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CREAM

e-magazine



COVERAGE

- Pioneering Sustainable
 Construction: Launch of Malaysia's
 First Repurposed Concrete
 Aggregates (RCA) Facility
- CREAM Achieves Major Milestone with Extension of Product Certification Scope
- Digitisation for IBS: From Policy to Practical Delivery
- Understanding the Differences Between Tensile Strength and Hardness in Metallic Materials
- Contractor's Quality Management System (CQMS)

and many more.









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about us

Construction Research Institute of Malaysia (CREAM) was established on 26 March 2004 as a Company Limited by Guarantee (SBMJ) under the Act Company 1965. CREAM became fully operational on January 1, 2006. Establishment of CREAM is to be the research arm of the Construction Industry Development Board (CIDB) Malaysia to encourage, promote and implement activities research and development (R&D) related to the national construction industry with Section 4(c), CIDB Act 1994 (Act 520). With the ability of knowledge and existing expertise, CREAM actively cooperates with parties interested in producing research that will benefit the sector construction. At the same time, CREAM also supports the development of the industry construction in a better direction through the quality and integrity of building materials when also offers testing, evaluation and certification services to industry players. CREAM will continue to be proactive in being active and reinventing the way we in doing something, to keep giving the best to all parties and always responsive to our customers.

vision

To make CREAM globally recognized as the leading institute for Research and Development (R&D) that drives quality, innovation, technology and skills towards achieving sustainability in the construction industry.

mission

To meet the strategic needs of Research and Development in the Malaysian construction industry. CREAM is also committed to build partnerships with the industry's stakeholders and researchers while exploring and encouraging the development of a knowledge-based industries as well as ready to meet current demands and challenging changes.





what we offer

- Research and Development
- Industry Consultancy and Engagement
- Lab Testing
- Product Certification
- Assessments QLASSIC, SHASSIC, MyCREST and Sustainable Infrastar
- Certificate of Approval
- Inspection and Sampling
- Contractor's Quality
 Management System (CQMS)
- SustainBuild Mark Certification
- Forensic Investigation
- Technical Opinion
- Journal Publication

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PIONEERING SUSTAINABLE CONSTRUCTION: LAUNCH OF MALAYSIA'S FIRST REPURPOSED CONCRETE AGGREGATES (RCA) FACILITY



Kuala Lumpur, 29 July 2025 – A significant milestone for Malaysia's construction industry was achieved with the launch of the country's first Repurposed Concrete Aggregates (RCA) Facility, a pioneering initiative by YTL Cement Group in collaboration with CREAM.

Held at the RC Aggregates facility in Jalan Chan Sow Lin, Kuala Lumpur, the launch event marked the official commencement of operations for this pilot project, which has been running since April 2025. The ceremony was officiated by Puan Zainora Zainal, Chief Executive of CIDB Malaysia, alongside Datuk Aziyah Mohamed, Director of YTL Cement.

This strategic facility—established under the Memorandum of Understanding (MoU) signed in 2023 between YTL Cement and CREAM—represents a groundbreaking approach to managing construction waste by transforming returned fresh concrete into valuable repurposed aggregates. These recycled materials can replace up to 30% of natural aggregates in new structural concrete mixes, and the finer by-products are used as road base materials or raw input for bricks.







"This initiative reflects our commitment to supporting national efforts in sustainable development," said Datuk Aziyah Mohamed. "Most importantly, we aim to shift industry perceptions to view returned fresh concrete not as waste, but as a resource that can drive sustainability."

Echoing the importance of innovation and partnership, Puan Zainora Zainal emphasized the broader impact:

"The RCA facility shows how public and private sectors can work together to accelerate innovation and realise national policy goals. I hope this will inspire more industry players to adopt and develop similar sustainable practices."

A Circular Solution for the Future

Each year, approximately 30 million m³ of concrete is produced in Malaysia, with an estimated 5% returned as unused concrete. Until now, most of this ended up in landfills. The RCA facility offers an alternative that is aligned with National Construction Policy 2030 (NCP 2030), focusing on sustainability, carbon reduction, and resource conservation.

The pilot project is not only a recycling hub but also serves as an R&D platform for ongoing innovation. Joint efforts between YTL Cement and CREAM are underway to explore the potential of aggregate fines and other by-products for wider construction applications, including building materials development.

Located near high-density construction zones, the facility reduces the need for long-distance material transport, further lowering carbon emissions and supporting urban sustainability goals.





A Testament to Industry Collaboration

This facility is a shining example of how collaboration between a leading industry player and a public research institute can yield tangible impact. The MoU between CREAM and YTL Cement extends beyond recycling—it also covers construction talent development and research excellence.

As Malaysia accelerates its transition toward low-carbon, circular construction, this launch sets a high benchmark for others to follow. It is a testament to how bold ideas, when supported by strong partnerships, can redefine the future of construction.

CREAM Achieves Major Milestone with Extension of Product Certification Scope

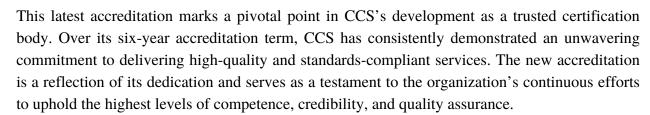






by Ts. Syed Hazni Abd Gani, Muhammad Abid Zafran Mohd Yusri & Mohd Shearhan Mahtar

Construction Research Institute of Malaysia (CREAM), through its dedicated certification arm, CREAM Certification Services (CCS), proudly announces a significant achievement in its journey toward excellence. On 17 April 2025, CCS was officially accredited by the Department of Standards Malaysia (DSM) for ten (10) new scopes of product certification under the internationally recognized standard MS ISO/IEC 17065:2012.





The (10) new accreditation scopes

1.MS ISO 13006: 2020	Ceramic Tiles - Definitions, classifications, characteristics and marking (Second Revision)		
2. MS 147: 2021	Specification for quality of Vitreous China Sanitary Appliances		
3. MS EN 197-1: 2014	Cement - Part 1: Composition, specifications & Conformity Criteria for Common Cement		
4. BS EN 13230-1:2016	Railway Application – Track – Concrete sleepers and bearers: Part 1: General Requirements		
5. BS EN 13230-2:2016	Railway Application – Track – Concrete sleepers and bearers: Part 2: Prestressed monoblock sleepers		
6. MS 144: 2014	Steel wire for the reinforcement of concrete products - Specification		
7. MS 145: 2014	Steel fabric for the reinforcement of concrete - Specification		
8. MS 146: 2014	Steel for the reinforcement of concrete - Weldable reinforcing steel - Bar, coil and decoiled product - Specification		
9. MS 1462-1: 2021	Metal scaffolding - Part 1: Prefabricated scaffolds - Specification for steel frame scaffolding		
10 . MS 1462-2-1: 2010	Metal Scaffolding – Part 2: Tubular (tube and coupler) scaffolds - Section 1: Specification for steel tubes		

Raising the Bar in Product Certification

The newly accredited scopes indicate that CREAM not only meets national and international requirements, but that its product certification processes are performed by qualified personnel using reliable methods and equipment, resulting in accurate, consistent, and high-quality outcomes.

This achievement strengthens CREAM's position as a credible and competent product certification body—one that is well-respected by industry players, government agencies, stakeholders, and academic institutions. Furthermore, the expansion allows CCS to cater to a wider range of clients while reinforcing its role in promoting quality assurance and safety within Malaysia's construction industry.

What This Means for the Industry

The extension of scope is more than just an internal milestone—it holds broad implications for the Malaysian construction sector. As demand for credible certification grows, the availability of local, high-standard certification services like those offered by CCS provides industry players with easier access to internationally recognized compliance services.

This contributes to increased trust and confidence in local products and services, helping to drive both domestic quality assurance and global market recognition.

Looking Ahead

With these ten new scopes of product certification now officially accredited, CREAM and CCS are poised to expand their impact and value in the certification landscape. Moving forward, CCS remains committed to engaging industry players and stakeholders to support their certification needs with excellence, efficiency, and integrity.

For those interested in exploring CCS's product certification services, or for any inquiries, please feel free to contact the team at *syed@cream.my*. Our team of competent personnel will be happy to assist and discuss how we can support your certification requirements.

Digitisation for IBS : From Policy to Practical Delivery

Malaysia's IBS agenda is now more than just policy; it is a test of delivery. Digitisation serves as the tool that transforms targets into on-site results.





by Nurulhuda Mat Kilau & Maria Zura Mohd. Zain

The direction is set: a minimum IBS Score of 70 now applies to (i) government building projects valued RM10 million and above (Treasury Circular PK 1.10, effective 15 January 2020), and (ii) private building projects valued RM50 million and above with GFA \geq 50,000 m² (KPKT Circular No. 4/2024, effective 10 July 2024) as a condition of plan approval under OSC 3.0 Plus.

The question is how to deliver this—reliably, affordably, and at scale. The most practical answer is end-to-end digitisation: BIM-led design, standard digital component libraries, data-driven logistics, real-time approvals, and transparent performance tracking.

Why digitisation matters now

IBS adoption has increased, but common challenges continue to hinder progress: remote logistics, inconsistent supplier coverage, skills gaps, non-standard components, and fragmented data. Recent studies nationwide and focused on Sarawak confirm this pattern and suggest the solution—utilising digital tools to connect the entire process from design to handover. In essence, policy defines the goal; digitisation is the means to achieve it.

Digitisation does not remove geography—but it makes logistics more predictable, approvals faster, and cash flow fair.

What has - and hasn't -- changed

Logistics bites:

Long road/river legs and multiple handling points damage components and blow out time.

Supply is uneven:

Supplier/manufacturer clusters are concentrated; rural and East Malaysia sites face thin options and higher costs

Up-front pressure:

Moulds, plant and software front-load cash for SMEs.

Skills gap:

Designers, supervisors and installers need jobspecific IBS skills and confidence with hybrid systems.

Standardisation lag:

Non-uniform component sizes complicate design, stocking and approvals.

Digital evidence of compliance:

Authorities and clients expect IBS scoring to be proven with BIM outputs and clean artefacts.

Ecosystem view:

Better outcomes come when project data, supplier capacity and logistics are visible in one place.

Context-based routes:

Remote projects may need hybrid pathways (lighter IBS components + on-site casting) to reach 70 sensibly.

NEVER EMPHASIS

The digital playbook (simple, practical, measurable)

Make BIM the single source of truth for the IBS score

- Tag structural and wall systems; link IBS score items (CIS categories) to elements in the model.
- Generate model-based take-off and a one-click IBS score report for submissions and progress reviews.

Standardise early with a Digital Modular Library (DML)

- Use a version-controlled library of standard components (precast slabs/walls, columns, beams, stair flights, PBUs, blocks) with embedded tolerances and fixing details.
- Designers stop redrawing; factories carry more ready stock; approvals compare like-for-like.

Treat logistics as a data problem

- Tag elements with QR/RFID and track dispatch-arrival; add low-cost telemetry (location, shock, humidity) for long journeys.
- Run a control-tower dashboard to align crane slots, river legs and road access.

Use 4D/5D BIM as the contract language

- Lock time (4D) and cost (5D) to WBS and IBS milestones; tie progress claims to factory QA and on-site installation.
- Enable direct payments to fabricators upon factory sign-off, easing SME cashflow.

Deploy on-site castinf "kits" where haullage is impractical

- Pre-engineered digital kits (formwork sets, mix designs, method statements, QA checklists in an app) for panels, beams and slabs.
- Keep remote schools, clinics and housing within reach of IBS 70 without risky long-haul lifts.

Wire your pack to OSC 3.0 Plus

- Submit a single digital pack: BIM extracts, IBS score evidence, component schedules, fabricator drawings, logistics plan and training matrix.
- Organise it in the order the ATL/SOP checks-this alone reduce queries.

East Malaysia spotlight: design for distance

Sarawak and Sabah bring unique implementation realities that cannot be solved by simple "copy-pasting" Peninsular Malaysia's approached. The geography-first constraints include:

Long overland transport River crossings or brage Limited heavy-lifting plant Unpredictable weather in routes that can stretch transfers that add handling in remote districts, making interior and coastal areas, hundreds of kilometers, stages-and thus damage installation of large, heavy affecting haulage schedules with sections of unsealed risk-to every component. elements more complex. and on-site works. road.

The winning formula in this context combines system choice, logistics planning, and local capacity-building, all underpinned by digital coordination.

Lighter, modular components for transport efficiency

- Prioritise precast panels, modular blocks, and panelised wall systems that fit within standard lorry or barge dimensions.
- Design for stackability and minimal loose parts to reduce handling damage.
- Use BIM simulations to optimise module sizes for the exact transport path—including turns, gradients, and bridge limits identified in GIS surveys.

Temporary or near-site casting yards for heavy elements

- For beams, slabs, or stair flights too heavy for long-haul, establish temporary casting yards within 30–50 km of the site.
- Apply the forthcoming Guideline for Temporary Precast Concrete Casting Yards to ensure compliance with quality, safety, and environmental standards.
- Digitally manage casting schedules, QA inspections, and material usage via tablet or mobile apps—feeding directly into the project's central data platform.

Digitally-scheduled deliveries to match site readiness

- Create a live 4D logistics model integrated with the construction schedule to coordinate river/road transfers and crane availability.
- Deploy IoT tags or QR codes to monitor the location, condition, and estimated time of arrival of each component; automatically inform site teams when deliveries are on their way.
- Reduce idle crane time by sequencing deliveries to align exactly with installation slots.

State - level logistics hubs with shared telemetry

- Establish regional hubs in Sarawak and Sabah for short-term component storage, shared between multiple projects.
- Equip hubs with load monitoring, condition sensors, and a shared delivery-booking system so contractors can slot in their lifts and avoid clashes.
- Use hub data to forecast demand for specific component types, reducing the risk of shortages or overproduction.

Local skills development linked to real projects

- Expand micro-credential programmes for installers, supervisors, and plant operators through ABM and state TVET centres.
- Align training modules to the actual IBS systems being installed in local projects.
- Issue digital competency IDs that can be verified by site managers before work begins, ensuring only qualified personnel handle IBS components.

The result:

Predictable programmes with fewer disruptions, reduced risk of component damage, faster turnaround from factory to site, and a stronger local workforce. This approach not only achieves the 70 IBS score in challenging terrains but also builds a sustainable delivery model for future projects in East Malaysia.

A firm view

Digitisation is not a bolt-on—it is the only credible way to scale IBS beyond showcase projects into the everyday schools, clinics, flats and shop-offices that define our built environment. Malaysia has set the policy; digitisation is how we deliver on time, to quality, and at a fair cost.

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- CIDB Malaysia & CREAM (Dec 2024). Transformasi Ekosistem IBS ke Arah Pembinaan Efisien dan Berkesan di Malaysia: Kajian Hubungan antara Permintaan dan Pengeluaran dalam Industri IBS di Malaysia (Study Report).
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Understanding the Differences Between Tensile Strength and Hardness in Metallic Materials







by Ir. Ts. Ahmad Hazim Abdul Rahim, Rohani Mokhtar & Ts. Syaza Nabilla Mohd Suhaimi

In the field of materials science and engineering, tensile strength and hardness are two fundamental yet essential mechanical properties used to evaluate and compare metallic materials. There is a notable correlation between hardness values and tensile strength. For example, product standards such as MS 1462-4-2, Clause 6.3.1, state that "if tensile tests are not possible (e.g., for smaller elements of cast iron), hardness tests shall be carried out." Pavlina and Van Tyne (2008) also concluded that yield strength and tensile strength exhibit a linear correlation with hardness for steels. This finding is supported by Genculu (2024), who compiled data across various metal types to demonstrate the relationship between tensile strength and hardness.

Although both tensile strength and hardness reflect how a material behaves under force, they serve different purposes in design and manufacturing. Understanding these differences is crucial for selecting the appropriate material for a given application.

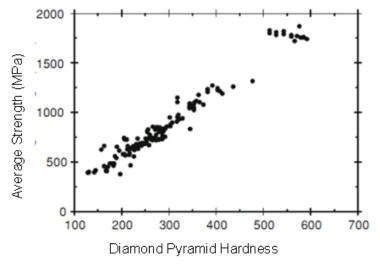


Figure 1: Plot of the average strength of various steels as a function of hardness (Vickers) (Pavlina and Van Tyne, 2008)

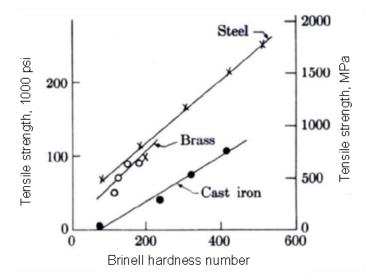


Figure 2: Brinell hardness versus tensile strength for steel, brass and cast iron (Genculu, 2024)

What is Tensile Strength?

Tensile strength is the maximum amount of tensile (pulling or stretching) stress a material can withstand before breaking. It is typically measured in units of force per area, such as megapascals (MPa) or newtons per square millimetre (N/mm²). Tensile strength is determined through a tensile test, where a specimen is stretched until it fractures.

An example of a material designed with high tensile strength is the steel cable used in bridges and elevators, which must support large loads without snapping.

Properties of Tensile Strength

Yield Strength

The stress at which a material begins to deform plastically

Ultimate Tensile Strength

The maximum stress a material can withstand

Fracture Strength

The stress at which the material ultimately breaks

Elongation at Break

The amount a material stretches before it breaks

What is Hardness?

Hardness refers to a material's resistance to indentation, scratching, or wear. It is measured using several methods, including the Brinell, Rockwell, and Vickers hardness tests. Each method involves pressing a hard object into the surface of the material and measuring the size or depth of the resulting indentation.

An example is cutting tools made from hardened steel or carbide, which require high hardness to maintain sharp edges and resist abrasion.



Rockwell Hardness



Brinell Hardness



Vickers Hardness

Properties of Hardness

Hardness Value

Indicates a material's resistance to indentation, scratching, or abrasion; varies depending on the test method (e.g., Rockwell, Brinell, or Vickers)

Indentation Size

The size or depth of the indentation formed during testing reflects the material's hardness

Differences Between Tensile Strength and Hardness

Tensile Strength	Tensile Strength	Hardness
Measures	Resistance to pulling force	Resistance to surface indentation
Units	MPa, N/mm ²	Dimensionless (e.g., HRB, HRC)
Test Method	Tensile test (stretch until break)	Indentation or scratch test
Indicates	Structural load capacity	Wear and abrasion resistance
Related to	Ductility, strength	Surface toughness, wear resistance
Failure Mode	Fracture or necking	Surface wear, scratching

When to Prioritize Tensile Strength vs. Hardness

Applications Where Tensile Strength is Crucial

- Structural Components: Beams, columns, cables
- Automotive Parts: Axles, drive shafts
- Pressure Vessels: Gas cylinders, pipelines

These components must carry heavy loads or withstand internal pressures. Failure by fracture in such applications can lead to catastrophic consequences, making high tensile strength essential.

Applications Where Hardness Is More Important

- Cutting and Machining Tools: Drills, saw blades
- Bearings and Gears: Components subjected to high contact pressure and friction
- Surface Coatings: Anti-wear layers, decorative or protective plating

In these applications, resistance to surface damage—such as scratching, abrasion, and wear—is key to ensuring long-term durability and optimal performance.

Makmal Kerja Raya Malaysia (MKRM): Your Trusted Partner for Tensile Strength and Hardness Testing

At Makmal Kerja Raya Malaysia (MKRM), we specialize in providing comprehensive testing services for both tensile strength and hardness to ensure your materials meet the highest standards of quality and durability.

For tensile strength testing, our laboratory in Kuala Lumpur is equipped with Universal Testing Machines (UTMs) — also known as tensile testing machines — with loading capacities ranging from 100 kN to 2000 kN. Meanwhile, our branches in Sabah and Sarawak are equipped with 1000 kN capacity UTM machines. These machines are capable of testing mechanical properties of materials and components under tension, compression, bending, and other forces. UTMs are essential in determining key mechanical properties such as tensile strength, yield strength, and elongation, and they can be used on a wide variety of materials, including metals, plastics, and composites.

In addition, MKRM's materials laboratory features three different types of hardness testing machines to accommodate various product requirements. We are equipped with Vickers, Brinell, and Rockwell hardness testers — all readily available for any hardness test request. With advanced equipment and a team of experienced professionals, MKRM is committed to delivering precise and reliable results every time.



UTM 2000kN

Whether you're working with metals, alloys, or composite materials, our testing services ensure your products comply with both local and international standards. This is critical for:

- Ensuring product safety and performance in structural or mechanical applications.
- Verifying material specifications for industrial manufacturing.
- Optimizing production processes to enhance efficiency and extend product lifespan.

By choosing MKRM, manufacturers and engineers gain the confidence to make informed decisions on material selection and treatment — reducing the risk of failure and ensuring reliable, long-lasting performance.

Conclusion

Tensile strength and hardness are fundamental yet distinct properties that define how metals behave under different types of mechanical stress. Evaluating both properties is essential to ensure materials perform reliably in their intended applications — whether it's supporting massive structures or maintaining precision in cutting tools.

To ensure your products meet the required standards of tensile strength and hardness, trust MKRM to deliver accurate and professional testing services. Our commitment to quality and precision will help you uphold the highest standards in your manufacturing and engineering processes.

References:

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Contractor's Quality Management System (CQMS)

Contractor's Quality Management System (CQMS) CIS 29:2021 is an independent system that evaluates a contractor's quality management implementation based on the Construction Industry Standard (CIS 29). Serving as an affordable alternative to ISO 9001, CQMS is ideal for budget-conscious contractors who prioritize the quality of their work. By choosing CQMS, contractors can maintain quality control, meet client standards, and gain additional benefits for PPK registration in Malaysia. Implementing CQMS also earns contractor's extra points in MCORE/SCORE CIDB assessments for PPK registration.

STANDARD INDUSTRI PEMBINAAN

(CONSTRUCTION INDUSTRY STANDARD)

CIS 29:2021

CONTRACTOR'S QUALITY MANAGEMENT SYSTEM (CQMS)

Description: Contractor Management System, Quality Requirements, Certification Criteria

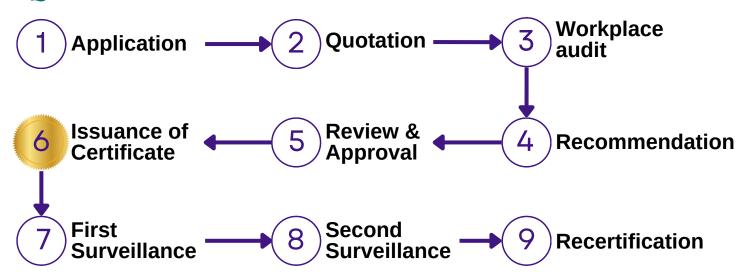
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CONSTRUCTION INDUSTRY DEVELOPMENT BOARD



With a certification fee of RM4000, CQMS covers one-day training, documentation for the quality manual, third-party audit, and certification to CIS 29:2021. The audit process is streamlined, taking only one day, and the certification remains valid for three years. Furthermore, CQMS carries equivalent weightage to ISO 9001 for CIDB SCORE/MCORE, making it an attractive and cost-effective choice for contractors in Malaysia, specially designed for their needs.

CQMS Process



Validation

Contractor's Quality Management System (CQMS) is applicable for all G1 - G7 contractors and CQMS Certification is given a validity term of three (3) years from the date of issuance. They can be reviewed as and when necessary subject to the CQMS Assessment Programme.

Benefits of CQMS

- Specialized Evaluation: Tailored assessments based on CIS 29
- Cost-effective: an affordable alternative for contractors, only RM4000, with high-quality standards
- Enhanced Reputation: Maintains rigorous quality control, enhancing credibility
- Smooth PPK Registration: Streamlines registration process for Malaysian contractors
- Extra Points in Assessments: Earns additional points in MCORE/SCORE CIDB assessments
- Streamlined Audit Process: One-day audit minimizes disruptions and saves time
- Long-Term Certification: Valid for three years, ensuring continuous credibility
- Equivalent Recognition: Carries same weightage as ISO 9001 for CIDB SCORE/MCORE



Scan the QR code for CQMS Application Form



Guide for Makmal Kerja Raya Malaysia (MKRM) Testing Application

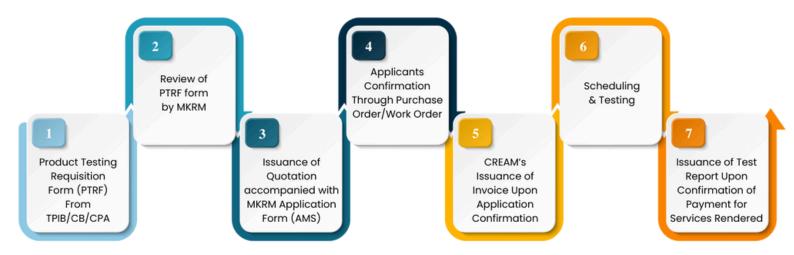




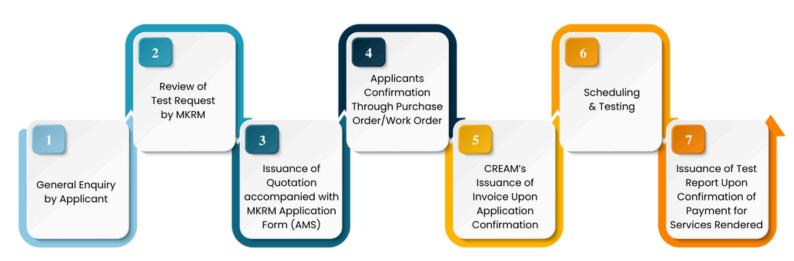
by Ts. Yuzairy Rozaidi Bin Rohaizan and Ts. Syaza Nabilla Mohd Suhaimi

Makmal Kerja Raya Malaysia (MKRM) is an ISO 17025-accredited laboratory serving as the testing division for the Construction Research Institute of Malaysia (CREAM). Equipped with a wide range of facilities for structural and material testing, we cater to the construction industry. For over 17 years, we have supported the sector by conducting tests on local and imported products for local authority approval, QA/QC testing, and research testing for industry and academia. Below is the process flow for MKRM's testing service applications:

1) For authority mandated testing (Third-party Inspection Body, Certification Body, Construction Product Approval etc.):



2) For general testing (QA/QC, In-House developed test method, academia research etc.):



For further details about our testing services, kindly email your queries to mkrm@cream.my or visit our website by scanning the QR code below:





Testing Facilities Available at CREAM - MKRM



We offer over 10 years of experience, providing a broad range of services to clients around the globe.

Our global network of laboratories and testing facilities, staffed by knowledgeable, experienced and competent personnel, help you to reduce risks, shorten time to market and demonstrate the quality and safety of materials, components, or products.

Full scale structure component test is our main forte. We can test actual size structure components such as beam, wall, slab, piles, segmental box girder, scaffolding, railway component, etc. We also offer testing services for wide range of construction material for your product quality determination, regulatory requirement, or any other compliance purposes.

CREAM-MKRM and its branches are accredited to MS ISO/IEC 17025 by Department of Standards Malaysia, thus ensuring the high standard and quality of the report produced.

Some of our facilities are:

- 1. Reaction floor (15m x 26m)
- 2. Reaction wall (6m x 6m)
- 3. Universal testing machine 100 kN-2000 kN
- 4.200 kN-300 kN dynamic testing machne 100 kN-2000 kN
- 5.300 kN dynamic actuator
- 6.500 kN 2000 kN static actuator
- 7.500 kN resonance testing machine
- 8. Hardness tester
- 9. Spectrometer
- 10.3D bar measurement

Scope and Testing Services include but not limited to

IRON & STEEL

Typical Product: Rebar, Plate, Mesh, Wire, Rod, Tube, Strand, Hook, Anchor, Lifting Clutch etc.

- Dimension
- Mass
- Tensile
- Yield
- Fatigue
- Chemical Element Analysis (XRF, Spectrometer, ONH Analyzer)
- · Coating thickness (Magnetic & Gravimetric method)
- · Coating mass
- Surface coating
- Shear weld
- Flattening

- Surface geometry (Microscope & 3D high speed camera scan
- Pull out force
- Bend/Rebend
- Elogation
- Relaxation
- Hardness (Brinell, Rockwell & Vickers)
- Rebar bond test
- Mechanical splice test
- Weathering
- Corrosion
- Sample cutting

SCAFFOLDING & FALSEWORK

Typical Product: A-Frame, Modular, Tubular, Vertical & Horizontal Frame, Standard, Ledger, Transom, Cross Brace, U-Head & Jack Base, Sleeve, Coupler, Pin, Steel Prop, Platform, Clamp & Hook, Catwalk, Toe board, Guardrail, Stairway etc

- Dimension
- Mass
- Tensile
- Fatigue
- Chemical Element Analysis (XRF, Spectrometer, ONH Analyzer)
- Coating thickness (Magnetic & Gravimetric method)
- · Coating mass
- Surface coating
- Bending /Flexural
- Shear
- Proof load
- · Cross cut test
- Corrosion
- Weathering
- Deflection

- Surface geometry (Microscope & 3D high speed camera scan
- Load test on U-Head/Jack base
- Side protection test
- · Bending test on platform
- · Dynamic test on staircase
- Drop test
- · Global test on shoring system
- Full scale test in scaffold, falsework & shoring system
- 1x3, 3x3, high tower, low tower
- Test on sleeve & coupler
- Straightness
- Load test on prop
- · Pin test on prop
- Unintentional disengagement on prop Cross brace pi

CONCRETE

Typical Product: Ready Mixed Concrete (RMC), Fresh Concrete, Concrete Coring, Mortar, Aggregates, Cement, Bricks, Blocks

- Sample Preparation
- Dimension & Mass
- Compression test (Cube, Cylinder, Core)
- Flexural Test
- Density
- Water absorption
- Specific Gravity
- NDT Test on Concrete

- Slump test
- Cement chemical properties (XRF)
- · Sieve analysis
- Compacting factor
- Cube test with RFID technology
- Concrete coring
- Tensile splitting
- Immersion

NON-DESTRUCTIVE TEST (NDT)

Typical Product: Concrete, Iron & Steel, Cement

- Rebound / Schmidt Hammer
- Ground Penetrating Radar (up to 6 m)
- Ultrasonic Pulse Echo Wireless Imaging System
- Eddy Current Instrument
- · Digital Ultra Sonic Flaw Detector
- Handheld XRF
- Digital Microscope
- 3D Bar Scanner for Surface Geometry



FULL SCALE STRUCTURAL TEST

Typical Product: Industrialized Building System (IBS) Component, Precast Concrete, Steel Frame, Timber Frame, Formwork, Blockworks, Innovative Product, Wall Panel, Beam, Slab, Hollow Core Slab, Staircase, Precast Piles, Pipes, Culvert, Non Load Bearing Wall, Bridges, Pier, Segmental Box Girder etc.

- Static load test (Vertical, Horizontal)
- Flexural & Bending test
- Compression test
- Load Combination (Vertical + Horizontal)
- Dynamic Load Test
- Dimension
- Proof Load Test
- Design Conformity Test
- Strength & robustness test of Wall Panel
- Customized structure test





RAILWAY INFRASTRUCTURE

Typical Product : Precast Concrete Railway Sleepers, Composite Sleepers, Bearers, Rail Track

- Bending moment test on sleepers (Negative / Positive)
- Bending moment test on rail seat (Negative / Positive)
- Dynamic load test on rail seat
- Fatigue test on rail seat
- Insert Pull out test
- Bend test on rail track
- Chemical composition test
- Hardness Test
- Dynamic/Fatigue test

MKRM SABAH & MKRM SARAWAK

Typical Product: Concrete, Cement, Aggregate & Iron & Steel

CONCRETE

- Compression
- Flexural
- Water depth of penetration
- Slump
- Density
- Dimension
- Air content
- · Degree of Compatibility
- · Water absorption

AGGREGATE

- Particle size distribution
- · Impact value
- Crushing value
- Flakiness index
- Elongation

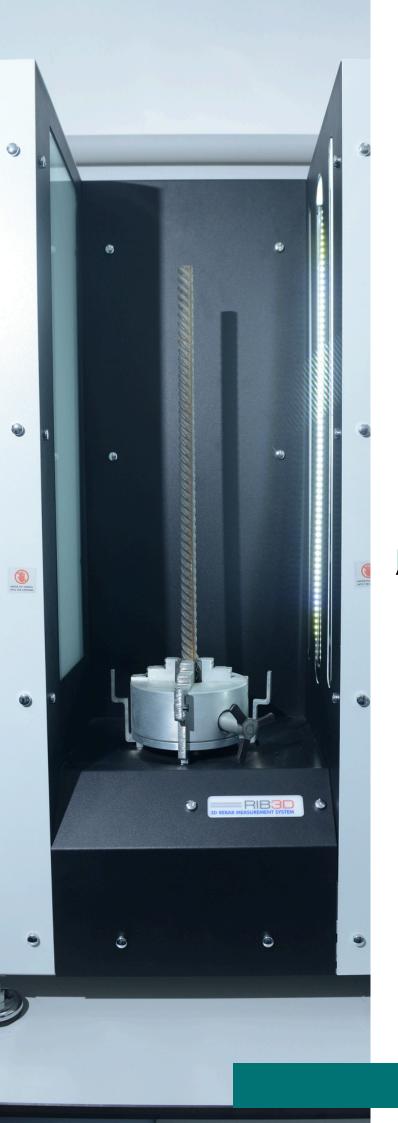
CEMENT

- Compression on mortar
- Soundness
- Setting time
- Fineness (Blaine method)

IRON & STEEL

- Tensile
- Yield strength
- Elongation
- Dimension





CREAM Holds Asset Disposal Programs to Promote Sustainability

Date : 10 June & 3 July 2025

Venue : Makmal Kerja Raya Malaysia, Kuala Lumpur

The ICT and Facility Management Unit of the Construction Research Institute of Malaysia (CREAM) successfully organized two Asset Disposal Programs in June and July 2025, demonstrating the institute's commitment to efficient asset management, sustainability, transparency, and staff engagement.

Prior to implementation, the Asset Disposal Committee thoroughly reviewed and approved the disposal list to ensure compliance with organizational policies and accountability, while also selecting methods aligned with sustainable practices.





The first program, held on 10 June 2025, focused on the disposal of ICT equipment and company vehicles, with active participation from 23 staff members. Among the highlights, Mr. Nasrul Naim Muhd Amin Al-Husaini from the MKRM Department won the vehicle disposal, while Madam Sharifah Nur Fairuz Syed Nasir from the R&D Department received the highest number of awards in the ICT category.

Building on this success, the second program on 3 July 2025 centered on the disposal of office furniture, attracting participation from 15 staff members, CIDB representatives, and external vendors. This initiative further strengthened collaboration while promoting sustainable disposal practices.

CREAM extends its sincere appreciation to all staff, CIDB representatives, and vendors for their invaluable contributions to the success of these programs, which underscore the organization's ongoing pursuit of excellence.

Assessment Visit and Compliance Documentation Review for CREAM's DSM Accreditation Scopes

Date: June - July 2025

Venue: The MET Corporate Tower and Makmal Kerja Raya Malaysia, Kuala Lumpur





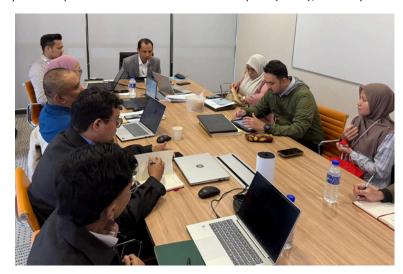
In June and July 2025, the Compliance & Audit Unit of CREAM arranged an official visit from the Construction Quality Compliance Division of CIDB Malaysia. The delegation was led by Ms. Nur Hafizah Mohd Nor, Division Manager, and supported by Mr. Izzat Azri Amri and Ms. Norasikin Sulaiman.

The purpose of the visit was to conduct an assessment of the premises and review the relevant compliance documents for CREAM's three main scopes accredited by the Department of Standards Malaysia (DSM), namely:

- Certification Body (ISO/IEC 17065:2012)
- Inspection Body (ISO/IEC 17020:2012)
- Testing Body (ISO/IEC 17025:2017)

This visit forms part of ongoing efforts to uphold high standards of quality and compliance within the construction industry.

We extend our sincere appreciation to CIDB Malaysia for their continued cooperation and support.









CREAM - MKRM Laboratory Visit

Date: 8 July 2025

Venue: Makmal Kerja Raya Malaysia, Kuala Lumpur



It's a pleasure to have representatives from **Prasarana Malaysia** and **Gamuda Engineering** to visit our CREAM - MKRM on 8 July 2025.

The main objective of the visit is to learn more about our testing facilities and services, and to discuss future collaboration opportunities. The visit was very productive and allowed the visitors to gather valuable information about the latest technology available at CREAM-MKRM.

Thank you for joining us and making this visit a success. Our team at CREAM-MKRM is so glad to meet with you in our lab.

We hope to cooperate with you soon as your business partner.







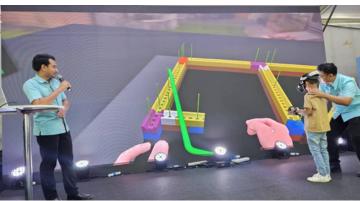


Program MADANI Rakyat Terengganu 2025

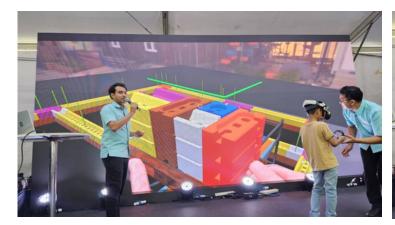
Date : 10 July 2025

Venue: Kedai Pasar Payang Kuala Terengganu, Terengganu





On 10 July 2025, the Construction Research Institute of Malaysia (CREAM) presented an innovative demonstration of the Virtual Reality (VR) Interlocking Hollow Block System at the Program Madani Rakyat Terengganu 2025. The session was conducted at the mini stage during one of the designated pocket talk segments and successfully attracted participation from a wide range of stakeholders.





The demonstration underscored the potential of VR technology in the construction industry, particularly in showcasing the application of interlocking hollow blocks. Through an immersive VR simulation, participants were able to visualise the block-laying process in a realistic and interactive environment. This approach not only enhanced engagement but also provided a practical understanding of construction assembly and operational efficiency.

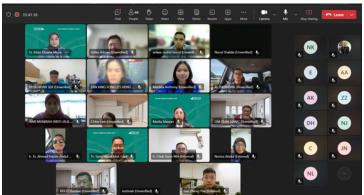
The initiative received positive response from participants comprising students, industry professionals, and members of the public. By integrating advanced technology with modern construction methods, the session highlighted the importance of promoting awareness of innovative building techniques and reinforcing the role of digitalisation in driving transformation within the construction sector.

CREAM Webinar Series 2025

CREAM Webinar Series 2025 is a monthly program organised by CREAM and it is a part of our efforts to initiate conversations on issues, challenges, opportunities and initiatives for the construction industry and beyond.

The topic for this month's webinar is "Earthquake Risk Assessment and Design Requirements"





Topic 1 : Earthquake Patterns in Southeast Asia: Recent Developments and Malaysian Risk Zones
Topic 2 : Understanding Seismic Impact: Hazard Analysis, Risk Management and Design Compliance

Date : 15 July 2025

Speaker:

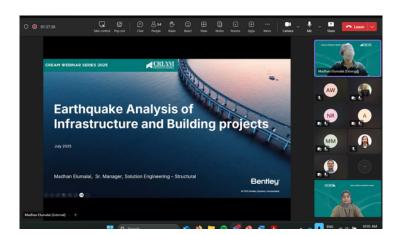
Prof. Ir. Dr. Azlan Adnan, FASc
 Professior of Earthquake Engineering, Universiti Teknologi Malaysia (UTM)

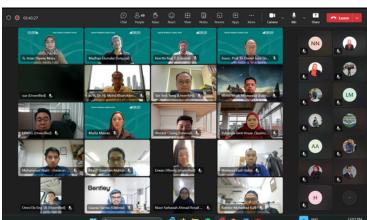
No of participants: 67 pax

CREAM Webinar Series 2025

CREAM Webinar Series 2025 is a monthly program organised by CREAM and it is a part of our efforts to initiate conversations on issues, challenges, opportunities and initiatives for the construction industry and beyond.

The topic for this month's webinar is "Designing for the Unexpected: Seismic-Resilient Infrastructure for Malaysia's Future"





Date: 21 July 2025

Topic 1: Seismic Resilience in Malaysia: Current Practices and Future Directions

Topic 2: Earthquakes Analysis of Infrastructure and Building Projects

Topic 3: PLAXIS applications in Geotechnical Earthquake Engineering

Speakers:

• Associate Professor Dr. Daniel Looi Ting Wee

Head, School of Engineering & Programme Leader for Civil Engineering, Faculty of Engineering and Technology, Sunway University

• Mr. Madhan Elumalai

Senior Manager, Solution Engineering - APAC, Bentley Inc.

• Mr. Keerthi Raaj S

Product Success Manager, Geotechnical, Bentley Inc

No of participants: 50 pax

Briefing on the Implementation of SHASSIC and QLASSIC for State Government Projects in Melaka

Date: 17 July 2025

Venue: Melaka State Economic Planning Unit (UPEN), Melaka





On 17 July 2025, the Melaka State Economic Planning Unit (UPEN Melaka) invited the Construction Industry Development Board (CIDB) Melaka and the Construction Research Institute of Malaysia (CREAM) to conduct a briefing on the implementation of the Safety and Health Assessment System in Construction (SHASSIC) and the Quality Assessment System in Construction (QLASSIC). The session focused on government projects funded under the State Allocation of Melaka 2025.

Mr. Muhamad Azam Azmai, Assessment Officer from CREAM, delivered an insightful presentation outlining the criteria, methodology, and benefits of SHASSIC and QLASSIC. His session provided participants with a deeper understanding of how these assessment systems serve as benchmarks to ensure safety, health, and quality performance in construction projects.

The programme also served as a valuable platform for knowledge sharing and collaboration between UPEN Melaka, CIDB Melaka, and CREAM.

Through this initiative, all parties reaffirmed their commitment to ensuring that future state-funded projects in Melaka are implemented in line with the highest standards of safety, quality, and excellence in construction practices.



A Glimpse into the Future: CREAM at Merdeka 118

Date : 23 July 2025

Venue: Merdeka 118, Kuala Lumpur



On 23 July 2025, the Construction Research Institute of Malaysia (CREAM) had the privilege of visiting Merdeka 118, Malaysia's tallest building and an enduring symbol of engineering excellence. The visit centred on discussions with PNB Merdeka Ventures regarding arrangements for a potential site visit in conjunction with the upcoming Digital Construction Summit 2025.

The Summit, scheduled to be held on 29–30 October 2025 at the Malaysia International Trade and Exhibition Centre (MITEC), Kuala Lumpur, forms a key component of the International Construction Week (ICW) 2025 organised by CIDB. To complement the programme, the site visit is proposed for 31 October 2025, providing participants with a unique opportunity to experience first-hand one of the nation's most iconic construction achievements.

During the meeting, CREAM officers explored how the site visit could give participants direct exposure to ongoing construction activities at the Merdeka 118 retail lot project. In addition to observing current works, the visit aims to highlight the remarkable development journey of Merdeka 118, a project that exemplifies ambition, innovation, and precision engineering.

Through this initiative, CREAM reaffirms its commitment to bridging knowledge sharing with practical industry exposure, enabling professionals and participants of the Digital Construction Summit to witness the integration of advanced construction practices and digital innovation in a landmark that now defines Malaysia's skyline.

OSHA Amendments and CDM Enforcement: Responsibilities of Clients, Consultants, and Contractors in Sabah

Date : 29 July 2025

Venue: Makmal Kerja Raya Malaysia Kota Kinabalu, Sabah

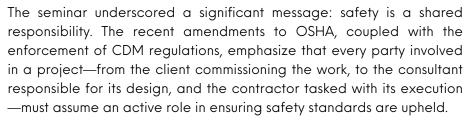




CREAM MKRM Sabah organized a seminar on 29 July 2025 titled "OSHA Amendments and CDM Enforcement Towards Clients, Consultants, and Contractors in Sabah." The event was timely, as the construction sector prepares for stricter enforcement of the Occupational Safety and Health (OSHA) amendments and the Construction (Design and Management) Regulations (CDM).

The keynote address was delivered by Mr. Muhammad Zuhaily Ibrahim, an officer from the Department of Occupational Safety and Health (DOSH) Sabah. His participation provided attendees with valuable insights and a direct channel to understand the expectations of the regulatory authority. The seminar was attended by representatives from client organizations, consultancy firms, and major contractors, who are among the key stakeholders responsible for shaping and maintaining safe construction environments.







This paradigm shift not only safeguards the well-being of workers but also enhances accountability, minimizes the risk of costly incidents, and fosters greater confidence in Sabah's construction industry.



In summary, the seminar successfully highlighted the importance of adapting to evolving legal frameworks in occupational safety and health. With guidance and perspectives shared by DOSH Sabah, participants gained a clearer understanding of their roles and obligations under the new requirements. More importantly, they left with a renewed commitment to cultivating safer worksites.

For Sabah, this represents not just progress in infrastructure development, but also a meaningful step forward in embedding a culture of safety, accountability, and shared responsibility across the construction sector.

CREAM MKRM Sabah Visit to Sogoraya Sdn. Bhd.

Date: 6 August 2025

Venue: Sogoraya Sdn. Bhd. Penampang, Sabah





On 6 August 2025, CREAM MKRM Sabah conducted a technical visit to Sogoraya Sdn. Bhd., a timber manufacturer with established expertise since 1996. Operating on a 2.3-hectare site, Sogoraya specializes in sawn timber trading as well as the production of finger-jointed components and laminated boards. With a consistent output of approximately 3,000 m³ annually since 2004, the company has developed strong export links to Japan, China, Australia, Korea, Hong Kong, Singapore, and Thailand.



The visit was represented by En. Ahmad Hazim and Puan Nor Azila from CREAM MKRM Sabah, while Sogoraya Sdn. Bhd. was represented by En. Roger Wang, En. Gan Ka Meng, En. Neerol, and En. Amree.

The main agenda was to evaluate the testing requirements for glued laminated timber products used in construction, particularly to verify their mechanical properties such as bending strength, shear resistance, and density in accordance with BS EN 408:2010 – Timber Structures – Structural Timber and Glued Laminated Timber – Determination of Some Physical and Mechanical Properties.

Discussions also highlighted the importance of aligning test methods with the available machine capacity at CREAM MKRM Sabah, ensuring accurate and reliable data generation to support both local compliance and international standards.

In addition, the engagement created opportunities for long-term collaboration in product quality assurance, structural performance monitoring, and advanced R&D on engineered timber.

This initiative demonstrates a shared commitment between CREAM and Sogoraya to strengthen the competitiveness of Sabah's timber industry through technical validation, innovation, and sustainability.





Topcon Chooses Malaysia as Southeast Asia Training Hub – CREAM to Drive Local Impact

Date: 6 August 2025

Venue: Topcon Malaysia Training Center (TMTC) Kota Kemuning, Selangor



Malaysia has taken another significant step towards becoming a regional leader in construction innovation with the official launch of the Topcon Malaysia Training Center (TMTC) on 6 August 2025 in Kota Kemuning, Selangor. The ceremony was officiated by Topcon President and Chief Executive Officer, Mr. Takashi Eto, and attended by government officials, industry leaders, and international partners. The Construction Research Institute of Malaysia (CREAM) was proudly represented at the event, reaffirming its role as a key national platform in connecting global innovation with Malaysia's construction industry.

The newly established TMTC has the capacity to train up to 30 participants per session in advanced modules covering digital construction solutions, smart equipment applications, and technology-enabled project delivery. The training programmes are designed not only for Malaysian professionals but also for participants from Indonesia, Taiwan, and other parts of Asia.



For CREAM, this development goes beyond the establishment of a training centre – it represents a strategic platform for collaboration and knowledge transfer. Through its partnership with Topcon, CREAM is positioned to facilitate applied research on digital construction solutions, strengthen Malaysia's industry ecosystem by integrating global technologies with local practices, and support CIDB's strategic agenda, particularly through initiatives such as the upcoming Digital Construction Summit in October.



As Malaysia continues to attract global players such as Topcon, CREAM remains committed to ensuring that the local construction industry derives maximum benefits – from enhanced skills development and capacity building to improved competitiveness on the regional and global stage.

Driving ESG in Construction: CREAM Introduces the SustainBuild Mark

Date: 13 August 2025

Venue: JW Marriott Hotel Bukit Bintang, Kuala Lumpur



The Edge Malaysia, in collaboration with YTL Cement, successfully hosted the Sustainable Construction Symposium 2025 on 13 August 2025 at the JW Marriott Hotel, Kuala Lumpur. The symposium brought together local and international experts to share insights on sustainable construction, technological innovation, and the future of resilient cities.

One of the key highlights of the event was the unveiling of the SustainBuild Mark (SB Mark), Malaysia's first standardised certification on assessing a company's ESG management system and construction product credentials. Taking the stage, Ir. Ts. Dr Hj Mohd Khairolden Ghani, Senior Manager at CREAM, introduced the initiative and outlined how it will guide the industry towards greener and more resilient practices.

Jointly developed by CREAM and YTL Cement, the SB Mark is designed to support SMEs and non-listed companies in embedding ESG practices into their operations.

Dr Khairolden emphasised the importance of establishing a clear and practical pathway for the wider industry to strengthen sustainability performance, in line with Malaysia's transition towards a low-carbon future.

Through this initiative, CREAM reaffirmed its role as a driving force in shaping industry standards, ensuring that sustainability is both achievable and impactful, while strengthening its position at the forefront of Malaysia's sustainable construction journey.





Refinement Workshop on Question Enhancement and Assessment for SCORE 3.0

Date : 17-19 August 2025

Venue : Bangi Resort Hotel, Bandar Baru Bangi, Selangor





The Construction Industry Development Board (CIDB) successfully organized a three-day, two-night Refinement Workshop on Question Enhancement and Assessment for SCORE 3.0 at Bangi Resort Hotel, Bandar Baru Bangi, Selangor, from 17 to 19 August 2025 (Sunday to Tuesday). The workshop gathered 10 participants, comprising representatives from the Contractor Development Division of CIDB and CREAM.

The session aimed to validate and refine the SCORE 3.0 assessment framework through the following objectives:

- To refine the SCORE assessment questions based on feedback, review findings, and improvements identified in previous workshops and review sessions.
- To evaluate and determine the need for supporting documents for each question, whether mandatory or optional, to ensure clarity in the assessment process and avoid overlap or confusion during reviews.
- To ensure the structure and content of the questions are aligned with the SCORE criteria and methodology.

The workshop served as an open platform for dialogue and exchange of ideas, encouraging participants to share insights and build consensus.

On Day One, participants conducted the final review of SCORE draft questions for the Large Grade category (Scope 1–7), collaboratively refining and strengthening the assessment framework. On Day Two, the focus shifted to the Medium Grade and Small categories (Scope 1–7), ensuring that the questions were clear, well-structured, and aligned with SCORE standards. The final day of the workshop was dedicated to consolidating outcomes and confirming adjustments, marking the successful completion of the refinement process.

This workshop reflects CIDB's and CREAM's continuous commitment to enhancing the SCORE system as a reliable and comprehensive tool for contractor performance evaluation, supporting excellence and competitiveness in Malaysia's construction industry.





Technical Visit - Embodied Carbon in Construction Materials & Occupational Safety and Health (OSH) to United Kingdom

Date: 17-24 August 2025 Venue: United Kingdom





The Construction Industry Development Board (CIDB) Malaysia, together with the Construction Research Institute of Malaysia (CREAM), successfully undertook a technical visit to the United Kingdom from 17 to 24 August 2025. The delegation was led by Ir. Hj. Mohd Hatta Zakaria, Board Member of CIDB Malaysia and Director General of DOSH, and joined by:

- Sr Ahmad Farrin Mokhtar Senior General Manager, CIDB
- Mr Mohammad Faizal Abdul Hamid General Manager, CIDB
- Mr Afiq Farhan Hassan Assistant Manager, CIDB
- Ir. Ts. Dr. Hj. Mohd Khairolden Ghani Senior Manager, CREAM
- Mr. Mhd. Jumain Mapplati Consulting Officer, CREAM

The primary objectives of the visit were to:

- Explore advancements in embodied carbon reduction in construction materials and methods.
- Understand Occupational Safety and Health (OSH) practices, regulations, and innovations in the UK.
- Establish strategic collaboration opportunities with relevant institutions.
- Benchmark the UK's approaches to sustainability, carbon reporting, and workplace safety.









The visit was deemed highly successful, achieving all outlined objectives through engagements with key institutions:

Health and Safety Executive (HSE) Science and Research Centre - Implementation and challenges of Construction (Design and Management) Regulations (CDM). Research on safety innovation, real-time risk assessment tools, and predictive safety analytics. Visit to the Forensic Laboratory: Showcased HSE's capabilities in investigating construction accidents and improving safety protocols. Engagement with the Building Safety Regulator (BSR): Overview of its operational and regulatory responsibilities, including building inspections, risk management frameworks, and safety compliance in high-risk buildings. The UK's multi-disciplinary, data-driven approach to OSH emphasizes regulatory enforcement, research, and innovation. Integration of forensic insights into policymaking enhances overall safety governance.





The Institution of Civil Engineers (ICE), London - Deep dive into embodied carbon measurement, with emphasis on PAS 2080 (Carbon Management in Infrastructure). Overview of the Built Environment Carbon Database (BECD), a centralized platform for carbon data sharing. Introduction to collaborative contract models (NEC, X29) promoting sustainability, risk-sharing, and carbon reduction incentives. UK government policies now mandate carbon data reporting by suppliers, including disclosure of calculation methods and participation in validation programs to resolve discrepancies between carbon calculation tools. Robust frameworks such as PAS 2080 and NEC X29 industry-wide accountability for carbon demonstrating the importance of standardized tools, transparency, and contractual alignment with sustainability targets.

Royal Institution of Chartered Surveyors (RICS), London - Need for data harmonisation and government-mandated reporting to address fragmented carbon data sources. Economic pressures: Rising labour and material costs, ageing workforce, and persistent labour shortages. Industry call for policy alignment, capacity building, and cross-border data sharing for global carbon benchmarking. The UK construction industry recognises the urgency of harmonising carbon measurement standards and addressing workforce challenges to maintain momentum in decarbonisation.

Tun Abdul Razak Research Centre (TARRC), Hertfordshire - Highlighted success story: High Damping Natural Rubber Bearings (HDNRB) used in Sultan Abdul Halim Muadzam Shah Bridge (Second Penang Bridge) for seismic protection. Discussion on Standard Malaysian Rubber (SMR) specifications and innovation in rubber-based construction applications. Exploration of collaboration between CREAM and TARRC to promote Malaysian natural rubber in international markets. Strong potential for Malaysia to position natural rubber as a key sustainable construction material, both regionally and globally, through strategic R&D and international partnerships.

Institute of Workplace and Facilities Management (IWFM), London - Role of ISO 41001 in professionalising Facilities Management (FM). Focus on standards, certifications, and market structure comparisons between the UK and Malaysia. Skills shortages, slow technology adoption, and absence of unified standards for FM contractors were among the challenges faced by UK industry. Emphasis on ESG integration, competency development, and sustainable facilities management. Professionalisation and certification in FM are critical to achieving sustainability goals and overcoming industry fragmentation in both the UK and Malaysia.





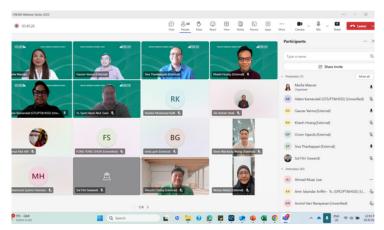
The EDGE, Sustainable London Office- Visited the EDGE marketing suite and innovation hub offering 33,000 sq. ft. of affordable, sustainable workspace. Focused on meeting Net Zero and ESG standards, with sustainability targets including <500 kg CO₂/m² embodied carbon. 5-star NABERS UK rating and EPC A rating by 2030 with innovative features on climate island chilled beam system, renewable energy integration, efficient water and waste systems. The EDGE demonstrates how commercial developments can push the boundaries of carbon efficiency, green building design, and inclusive workspace models, setting a benchmark for sustainable real estate.

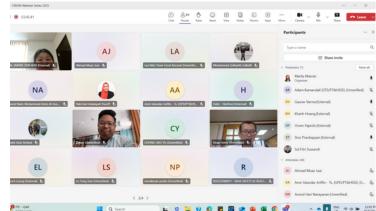
The technical visit successfully achieved its key objectives by engaging with prominent institutions and stakeholders in the UK. The delegation gained valuable insights into best practices for embodied carbon reduction, construction safety, and sustainable development. Moving forward, CIDB and relevant Malaysian agencies can capitalise on these learnings to enhance national standards and regulatory frameworks, drive innovation and R&D in sustainable construction materials and foster international collaborations for workforce upskilling, data sharing, and policy harmonisation.

CREAM Webinar Series 2025

CREAM Webinar Series 2025 is a monthly program organised by CREAM and it is a part of our efforts to initiate conversations on issues, challenges, opportunities and initiatives for the construction industry and beyond.

The topic for this month's webinar is "Digital Project Delivery for Infrastructure- Design and Build Smarter"





Date: 20 August 2025

Speakers:

• Mr. Adam Kamarulail

Solution Domain Project Executive, PETRONAS

• Mr. Khanh Hoang

Application Engineer, Solution Engineering- APAC, Bentley Inc.

• Mr. Siva Thankappan

Senior Solution Architect, Solution Engineering- APAC, Bentley Inc

No of participants: 52pax

CIDB Malaysia Contractors Convention 2025

Date: 20 August 2025

Venue: Grand Paragon Hotel Johor Bahru, Johor





The CIDB Malaysia Contractors Convention 2025 was successfully organised in Johor, marking a significant milestone in strengthening the capacity and competitiveness of Malaysia's construction industry.

The convention was officiated by the Deputy Minister of Works, YB Datuk Seri Ahmad Maslan, and gathered over 220 contractors from Grade G1 to G7, alongside industry leaders, policymakers, and investors.

Organised by CIDB Holdings with the support of CIDB Malaysia, the event formed part of the broader International Construction Week 2025 (ICW2025) held at MITEC Kuala Lumpur. By extending the initiative to the southern region, CIDB ensured that contractors across the country gain equal access to knowledge, opportunities, and industry exposure.



Anchored on the theme "Driving Growth in the Construction Industry through Facilities Management, Sustainability and Digitalisation," the convention highlighted the industry's collective aspiration to embrace innovation and transformation through three core areas:

- Facilities Management (FM): Enhancing operational efficiency, asset value, and lifecycle management in construction projects.
- Sustainability: Promoting green construction practices, energy efficiency, and environmentally responsible project delivery.
- Digitalisation: Accelerating the adoption of digital solutions such as Building Information Modelling (BIM), smart technologies, and datadriven tools to boost productivity.

As part of the programme, the Construction Research Institute of Malaysia (CREAM) was represented by its Assessment Officer, Mr. Muhamad Azam Azmai, who presented the Sustainable INFRASTAR Assessment. This rating tool is specifically designed to evaluate the sustainability performance of infrastructure projects in Malaysia.

The presentation provided participants with valuable insights into the assessment's criteria and methodology, as well as its role in ensuring that the nation's infrastructure development aligns with sustainability principles and global best practices.

Through initiatives such as this, CREAM continues to support CIDB in driving industry-wide transformation, fostering knowledge sharing, and strengthening Malaysia's position as a leader in sustainable and digital construction practices.



Official Visit by CIDB Sabah Board of Directors Datuk Dr Roland Chia Ming Shen

Date: 20 August 2025

Venue: Makmal Kerja Raya Malaysia (MKRM Sabah)



On 20 August 2025, Datuk Rolland Chia Ming Shen, Board of Director of CIDB, made an official visit to CREAM MKRM Sabah, accompanied by En. Nazri bin Zakaria State Director of CIDB Sabah. The visit reflected CIDB commitment to strengthening collaboration and reinforcing the vital role of CREAM MKRM Sabah in supporting testing, research, and technical services for the construction industry in Sabah.

The visit gave the Board Member an opportunity to gain first-hand exposure to the facilities, capabilities, and ongoing testing carried out at CREAM MKRM Sabah. The subsequent discussion emphasized the critical role of laboratory services in supporting industry compliance with the requirements of the Fourth Schedule of CIDB Act 520, while elevating material quality and promoting best practices across the construction sector.











CREAM Integrity Programme 2025: "Integrity as the Core of Malaysia MADANI"

Date: 21 August 2025

Venue: Dewan Ixora Tingkat 25 The Met Corporate Tower, CIDB Malaysia Headquarters





With the theme "Integrity as the Core of Malaysia MADANI", the Construction Research Institute of Malaysia (CREAM) successfully organised the CREAM Integrity Programme 2025 on 21 August 2025 at the CIDB Malaysia Headquarters, The MET Corporate Towers, Kuala Lumpur. The programme brought together CREAM employees to reinforce understanding, practice, and appreciation of integrity values within the organisation.

The event began with welcoming remarks by Ir. M Ramuseren, Chief Executive Officer of CREAM, who emphasised the organisation's continuous commitment to cultivating a culture of transparency, accountability, and zero tolerance towards misconduct. He also urged all employees to embrace integrity as the foundation of their work, in line with the aspirations of Malaysia MADANI.

The Integrity Talk was delivered by Ps Mohd Ihsan bin Anuar, Officer, Community Education Division of the Malaysian Anti-Corruption Commission (MACC), who highlighted the importance of integrity as a safeguard against corruption. An interactive Q&A session followed, allowing CREAM staff to gain direct insights on integrity and corruption-related issues in the construction sector.







As part of the programme, CREAM also launched the Integrity Logo Design Competition 2025, aimed at fostering awareness and appreciation of integrity through creative engagement among employees. Certificates of appreciation were later presented by Ir. M Ramuseren and Ps Mohd Ihsan. A token of appreciation from CREAM was also presented to MACC to mark the shared commitment in strengthening the integrity agenda.

Through this event, CREAM reaffirmed its commitment to strengthening a culture of integrity as the foundation of good governance, in line with the aspirations of Malaysia MADANI and the construction industry's vision of competitiveness and corruption-free practices.

Mini Sports Carnival 2025: Kelab Sukan dan Kebajikan CIDB Ibu Pejabat

Date: 22 August 2025 Venue: Kuala Lumpur

The spirit of sportsmanship and camaraderie filled the air as **Kelab Sukan dan Kebajikan CIDB Ibu Pejabat (KCIDBIP)** proudly hosted the Mini Karnival Sukan KCIDBIP 2024/2026. The lively event brought together staff from CIDB Headquarters and its subsidiaries, including Construction Research Institute of Malaysia (CREAM),CIDB Holdings Sdn. Bhd., CIDB e-Construct Sdn. Bhd., CIDB MyIBS Sdn. Bhd., Construction Labour Exchange Centre Berhad (CLAB), and Akademi Binaan Malaysia (ABM) Wilayah Tengah.



With the energetic theme "Battle of the Supers: Bukan Sekadar Kuat Tapi Hebat", the carnival was more than just a sporting challenge — it was a celebration of teamwork, resilience, and unity. Participants were divided into four superhero-inspired teams — Ironman, Wolverine, Spiderman, and Thor — battling it out across 16 exciting events designed to test both skill and spirit.





One of the standout teams was **Ironman**, representing **CREAM**, **the CIDB Management Sector (HQ)**, **and CLAB**. With more than 30 members actively participating, Team Ironman impressed with their athleticism, passion, and strong team spirit. Their determination paid off as they clinched second place overall, marking them as one of the carnival's fiercest contenders.

The excitement reached its peak during the closing ceremony on 22 August 2025, officiated by CIDB Malaysia's Chief Executive, Puan Zainora Zainal. In her remarks, she praised the energy and commitment displayed by all participants, emphasizing how the carnival reflected CIDB's culture of unity and resilience.

Adding to their triumph, Team Ironman also took home the special recognition of "Most Havoc Supporters" thanks to their vibrant presence and thunderous cheers that kept spirits high throughout the games.

Ultimately, the KCIDBIP Mini Karnival Sukan 2025 was not only about winning medals or trophies, but about forging stronger bonds, embracing healthy lifestyles, and celebrating the shared identity of CIDB and its subsidiaries. It was a day of laughter, teamwork, and unforgettable memories — proving that at CIDB, strength is not just physical, but also in unity and togetherness.











Battle of the Supers: Bukan Sekadar Kuat Tapi Hebat!



















Property Expo PropEx 2025

Date : 22-24 August 2025

Venue: Sabah International Convention Centre (SICC) Kota Kinabalu, Sabah



CREAM-MKRM Sabah is honoured to be invited by CIDB Negeri Sabah to participate in Property Expo PropEx 2025 organized by Sabah Housing and Real Estate Developers Association (SHAREDA). The annual expo held on 22nd to 24th August at the Sabah International Convention Centre (SICC) was officially launched by Deputy Chief Minister II & Minister of Local Government and Housing Sabah, YB Datuk Seri Panglima Dr. Joachim Gunsalam.

The objective of the event is to provide platform and opportunities for both developers and contractors to seek and capture sales leads from prospective purchasers. It also serves as a platform for CREAM to promote it services and engage with industry players in Sabah. Throughout the expo, CREAM diligently engaged with other industries and developers such as KTI Sdn Bhd, K.K.I.P Sdn Bhd, WK Consortium Sdn Bhd and many more. Overall, SHAREDA Property Expo 2025 was a big hit.

CREAM MKRM Sabah would like to thank CIDB Negeri Sabah for the opportunities to set up exhibition booth during the SHAREDA Property Expo 2025 and would be thrilled to participate again in such events.







upcoming events





Comprehensive Course

CIS 31: Flood Risk Assessment in Malaysia & CIS 32: Landslide Vulnerability Assessment and Development of Risk Index for Critical Infrastructure (CI) in Malaysia

The Construction Industry Standard (CIS) is an official document owned by CIDB Malaysia, developed and published under the provisions of Act 520 by the CIDB technical committee. It is intended to help reduce the impact of disaster risks at construction sites.

COURSE OBJECTIVES

- Introduce the latest content of CIS 31:2024 and CIS 32:2024
- Provide understanding of flood and landslide 02 risk assessment methods based on CIDB guidelines and related regulations
- Explain the process of developing a Risk Index for Critical Infrastructure (CI)
- Enhance participants' ability to identify, assess, 04and plan risk mitigation strategies





4 - 6 November 2025 | Johor Bahru

TARGET PARTICIPANTS

- · Local Authority (PBT) technical officers
- Consulting engineers
- Technical agency officers
- Lecturers
- Researchers
- · Asset managers for critical infrastructure
- And other relevant professionals

INSTRUCTORS



Dato' Zakaria Mohamad, P.Geol Geological Board of Malaysia



Dr. Ferdause Ahmad, P.Geol Minerals and Geoscience Department, Terengganu



Ir. Hjh Bibi Zarina Che Omar

Former Deputy Director General (Technical Sector) Department of Irrigation and Drainage (JPS) Malaysia



Ir. Dr. Nor Eliza Alias

Senior Lecturer, Faculty of Civil Engineering, Universiti Teknologi Malaysia (UTM)

COURSE FEE RM700*/pax

*inclusive of:

- CIS 31 & CIS 32 courses + technical visit
- Free access to 10 CREAM Webinar Series sessions (with CCD Points worth RM750)
- Discount for testing services at CREAM Laboratories
- 25% discount for CQMS certification



More info:



www.cream.my













CIS 31: Flood Risk Assessment in Malaysia

TIME	PROGRAMME	
08.30am - 09.00am	Participant Registration	STANDARD
09.00am - 09.15am	Introduction to CIS 31:2024	INDUSTRI PEMBINAAN
09.15am - 10.15am	Concept of Flood Risk and Related Legislation based on CIS 31:2024	(COMERUCTION NOVIERY STANDARD)
10.15am - 10.30am	Morning Refreshments	CIS 31:2024
10.30am - 01.00pm	Flood Hazard and Flood Risk Development & Assessment Calculations	FLOOD RISK ASSESSMENT IN MALAYSIA Number for the dealers of conditions for the conditions Science III
01:00pm - 02:00pm	Lunch	CONSTRUCTION NOVETRY DESIGNMENT MOREO
02:00pm - 05:00pm	Flood Vulnerability Index Calculations	CIDE Construction Industry Development Board Malaysia See See Section 1 of the Section of the Section 1 of
05:00pm - 05:15pm	Tea Break End of Day	

CIS 32: Landslide Vulnerability Assessment and Development of Risk Index for Critical Infrastructure (CI) in Malaysia

TIME

05:00pm - 05:15pm

Day 2

Day 1



O8.30am - O9.00am Participant Registration O9.00am - O9.15am Introduction to CIS 32:2024 Concept & Framework of Landslide Risk Analysis and Related Legislation based on CIS 32:2024 10.15am - 10.30am Morning Refreshments 10.30am - O1.00pm Landslide Vulnerability Assessment O1:00pm - O2:00pm Hands-on: Landslide Vulnerability Index and Risk Classification

PROGRAMME

Site Practical - CIS 31:2024 & CIS 32:2024

Day 3

TIME	PROGRAMME
08.30am - 09.00am	Safety Briefing
09.00am - 09.15am	Introduction to Types of Landslides and Rainfall Factors
09.15am - 10.15am	Case Study Based on CIS 31:2024 and CIS 32:2024 – Group Discussion & Brief Analysis
10.15am - 10.30am	Morning Refreshments
10.30am - 12.00pm	Marking Landslide Scars and Use of MALVAT Tool
12:00pm - 02:00pm	Lunch
02:00pm - 05:00pm	Technical Visit (TBC)
05:00pm - 05:15pm	Tea Break End of Course

Tea Break End of Day Hosted by:



Organised by:



In Conjunction with:





CONSTRUCTING THE FUTURE OF ASEAN



Al in Construction: Transforming the Industry

29th - 30th October 2025 MITEC, Kuala Lumpur

REGISTRATION FEE

Early Bird

MYR680/ **USD170**

(Until 31 July 2025)

Normal Price

MYR800/ USD200

Group of 3

MYR640/ **USD160**

per person

Student MYR400/ **USD100**

Group of 10

MYR600/ **USD150**

per person

Student (Group of 3)

MYR350/ USD90

per person



SCAN HERE

CPD/CCD Available

25 CIDB/10 BEM/6 BQSM/5 LAM/MBOT/10 RISM





Digital Construction



Learn From Industry



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Bronze Sponsor

















Silver Sponsor

















Supporting Organiser

























ENQUIRIES 03-27791479

















THE ORGANISER

Construction Research Institute of Malaysia (CREAM) is a research institution of the Construction Industry Development Board (CIDB) and a company limited by guarantee dedicated to improving the Malaysian construction industry through research, consultancy, certification, and testing facilities. Established since 2004, CREAM will be the frontier in providing research insight in Construction 4.0, advanced materials, sustainability, forensic and structural engineering, IBS, construction productivity as well as affordable housing.

Why Need to Attend

- Thought speakers sharing novel ideas with state of the art digitalisation
- Sharing best practices, demonstrating business case in construction digitalisation
- Business networking opportunities with industry leaders among ASEAN countries and East Asia region.

Four Key Reasons to Participate in DCS2025

- A high-level international summit on digitalisation
- Gain the latest info and megatrends in digital construction
- Seek potential digital growth in ASEAN and East Asia region
- Develop new business linkages and opportunities with key players

About the Summit

The second Digital Construction Summit (DCS2025) is a much-awaited summit that will bring us to a high-level discussion with key stakeholders in digital construction. It is a platform to discuss digital trends, strategic planning for organisations, stock take potential, and market size in the ASEAN and East Asia region, imparting benefits to construction digital growth.

Who Should Attend?

- Government leaders, policymakers and key decision-makers
- High reputable construction contractors
- Consulting engineers
- Business leaders and entrepreneurs
- Academic and educationists
- Technologists and innovators
- Professional bodies and civil society leaders
- Digital investors
- Start-up companies and talented digital entrepreneurs



0830 - 0900 Registration of participants

PLENARY ADDRESS 1

0900 - 0930 Ir Prof. Llewellyn Tang

Founder and Group CEO of LPC Co. Ltd.

Associate Professor in BIM, University of Hong Kong

SESSION 3:

Al-Powered Design for Smart Cities **Moderator**: Ts. Anusha Magendram

Assistant Vice President / Senior Principal Analyst II Sustainable Development Technologies Division, Malaysian Industry-Government Group for High Technology (MiGHT)

Chief Digital Officer, IT Max Berhad

Speaker 2 : Assoc. Prof. Ts Dr Chai Chang Sa'ar

Taylor's University, Malaysia

Speaker 3 : Ar Dr Tan Loke Mun

Principal of DrTanLM Architect and founder director of ArchiCentre Sdn Bhd and DTLM Design Group

1100 - 1130 Coffee break / Networking

SESSION 4:

Data-Driven Decision Making in Construction **Moderator**: Mr. Muhammad Iyas Mahzan

Secretary & Managing Director, Pertubuhan BIM Malaysia

(PBM) & UTNM Resources Sdn Bhd

Speaker 1 : Dr. Naveed Anwar

Asian Institute of Technology, Thailand

Speaker 2 : Ts. John Lim Ji Xiong

Group Chief Digital Office, GAMUDA Berhad

Speaker 3 : Ir Zulkifli Mohamed

Project Director for RTS Link, MRT Corporation Sdn Bhd

Speaker 4 : Mr. Liew Ziqing

Head of Digitalisation, Development & Delivery (3D),

Sunway Property

1300 - 1430 Lunch and Networking

1130 - 1300

PLENARY ADDRESS 2

1430 - 1500 Ir Dr Megat Zuhairy bin Megat Tajuddin

Chief Executive, National Cyber Security Agency, Malaysia (NACSA)

1500 - 1515 Coffee break / Networking

SESSION 5:

Implementing AI in Construction Project Management

Moderator: Assoc. Prof. Ts Dr Abdul Rahimi Abdul Rahman

Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA)

1515 - 1630 Speaker 1 : Prof. Ir. Dr. Biemo Woerjanto Soermardi

Bandung Institute of Technology (ITB), Indonesia

Speaker 2 : Mr. Sunil MK, Chief of Staff, APAC, Bentley Systems

(Singapore) Pte. Ltd.

Speaker 3 : Mr. Cheah Wei Tsong

Technical General Manager, BIMAGE Consulting (M) Sdn Bhd

Closing Remarks by YB Ir Haji Yusuf Bin Haji Abd Wahab

1630 - 1700 Chairman CIDB (TBC)

Awards Ceremony for Digital Construction Competition 2025

1700 > End of session



CONFERENCE SCHEDULE

29th October 2025 Wednesday

0800 - 0830	Registration of participants
0830 – 0900	Arrival of invited guests
0900 - 0930	KEYNOTE ADDRESS YBhg. Dato' Seri Azman bin Ibrahim Ketua Setiausaha, Kementerian Kerja Raya (TBC)
0930 - 1115	SESSION 1: The Role of Al in Sustainable Construction Moderator: Ts. Dr. Pramila Tamunaidu Research Fellow Malaysia-Japan Advanced Research Centre (MJARC), Universiti Teknologi Malaysia (UTM) Speaker 1: Dr Ali Ghahramani Assistant Professor, National University of Singapore Speaker 2: Dr. Piia Sormunen Associate Professor, Tampere University, Finland Speaker 3: Ir. Ts. Maxx Wong Meng Fai Head of Technical and Solutions, YTL Data Centers
1115 - 1145	Coffee break / Networking
1145 - 1200	Arrival of The Honourable Dato Sri Alexander Nanta Linggi, Minister of Works
1200 - 1220	National Anthem Doa recitation Welcoming Remarks YBhg. Madam Zainora Zainal Chief Executive of CIDB Malaysia
1220 - 1240	Opening Speech by YB Dato Sri Alexander Nanta Linggi, Minister of Works (TBC)
1240 - 1300	 Launch of BIM Roadmap CIDB and MBAM Collaboration Programme on Construction Digital Maturity Index (CDMI)
1300 - 1430	Lunch / Networking / Visit Exhibition Booths
1430 - 1500	PETRONAS LEADERSHIP ADDRESS Ir. Shah Rizal Dahlan Vice President of Group Project Delivery, Project Delivery & Technology PETRONAS (TBC)
1500 - 1515	Coffee break / Networking
1515 - 1700	SESSION 2: Oil, Gas Industry & Energy Services in Digitalisation Moderator: Mr. Rosman Hamzah
1700 >	End of session

VENUE MAP



CONFIRMATION REGISTRATION

Participant registration is through the QR Code. The secretariat will respond within 3 working days. Should you not receive the confirmation letter/email, please contact us immediately.

TERMS OF PAYMENT

Full payment must be made to CREAM before the actual event day. For payment through bank transfers, kindly ensure you send us a copy of your bank receipt and details, otherwise the payment may not be acknowledged by CREAM.

Payment details:



Biller Code: 514992 Ref-1: Invoice no

Ref-2:

JomPAY online at internet and Mobile Banking with your Current or Savings account

Please send the proof of payment to:

Secretariat Registration Digital Construction Summit (DCS2025)

Construction Research Institute of Malaysia (CREAM) Level 14, CIDB 520, The MET Corporate Towers, No. 20, Jalan Dutamas 2, 50480 Kuala Lumpur, Malaysia

T : +603-2779 1479 Email : dcs2025@cream.my

DISCLAIMER

CREAM as the main organiser reserves the right to replace/change speakers/panellists or itinerary in the best interest of summit. Hence, you will still be charged if your participants don't turn up on the day of the event.



Kualiti Projek Terjamin: **Kepentingan Contractor's Quality Management System**

Alternatif kepada ISO 9001

Seminar ini bertujuan untuk memberikan pemahaman mendalam tentang kepentingan Contractor's Quality Management System (CQMS) bagi kontraktor dalam industri pembinaan. Peserta akan mempelajari bagaimana penerapan CQMS yang berkesan dapat meningkatkan prestasi projek, memastikan kepatuhan kepada piawaian kualiti, serta menjamin hasil projek yang berkualiti tinggi dan konsisten.







YURAN RM120/ PAX





Apa yang Anda Akan Peroleh



Tingkatkan Reputasi

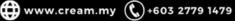
industri pembinaan.

Membina reputasi sebagai kontraktor yang komited terhadap kualiti dan kepuasan pelanggan.

Pematuhan Standard Mendapat panduan dalam mematuhi piawaian kualiti dan peraturan pembinaan terkini.

Maklumat Lanjut:















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Construction Research Institute of Malaysia



Kualiti Projek Terjamin: Kepentingan Contractor's Quality Management System

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YURAN RM120/ PAX

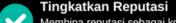




Apa yang Anda Akan Peroleh

Tingkatkan Pengetahuan

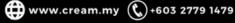
Mendalami konsep dan prinsip CQMS dalam industri pembinaan.

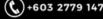


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Maklumat Lanjut:

















Construction Research Institute of Malaysia

