE BIN JAAFAR	SIRIM BERHAD
GREENREAP0454	TAN YEE LYN	VERITAS ARCHITECTS SDN BHD
GREENREAP0455	BRANDON WOO CHAO DONG	UOA DEVELOPMENT BERHAD
GREENREAP0456	ROJA RANI A/P APPLANAIDU	ZERIN PROPERTIES
GREENREAP0457	IR. CHAIN MENG YEE	KTA TENAGA SDN BHD
GREENREAP0458	QUEK WEI KIN	ZERIN PROPERTIES
GREENREAP0459	PRAKASH A/L KRISHNAMURTI	SUNWAY VELOCITY

GREENREAP0460	MARILYN CHUA TECK CHIANN	ETIKA HIJAU SDN BHD
GREENREAP0461	VEENOD PILLAI BALASUBRAMANIAM	SUNWAY INTEGRATED PROPERTY SDN BHD
GREENREAP0462	NUR SHUHADA AISHAH BINTI SHAHIDAN	GREENA CONSULTANTS PTE LTD
GREENREAP0463	NURFATHIHAH BINTI JAMALUDIN	EASTERN AND ORIENTAL BERHAD
GREENREAP0464	TAY VI MIKE	AIB ASSOCIATES ARCHITECTS SDN BHD
GREENREAP0465	AARON CHAI KAO KHY	M&E MANAGER MKH BERHAD
GREENREAP0466	IR. CHENG YEW LEONG, TONY	DE MARQ (M) SDN BHD
GREENREAP0467	NIK MOHD FAIZAL BIN NIK ADNAN	UNITED OVERSEAS BANK (MALAYSIA) BERHAD
GREENREAP0468	SURESH A/L ARUNAGIRI	AREA MANAGEMENT SDN BHD
GREENREAP0469	CHUA CHEONG YU	LI-ZAINAL SDN. BHD.
GREENREAP0470	DIYANA MOHD AMIN	ISKANDAR INVESTMENT BERHAD
GREENREAP0471	TIMOTHY EMMET DAWSON	ZERIN PROPERTIES URUS HARTA SDN BHD
GREENREAP0472	CHOW PUI TENG	VERITAS DESIGN GROUP
GREENREAP0473	MARYAM HANIN YAHYA	MAH SING GROUP SDN BHD
GREENREAP0474	YONG JOON YUNG	ETIKA HIJAU SDN BHD
GREENREAP0475	NIK AHMAD FARHAN ABDUL AZIZ	WAN HUSIN & ASSOCIATES SDN BHD
GREENREAP0476	SAHRIL AB LAH	KKTM SRI GADING JOHOR
GREENREAP0477	AMIRUL HAFIZ JOHARI	WAN HUSIN & ASSOCIATES SDN BHD
GREENREAP0478	KO BOON MING	CUSHMAN & WAKEFIELD MALAYSIA SDN BHD
GREENREAP0479	LOW HONG YAN	PLYTECH ENGINEERING
GREENREAP0480	MOLLY OON PHEY THONG	NXP MALAYSIA SDN BHD
GREENREAP0481	CHAN AI BOON	C&W SERVICES
GREENREAP0482	AMELIA NEOH SIEW YIN	ARUP ADVISORY SDN BHD
GREENREAP0483	NUR HIDAYAH YEZID	VERITAS ARCHITECTS SDN BHD
GREENREAP0484	ROSLAWATI ISMAIL	WAN HUSIN & ASSOCIATES SDN BHD

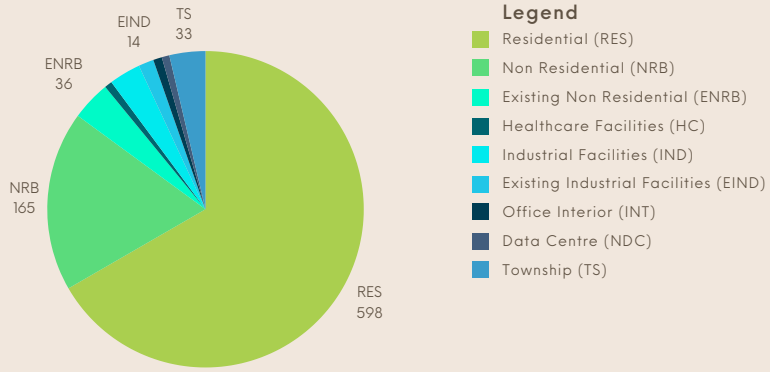
CONGRATULATIONS

TO ALL & WELCOME ON BOARD

PROJECT STATISTICS.

Project Registered

As of December 2023



Legend

- Residential (RES)
- Non Residential (NRB)
- Existing Non Residential (ENRB)
- Healthcare Facilities (HC)
- Industrial Facilities (IND)
- Existing Industrial Facilities (EIND)
- Office Interior (INT)
- Data Centre (NDC)
- Township (TS)

Project Certified

343 out of 598 projects registered are certified as of December 2023

Certified Buildings

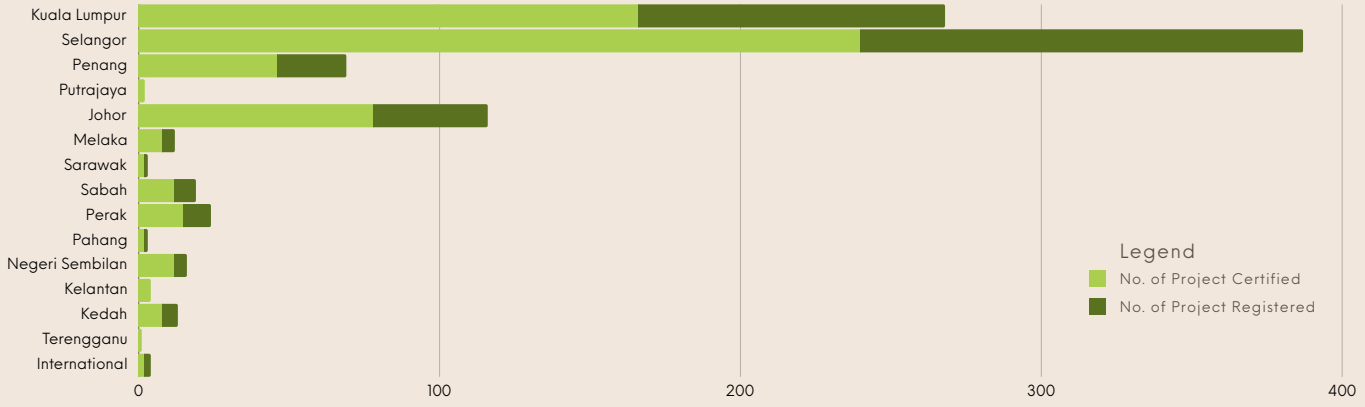
21,189,226.08 sqm out of 34,605,869.63 sqm of buildings are certified as of December 2023

Certified Township

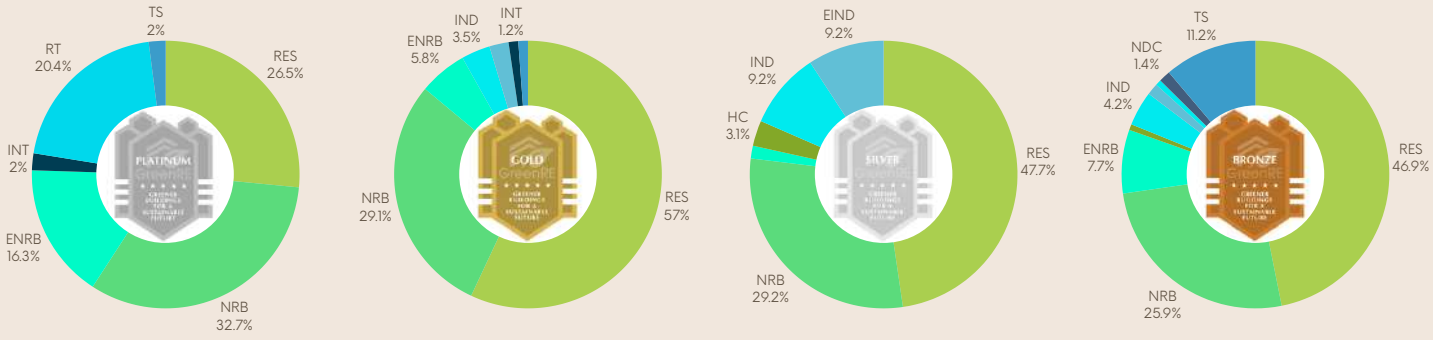
6,966.62 acres out of 17,118.11 acres of townships are certified as of December 2023

Project Distribution

As of December 2023

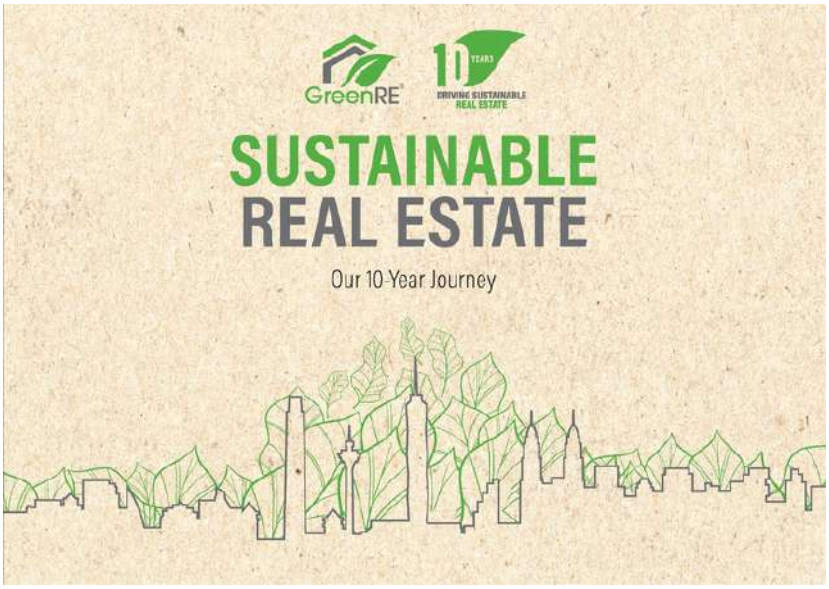


Projects Certified by Rating



Legend

- Residential (RES)
- Non Residential (NRB)
- Existing Non Residential (ENRB)
- Healthcare Facilities (HC)
- Industrial Facilities (IND)
- Existing Industrial Facilities (EIND)
- Office Interior (INT)
- Data Centre (NDC)
- Retail(RT)
- Township (TS)



GreenRE 10th Anniversary Coffee Table book, hardcover edition, is now available for purchase. Contact info@greenre.org for more information.

Follow us on social media:

greenresdnbhd
greenremalaysia
GreenRE Sdn Bhd
www.greenre.org