GreenRE Bulletin

Issue 9 | January - June 2023

EVENTS:
GreenRE's Sustainable Development Awards 2023

FEATURED ARTICLE:
Incorporating Airflow Simulations in the Design Stage of Projects

FEATURED PROJECT : A SUSTAINABLE EDUCATION SPACE

SUNWAY INTERNATIONAL SCHOOL

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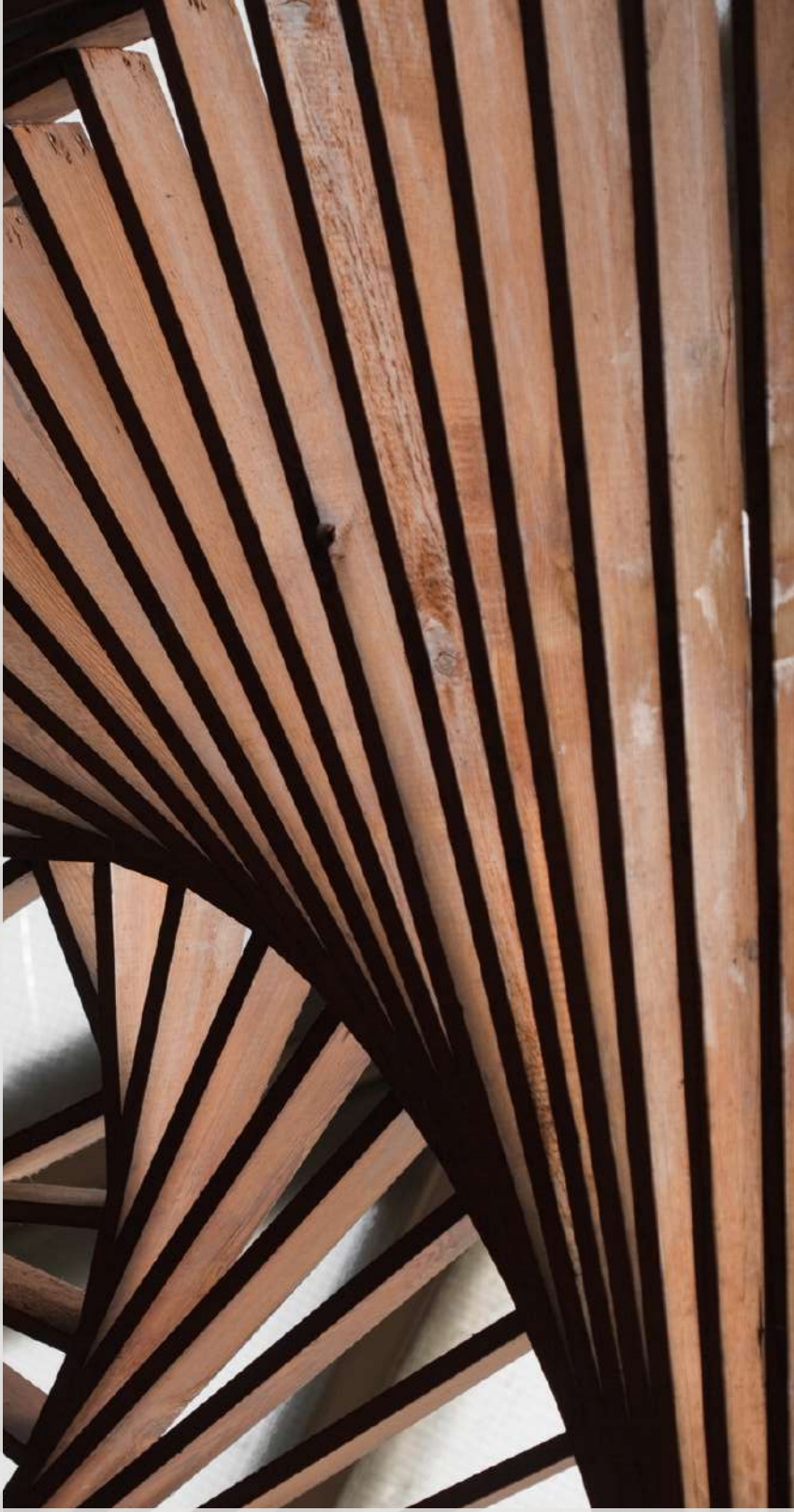

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FOREWORD.

Dear Readers,

As we find ourselves at the midpoint of 2023, it is with great pleasure that we share this mid-year bulletin with all of you. This publication serves as a testament to the journey we have embarked upon together and provides a glimpse into the inspiring accomplishments, challenges, and aspirations that define our sustainable real estate industry.

It is hard to find anyone in the construction and real estate industry who does not agree the industry needs to be greener. With buildings accounting for over 40 percent of our 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 – 2020 to 2030 – are critical to set us on the right path towards this target.

I am proud to announce, GreenRE, in it's 10th year of operations, has been a crucial proponent in this journey, to promote sustainability and democratise the green building certification industry by offering an affordable green rating tool. Today, working together with various stakeholders, we have grown by leaps and bounds, emerging as a guiding force in the industry, beyond just REHDA members. With over 400 registered green projects in Malaysia or over 400 million square feet of real estate, our reach has expanded globally, with two international projects in the UK and Cambodia.

GreenRE is also working together with financial institutions to facilitate green certification as a benchmarking tool for green financing. Indeed, in the last few years, banks have been a driving force in enabling the market for sustainable and low carbon technology and material. GreenRE has signed MOUs with several other banks in Malaysia in the past year. Additionally, to step up the pace of greening our buildings and raise sustainability standards of our buildings, GreenRE has recently launched revised versions of our rating tools, including the Super low energy rating tool, to guide buildings towards net zero.

Additionally, as many of you may already know, GreenRE and CREAM (under the Construction Research arm of CIDB) recently officiated the joint certification between GreenRE and MyCrest last March 2023. Essentially, GreenRE will act as lead certifier for private sector projects through the GreenRE Non-residential Building while CREAM will lead certification for government sector projects through MyCREST . We hope a collaboration such as this will to improve standardisation of available rating tools and increase the uptake of green building certification in Malaysia.

Thank you for your continued support, engagement, and enthusiasm. Together, we are forging a path that will leave a lasting impact on our real estate industry.

Datuk Muztaza Mohamad

GreenRE Head of Management Committee


GreenRE
10 YEARS
DRIVING SUSTAINABLE REAL ESTATE
CELEBRATES
10
YEARS

News & Events

SUSTAINABLE DEVELOPMENT AWARDS 2023 IN CONJUNCTION WITH REHDA ANNUAL DINNER 2023, 15 MARCH 2023

GreenRE's Sustainable Development Awards (SDA) 2022/2023, celebrated green real estate excellence and honored projects that have achieved outstanding sustainability performance in the preceding year. There were four (4) project category awards capped off by a Top Sustainable Developer award.

The awards were presented by YB Tuan Nga Kor Ming, Minister, Ministry of Local Government Development of Malaysia (KPKT), accompanied by REHDA President, Datuk NK Tong and Datuk Seri FD Iskandar, GreenRE Chairman & REHDA Most Recent Past President.

THE JUDGING CRITERIA

The judging criteria for project awards were objectively based on the highest GreenRE points scored during certification and projects were independently reviewed by a panel of judges consisting of experts in the green building sector. Projects must have achieved a GreenRE Gold or Platinum Rating, be completed and in operation.

The top sustainable developer award was based on total number of GreenRE projects certified with a higher weightage for Gold and Platinum ratings. In addition to these, other qualitative criteria were considered encompassing how deeply ingrained sustainability principles were within the developer's long-term strategy and operations.

THE WINNERS

The winning projects are projects that showcase the 6 elements of a high-performing green building, ie. Energy Efficiency, Water Efficiency, Indoor Environmental Quality, Environmental Protection, Green Innovation and Carbon Emission and Resource Management. These buildings and facilities applied passive design and energy efficient strategies resulting in significant reduction in energy consumption. The utilisation of green concrete and effective construction management, in turn, optimises resources and reduces the carbon impact of these developments. Additionally, building occupants well-being are addressed, with biophilic design features, greenery provision and natural daylighting and ventilation.

HIGHEST SCORING COMMERCIAL BUILDING (OFFICE) CATEGORY

WINNER: Lot 91 by Impian Bebas Sdn Bhd (A Joint Venture between KLCC (Holdings) Sdn Bhd and Sapura Resources Berhad).

The Award was received by Datuk Md Shah Mahmood, Group Chief Executive Officer of KLCC (Holdings) Sdn Bhd and Dato' Shahriman Shamsuddin, Managing Director of Sapura Resources Berhad


Double Glazed Facade to Reduce Heat Transfer


Heat Recovery Wheel to Pre-Cool Fresh Air Temperature


Water Savings through AHU Condensate Water Recovery & Rainwater Harvesting System

KEY FEATURES


Energy Efficient Lifts with Regenerative Motors

Provision of Recycling Center at Each Floor


Energy Efficiency LED Lighting with Daylight Sensor

Lot 91 Lot 91 is a 45-storey Grade A office building located in the KLCC precint. Key energy saving features including district cooling system, a Heat Recovery Wheel, and an AHU condensate water recovery.

PROJECT TEAM

ESD Consultant: Li-Zainal Sdn Bhd
Architect: GDP Architects Sdn Bhd
Landscape Consultant: WDI Design Sdn Bhd
M&E Consultant: Li-Zainal Sdn Bhd
Structural Engineer: ARUP Jururunding Sdn Bhd

WINNER: 1 Powerhouse by Bandar Utama City Assets Sdn Bhd.

The Award was received by YBhg. Tan Sri Dato' Ir. (Dr.) Teo Chiang Kok - CEO of Bandar Utama City Corporation Group accompanied by Miss Teo Chui Ping.

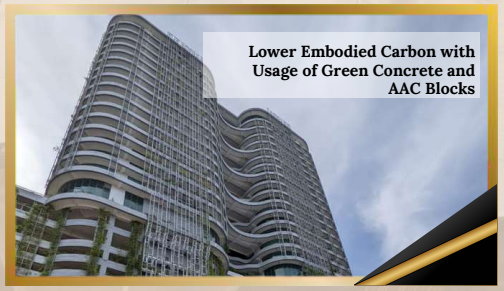
1 Powerhouse is a transit-oriented development in Petaling Jaya comprising of an 18-storey office tower, 19-storey hotel and 14-storey podium carpark which also services the adjacent Bandar Utama MRT station. The development uses aerated bricks and Low E-value glazing in the façade and green Concrete, significantly reducing the building's embodied carbon.

Transit Oriented Development


Thermal Energy Storage System

Vertical Greenery

KEY FEATURES


Lower Embodied Carbon with Usage of Green Concrete and AAC Blocks


Closed Cycle Aquaponics


Low E Glass to Reduce Solar Heat Gain

PROJECT TEAM

ESD Consultant: ESD Greentech Sdn Bhd
Architect: CT Architect Sdn Bhd
Landscape Consultant: Morphosis Design Sdn Bhd
M&E Consultant: EAB Consulting Sdn Bhd
Structural Engineer: Project One U Sdn Bhd

HIGHEST SCORING INDUSTRIAL BUILDING CATEGORY

WINNER: Hap Seng Business Park (HSBP) by Hap Seng Logistics Sdn Bhd.

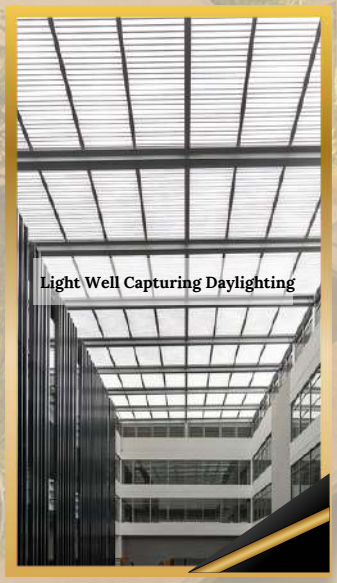
The award was received by Allan Teh, General Manager, Project HSBP


High Performance Facade to Reduce Thermal Transfer into Building


Building Orientation to Enhance Natural Ventilation

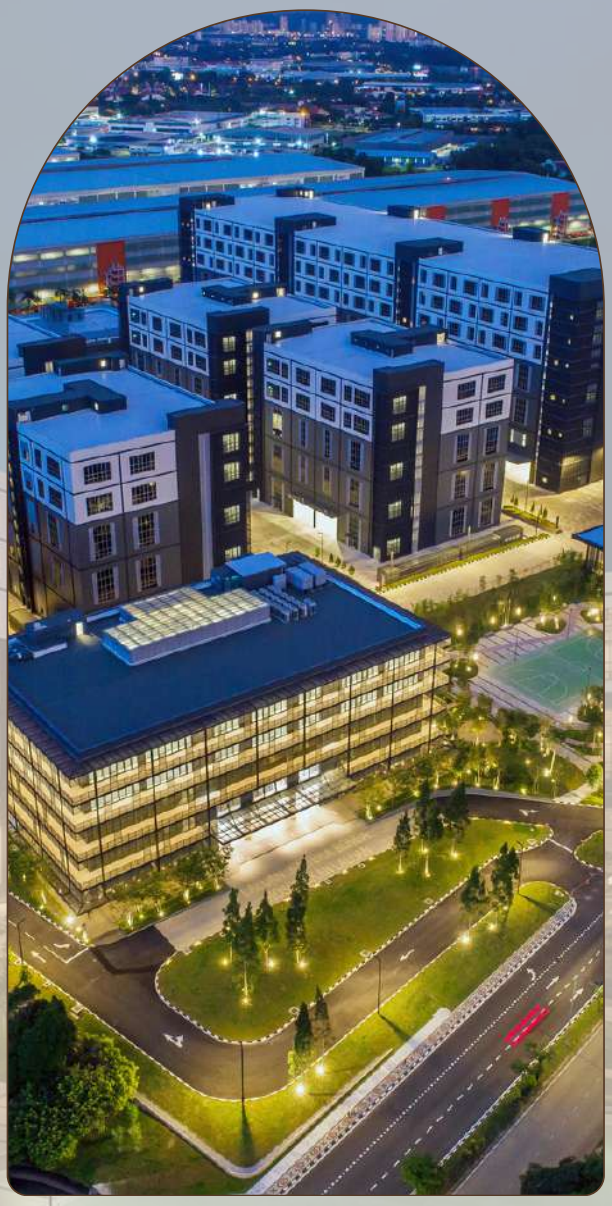

Extensive Green & Blue Spaces

KEY FEATURES


Light Well Capturing Daylighting


Use of Non Toxic Materials/ Finishing to Enchance IAQ


Rainwater Harvesting to Reduce Potable Water for Irrigation



Hap Seng Business Park (HSBP) is a 10-block mixed industrial and commercial hub situated in Shah Alam. Key green features include, excellent Passive design to optimise building energy consumption, façade designed to maximize daylighting through skylights and minimisation of west facing windows, strategic shading and utilizing natural ventilation with its North-South Orientation, HSBP achieved a QLASSIC score of 74%.

PROJECT TEAM

ESD Consultant: DME Solutions Sdn Bhd
Architect: ASIMA Architects Sdn Bhd
Landscape Consultant: UDG Associates Sdn Bhd
M&E Consultant: Han Yang Consultancy Sdn Bhd
Structural Engineer: WK Partners Consult Sdn Bhd

HIGHEST SCORING RESIDENTIAL BUILDING- HIGH RISE CATEGORY

WINNER: Megah Rise Residensi by PPB Hartabina Sdn Bhd.

The award was received by Mr Low Eng Hooi, Chief Executive Officer of PPB Hartabina Sdn Bhd


Energy Saving Equipment for Common Areas


5 Star Rated AC Units & Electrical Appliances

KEY FEATURES


WEPLS Rated Water Fittings


High Green Plot Ratio


Good Ventilation & Daylight in Residential Units

Megah Rise Residensi is a luxury high rise serviced apartment located in the heart of Petaling Jaya providing an environmentally conscious living space.features energy efficient design elements including high-speed regenerative lift in common areas, provision EV charging stations, and green spaces. Residential units were strategically designed to allow true cross ventilation (a natural cooling effect for occupants) and fitted with water efficient fittings and 5 Star Rated- air conditioning units.

PROJECT TEAM

ESD Consultant: Li-Zainal Sdn Bhd
Architect: KSKA Arkitek Sdn Bhd
Landscape Consultant: PRAXCIS Design Sdn Bhd
M&E Consultant: Li-Zainal Sdn Bhd
Structural Engineer: APEC Sdn Bhd

TOP SUSTAINABLE DEVELOPER 2022/2023 : WINNER- **SUNWAY PROPERTY**

The award was received by Mr Chong Sau Min, Senior Executive Director, Property Development Division, Central Region of Sunway Property

Sunway Property is committed to transforming their portfolio to low carbon sustainable cities. The company's sustainability strategy and vision translates to its commitment towards producing high performing, resource efficient buildings and townships.

Sunway Property has registered close to 30 projects with GreenRE in period 2020-2023 including 11 Gold and 4 Platinum certified projects.

Sunway property is committed to transforming their portfolio to low carbon sustainable cities. The company's sustainability strategy and vision translates to its commitment towards producing high performing, resource efficient buildings and townships. .

2020-2023

- **Total GreenRE Certified - 27 Projects**
- **Total GreenRE Gold - 11 Projects**
- **Total GreenRE Platinum - 4 Projects**

SUNWAY PROPERTY
Master Community Developer

LAUNCH OF GREENRE-MYCREST JOINT CERTIFICATION FRAMEWORK

On 24 June 2023, GreenRE Sdn Bhd and the Construction Research Institute of Malaysia (CREAM) under the Construction Industry Development Board (CIDB), launched a joint certification framework for their rating tools, GreenRE Rating Tools and MyCREST. Officiating the collaboration were GreenRE's Chairman Datuk Seri FD Iskandar and CEO of CREAM, Ir M. Ramuseren, while REHDA President Datuk NK Tong and En Ruslan Aiman, the Manager of Safety, Health, Environment and Quality Division at CIDB stood as witnesses.

(L – R): Datuk NK Tong (President of REHDA Malaysia); Datuk Seri FD Iskandar (Chairman of GreenRE Sdn Bhd), Ir M Ramuseren (CEO of CREAM) and En Ruslan Aiman (Manager of Safety, Health, Environment and Quality Division at CIDB) posing for a group photo at the event.

Under the framework, GreenRE will act as lead certifier for private sector projects through its soon-to-be-launched GreenRE Non-residential Building (NRB) v4.0 rating tool while CREAM will lead certification for government sector projects through MyCREST v2.0 Design and Construction rating tool.

With the joint certification, both rating tools aim to achieve similar carbon reduction score to each other, while all pre-requisites covering high impact areas to reduce embodied and operational carbon will be mutually adopted. The first stage will cover new non-residential building projects only, while other categories such as existing non-residential, residential, industrial and healthcare projects will follow suit in later stages.

“GreenRE is proud to spearhead ESG initiatives that will benefit the industry and the rakyat, in line with REHDA Malaysia’s slogan ‘Towards Sustainable Development’,” says Datuk NK Tong, President of REHDA Malaysia which is also GreenRE’s parent organisation. “The joint certification marks a new milestone in the collaborative partnership between the two entities, following the signing of a Memorandum of Understanding (MoU) in 2021 aimed at synergising efforts towards promoting sustainable development in the property and construction sectors. For developers, this will mean that the road to obtain green certifications from both GreenRE and CREAM will be made much easier and faster,” he further added.

With the joint certification, REHDA and GreenRE reiterate the commitment to support the Government in all its measures that benefit Malaysians, and we will continue to encourage our members to uphold our nation-building role of providing quality, affordable homes for the rakyat in a timely manner.

REHDA YOUTH MELBOURNE INTERNATIONAL TOUR, 8-10 MAY 2023

GreenRE participated in the Melbourne International Tour organised by Rehda Youth, 8-10 May 2023. The study tour aimed to provide an insight of sustainable property development in Melbourne, Australia. The tprogramme included tours of Big Plan Melbourne, New Quay Docklands, South Bank Immersive Display Suite by Beulah and Paragon by Beulah International, Burwood Brickworks by Fraser Property, Nightingale Village by Breathe Architecture, Liv by Mirvac, Victoria Square by Growland and Melbourne Square by OSK Properties.

BIG PLANS MELBOURNE

Big Plans is a technology platform that provides tools to help people design, build, renovate, and buy homes with ease and within budget. This integration of full-scale technology leads to perfect floor plans from the start, preventing unexpected delays and surprise expenses.

For property developers, this technology can be incredibly beneficial. By using Big Plans, they can offer their clients a stress-free and budget-friendly experience. The platform allows developers to create accurate and detailed floor plans, which can help them avoid costly mistakes and delays during the building process.

PARAGON BY BEULAH

Paragon by Beulah, a mixed-use 48-level residential tower located on a prominent corner of Melbourne's CBD. Designed to accommodate 227 luxurious residences, Paragon is a transformative project that brings Beulah's research and design-driven approach to a prime location in the bustling heart of Melbourne.

BURWOOD BRICKWORKS

Burwood Brickworks is a sustainable mixed-use development located in Melbourne's eastern suburbs. The development includes a range of residential, commercial, and retail spaces, as well as public amenities such as a community garden and rooftop cinema. It is the first retail center in the world to achieve the Living Building Challenge certification, which means it is designed to be one of the most sustainable buildings on the planet.

Burwood Brickworks incorporated food and sustainability elements such as an urban farm and a rooftop garden. It also features a "food hub" with a range of restaurants and cafes that offer locally sourced, sustainable food.

The building itself is designed to be eco-friendly and energy-efficient. It includes features like solar panels, rainwater harvesting, and a "green roof" that helps to regulate the building's temperature.

LIV BY MIRVAC

LIV Munro by Mirvac is a unique development project in Melbourne that is designed to offer residents a luxurious and sustainable living experience. 'LIV by Mirvac' the developer behind the project, is committed to sustainability and has designed the development to achieve a 5-star Green Star rating. It is a modern and sleek development that offers a range of high-end amenities, and it is designed to be eco-friendly and energy-efficient. It includes features such as solar panels, rainwater harvesting, and energy-efficient lighting and a range of sustainable materials, ie. recycled timber and low-VOC paint.

NIGHTINGALE VILLAGE

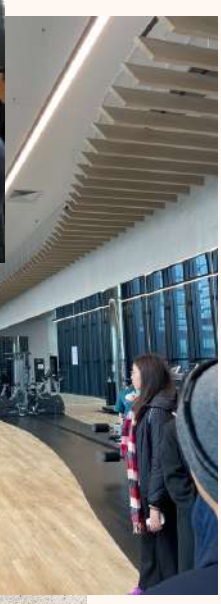
The Nightingale Village is a future precinct on Duckett Street in Brunswick. The Village is a collection of six neighbouring buildings, each designed by a different award-winning architect using the social, environmental, and financial sustainability principles of the Nightingale model.

While each building has its own investors and its own financial entity led by the architect, the interconnectivity of the developments offered a unique chance to co-operate and align with each other to achieve better outcomes across the site for investors, future residents, retailers and at the street level.

It is not just an urban experiment, but a chance to change the way housing is built on a wider scale and to create smart, deliberate and liveable density.

MELBOURNE SQUARE

Melbourne Square is a luxury project from OSK Property. This new inner-city precinct delivers premium apartments and penthouses, alongside an exceptional level of private amenity and lush rooftop gardens. Public amenities available in the lower floors include, a supermarket, retail, dining and childcare choices, and the best of Melbourne city at its doorstep, Melbourne Square is a landmark urban destination which reflects the fine design and livability for which this city is renowned.



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By partnering developers, contractors and suppliers, UOB aims to drive solar adoption across Malaysia with U-Solar's financing solutions. The programme provides a comprehensive suite of financing solutions, connects solar contractors to global leading equipment suppliers and offers exclusive solar installation packages to both business and individual end-users.

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Forging a Sustainable Future

Right By You

Events @ a Glance

ROYAL INSTITUTION OF SURVEYORS MALAYSIA - SARAWAK BRANCH (RISM) SURVEYORS' CONGRESS, 21-22 MARCH 2023

GreenRE was invited to speak at the **Royal Institution of Surveyors Malaysia (RISM) - Sarawak Branch** Surveyors' Congress, held on 21-22 March 2023 at Kuching, Sarawak.

GreenRE's Executive Director, Ir Ashwin Thurairajah presented on 'GreenRE Certification from Design, Construction to Facility Management'.

CAN-CGM CLIMATE CHANGE POLICY PROPOSAL STAKEHOLDER CONSULTATION, 27 MARCH 2023

In collaboration with CEO Action Network (CAN), Climate Governance Malaysia (CGM), Malaysia Green Building Council (GBC) and Sime Darby, GreenRE held a stakeholder consultation session with Chief Sustainability Officers and sustainability representatives from Sunway, MRCB, IJM, IOI, Gamuda, SP Setia and Ecoworld on 27 March 2023 at Wisma REHDA, Petaling Jaya.

The purpose of the meeting was to fine tune policy report for property development and construction sector issued to government in 2021 by CAN-CGM. Actionable policy recommendations to be developed for discussion with government prior to COP#28 which will be held in Dubai in December 2023.

GREENRE MANAGEMENT MEETING WITH NRECC MINISTER, YB NIK NAZMI ON 30 MAR 2023

GreenRE Board & Management Committee met with the **Minister of Energy, Natural Resources and Climate Change (NRECC)**, YB Tuan Nik Nazmi Nik Ahmad on 30th March 2023. During the meeting, GreenRE stressed on the importance of green building certification to drive decarbonisation of the property development sector. GreenRE also highlighted the need for balanced regulation and incentives together with more transparent access to data necessary for benchmarking progress towards this goal.

MALAYSIA INSTITUTE OF ART (MIA) STUDENT VISIT TO WISMA REHDA, 12 APRIL 2023

A group of 25 Students from the Faculty of Interior Design, **Malaysian Institute of Art - MIA** carried out a study tour of Wisma REHDA. The visit aimed to provide the students with information on the fundamentals of environmentally sustainable building design, GreenRE requirements, and green design technologies and strategies.

For more information on Wisma REHDA study tours, contact us at info@greenre.org

99 SPEEDMART'S LAUNCH OF ZERO PLASTIC CAMPAIGN AND GREENRE CERTIFICATION REGISTRATION, 9 MAY 2023

99 Speedmart's Launch of the Zero Plastic Bag and Recycle Bag campaign was held on 9 May 2023 at Wisma 99 Speedmart. The launch was officiated by Minister of Natural Resources, Environment and Climate Change (NRECC), YB Tuan Nik Nazmi Bin Nik Ahmad.

In conjunction with this launch, GreenRE was presented with a certificate of recognition to commemorate 99 Speedmart's sustainability journey. Currently, 99 Speedmart has registered over 10 outlets for GreenRE certification, including their headquarters in Klang.

UNGCMY'S BUILDING A SUSTAINABLE FUTURE: INSIGHTS FROM REAL ESTATE & INDUSTRY PRACTITIONERS PANEL DISCUSSION, 11 MAY 2023 (JOHOR BHARU)

A panel session hosted by UN Global Compact Network Malaysia & Brunei (UNGCNMYB) alongside SENG LIY Engineering as part of their Greenovation Campaign to bring the sustainability and ESG conversations closer to the construction, buildings, property and facilities management industry. Moderated by Edey Suresh, Director at UN Global Compact Network Malaysia & Brunei, panelists included - Gerard Soosay, Chief Executive Officer, Sunway City Iskandar Puteri, Ir. Ts. Kuna Segeran, Head of Facilities Management, Iskandar Investment Berhad, Kevin Fernandez, Vice President, Strategic Partnerships & Innovation, Alliance Bank Malaysia Berhad and Juanita Lourdes, Sales and Marketing Manager, GreenRE Sdn Bhd.

GREENRE-REHDA BRANCHES GREEN BUILDING AWARENESS SESSION

GreenRE participated in REHDA Perak and REHDA Negeri Sembilan's members outreach programmes.

REHDA Perak

A half-day green building awareness session was held at REHDA Perak HQ in Ipoh on 24 May 2023. The awareness session was attended by over 30 REHDA Perak members including most of the REHDA Perak Council members. Ir Ashwin Thurairajah, GreenRE Executive Director, and Ar Dr. Joseph Kong, GreenRE Technical Panel member (Director, DME Solutions Sdn Bhd) presented on the '*Importance of Green Buildings and Green Certification*' and '*Energy Efficiency and Daylighting for Landed Properties*', respectively.

REHDA Negeri Sembilan

The REHDA Negeri Sembilan Outreach Programme was held on 25 May 2023 at Hotel Royale Chulan Seremban. It was officiated by YB Tn Teo Kok Seong, State EXCO for Urban Wellbeing, Housing, Local Government and New Village. The programme included presentations by the Ministry of Local Government, REHDA , YYC Group, Zerin Habitat, GreenRE Sdn Bhd and ESD GreenTech Sdn Bhd. Ir Ashwin Thurairajah, GreenRE's Executive Director presented on the urgency for sustainable real estate and the role of green building certification. The programme was attended by 74 participants comprising of REHDA Negeri Sembilan members and non-member developers.

E&O ANDAMAN ISLAND PHASE 1 LAUNCH AT E&O HOTEL PENANG, 26 MAY 2023

Eastern & Oriental Bhd's (E&O) township development project Andaman Island Phase 1 and its' first two developments The Meg and Arica, attained GreenRE Platinum Provisional Certification under the township category and Residential category respectively.

The launch ceremony was held at the E&O hotel on 26 May 2023, attended by YAB Chow Kon Yeow, Chief Minister of Penang and other Penang Ministerial representatives along with GreenRE's Board Member Dato Rick Cheng and Executive Director, Ir Ashwin Thurairajah.

SEGAMAT LOCAL AUTHORITY'S 'MAJLIS PELANCARAN PELAN TINDAKAN MASYARAKAT RENDAH KARBON 2030, 4 JUNE 2023

GreenRE was part of Segamat Local Authority's 'Majlis Pelancaran Pelan Tindakan Masyarakat Rendah Karbon Segamat 2030 (Ptmrks2030)' where Ts. Intan Mastor, GreenRE Senior Assessor, presented on '*Low Carbon Cities and Green Buildings*' at Segamat Central Shopping Mall last Sunday, 4 June 2023.

The event was officiated by Yang Berhormat Dato' Haji Mohd Jafni bin Md Shukor Pengerusi Jawatankuasa Perumahan dan Kerajaan Tempatan Negeri Johor.

PUBLIC BANK'S GREEN REAL ESTATE SEMINAR, EMBRACING SUSTAINABLE DEVELOPMENT: THE WAY FORWARD FOR SME DEVELOPERS', 14 JUNE 2023

GreenRE's Executive Director, Ir Ashwin Thurairajah was invited to be part of Public Bank's Green Real Estate Seminar, held last 14 June 2023 at W Hotel, Kuala Lumpur.

The event included presentations by PwC, Knight Frank Malaysia, Gamuda Land, and Public Bank and was attended by over 150 participants.

PERSATUAN PENGURUSAN KOMPLEKS MALAYSIA (PPKM)'S (RE)NEW ENERGY MANAGEMENT WEBINAR, 15 JUNE 2023

GreenRE was part of PPKM's webinar on renewable energy management for shopping malls. The webinar aimed to provide information on renewable energy options which has become essential in the light of rising cost of electricity and operational expenses. GreenRE's Executive Director, Ir Ashwin Thurairajah presented on '*Green Certification-Optimising Energy Efficiency in Retail Outlets*'.

PPKM regularly organises webinars for their members, to introduce new directions and technology to further enhance the management of shopping malls as part of their ongoing training and education programmes.

THE EDGE MALAYSIA EMBRACING SUSTAINABILITY IN CONSTRUCTION AND REAL ESTATE PANEL DISCUSSION, 24 JUNE 2023

GreenRE's Executive Director, Ir Ashwin Thurairajah was part of **The Edge Malaysia**'s Real Talk 2023 Forum, 'Buying into Sustainable Developments' panel session. The forum was part of a two-day event by The Edge Malaysia and YTL Cement's Embracing Sustainability in Construction and Real Estate Symposium on 23 and 24 June 2024.

This panel session was moderated by Knight Frank, Executive Director of Research and Consultancy Amy Wong, and featured four panel speakers — Zerin Properties CEO and Managing Director Previndran Singhe, GreenRE Executive Director Ir. Ashwin Thurairajah, Gamuda Land Executive Director of Product Management Unit Jess Teng, and Sime Darby Property Bhd General Manager of Safety and Sustainability Mohd Razif Mohd Yusoff.

The strongest relationship does not only survive, but it also flourishes over time.

We have grown from strength to strength since our inception in 1972 to establish ourselves as the preferred building material solutions partner in Malaysia and the region.

Our involvement in various iconic projects which have redefined the country's infrastructure landscape, ranging from expressways, bridges, railroads to integrated developments is testament of our proven track record.

As part of our strong emphasis on the environmental, social and governance (ESG) agenda, CIMA continues to push the boundaries of what is possible through our line-up of greener, safer and more sustainable products as well as solutions.

The last 50 years have been a meaningful experience for us. Our partnership of nation building, innovation, and growth with our various stakeholders is stronger than ever.

CIMA is certainly here to stay. The time is now for us to achieve more, together.

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Training

GREENRE ACCREDITED PROFESSIONAL'S COURSE NO. 30 & NO. 31 (HYBRID)

GreenRE's GreenRE Accredited Professional's Course No 30 and 31 was a success, with record number participants in recent years, a total of 130 participants attended GreenREAP's Course in the first half 2023. GreenREAPC No. 30 was held from 14-16 February 2023 at Wisma REHDA, Kelana Jaya and GreenREAPC No. 31 was carried out in Opero Hotel, Johor Bahru from 16-18 May 2023.

The GreenREAPC participants consisted of engineers, architects, facilities managers, project managers, green consultants, and also academicians. This training course was a remarkable opportunity for our members to enhance their skills, broaden their perspectives, and connect with fellow industry players.

Over the course of 3 days, we delved deep into all aspects of green building certification, exploring the best practices, green building theory and existing and emerging technology. The GreenREAP courses provided an excellent platform for knowledge sharing, skill enhancement, and networking.

The course covered 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 and also 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 which related to green building and sustainable development.

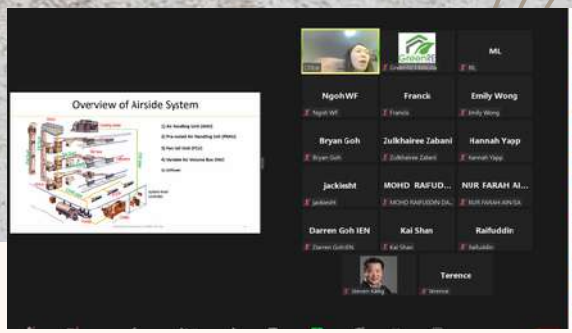
The GreenREAP courses are also applicable for CPD points from Suruhanjaya Tenaga, Institute of Engineering, Malaysia (IEM), Lembaga Arkitek Malaysia (LAM), Lembaga Penilai dan Pentaksir Malaysia (LPPEH) as well as GreenRE.

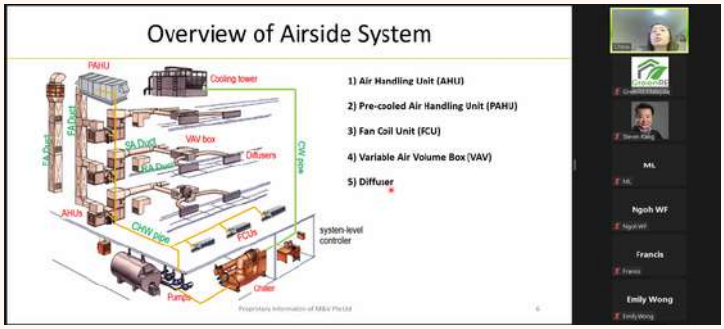
Two more GreenREAPC intakes will be held in the second half of 2023 in Wisma REHDA, Petaling Jaya. Follow us on Facebook, LinkedIn and Instagram to stay updated on future events, resources, and industry insights.

GREENRE TECHNICAL SEMINAR 01-2023 ON EFFICIENT CENTRAL AIR-CONDITIONING DESIGN AND MEASUREMENT & VERIFICATION SYSTEMS (ONLINE)

The highly anticipated GreenRE Technical Seminar (GRETS) 01-2023 on Efficient Central Air-Conditioning Design and Measurement & Verification Systems (ACMV) was held on 21-22 March 2023 Online (via Zoom).

This technical hands-on two-day seminar equipped participants with an in-depth understanding and knowledge of air-conditioning, central chilled water plants, chilled water airside system, chiller plant performance, measurement and verification and their optimisation. The trainers for the course were, Mr. Steven Kang (Director), Ms. Chloe Ng (Business Development Manager) and Mr. Bryan Goh (Business Development Manager) from Measurement & Verification Pte Ltd.





Featured Project

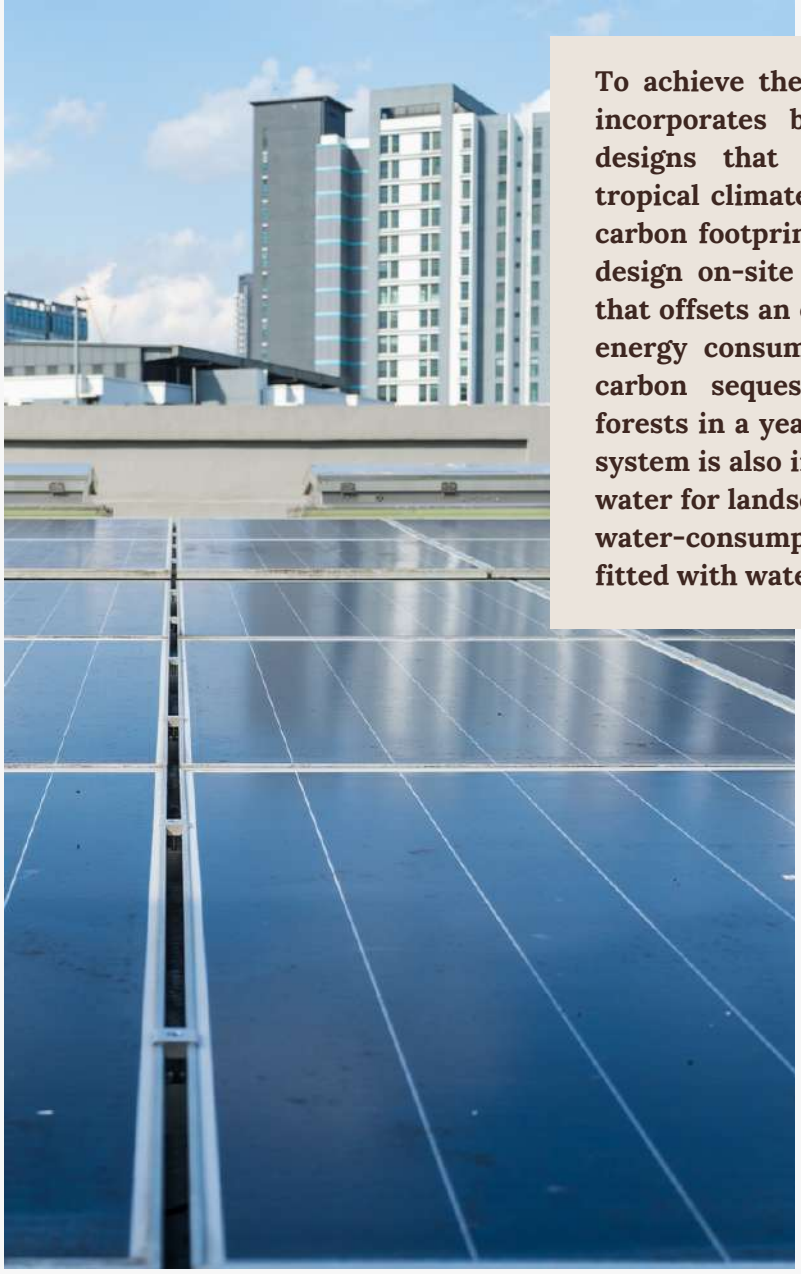
A Sustainable Education Space

SUNWAY INTERNATIONAL SCHOOL (SIS)

By Sunway Education Group

Sunway International School (SIS) is proud to be the first international school to aim for GreenRE certification Platinum rating. This project is part of the Sunway Group's commitment to sustainability, with Sunway Education Group as the owner and Sunway Construction as the builder. The Sunway Group has a proven track record of green buildings with ISO 14001 Standards, including residential (Sunway Onsen Suite, Sunway Geolake, Sunway Belfield) and mixed-developments (Sunway South Quay Square). They regularly report on their environmental, social, and governance (ESG) goals and aim for 5% generation of electricity from renewable sources, and 10% reduction of overall water consumption by Year 2030.

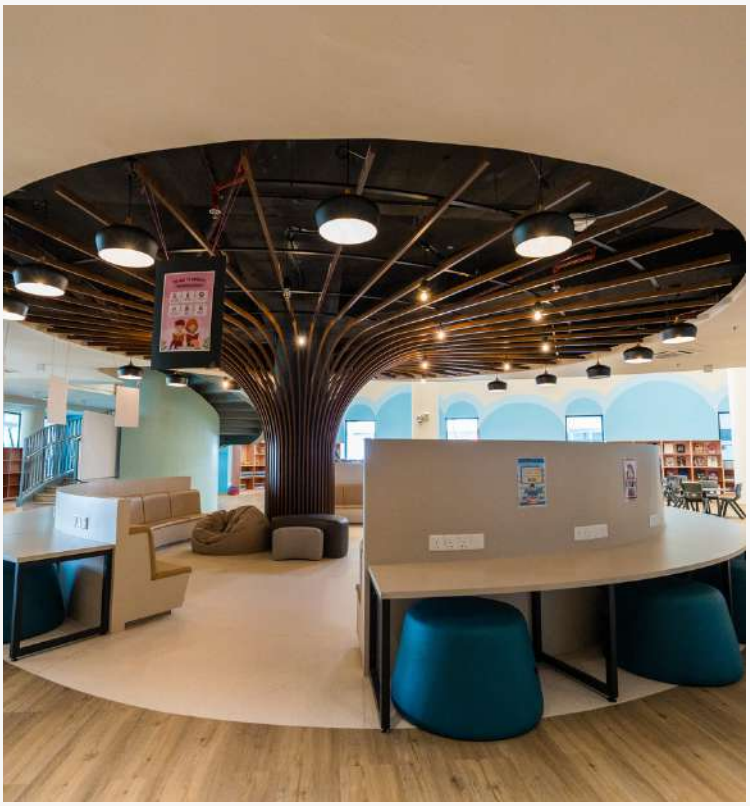
GREEN FEATURES



To achieve these goals, the SIS project incorporates both active and passive designs that take advantage of the tropical climate to reduce the building's carbon footprint. The noteworthy active design on-site is the 1062 solar panels that offsets an estimated 9% of the site's energy consumption, equivalent to the carbon sequestered by 500 acres of forests in a year. A rainwater harvesting system is also implemented to repurpose water for landscape irrigation, and major water-consumption areas have been fitted with water-saving features.

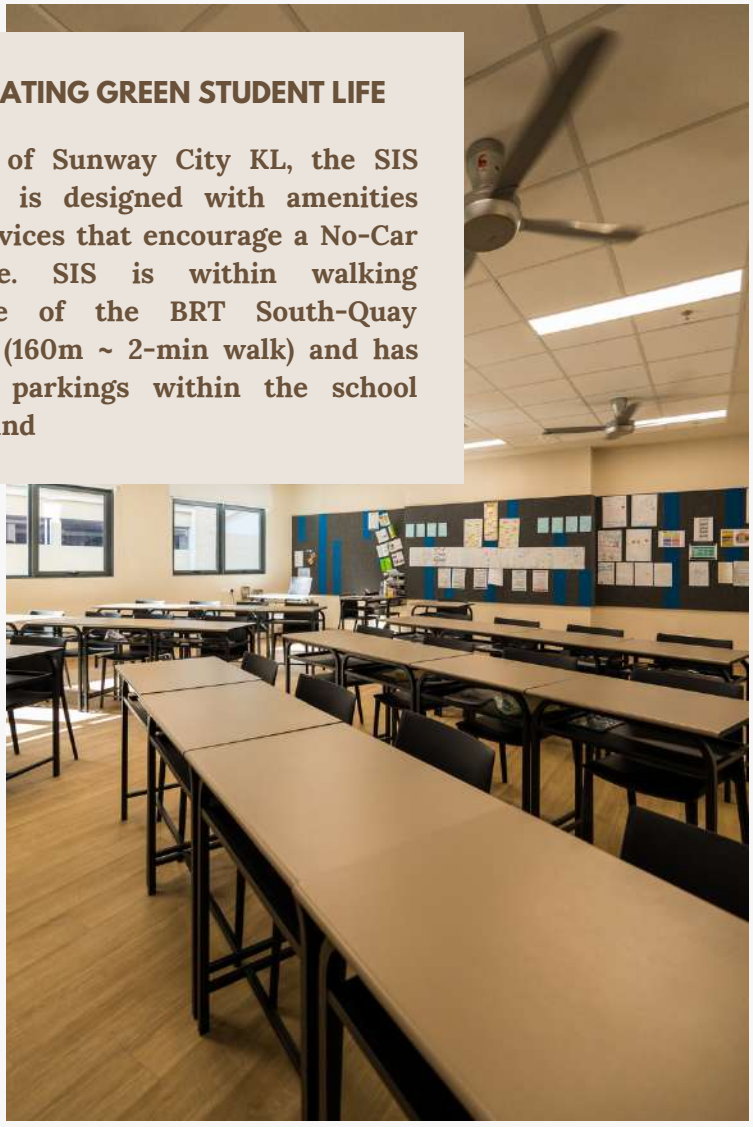
INSULATED AT ITS CORE

The building incorporates glazing with solar control, plentiful shaded areas, and light tone colors to reduce the heat-island effect. These passive designs result in an astonishing Overall Thermal Transmittance Value (OTTV) value of 34 W/m²; 15% lower than the baseline of a GreenRE-Platinum building, and twice the reduction when compared to a GreenRE-Certified building. The spacious corridors are naturally ventilated and installed with High Volume Low Speed (HVLS) fans for improved circulation and cool ambient conditions. The shaded outdoor corridors serve as a meeting ground for the students during their recess and off-hours.



ADVOCATING GREEN STUDENT LIFE

A part of Sunway City KL, the SIS campus is designed with amenities and services that encourage a No-Car Lifestyle. SIS is within walking distance of the BRT South-Quay station (160m ~ 2-min walk) and has bicycle parkings within the school compound



DESIGNED FOR SAVINGS

SIS campus is designed and constructed with energy savings in mind, modeled to achieve a third (~30%) of savings from baseline. This is due to the use of 100% LED light fittings that provide effective indoor environmental quality, an efficient Heating, Ventilation, and Air Conditioning (HVAC) system that saves 40% from baseline, and natural ventilation for 90% of the car park, staircases, and corridors.

PROMOTING WELL-BEING

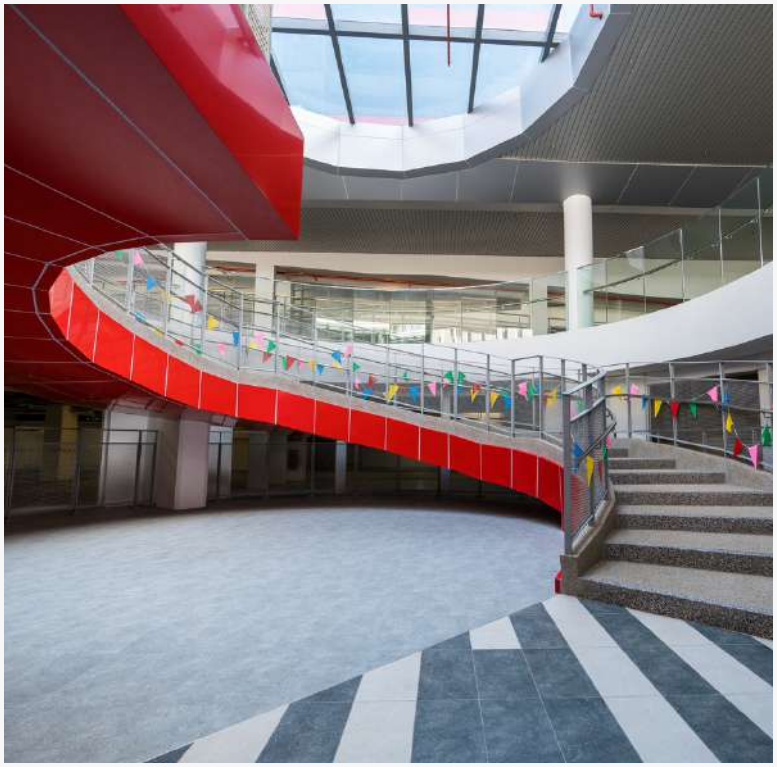
SIS campus features amenities like a 8-lane swimming pool and multiple pockets of landscaped areas. These features reduce the heat-island effect and promote an environment for psycho-escapism. The indoor multipurpose hall and playground provide designated locations where students can engage in sports, activities and exercises for their well-being.

CONSTRUCTED WITH QUALITY

SIS's campus with its luscious greenspace and ventilated corridors has a Concrete Usage Index (CUI) of 0.40 m^3/m^2, with 20% replacement of green cement within its green concrete volume. The built environment has a QLASSIC score of 76.

SUSTAINABLE AWARENESS

SIS promotes not only quality education but also sustainability and responsibility. Recycling bins for plastic, paper, and metal are placed throughout the campus. Specific bins for food waste are provided at the canteens, and E-waste collection is placed near the entrance for convenience



PROJECT TEAM

Owner: Sunway Education Group Sdn Bhd
Architect: SA Architects Sdn Bhd
C&S Consultant: Maverick United Sdn Bhd
M&E Consultant: Zeal Perunding Sdn Bhd
Quantity Surveyor: Baharuddin Ali and Low Sdn Bhd
Green Building Consultant: BSD Consultancy Sdn Bhd
Main Contractor: Sunway Construction Sdn Bhd

"Nurturing Minds, Building Character"

CLIMATE ASIA
a subsidiary of BSD

Carbon Neutral Partner

International Green Build Conference : 1 Aug 2023 Realising Low Carbon Real Estate

As the Conference's
Carbon Neutral Partner...

Climate Asia collected data from the delegates and other stakeholders to calculate the amount of GHG emitted to establish a base load for implementation of the reduction and removal strategies for upcoming events.

Our heartfelt appreciation to the participants who had responded to our data collection survey. We received 34% responses from the estimated total participants which was a successful survey.

Why is Carbon Neutrality important for events and businesses in Asia? ...because 51% of annual global greenhouse gas emissions occurs in this continent. Malaysia is no less a contributor to this phenomenon.

Carbon neutrality is "net-zero" which is a state where the greenhouse gases (GHG) emitted into the atmosphere are balanced by the amount of GHGs removed. This is the state where global warming stops. The Paris Agreement underlines the need for net-zero, to be achieved by 2050. More than 70 countries, including the biggest polluters have set a net-zero target, covering about 76% of global emissions.

The climate-action through the reduction and removal (carbon

Talk to me, at Climate Asia
Lim Bee Ling | M:+6019-3078662
E:beeling@climateasia.com

At Climate Asia, we understand that sustainable business practices are crucial for the long-term success and resilience of organizations in today's changing world, in particular, the impact of climate-change.

We provide comprehensive consulting services to help our clients effectively measure, manage, and report their carbon emissions and ESG.

- carbon footprint audit
- decarbonisation roadmap
- developing sustainability strategies
- implementing green solutions
- engaging stakeholders and reporting on sustainability performance

Featured Article

Ghar Ek Lau, Ph.D. & Ryan Danks, B.A.Sc., P.Eng. , RWDI

INCORPORATING AIRFLOW SIMULATIONS IN THE DESIGN STAGE OF PROJECTS

Airflow simulation using computational fluid dynamics (CFD) is a technique for predicting the movement of air by computationally solving complex mathematical equations. Advanced CFD analysis can be used to help projects achieve a wide range of objectives, including optimizing equipment, industrial processes and human environments for comfort, efficiency, and safety. In this article, we explore the ways in which airflow simulations via CFD could be incorporated during the design stage of projects. We will be focusing on two topics in the context of creating a more sustainable built environment, namely indoor ventilation, and outdoor microclimates.

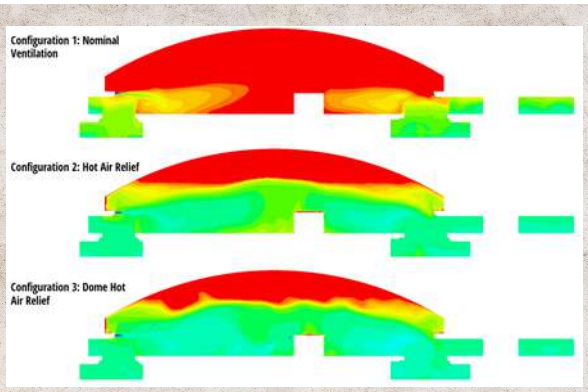


Image 1: CFD Prediction of Temperature at a Section through a Shopping Mall in Kuala Lumpur, Malaysia

INDOOR VENTILATION

A well-designed heating, ventilation, and air-conditioning (HVAC) system performs many (largely invisible) functions. It provides comfort through control of temperature and humidity. It delivers clean, odour-free air through filtration and air exchange with the outdoors. In some cases, it controls contaminant levels (e.g. industrial ventilation and emergency smoke control systems). In specialized spaces such as operating rooms and laboratories, a ventilation system may also act to ensure the occupants' safety by limiting the spread of germs or dangerous chemicals. The challenge that a modern designer faces, is to balance the need for comfort and safety with the up-front and operational costs (in both monetary terms and carbon) of the equipment. Whether the system is driven mechanically, naturally, or both, CFD is a useful tool for early design to address this challenge.

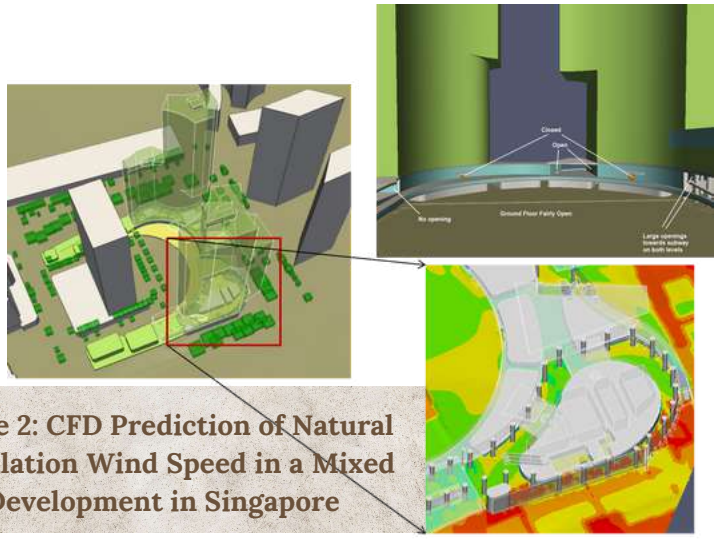
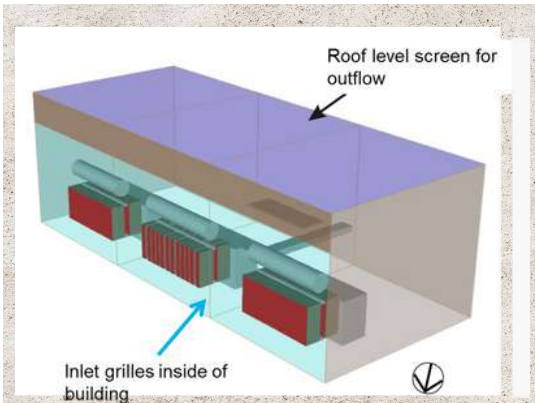


Image 2: CFD Prediction of Natural Ventilation Wind Speed in a Mixed Use Development in Singapore

Many prescriptive standards exist which set required ventilation rates for high-performance spaces. However, in our experience, how air is introduced into a space can be more important than the amount of air supplied. Thoughtful choices informed by CFD analyses can lead to ventilation schemes that can demonstrate the required (or in some cases better) occupant ventilation, at reduced energy use. Even for less rigorous settings where the HVAC is mainly mechanically driven, the correct sizing and placement of supply and return registers is essential. We can model airflows in detail to identify opportunities to enhance the performance of an HVAC system (Image 1), often saving money and carbon emissions.

However, fans aren't the only solution. Increasingly designers are exploring naturally-driven ventilation. This approach leverages a combination of buoyancy and wind forces to ventilate and control comfort with little to no need for mechanical systems. This strategy saves energy and can increase the amount of occupiable space in a building (by reducing the need for ducts and mechanical systems) but requires careful design to ensure adequate air movement consistently. In addition to the ability to enhance the efficiency of the ventilation approach, the role of CFD modelling here is also to provide a snapshot of the spatial distribution of internal thermal comfort under a set of design conditions in complex architectural spaces (Images 2 – 4). This can then be combined with long-term climate statistics to derive an understanding of how often natural ventilation is viable.



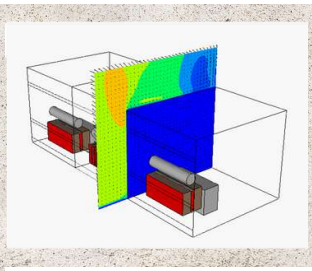
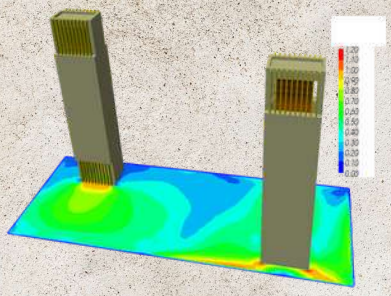
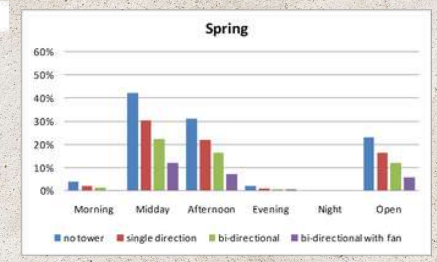


Image 3: CFD Prediction of Natural Ventilation Air Speed of Transformer Vault

Image 4: CFD Prediction of Natural Ventilation Driven by Wind Towers in Princess Noura University, Riyadh Saudi Arabia





OUTDOOR MICROCLIMATES

Outdoor Thermal Comfort

The environment within cities is strongly influenced by the buildings within it. Depending on the form and layout of the buildings, different environmental conditions, or microclimates will be created. These building-influenced microclimates can include significant changes to the wind regime at the base of a building, access to sunlight, and exposure to irritants like pollution, odours, noise and glare. The extent of these changes directly affects the experience of people in the urban realm. CFD simulations, with their ability to model the movement of heat, air and particulates in complex environments, enables a designer to understand and enhance the microclimate around a project before it is built (Image 5).

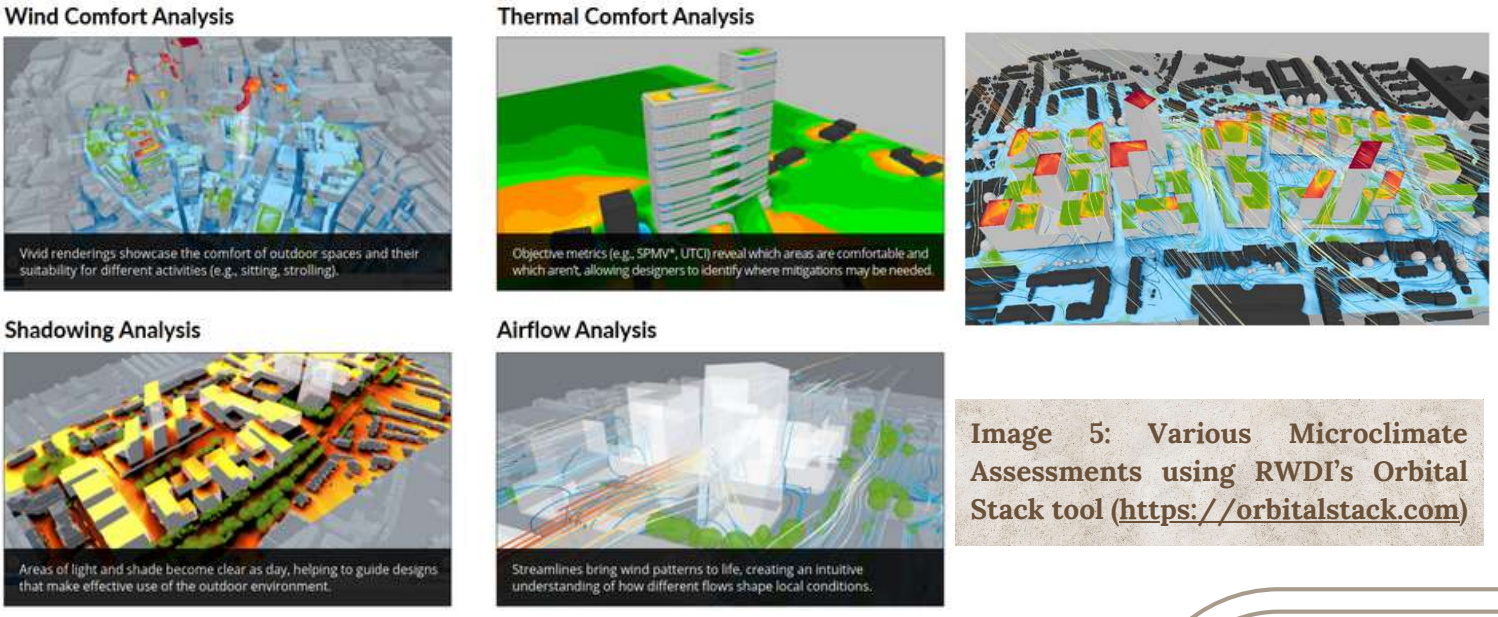


Image 5: Various Microclimate Assessments using RWDI's Orbital Stack tool (https://orbitalstack.com)

However, CFD simulations of discrete conditions are not enough. To be truly effective, the simulations of the built environment should be coupled with historic or future weather data to gain an understanding of the range of wind and solar conditions people will be exposed to along with human physiological models that convert the climate conditions in a space to an estimate of how thermally comfortable a person may find that space.

Assessing a subjective topic like thermal comfort comes with a great deal of nuance which often benefits from expert interpretation and guidance to help create a holistic solution. For example, in hot climates, providing shade is critical to improving outdoor thermal comfort. However, some shading devices can also block cooling breezes (Image 6). Conversely, strong winds can make spaces more thermally comfortable, but may be too strong to allow people allow people to effectively use the space (e.g. a dining space where napkins blow off the table). An outdoor microclimatic assessment can provide greater insights into these different factors and opportunities to make cities more walkable, improve foot traffic around retail and outdoor dining and reduce urban heat island effects that exacerbate extreme heat events.

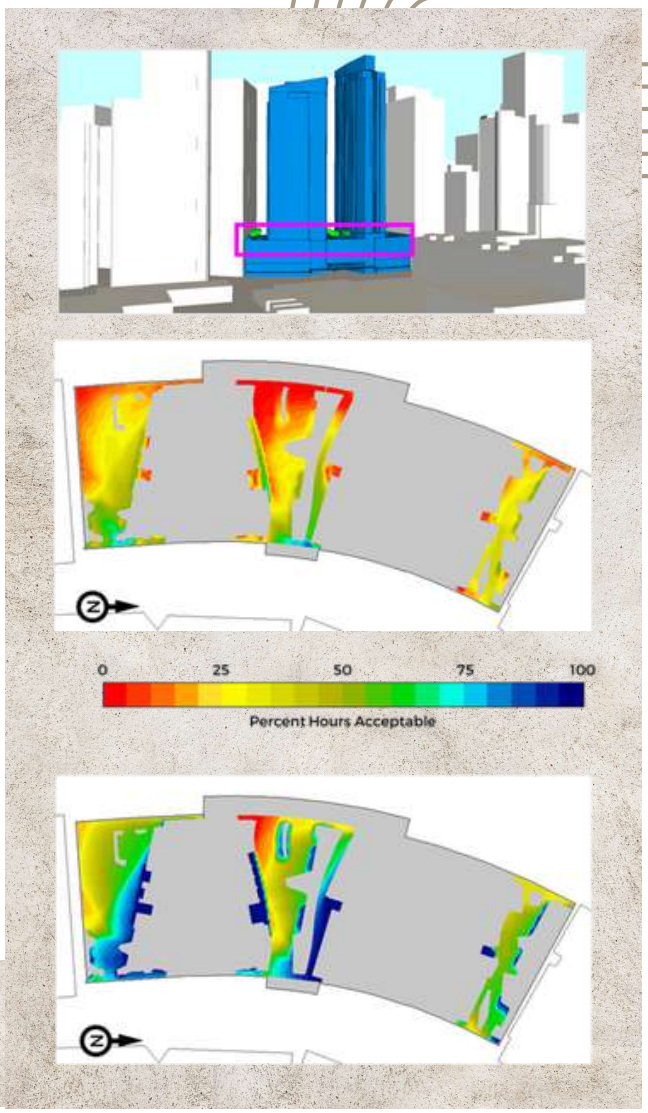


Image 6: Thermal Comfort Prediction for a Mixed Use Development in the Philippines (left), before (centre) and after (right) mitigation

Wind-Driven Rain

The flow of winds in and around buildings can be very complex and can lead to rainwater be transported and accumulated in unexpected ways. Wind-rain interactions can affect drainage systems, rainwater harvesting systems, cladding systems, roof loads and the satisfaction of occupants who expected the spaces to be dry. Good design for open spaces and rainwater management takes these patterns into account. Depending on the local climate, smart tweaks to a building's orientation and form could make a big difference to the project capital and operating costs for managing rain and its effects.

Depending on the needs and the possible issues, CFD could be used to simulate airflow and raindrop travel to quantify rain infiltration problems (Images 7 and 8). This can be done for any wind direction(s) and speed(s) of interest. The predictions can show where rain will go, how often it will go there, and how to make it go somewhere else – without creating new issues.

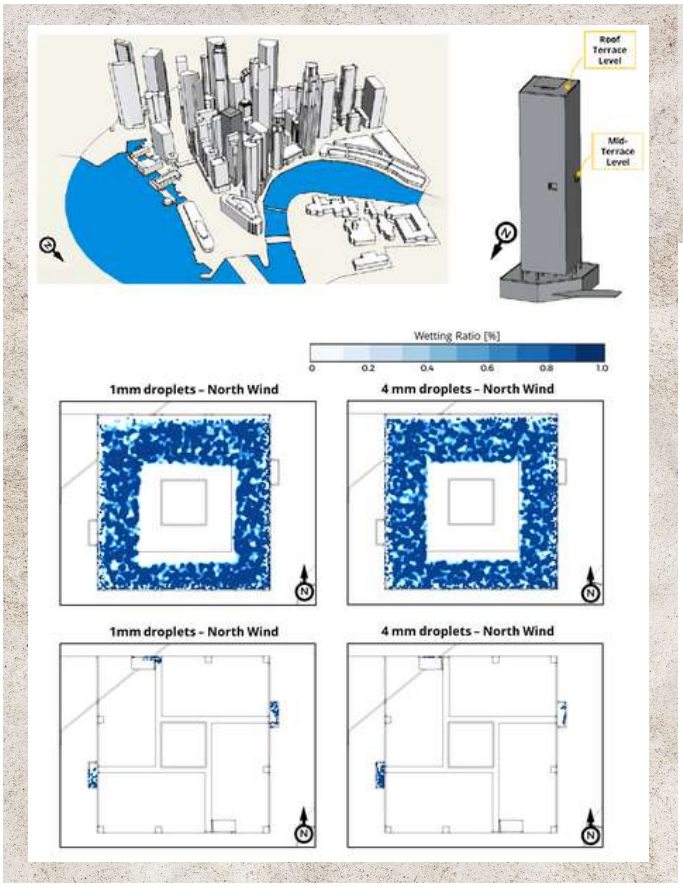


Image 7: CFD Prediction of Rain Infiltration onto a Roof Terrace (top) and Mid Terrace Covered Spaces in a Sample Project in Singapore.

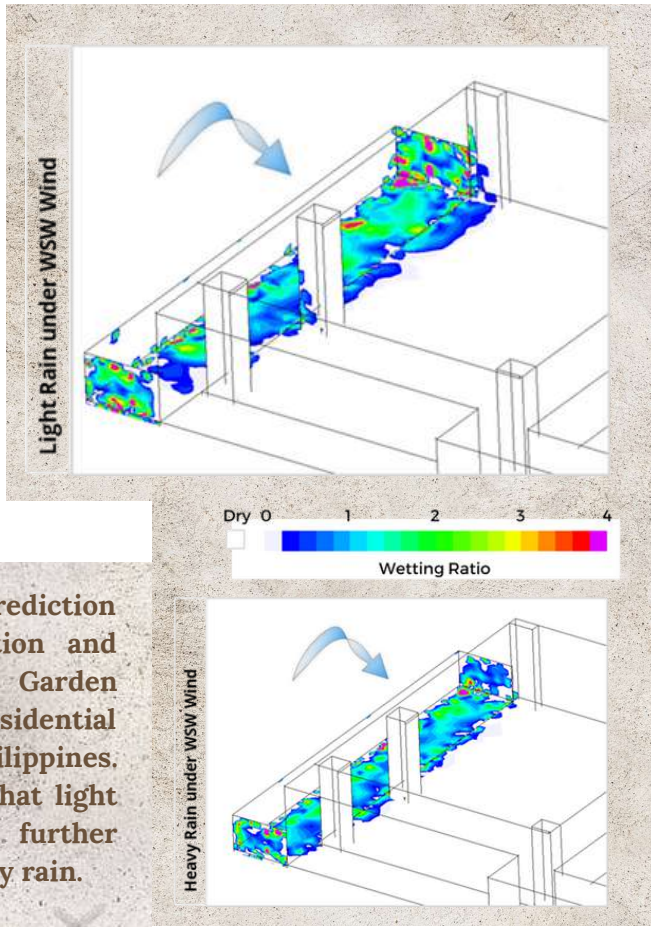


Image 8: CFD Prediction of Rain Infiltration and Severity onto a Garden Terrace in a Residential Tower in the Philippines. Results showed that light rain penetrated further compared to heavy rain.

WHO IS RWDI?

RWDI is a leading consulting engineering firm with a history that includes a portfolio of unparalleled experience gained from thousands of projects across the world. RWDI's 50-year legacy is built on creating innovative solutions to complex engineering challenges. Our performance-centred approach combines innovative thinking, collaborative problem solving, and a passion for expanding the boundaries of the possible to achieve results.

We've built a team of over 800 engineers, scientists, and sustainability specialists over 30 offices across North America, Europe and the Asia Pacific region. With deep technical expertise, we drive success on ambitious building, industry, and infrastructure projects – enhancing performance, resiliency, and efficiency.

Our goal is simple: to help clients overcome any design or operational challenge to meet ambitious goals while ensuring projects exist in harmony with their natural environment.

AUTHORS

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INQUIRIES

If you require any further information regarding RWDI's services and how we can help with your project, please feel free to contact us.

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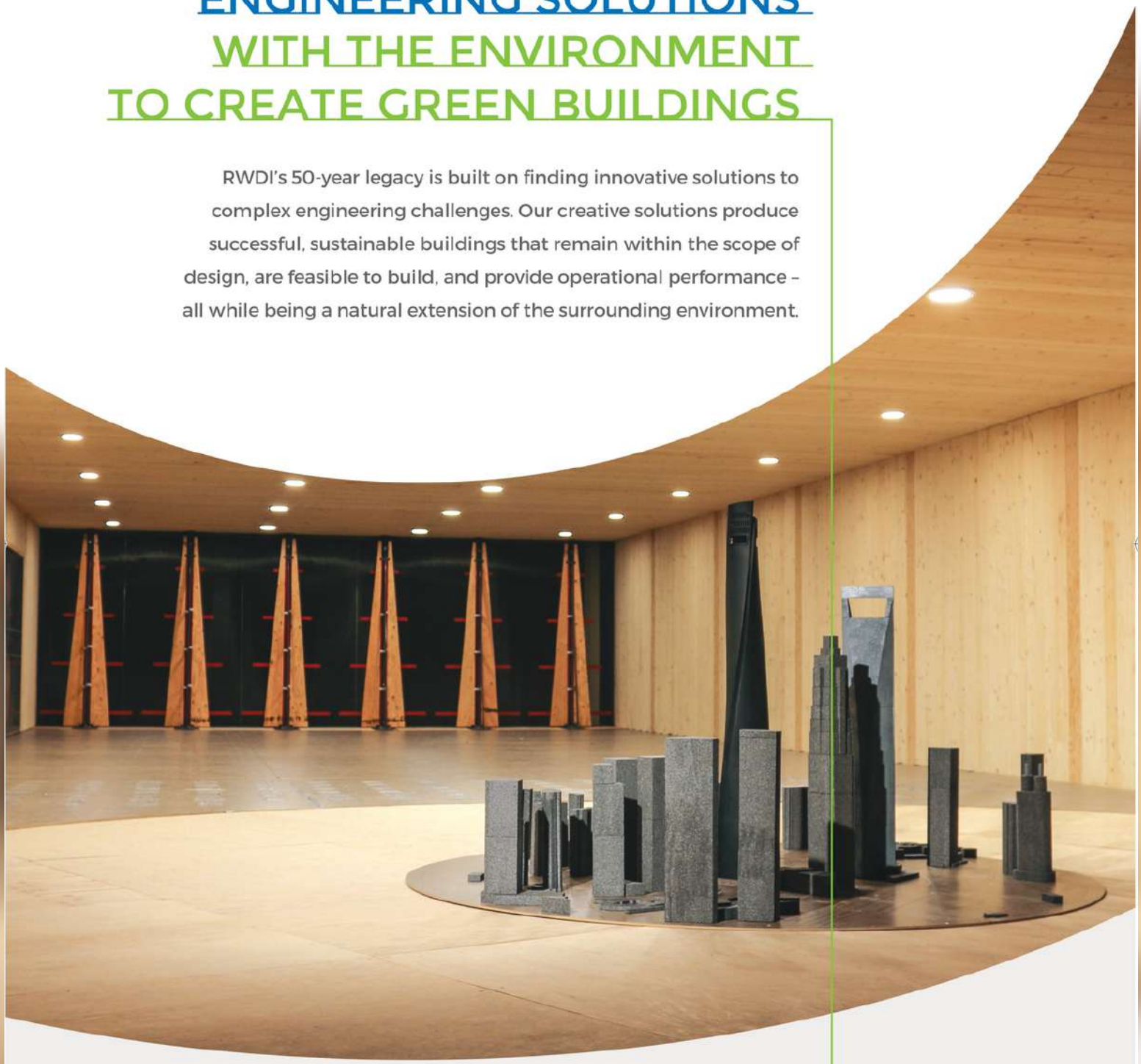
BALANCE ENGINEERING SOLUTIONS WITH THE ENVIRONMENT TO CREATE GREEN BUILDINGS

RWDI's 50-year legacy is built on finding innovative solutions to complex engineering challenges. Our creative solutions produce successful, sustainable buildings that remain within the scope of design, are feasible to build, and provide operational performance – all while being a natural extension of the surrounding environment.



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Research Update

Assoc. Prof. Ts. Dr. Vincent Woon Kok Sin & Ms. Ng Wai Lam,
Xiamen University Malaysia

A LIFE CYCLE ASSESSMENT TOWARDS LOW-CARBON BUILDINGS IN MALAYSIA

Buildings contribute nearly 40% of energy-related carbon emissions, equivalent to around 14 gigatons annually (United Nations Environment Programme, 2021). Transitioning to green building construction is crucial for decarbonizing the built environment. Various voluntary Green Building Rating Systems (GBRS) have been developed globally to assess the performance of green buildings. These systems assign credits and weights to environmental factors, with energy, water, and materials being the most commonly analyzed categories, followed by site and indoor/outdoor environmental qualities (Ng et al., 2022). Evaluating a building's carbon sustainability involves considering both embodied carbon (EC) and operational carbon (OC). EC refers to the total impact of greenhouse gas emissions associated with materials throughout their lifecycle, including extraction, manufacturing, construction, maintenance, and end-of-life stages. OC refers to carbon emissions during a building's occupancy stage. Quantifying carbon emissions is vital for understanding building potentials and identifying emission reduction pathways (Su et al., 2023). Green Building Rating Systems have started incorporating Life Cycle Assessment (LCA) to quantify carbon emissions and environmental impacts. However, the widespread adoption of LCA in these GBRS is limited, posing challenges in accurately determining building carbon emissions.

Considering the above limitation, we have partnered with GreenRE Sdn. Bhd. and Universiti Teknologi MARA to assess the life cycle carbon emission of green-certified non-residential buildings and identify the major carbon hotspots from the buildings. The research adopts LCA to quantify the carbon emitted from green-certified buildings at different rating levels (i.e., platinum, gold, silver, and bronze). It intends to investigate the relationship between the green building rating level and carbon emissions.

METHODOLOGY

LCA adopts international standards, ISO 14040 and ISO 14044, to assess the building's energy flow, materials used, and product's environmental impact (Chau et al., 2015). LCA encompasses four stages: a) goal and scope,b) data collection and compilation, c) data quantification and analysis, and d) result interpretation, as shown in Figure 1.

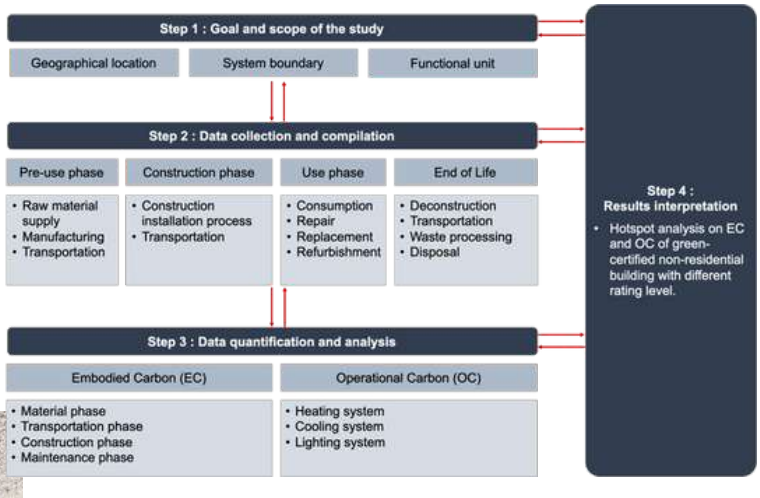


Figure 1: The overall framework for life cycle assessment.

The study's goal focuses on the scientific evaluation of sixteen (16) green-certified non-residential buildings from a life cycle perspective, including office, commercial, and hotel. As shown in Figure 2, the overall system boundary includes the material (A1-A3), transportation (A4), construction (A5), replacement (B4) and use phases (B6-B7). The demolition phase (C1-C4) of green-certified buildings is excluded from the analysis as it represents a relatively small contribution to the building's carbon emissions, estimated to be around 2% of its total carbon emissions over its lifetime (Chau et al., 2015).

The lifespan of the building is assumed to be 50 years, following the Construction Industry Standard set by Construction Industry Development Board Malaysia (CIDB, 2021). The functional unit in this study is gross floor area, m2 and yearly basis, y. We select the building projects with two criteria: a) it must be a green-certified building, and b) the building must have been operational for at least one year. Therefore, we analyze the full-accreditation construction projects because operational phase data is readily available. The data inventory for LCA is mainly collected from the GreenRE database. It includes on-site data and survey information—for instance, the building floor plan, the bill of material, and the utilities bill. We also refer to local authorities' reports such as CIDB, Clean Development Mechanism, and Air Selangor to retrieve the emission factor for building materials, electricity, and water.

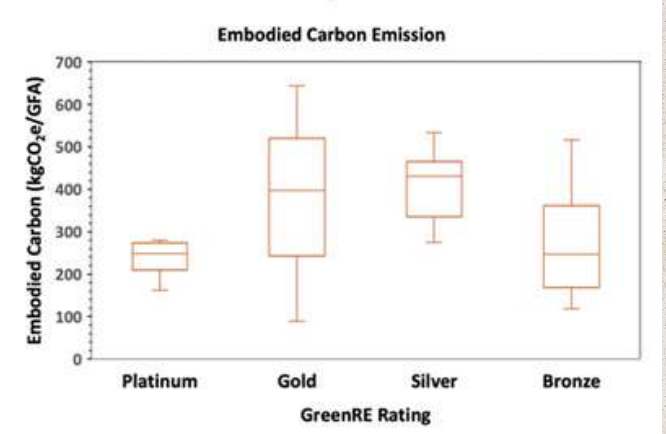
Figure 2: The system boundary of the study (Adopted from One Click LCA Ltd (2021)).

LIFE CYCLE CARBON ASSESSMENT RESULT

The study's goal focuses on the scientific evaluation of sixteen (16) green-certified non-residential buildings from a life cycle perspective, including office, commercial, and hotel. As shown in Figure 2, the overall system boundary includes the material (A1-A3), transportation (A4), construction (A5), replacement (B4) and use phases (B6-B7). The demolition phase (C1-C4) of green-certified buildings is excluded from the analysis as it represents a relatively small contribution to the building's carbon emissions, estimated to be around 2% of its total carbon emissions over its lifetime (Chau et al., 2015).

EMBODIED CARBON EMISSIONS ANALYSIS

As shown in Figure 3, the analysis reveals that green-certified buildings with gold ratings demonstrate lower EC emissions (~70 $kgCO_2e/m^2$) than platinum-rated buildings but higher emissions than silver and bronze-rated buildings (~110 $kgCO_2e/m^2$). Concrete usage is the primary contributor to EC emissions, accounting for an average of 53%. Hence, reducing concrete consumption and promoting the use of green cement are vital in curbing EC. Green building rating systems, such as GreenRE, have recognized this importance and allocated points for concrete usage and green cement replacement. Projects achieving a concrete usage index of less than 0.35 and incorporating green cement replacements exhibit lower emissions, emphasizing the need for minimum CUI index requirements and green cement usage in platinum and gold-rated buildings. Additionally, reinforcement steel emerges as the second-largest contributor, contributing an average of 26% to embodied emissions. It is recommended that pre-requisite points can be allocated within the rating system to encourage the adoption of recycled reinforcement steel.



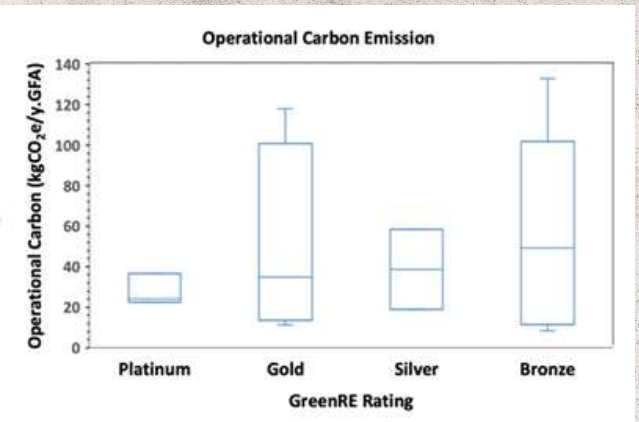


Figure 3: The a) embodied carbon emission, and b) operational carbon emission of green-certified non-residential buildings for different rating levels (i.e., platinum, gold, silver, and bronze). Within each box, horizontal lines denote median values; boxes extend from the 25th to the 75th percentile of each group's distribution of values; vertical extending lines denote adjacent values (i.e., the most extreme values within 1.5 interquartile range of the 25th and 75th percentile of each group).

OPERATIONAL CARBON EMISSIONS ANALYSIS

OC emissions predominantly result from electricity usage, constituting around 84% of the total OC footprint. Comparatively, water and solid waste emissions play a minor role. The GreenRE rating system is awarded up to 25 points for improving the efficiency of air-conditioning systems, including chiller plants, cooling towers, and water pumps. Projects scoring full points under this criterion witnessed substantial reductions in electricity consumption (84-96%), aligning with the OC emissions of platinum-rated buildings. To effectively address electricity-related emissions, enhancing air-conditioning efficiency is crucial. Consequently, a mandatory air-conditioning criterion is suggested to differentiate OC emissions among different rating levels.

This research highlights the significance of addressing embodied and operational carbon emissions while integrating specific measures into green building rating systems to ensure alignment with desired rating levels. Following the successful identification of EC and OC of the non-residential buildings from a life cycle perspective, the next phase of the study is to develop a robust Green Building Carbon Index (GBCI) that benchmarks carbon emissions in green-certified buildings. By integrating regression modelling and LCA principles, the GBCI can comprehensively assess a building's carbon impact, considering both embodied and operational emissions. Aligning the GBCI with SDG 13 will facilitate effective climate change mitigation efforts within the construction industry.

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TECHNICAL UPDATES

1.0 ANNOUNCEMENT ON NEW TOOLS

GreenRE has launched the latest revisions on the following tools (effective as of June 2023) :

·Non-Residential Building v4.0 (*Revamped toolkit for GreenRE-MyCREST Dual Certification)
·Existing Non-Residential v3.3
·Industrial Facilities v1.1
·Existing Industrial Facilities v1.1
·Residential Building & Landed Home v 3.3
·Township v2.0
·Data Centre v1.1
·Retail v1.0 (*New Toolkit – Restaurant annex will be absorbed into this tool)

All the updated tools and guidelines can be downloaded from our website :
(*https://greenre.org/rating_tools*).

The previous versions of the tools can be used until 31st December 2023.

2.0 ANNOUNCEMENT ON NEW SUBMISSION TEMPLATE

GreenRE has revised the signatory page in the submission template. The revised version can be downloaded from the GreenRE Website effective July 2023.

3.0 NON-RESIDENTIAL BUILDING V3.2

The minimum scoring for the Shop Lot project to be 22 credits for PART 1: Energy Related Requirements

4.0 RESIDENTIAL BUILDING AND LANDED HOME V3.3

For Bronze and Silver rating, 3-star rated air conditioning is required for common area facilities

For Gold and Platinum rating, 5 Star rated air conditioning is required for common area facilities.

5.0 UPDATE ON THE CARBON FACTOR FOR ENERGY & WATER – ALL TOOLS

Effective August 2023, for operational carbon calculation requirements, the carbon emission factor for energy and water to be used in calculation as follow:

Energy: 0.78 kg CO_2e/kWh

Water :0.419 kg CO_2e/m^3

6.0 ANNOUNCEMENT OF GREENRE – MYCREST DUAL CERTIFICATION

GreenRE in collaboration with the Construction Research Institute of Malaysia (CREAM, CIDB) is pleased to announce the launch of GreenRE - MyCREST Dual Certification. From July 2023 onwards, GreenRE -MyCREST dual certification will be assessed using GreenRE Non-Residential Building v4.0. For more information kindly contact assessor@greenre.org

CALENDAR of events

2023

JULY
4-6

GREENRE ACCREDITED PROFESSIONAL'S COURSE NO.32

Wisma REHDA,
Kelana Jaya / Online

GREENRE CPD POINTS: 15

GREENRE

JULY
7

GREEN BUILDING AWARENESS SEMINAR FOR BANKS (UOB)

Wisma REHDA,
Kelana Jaya

GREENRE-UOB

JULY
31

GREENRE TOUR IN CONJUCTION WITH GBC 2023

Kuala Lumpur

GREENRE & REHDA YOUTH

AUGUST
1

3RD GREEN BUILD CONFERENCE (GBC 2023)

One World Hotel, PJ

GREENRE & REHDA INSTITUTE

AUGUST
19

GREENRE ACCREDITED PROFESSIONAL'S COURSE NO.32 (ASSESSMENT)

Wisma REHDA,
Kelana Jaya / Online

GREENRE

SEPTEMBER
6-9

ENGINEER & MARVEX

KLCC

IEM

SEPTEMBER
14

GREENRE REFRESHER COURSE 2023

Online

GREENRE

CALENDAR of events

2023

SEPTEMBER 20-21

GREENRE TECHNICAL SEMINAR 02-2023 (GREEN DATA CENTRE)

Online

GREENRE CPD POINTS: 5

GREENRE

OCTOBER 4-6

INTERNATIONAL GREENTECH & ECO PRODUCTS EXHIBITION & CONFERENCE MALAYSIA (IGEM) 2023

KLCC

MGTCCC

OCTOBER 17-19

GREENRE ACCREDITED PROFESSIONAL'S COURSE NO.33

The Ship Campus, Penang / Online

GREENRE CPD POINTS: 15

GREENRE

NOVEMBER 15-17

INTERNATIONAL CONSTRUCTION WEEK (ICW)

MITEC

CIDB

NOVEMBER 18

GREENRE ACCREDITED PROFESSIONAL'S COURSE NO.33 (ASSESSMENT)

Wisma REHDA, Kelana Jaya

GREENRE

NOVEMBER 21

GREENRE TECHNICAL SEMINAR 03-2023

Wisma REHDA, Kelana Jaya

GREENRE CPD POINTS: 5

GREENRE

NOVEMBER 29

GRESB REGIONAL HIGHLIGHTS (MALAYSIA)

Wisma REHDA, Kelana Jaya

GREENRE & GRESB

NEWLY CERTIFIED GREENRE PROJECTS

Project Name & Location	Company	Design Ref	Type of Cert	Date of Cert
SJK (C) Cheah Fah, Sunway City Iskandar Puteri	Sunway Iskandar Sdn Bhd	NRB v3.0	Provisional	16/1/23
The Meg	Persada Mentari Sdn Bhd	RES v3.2	Provisional	1/2/23
Arica Executive Homes (Plot 16C)	Persada Mentari Sdn Bhd	RES v3.2	Provisional	7/3/23
ARUP KL Office Fitout	Arup Jururunding Sdn Bhd	INT v1.0	Actual	11/4/23
Sunway South Quay (Sunway CP2) - Retail and Cinema	Sunway South Quay Sdn Bhd	NRB v3.2	Provisional	2/6/23
Sunway CP2 - Office Tower 2	Sunway South Quay Sdn Bhd	NRB v3.1	Provisional	27/6/23
Wisma Speedmart	99 Speedmart Sdn Bhd	NRB v3.2	Provisional	27/6/23

Project Name & Location	Company	Design Ref	Type of Cert	Date of Cert
Wisma REHDA	Real Estate Housing Association	NRB v3.0	Renewal 2	1/1/23
Residensi Estetik 8 (EST 8)	Titian Sama Sdn Bhd	RES v3.1	Provisional	11/1/23
MK31 - Plot 1	Laser Tower Sdn Bhd	RES v3.1	Provisional	13/1/23
GTower	GTower Sdn Bhd	ENRB v3.1	Renewal 2	30/1/23
ASMPT Malaysia Sdn.Bhd. (ATM Extension)	ASMPT Malaysia Sdn Bhd	NRB v3.0	Actual	21/2/23
Residensi Heliks	Eupe PJ South Development Sdn Bhd	RES v3.2	Provisional	24/2/23
Retail Mall @ Battersea Power Station	Battersea Power Station Development Company	ENRB v3.2	Provisional	9/3/23
Parc 3 @ KL South	Titian Sama Sdn Bhd	RES v3.1	Actual	22/3/23
D'Vine	Momentumace Sdn Bhd	RES v3.2	Provisional	23/3/23
D'Terra Residence (Exsim Damansara Plot 9B)	Mightypop Sdn Bhd	RES v3.1	Provisional	3/4/23
Hap Seng Star Mercedes-Benz Autohaus @ Kota Kinabalu (Mercedes-Benz Autohaus @ Kota Kinabalu)	Trio Empireland Sdn Bhd	NRB v3.1	Provisional	27/4/23
Hyatt Regency (Tower A) @ KL Midtown	KL Midtown Sdn Bhd	NRB v3.0	Provisional	8/5/23
D'Mother Warehouse	Syarikat Logistik Petikmas Sdn Bhd	EIND v1.0	Provisional	19/5/23
Exsim Damansara Plot 9C	Mightypop Sdn Bhd	RES v3.1	Provisional	29/5/23

Project Name & Location	Company	Design Ref	Type of Cert	Date of Cert
Sunway Lenang Heights	Sunway City JB Sdn Bhd	RES v3.2	Provisional	11/1/23
Sunway Medical Centre Velocity Tower B	Sunway City Sdn Bhd	HC v1.0	Provisional	17/1/23
Residensi Tujuh (Plt F- Mix 1)	Kwasa Sentral Sdn Bhd	RES v3.1	Provisional	16/2/23
PSV1 Residences @ Platinum South Valley, Sg Besi	Pembinaan Serta Hebat Sdn Bhd	RES v3.2	Provisional	17/2/23
Alira Subang Jaya (Alira @ Metropark Subang)	Next Delta Sdn Bhd	RES v3.2	Provisional	24/3/23
Park One, Melawati	Sime Darby Property (KL East) Sdn Bhd	RES v3.2	Provisional	10/4/23
Sanctuary Terrace	Manda'Rina Sdn Bhd	RES v3.2	Provisional	11/4/23
Hyatt Centric Kota Kinabalu	Sunhill Ventures Sdn Bhd	NRB v3.1	Actual	13/4/23
The Vesta Residences @ Skysierra	SkySieraa Development Sdn Bhd	RES v3.2	Provisional	29/5/23
SFI Food Sdn Bhd (Phase 1)	SFI Food Sdn Bhd	EIND v1.0	Renewal 1	6/6/23
SFI Food Sdn Bhd (Phase 2)	SFI Food Sdn Bhd	EIND v1.0	Renewal 1	6/6/23
Caffe Diem @ Pekan Cina	Encomas Sdn Bhd	ENRB v3.0	Renewal 1	15/6/23
Mapletree Logistics Hub - Jubli Shah Alam	Symphony Warehouse Sdn Bhd	IND v1.0	Actual	22/6/23

Project Name & Location	Company	Design Ref	Type of Cert	Date of Cert
IJM Rimbayu Robin	Bandar Rimbayu Sdn Bhd	RES v3.2	Provisional	16/1/23
Laurel Residence, Bangsar South	Sunny Uptown Sdn Bhd	RES v3.2	Provisional	17/1/23
IJM Rimbayu Avela (Bandar Rimbayu Phase 17)	Bandar Rimbayu Sdn Bhd	RES v3.2	Provisional	18/1/23
KL Trillion	Badan Pengurusan Bersama KL Trillion	ENRB v3.2	Actual	20/1/23
The Ship Campus & Hostel	PKT Logistics (M) Sdn Bhd	NRB v3.2	Actual	20/1/23
NTT Cyberjaya 6 Data Center	NTT Global Data Centers CBJ1 Sdn Bhd	NDC v1.0	Provisional	7/2/23
Taman Viluxe	Aspen Vision City Sdn Bhd	RES v3.2	Provisional	17/4/23
Eko Perdana & Bandar Sri Perdana Sub-Phasing Phase 4F (Eco Perdana 127 & 4F Lahad Datu)	Hap Seng Properties Development Sdn Bhd	TS v1.0	Provisional	19/4/23
Riverpark	Kumpulan Gapadu Sdn Bhd	RES v3.2	Provisional	19/4/23
M Minori	MS Lakecity Sdn Bhd	RES v3.2	Provisional	28/4/23
Panora	Semai Meranti Sdn Bhd	RES v3.2	Provisional	19/5/23
Eco Spring (Plot 2, 3, 4 and Plot Perdagangan)	Eco Summer Sdn Bhd	TS v1.0	Provisional	25/5/23
ECO Grandeur	Paragon Pinnacle Sdn Bhd	TS v1.0	Provisional	25/5/23
Dahlia Residences	Bukit Hitam Development Sdn Bhd	RES v3.2	Provisional	25/5/23
Residensi Mori Scientex Rawang	Scientex Park (M) Sdn Bhd	RES v3.2	Provisional	2/6/23
Qi Tower	Kami Buliders Sdn Bhd	ENRB v3.2	Provisional	6/6/23
Sunway Big Box Retail Park	Sunway Marketplace Sdn Bhd	NRB v3.2	Provisional	14/6/23
Eco Botanic 2 (Precinct 1)	Melia Spring Sdn Bhd	TS v1.0	Provisional	19/6/23
Esteem Business Park	Esteem Business Park Sdn Bhd	IND v1.0	Provisional	26/6/23

NEWLY CERTIFIED GREENRE ACCREDITED PROFESSIONALS (GREENREAPS)

Cert No.	Name	Company
GREENREAP0362	Nurul Khalisha Binti Mohd Tajul Hasnan	Green Quarter Sdn Bhd
GREENREAP0363	Bashira Binti Mohd Bahar	Taylor's University
GREENREAP0364	Preshinder Kaur Jassal	Sunway Integrated Properties Sdn Bhd
GREENREAP0365	Chong Ting Sheng	ARUP
GREENREAP0366	DR. Au Pek Ing	Benta Mewah Sdn. Bhd. (Property Development)
GREENREAP0367	Tan Bing Hong	Sunway Integrated Properties Sdn Bhd
GREENREAP0368	AR Daniel Chong Voon Chuen	Veritas Architects Ssn Bhd
GREENREAP0369	Ts. Nur Syafika Artika Binti Rahim	Meteor Property Sdn Bhd
GREENREAP0370	Chang Sin Yee	ARUP
GREENREAP0371	Muhammad Syahmi Bin Mansor	ARUP
GREENREAP0372	Athirah Binti Ghani	Archiconic Sdn Bhd
GREENREAP0373	Lo Synne	Sunway Construction Sdn Bhd.
GREENREAP0374	Nur Allia Binti Mohamad	Archiconic Sdn Bhd
GREENREAP0375	Joel Chan Shen Wei	Sunway Property
GREENREAP0376	Ho Zhe Wei	Sunway Construction Sdn Bhd.
GREENREAP0377	Chen Hong Wei	Alliance MEP Sdn Bhd.
GREENREAP0378	Teow Ker Loo	RDC Arkitek Sdn. Bhd.
GREENREAP0379	Lam Tuck Lone	Studio PNA Sdn. Bhd. & Ping Ng Architect
GREENREAP0380	Khairul Amrullah	Estimation & Contracting

GREENREAP0381	TS. Yusrizal Bin Yusoff	Tenaga Nasional Berhad
GREENREAP0382	Kamarul Ikram Bin Enche Rahim	Tenaga Nasional Berhad Global Business Solutions (TGBS)
GREENREAP0383	Tang Lai Hing	Tenaga Nasional Berhad
GREENREAP0384	Mohammad Akmal Bin Mohammad Bokhari	Tenaga Nasional Berhad
GREENREAP0385	Nor Afifah Shahirah Binti Zakaria	GBI Innovation Sdn Bhd
GREENREAP0386	Mugunthan Ramasamy	Dana Engineering Sdn. Bhd
GREENREAP0387	Chin Kuan Fang	Think Cloud Design Lab
GREENREAP0388	Sie Ing Swan	Sunway REIT Management Sdn Bhd
GREENREAP0389	Ar. NG SHI QI	SQ NG Architect
GREENREAP0390	Low Mei Qi	Archiconic Sdn Bhd
GREENREAP0391	Nathira Haja Mohideen	MCT Bhd.
GREENREAP0392	Sim See Yoong	Trane Malaysia Sales & Services Sdn Bhd
GREENREAP0393	Wong Weng Hong	ARUP Jururunding Sdn Bhd
GREENREAP0394	Tan Yin Chian	ARUP Jururunding Sdn Bhd
GREENREAP0395	Ar. Dr. Ratnakala Sithravel	Jönköping University
GREENREAP0396	Mohd Syukri Bin Abdul Rahman	ARUP Jururunding Sdn Bhd
GREENREAP0397	Mohamad Haiqal Bin Azhar	ARUP Jururunding Sdn Bhd
GREENREAP0398	Woon Siong Sheng	ARUP Jururunding Sdn Bhd
GREENREAP0399	Teng Kong Lein	ARUP Jururunding Sdn Bhd
GREENREAP0400	Yenni Khaliddazia	ARUP Jururunding Sdn Bhd
GREENREAP0401	Koh Sin Yee	Sunway REIT Management Sdn Bhd
GREENREAP0402	Lai Peck Wah	Sunway Integrated Properties Sdn Bhd
GREENREAP0403	Low Yee Munn	Sunway Group

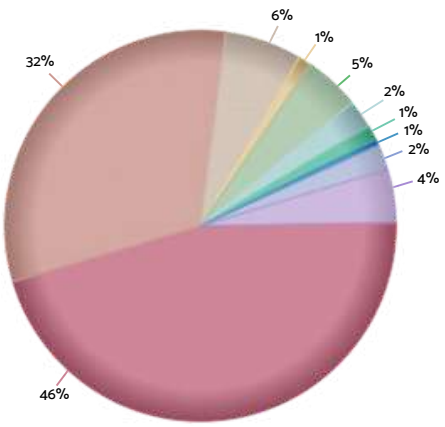
GREENREAP0404	Siti Radhiah Binti Md Merzuki	GreenRE Sdn Bhd
GREENREAP0405	Norfaizahtul Aziemah Bt Dzukepli	Tenaga Nasional Berhad
GREENREAP0406	Anthony Gan Torng Yang	Green Quarter Sdn Bhd
GREENREAP0407	Tan Siew Kim	Imperium International College
GREENREAP0408	Yeon Wei Ni	Arcadis (Malaysia) Sdn. Bhd.
GREENREAP0409	Hoh Ming Hooi	Sunway REIT Management Sdn Bhd
GREENREAP0410	Ong Zhen Ling	SMA Bersekutu Sdn. Bhd., Malaysia
GREENREAP0411	Mohammad Muzakkir Bin Othman	ARUP Jururunding Sdn Bhd
GREENREAP0412	Lim Jay Tsen	CARPUTZAP
GREENREAP0413	Bryan Ong Hann Shing	Green Quarter Sdn Bhd
GREENREAP0414	Loh Boon Lin	Crest Builder Holdings Berhad
GREENREAP0415	Goh Joon Sai	ARUP
GREENREAP0416	Ooi Wei Kiat	Eminent Pedestal Sdn. Bhd.
GREENREAP0417	Ahmad Fadhlan Bin Abd Hamid	Tenaga Nasional Berhad
GREENREAP0418	Yew Yi Zhi	Veritas Architects Sdn Bhd KL
GREENREAP0419	Yap Pui Mun	MKH Berhad
GREENREAP0420	S Ramesh V Subramaniam	IJM Land Berhad
GREENREAP0421	Lee Sen Yen	Commercial Parade Sdn Bhd (Sunway REIT)
GREENREAP0422	Bhavani a/p Ravichanthar	GreenRE Sdn Bhd

CONGRATULATIONS

TO ALL & WELCOME ONBOARD

PROJECT STATISTICS.

PROJECT REGISTERED



Legend

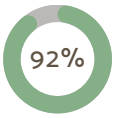
- Residential (RES)
- Non-Residential (NRB)
- Existing Non-Residential (ENRB)
- Healthcare Facilities (HC)
- Industrial Facilities (IND)
- Existing Industrial Facilities (EIND)
- Office Interior (INT)
- Data Centre (NDC)
- Retail (RT)
- Township (TS)

PROJECT CERTIFIED

267 out of 473 projects registered are certified as of June 2023

Certified Buildings

14,427,774.39 sqm out of 27,851,412.53 sqm of buildings are certified as of June 2023

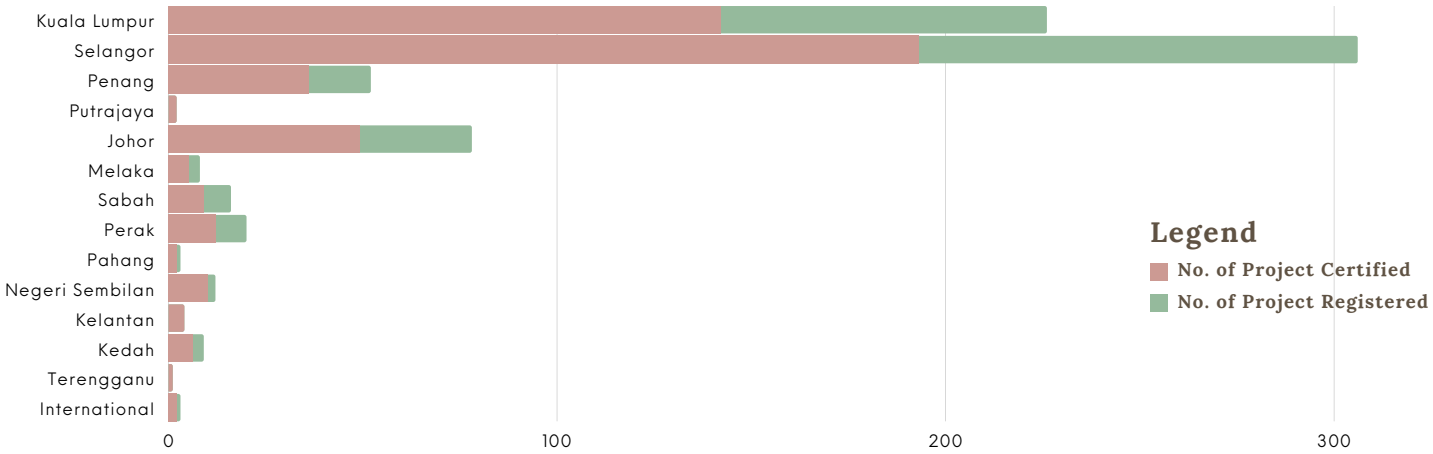


Certified Township

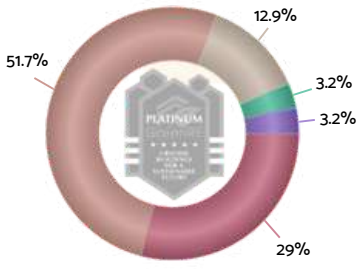
5,550.60 acres out of 12,342.10 acres of townships are certified as of June 2023

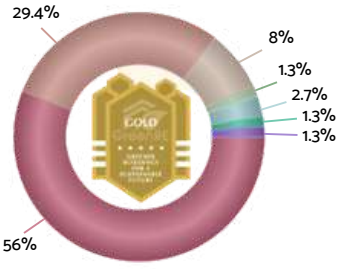
PROJECT DISTRIBUTION

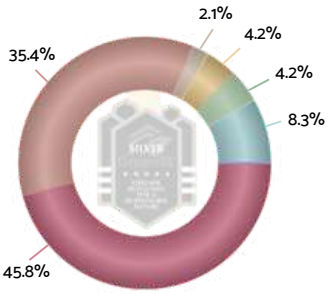
As of December 2022

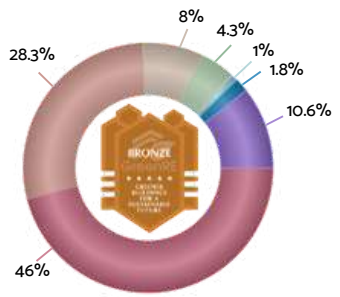


PROJECTS CERTIFIED BY RATING









Legend

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