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BINA Integriti

LEMBAGA PEMBANGUNAN INDUSTRI PEMBINAAN MALAYSIA

- CIDB INITIATIVES IN **GREEN** TECHNOLOGY
- Principle 6 :

IMPORTANCE OF ENVIRONMENTAL PRESERVATION

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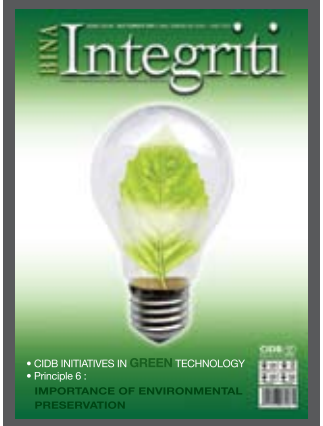

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Buletin Bina Integriti (dalam format PDF) boleh dimuat turun daripada www.cidb.gov.my

Apa ada pada nama BINA Integriti?
BINA INTEGRITI

BINA - Mencerminkan industri pembinaan Malaysia.
INTEGRITI - Melambangkan objektif utama penerbitan buletin ini iaitu untuk menjadi bahan rujukan dan perkongsian ilmu pengetahuan, makluman mengenai program-program penerapan integriti dalam industri pembinaan, penggalakkan budaya kerja berintegriti dan juga untuk mewarwarkan peranan CIDB dalam program-program berkenaan.

OBJEKTIF PENERBITAN BINA Integriti

Buletin BINA Integriti ini diterbitkan dengan objektif seperti berikut:

1. Memberi kesedaran kepada semua penggiat industri pembinaan tanahair akan kepentingan pemantapan integriti dan penerapan nilai-nilai murni di dalam sektor binaan.
2. Menanamkan sikap berhemah dan budaya kerja beretika di kalangan penggiat industri pembinaan.
3. Memperkukuhkan tahap kepercayaan dan keyakinan awam terhadap sektor pembinaan negara.
4. Mempromosi dan mewarwarkan program dan aktiviti anjuran CIDB, khususnya program pengukuhan integriti serta program-program lain yang relevan.

Lidah Pengarang

Assalamualaikum dan Salam Integriti!

Semoga semua pembaca sihat, ceria dan berintegriti selalu di dalam melaksanakan tanggungjawab seharian sama ada di tempat kerja mahupun bersama keluarga tercinta.

Manusia diciptakan sebagai khalifah untuk mentadbir dan sebagai pemimpin di dunia ini. Tugas ini diberikan kerana kelebihan akal fikiran yang telah diberi Tuhan. Manusia mentadbir jagat raya yang memberi erti bahawa kita 'mengepalai' segala perkara duniawi. Tidak seperti flora, fauna, gunung ganang dan lautan yang tidak diberikan akal fikiran untuk mentadbir. Namun yang menyedihkan, manusia dengan kepintarannya jugalah yang selama ini merosakkan alam ciptaan Tuhan ini. Pembangunan yang tidak terancang dan keinginan mengaut untung yang dipaksikan atas nama pembangunan ekonomi telah memberikan kesan terhadap sistem ekologi alam semulajadi.. Green House Effects ini telah menyebabkan pelbagai tragedi yang tidak diingini seperti kejadian tanah runtuh, tsunami, banjir dan taufan besar.

Terkini, dunia hari ini menyaksikan satu 'trend' yang positif di mana manusia telah sedar tentang kepentingan menjaga persekitaran semulajadi iaitu 'Go Green'. Teknologi hijau diwarwar dan dicanang di pelusuk dunia. Adalah diharapkan supaya semua pihak terbabit sedar dan mengetengahkan teknologi mesra alam dalam segala aktiviti pembangunan yang dilakukan.

.

BINA Integriti kali ini menjengah inisiatif teknologi hijau industri pembinaan yang dilaksanakan CIDB di dalam halaman ___. Manakala artikel siri terakhir kupasan Kod Etika Kontraktor pula memaparkan Prinsip Keenam, Pemeliharaan Alam Sekitar di halaman _____. Pembaca juga disajikan dengan isi padat teks ucapan penuh Pengerusi CIDB bersempena MEF (Malaysia-Europe Forum) Munich Spring Rountable 2010 pada Mac 2010 yang lalu yang membincangkan komitmen Malaysia terhadap pemeliharaan dan pemuliharaan alam dalam konteks industri pembinaan.

Selamat Membaca dan Selamat Melestarikan Alam!

KETUA EDITOR
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SEKTOR PEMBINAAN : Sektor Utama Penyumbang Kerosakan Alam Sekitar

Pelancaran Polisi Teknologi Hijau Kebangsaan oleh YAB Perdana Menteri pada Julai lalu menunjukkan kesungguhan Malaysia di dalam agenda melestarikan bumi. Sektor pembinaan tidak terkecuali diberi peranan penting apabila tersenarai di dalam empat sektor utama yang terkandung di dalam Polisi tersebut. Untuk meminimumkan kesan terhadap alam sekitar, empat Sektor telah dikenalpasti kepentingannya untuk tujuan ini iaitu, Sektor Tenaga, Sektor Air dan Pengurusan Sisa, Sektor Pengangkutan serta Sektor Bangunan.

Melalui Polisi tersebut, Sektor Bangunan akan menerima pakai Teknologi Hijau dalam pembinaan, pengurusan, pemuliharaan dan pemusnahan bangunan. Walaupun, mandat yang digenggam oleh Malaysia di dalam merealisasikan Polisi Teknologi Hijau Kebangsaan ini tidak dinafikan mencabar, semua pihak terlibat hendaklah bertindak seiring dengan matlamat Negara di dalam menyediakan alam sekitar yang mapan untuk generasi hadapan.

Namun, di sebalik perancangan hebat Negara ke arah pengadaptasian Teknologi Hijau, cabaran yang dihadapi oleh Malaysia tidak kurang hebatnya apabila kajian mendapati bahawa Malaysia mempunyai penggunaan tenaga tertinggi per kapita di kalangan negara ASEAN. Dalam kajian yang lain pula, penemuan menunjukkan bahawa peratusan yang disumbangkan oleh bangunan terhadap pelepasan GHG (Greenhouse Gas) iaitu sebanyak 41% menggambarkan bahawa sektor pembinaan merupakan penyumbang utama kesan rumah hijau di dunia.

Impak negatif daripada sektor pembinaan terhadap alam sekitar boleh dilihat daripada pelbagai bentuk masalah pencemaran alam sama ada secara langsung atau tidak langsung. Pencemaran udara hasil daripada pembebasan asap di tapak bina serta pencemaran air hasil daripada pembuangan sisa binaan ke sungai dan tasik semulajadi merupakan kesan segera yang boleh dilihat dengan mata kasar oleh aktiviti pembinaan terhadap alam sekitar. Kesan tidak langsung atau yang berbentuk jangka panjang seperti kesan rumah hijau menyebabkan pemanasan global dan dideritai kesemua penghuni alam juga berhubung kait dengan sektor pembinaan. Pembalakan serta penerokaan kawasan hutan secara berleluasa untuk pembinaan turut menjadi faktor penyumbang kepada pemanasan global tersebut. Sememangnya, aktiviti pembangunan dan modernisasi secara terburu-buru dan terdesak menyebabkan pihak-pihak terbabit terlepas pandang terhadap pemeliharaan alam sekitar.

Justeru, pelaburan jangka panjang terhadap pemeliharaan alam sekitar tidak seharusnya dipandang sepi oleh kesemua pihak terlibat. Sebagai contoh kesedaran terhadap penjimatan tenaga di dalam sektor pembinaan seperti bangunan jimat tenaga (energy saving building) telah mula mendapat tempat di dalam sektor pembinaan Malaysia. Langkah ini jika diusahakan seikhlasnya pasti akan menjadi satu budaya positif di dalam industri pembinaan.

Adalah menjadi tanggungjawab CIDB untuk mendokong penuh usaha kerajaan di dalam menyediakan alam sekitar yang mapan dengan merangka program-program pembangunan industri pembinaan yang bersesuaian untuk memulihara dan memelihara alam sekitar. Sokongan dan kerjasama semua penggiat industri pembinaan bagi mengurangkan kesan terhadap alam sekitar melalui aktiviti pembinaan yang mesra alam amatlah diharapkan di dalam menjamin kemapanan alam sekitar.

DATUK Ir. HAMZAH HASAN
Ketua Eksekutif CIDB Malaysia

TURNING GREEN: THE CONSTRUCTION SECTOR TAKES THE LEAD-MALAYSIAN PERSPECTIVE

Speech by YBhg Tan Sri Dato' Dr Ir. Tan Sri Jamilus Hussien (Chairman of CIDB Board of Directors) at "THE MEF (Malaysia Europe Forum) – Munich Spring Roundtable 2010" with the theme "The Global Green Agenda: Securing a Sustainable Development"

It is indeed a rare honour to be given this opportunity to address this august international conference congregating some of the best intellects of this region and beyond. The theme of this International Conference, 'The Global Green Agenda: Securing a Sustainable Development' is undoubtedly very relevant to current needs inasmuch as it is challenging to all those responsible for Sustainable Development. My sincere thanks to the organiser of this Conference, for giving me time to share my thoughts and experience on a subject close to my heart. I have been asked by the organiser to present a topic entitled 'Turning Green: The Construction Sector Takes the Lead'. However, in view of the current development that is taking place in Malaysia, I have decided to make a slight amendment to the title of my presentation whereby it is now entitled "Turning Green : The Construction Sector Takes the Lead – The Malaysian Perspective". I believed by doing so, the discussion would be more focused and also enable me to promote some of the programmes currently developed by CIDB Malaysia on sustainable development.

In brief, Construction Industry Development Board Malaysia or CIDB as famously known in Malaysia is a Government key agency under the Ministry of Works Malaysia set-up to develop and manage the construction industry in Malaysia.

The construction industry plays a significant role in developing an economy. In Malaysia alone, the output of construction is worth RM50 Billion (EUR10.42 Billion) a year, accounts for 3 to 5% of Gross Domestic Product (GDP) and provides employment for around 800,000 workers. The output of construction industry be it public or private projects has major impact on our ability to maintain a sustainable economy overall and major impact on environment as well. It is clear that we cannot meet our declared environmental targets without dramatically reducing the environmental impact of buildings and infrastructure construction.

The many years of high rate of construction had caused a high demand of raw materials and energy resources. We had witnessed the skyrocketed price of oil and precious metals. Steel and copper prices increased tremendously due to high demand in the construction and manufacturing sectors. Coupled with the above we are faced with the ever clearer view that the earth will suffer ecologically if the current consumption pattern continues its pace without any major changes.

Construction on the other hand is viewed by public as being on collision with natural environment. This perception stems from the argument that built environment can only be built by scavenging, or at the expense of destroying the natural environment. The debate is often presented through the conflicts between economic activities and the environment, as if it is only possible to pursue one at the expense of the other. The environmental consequences of construction activities are considerable and have a global impact as highlighted in the forum on Future of Sustainable Construction held during the Summit on the Global Agenda in Dubai, UAE on November 2008 of which construction contributes the following adversity:

- Affects 40% of global Green House Gas (GHG)
- Affects 70% of cities' GHG
- Deposits 40% of its waste in landfills
- Consumes 12% of the world's water
- Occurs in hazard prone geographies
- Contributes to loss of biodiversity and ecosystems
- Consumes 30% of world's resources

In Malaysia alone, construction sector contributed an average

of 624 tonne of waste daily and this figure represents 28% of total waste in comparison with other sectors. Non-renewable construction resources such as rocks, sand and earth materials form the main component of construction waste.

Such adversities proved that construction projects that are not properly managed and delivered would bring major catastrophe to the surrounding environment. The debate is often presented through the conflicts between economic activities and the environment, as if it is only possible to pursue one at the expense of the other. The construction fraternity faced with the dilemma of continuing the progress with the detriment to the environment and depleting energy resource.

However, it is in my opinion that such perception would not be in existence if developers, contractors and professionals in the construction industry work towards the evolutions of socially responsible construction community that respects the environment in pursuits of economic benefits.

This conference is indeed most appropriate to allow all of us from different nations to share and exchange our creative strategies in getting the construction sector back on its feet again. It is therefore necessary for us to seek a path that will provide recovery to construction and take the opportunity to address the Climate Change effects positively. The technology available currently for the implementation of energy efficiency and renewable energy is fully developed in the industry. It is therefore the most opportune time for many nations to deploy all these in the quest of turning the world into more environmentally friendly.

As a nation, regionally, Malaysia has performed reasonably well and contributed substantially to global sustainable stewardship. Under the Environment Protection Index (EPI) Score of year 2008, Malaysia was ranked 26th out of 149 countries. I am proud to mention that Malaysia is ASEAN's top most member country under the EPI Score. However, no matter how proud we are of our current achievements there are still much room for improvements.

At the national level, several policies and directions have been put in placed by the Malaysian Government to reflect the significance of Green Technology and Sustainable Development on the growth of Malaysia. The creation of the Ministry of Energy, Green Technology and Water in 2009 reflects Malaysia's seriousness in creating an economy that would depend on clean, green and sustainable solutions. The formation of this Ministry has led to the establishment National Green Technology policy which is a policy that will provide guidance for businesses and industries in Malaysia to bring positive impact to the nation economic growth.
The National Green Technology Policy is based on four primary pillars of Energy, Environment, Economy and Social perspective. In addition, 5 main objectives underline the policy which are:

- Decreasing growth of energy consumption while enhancing economic development;
- Facilitating growth of the Green Technology industry and enhancing its contribution to the national economy;
- Increasing national capability and capacity for innovation in Green Technology development and enhancing Malaysia's Green Technology competitiveness in the global arena;
- Ensuring sustainable development and conserving the environment for future generations; and
- Enhancing public education and awareness on Green Technology and encouraging its widespread use.

On top of this, the National Green Technology Policy comprises five strategic thrusts which are:

- Strategic Thrust 1, strengthening the institutional frameworks especially among Government Ministries, agencies, private sectors and other stakeholders.
- Strategic Thrust 2 aims to provide a conducive environment for Green Technology Development. This includes the introduction and implementation of innovative economic instruments as well as the establishment of effective fiscal and financial mechanisms to support the growth of green industries. On this note, the Government has officially launched a fund amounting to RM1.5 billion to encourage business investment in green technology, green construction and innovation.
- Strategic Thrust 3 will seek to intensify human capital development by availing training and education programmes and by providing financial packages and incentives for students embarking on green technology related subjects.
- Strategic Thrust 4, of the Green Technology Policy is to Intensify Green Technology Research and Innovation towards commercialisation.
- Strategic Thrust 5, the final thrust is for green technology to move forward banking on strong promotion and public awareness as Green Technology is a new sector for the country and not many people could relate well to this subject.

In Malaysia, the strive for cleaner and healthier environment based on sustainable solution is not being

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confined to Government sector only. It is indeed heartening to say the sustainable movement among Malaysian construction professionals is not new and is driven endogenously by enlightened members. The Green Building Index (GBI), for example was developed and managed for Malaysia by Malaysian Institute of Architects and Association of Consulting Engineers Malaysia. The rating for GBI is based on six criteria, which are:

- Energy Efficiency
- Indoor Environmental Quality
- Sustainable Site Planning and Management
- Materials and Resources
- Water Efficiency
- Innovation

With the use of the GBI, our designers will now have the tool to guide them into selecting more sustainable resources that are renewable or recyclable in the construction of built environment, and are able to utilise energy efficiently. This will help the contractors to install construction materials that are sustainability-effective. The impact of such judicious decisions during design will be felt along the whole life cycle of the project, unlike the impact of the site activities which will be only felt during the construction process.

Another tool that is fast gaining inroads among our local designers is the use of life-cycle analysis. In terms of sustainability, real estate costs, for example, fail to take into account all the social, environmental and economic costs which leads to the inefficient use of resources and extra costs on governments and society, thus leading to a loss of economic productivity. With life-cycle costing being the preferred basis for assessment, a more accurate picture of the total project cost, including cost to environment will be made available. This will help in selecting project alternatives that is more sustainable in the long run.

CIDB Malaysia, being an agency responsible for construction is aware of the importance of sustainability in the full construction value chain. On this note, CIDB has been working to put up Strategic Recommendations to improve environmental practices in Construction Industry.

Among the proposed recommendations are:
- Strengthening the Development Approval process
- Enhancing Law and Enforcement
- Promoting Self-Regulation
- Increasing Capacity and Public Awareness
- Addressing knowledge gaps

Apart from this, CIDB is also taking steps to address sustainable construction and environmental issues which among others include:
- Urging contractors to obtain ISO 9001 certification to enhance the quality.
- Encouraging registration to ISO 14001 for the larger contractors in particular those intending to bid for international projects,
- Encouraging registration to OHSAS18001 to enhance occupational safety and health,
- Promoting the use of more technology-intensive method such as the use of Industrialised Building System,
- Commissioning studies on waste generated by construction sites,
- Incorporating safety and environmental awareness into National Occupancy Skills Standards,
- Undertaking research into the areas affecting sustainability such as:
- Waste minimization and Recycling Potential of Construction Materials,
- Construction Practices for Storm water Management and Soil Erosion Control for the Construction.
- Achieving Sustainability in the Construction Industry via International Environmental Management Systems Standard ISO 14001
- An Assessment of Thermal Comfort and Rainwater Outfall System
- Materials Security And Waste Management For Industrialized Building Systems (IBS): Towards Sustainable Construction
- Quantitative Safety and Health Assessment Model for IBS Construction
- Utilization of waste materials for the production of concrete pedestrian block (CPB)

However, it is on the implementation of Industrialised Building System or IBS that CIDB can be seen clearly playing its role supporting the agenda of sustainable construction. It is without doubt that IBS promises numerous benefits over conventional method such as:
- Lower number of site workers due to simplified construction methods
- Better quality of end products through controlled prefabrication process
- Reduce the consumption of construction material as well as reducing construction waste due to the usage of standardised components and less on-site materials

At this outset, I will need to mention that IBS is not a new concept in Malaysia. It has been introduced on the Malaysian soil since the early 70s. Yet, the market has not fully embraced the concept as seen by the cold response on the

ground. The major contributing factor to this cold response is the availability of cheap foreign labour in our country which is counter-productive to the development of Malaysian construction industry as it simply makes the industry more inefficient and less competitive.

However, in realising the require to change and realising the call to elevate the construction industry to greater height, the Malaysian Government recognised the need to intensify the usage of IBS in the industry. In view of this, the Government has issued a directive in 2008 requiring the minimum content of 70% IBS components in all Government building projects. The issuance of this directive reflects the seriousness of our Government to support the agenda of sustainable development as well moving the industry towards higher productivity in order to achieve a high-income economy in line with a developed nation status by year 2020.

As a result of this directive, for the past two years (2008-2009) a total of 597 government projects amounting to RM16.4 Billion (EUR3.42 Billion) have been implemented using IBS. I strongly believed the amount would keep on increasing for year 2010 based on the RM9 Billion (EUR1.88 Billion) budget allocated by the Government for social and infrastructure project. This huge amount would certainly create growing demand for IBS.

CIDB itself has developed and launched several programmes to lend its support to the Government directive as well as to ensure the readiness of the industry to meet the expected growing demand for IBS. These programmes among others include issuance of standard for IBS components, Listing of IBS Contractors, Suppliers as well as Designers, conduct research and development on matters related to IBS, aggressive promotion and awareness programmes on IBS for industry players, conduct training on IBS for Contractors and Designers, test and accredit IBS Contractors and last but not least publish catalogue on IBS components for reference by industry players.

These are some of CIDB's effort at contributing to more sustainable construction in Malaysia. There is, undoubtedly, many more issues of sustainable construction, some falling within the domain of our responsibility, whilst others are best handle by those who are more well-versed in them.

Those that fall within our jurisdiction includes research into the potential of nanotechnologies for the production of construction materials, identifying alternative source of non-renewable construction materials such as sand, enhancing the potential for the recycling of construction materials, and bringing waste to zero by adopting new and innovative construction techniques.

One area that CIDB can facilitate is achieving dematerialization of the construction value chain by converting it from a linear path of materials to a circular material flow. As it is, CIDB is already undertaking research in the utilization of construction waste material. CIDB is well positioned to provide the construction resources product stewardship and to overseer the sustainability-related obligations of all those involved in the product's life cycle.

The current global financial crisis and economic slowdown last year is the worst that has happened worldwide for the past 80 years. The year 2010 will be a very challenging and demanding period for all of us. As such, inasmuch as we may not like, we have no choice but to accept events as it is and to takes things in our stride. However, for every dark cloud there is a silver lining. The global slowdown provides a breathing space to re-examine the direction, role and impact of the construction industry so that mistakes of the past maybe avoided. It is a timely opportunity for us to move to a new future vision by revolutionising the construction cycle to enable net positive impact not only on environment and ecosystem but also on our economy and society.

In the Global Agenda 2009 was this quote: "We cannot move to a positive future without revolutionizing construction." The construction of built environment has the potent force to change lifestyles. The positive future envisioned in the quotation above is a generation that was not deprived of their rights to the global resources as a result of our excessiveness and greed. This we can achieve only by ensuring not only our construction is sustainable but more importantly one that is able to instil the appropriate lifestyle; a lifestyle that respects the needs of our future generation as much as it respects frugality in our current life.

I believe the decision on green technology and sustainable construction will ultimately engulf us without us making the choice because it is unavoidable and unstoppable. Thus, it is better to embrace it as quickly as possible and benefit from it or risk being perished. It is no more a choice but a necessity.

Finally, I would like to end my speech with a quotation obtained from an article called "The Climax of Humanity" in which the author mentioned that "Demographically and Economically, Our Era is Unique in Human History. Depending on How We Manage in the Next Few Decades, We Could Usher in Environmental Sustainability or COLLAPSE IT". I believed that quote sum up our duty to help and participate in the development of tomorrow's global economy and create better environment for our future generation. ■

CIDB INITIATIVES IN **GREEN** TECHNOLOGY

GREEN CONSTRUCTION TECHNOLOGY : Initiatives by CIDB

1. INTRODUCTION

CIDB is committed in supporting government's aspiration towards sustainable construction by the year 2020. Sustainable development programmes will enable us to balance between the economic growth, improving social well being and environmental protection. One of the main thrust towards sustainable development is sustainable construction. Green building initiative is the current priority in sustainable construction programme.

2. INITIATIVES UNDERTAKEN BY CIDB

2.1 The Formation of Technical Committee On Good Environmental Practices

In 1999 CIDB established Technical Committee on Good Environmental Practices in Construction known as TC 9. This committee comprised of representatives from government agencies, professional bodies, academia and construction related associations. The committee is formed to assist in providing policy directions and recommendations to improve environmental practices in the construction industry.

This committee was further divided into 6 working groups as below:

(i) WG 1 - Strategic Action Plans for GEP in Construction Industry Output : In 2007 - published "Strategic Recommendations for Improving Environmental Practices in Construction Industry"

(ii) WG 2 - Guidelines for Storm water Management - this was incorporated into MASMA (Manual Saliran Mesra Alam)

(iii) WG 3 - Guidelines for Soil Erosion Management

(iv) WG 4 - Guidelines on Good Environmental Practices in Construction

(v) WG 5 - Development of 3-tier Environmental System for Contractors

(vi) WG 6 - Waste Minimization and Recycling Potential for Construction Materials

2.2 Grants for R & D activities CIDB had provided fund for related R&B projects. Among the projects funded are;

(i) 2001 - Waste minimization a recycling potential of non-renewable construction materials (UKM)

(ii) 2004 - Environmental management plan in the contract tender document of construction projects (USM)

(iii) 2004 - Achieving sustainability of the construction industry via international environmental management system standard, ISO 14001 (USM)

(iv) 2006 - Materials security and waste management for IBS: Towards sustainable construction (USM)

(v) 2007 - Bill of Quantities (BQ) for the environmental protection works (EPW) which was adopted by JKR

2.3 Published Guidelines, Standards and Manuals

Related guidelines had also been published as guidelines to the industry;

(i) 2007 - Strategic Recommendations for Improving Environmental Practices in Construction Industry

(ii) 2008 - Guidelines on Construction Waste Management

(iii) 2008 - Construction Industry Good Practices Series – Construction Waste Management

(iv) 2008 - Compilation of Environmental Acts, Laws and Regulations Related to Construction Industry

2.4 Development of Training Module

(i) 2007 - Training module on Good Practices of Waste Management in Construction

2.5 Construction Industry Master Plan (CIMP) Recommendations Related to Green Building

CIMP was launched by the government in late 2006. This blueprint is spearheaded by 7 strategic thrust whereby one of its focus is on issues related to environment i.e. Strategic Thrust 3. There are 2 related strategic recommendations as follows:

(i) Encourage external accreditation in quality and environmental management. Under this recommendation CIDB promotes and encourage contractors to be certified to ISO 14001:2004

(ii) Promote environment-friendly practices. Under this recommendation the industry is proposed to explore in using the so called 'green building materials'

2.6 Industry Consultation

A meeting with the industry players on 11 February 2010 was organised to address several prevalent issues related to green technology in construction industry. This meeting was chaired by CIDB's chairman. Altogether 22 representatives from the industry have attended the meeting.

2.7 Formation of Task Force on Eco Labelling

A taskforce was formed to proposed recommendations in expediting the measures in addressing issues on eco labelling. The first meeting was held on 12 July 2010. The output of this task force is to establish a mechanism and criteria for eco labelling by September 2010.

2.8 Laboratory for Eco Labelling Testing

Construction Research Institute of Malaysia (CREAM) to undertake testing pertaining to eco labelling. This is to facilitate the industry in testing their eco building materials.■

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2.9 Green Construction Performance Assessment

Construction Industry Standard (CIS) on Green Construction Performance Indicator was developed as assessment tool to measure the construction performance related to green building parameters.

2.10 The Malaysian Construction Industry Excellence Awards (MCIEA) – Environmental Best Practices Award

MCIEA is a yearly program organised by CIDB to recognise outstanding contractors or industry players. One of the award category is Environmental Best Practices Award.

The award is to recognise local contractor who has demonstrated efforts in adopting environmental best practices so as to ensure that the level of impacts on the surroundings are minimum.

This category is open to all contractor registered with the CIDB and for local projects that achieved work progress between 25% and 75% is eligible to apply for this Special Award Category.

2.11 GREENBUILD ASIA 2011

GREENBUILD ASIA 2011 Exhibition & Conference will be held at the Putra WorldTrad Centre (PWTC) from 22-24 November 2011. The Exhibitio and conference is expected to showcase the world of sustainable building, design and construction.. The event is expected to attract more than 10,000 delegates and trade buyers across the region for updates on the latest technology and innovation in green homes and buildings. It will also features the latest building design, materials, construction equipment and interiors.

More than a tradeshow, GREENBUILD ASIA 2011 is an integrated event encompassing

- An International Exhibition
- A Top Level Green Building Industry Summit
- In-depth Technology Symposiums
- Eco-Homes Showcase
- Best-At-Show Awards
- Made-In-Malaysia Showcase

3. CONCLUSION

The launching of Green Technology Policy by our Honourable Prime Minister in 2009 reflects the seriousness of Malaysian Government towards the subject. Since then, Green Technology has drawn great attention from the key players in the construction industry. In the context of construction, CIDB has started to embark in green building since 1999 and will continue to support the aspiration of the government on green building by focusing its efforts towards improving the professionalism, innovation and adoption of new green technologies.

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CODE OF ETHICS FOR CONTRACTORS : **Principle 6**
IMPORTANCE OF ENVIRONMENTAL PRESERVATION

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Introduction

All the players in the construction industry have a responsibility to ensure that the environment is not damaged during construction activities. The players would include the Clients, Technical/ Environmental Consultants, Building Materials and Machinery & Equipment suppliers and the Contractors [including Sub-Contractors]. It is regrettable that the Contractors are the ones who are perceived to be mainly responsible for damaging the environment that may happen in the implementation of any Construction Project ['Project']. This wrong perception could be due to the physical presence of the Contractor at the work site that is most visible to the general public and could be deemed to be the face of any Project.

This article refers to 'Principle 6 Importance of Environmental Preservation' which is one of the six Principles include in the Code of Ethics [Code] that was issued by the Construction Industry Development Board [CIDB]. All the articles on the six 'Principles' included in the Code are or will be available on the BINA Integriti published by CIDB and also on their website www.cidb.gov.my.

Role of Government Agencies - Environmental Impact Assessment [EIA]

Malaysian Government has mandated the preparation of an EIA under Section 34A of the Environmental Quality Act, 1974. EIA is a study to identify, predict, evaluate and communicate information about the impacts on the environment of a proposed project and to detail out the mitigating measures prior to project approval and implementation. EIA is essentially a planning mechanism for preventing environmental problems due to an action. It ensures that the potential problems are foreseen and addressed at an early stage in the project planning and design. Thus this will avoid costly mistakes in project implementation, either because of the environmental damages that are likely to arise during project implementation, or because of modifications that may be required subsequently in order to make the action environmentally acceptable. EIA when integrated into the existing planning and decision-making structure provides additional information towards a better decision-making.

In addition Government has also issued several Guidelines on various aspects concerning the implementation of any Project have also been issued for which the Department of Environment [DOE] is made responsible. An EIA Study has to be conducted by competent individuals who are registered with the Department of Environment under the EIA Consultant Registration Scheme. A Handbook of Environmental Impact Assessment Guidelines and EIA Guidelines for specific activities published by the Department of Environment and other relevant guidelines published by other agencies. Clients and Contractors should refer to the latest Guidelines.

Local Authorities have mandated the Contractors to ensure that construction site is cleared from materials after the works are completed. Some of the materials may be recyclable and used again whereas the materials that are not useable may be deemed to be rubbish and has to be removed and disposed in manner that is safe and as approved by the relevant Local Authorities. The same would be applicable to electronic items that may contain mercury that can damage the underground water resources. Contractors must take appropriate measures for their disposal in approved manners as prescribed by the relevant authorities and ensure prevention of damage to the environment.

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Responsibilities of 'Clients' and 'Environmental Consultants'

The primary responsibility for preparation of any 'EIA' report is vested with the 'Client' and the appointed registered 'Environmental Consultant' who undertakes the preparation of the prescribed 'EIA' report which needs to be approved by the 'DOE'. The commencement of any physical construction can only be done after the 'EIA' has been approved by the relevant Authorities.

There are cases where Clients have instructed Contractors to commence implementation of Projects prior to the completion of the EIA and receipt of the mandated approval from the DOE. The Clients are prepared to take the risk of having to pay financial penalties as the quantum of penalties normally imposed could be a fraction of losses suffered for the delays in receipt of the EIA report and the DOE approvals and the quantum of profits to be derived. Contractors should give due notice to the Client and their appointed Consultants that any losses incurred would be borne by the Clients in the event of any direction to disregard compliance with EIA.

Responsibilities of Contractors

It is important that every Contractor undertakes comprehensive studies of the requirements of the approved EIA and ascertains the financial implications of compliance to the prescribed conditions. The financial implication should be incorporated in the building of the construction cost in the bid amount prior to submission of the tender. The Contractor should inform the 'Client' if the costs of compliance with the prescribed requirements of the 'EIA' report cannot be estimated/ascertained with any reasonable accuracy. 'Contractors' should request for additional financial provision in the contract costs proposals.

Contractors are mandated by Local Authorities to ensure that construction site is cleared of all materials after the works are completed. However some of the materials may be deemed rubbish which can be either biodegradable such as wood based and can be easily absorbed in the earth whereas others that may exist for centuries or even millenniums such as those made from oil based items like plastics and styrofoam that is in common use. The same would be applicable to electronic items that may contain mercury that can damage the underground water resources. Contractors must take appropriate measures for their disposal in approved manners as prescribed by the relevant Authorities and ensure prevention of damage to the environment. Excess materials that are reusable should be recycled.

Contractors should also ensure that the works implementation method should be environment friendly. Examples of this would include usage of recyclable items such as sheet piling, scaffolding, using clean fuels or bio-fuels for their machineries and equipment. Further new building materials invented through research are being introduced to the construction industry. Architects and Engineers should specify these new environment friendly building materials such as palm oil based fuels and bricks that include padi husk in their composition. Clients, Technical Consultants and Contractors should always be on the lookout for new environment friendly building materials that are introduced during relevant exhibitions.

Relevant Authorities should provide the necessary approvals and incentives for their adoption as the initial cost of these environmental friendly building materials for which the costs are generally higher than the established materials.

The Contractors can be the victims in the event of works that are subsequently subject to a Stop Order by DOE or other relevant Authorities. The suspension of works can result in substantial financial losses for the Contractors. It is important that the Contractors protect themselves and safeguard their interests by ensuring the inclusion of suitable clauses in the Terms and Conditions of Contract to ensure recovery of direct and indirect losses that may be suffered due to stoppage of any works for which the Contractors are not responsible.

It is important that Contractors maintain comprehensive documentation relevant to all correspondence in connection with environment aspects. The documentation will assist to safeguard the interest of the Contractors in the event of any action by relevant Authorities or Clients for any offences that may arise from non-compliance with environmental aspects.

All Contractors are required to have a comprehensive CEMP (Construction Environment Management Plan). The objective is to ensure that all known, expected and unknown or hidden risks are covered and mitigating measures are taken to avoid and prevent any untoward damages. The aspects covered would include, among others, those listed above under 'Types of Environmental Damage'. Samples of comprehensive CEMP are available on the internet (17 Construction Environmental Management Plan).

Types of Environmental Damage

The types of environmental damage that may be attributed to the Contractors would generally include the following:

[a] Land slides and earth slips on slopes due to cutting of vegetation / trees or other reasons;

[b] Damage to water resources through siltation of rivers, lakes, waterfalls, underground water sources, etc;

c] Flood situations due to damaged drainage systems from poor design/quality of construction;

[d] Health hazards due to stagnant water at construction sites and indiscriminate disposal of construction debris and other excesses;

[e] Wasteful implementation methods of building materials; and

[f] New environmental techniques and technologies, such as on- and off-site decontamination, specialized toxic substance treatments, and groundwater contamination.

Recommendations and Conclusion

Construction Industry players have a opportunity to re-build the 'Projects' the right way with sustainable materials and socially sensitive designs that protect air, water, land, and human resource. Green buildings program established by the Governments similar to the most developed and developing countries have triggered a boom in

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building green infrastructure works, it is believed that it will give the green light to sweeping reforms in the way projects are implementation.

None of the construction industry players especially Clients, Contractors and Technical Professionals, can ignore the importance of the environmental movement. The environment aspects would also include the type and usage of building materials and the implementation methodology that would prevent degradation and ensure sustainability of the environment. The Government and relevant Authorities must provide the necessary incentives to those involved.

As an example the first step in the case of roads/ highway works is to figure out how to reduce the millions of tons of virgin aggregate materials that is procured through destruction of hills every year. The usage of recycled materials should be encouraged by giving of incentives and increased progressively. Construction of highway/road works, including their subsequent periodical maintenance, can increase the use of recycled asphalt.

The present method of estimating the cost of Projects not reflect the environmental damage in procuring the building materials such as sand, granite, wood, bricks, steel, etc, does not take into account environmental costs including air pollution and its associated health care costs, hazardous waste generation, greenhouse gas emissions and other environmental impacts. Cost of Projects' should not be viewed with blinkers on but with the direct and indirect impact on not only the surroundings but also on the methods used to procure the building materials or manufacture of equipment and machinery installed or used in the implementation of any Project.

Research and development of better ways to implement construction Projects is the responsibility of the technical/other relevant professionals and researchers and is only half the battle. The other half is education and outreach to developers, contractors, and engineering students. The first green Projects will probably start with small Projects as developers can see the benefits of environmentally friendly Projects or green building construction but as the benefits and cost-savings begin to be realized on a bigger scale it is believed that environmentally friendly Projects will become the norm and standard.■

KURSUS INTEGRITI KONTRAKTOR

Setiap peserta diberi *10 mata CCD

Jadual Kursus bagi tahun 2010 adalah seperti yang dipapar di bawah ini. Jadual juga boleh dimuat-turun daripada laman web CIDB atau dirujuk daripada Pejabat CIDB Negeri/Cawangan. Bagi pertanyaan mengenai Kursus Integriti Kontraktor, anda boleh menghubungi mana-mana Pejabat CIDB

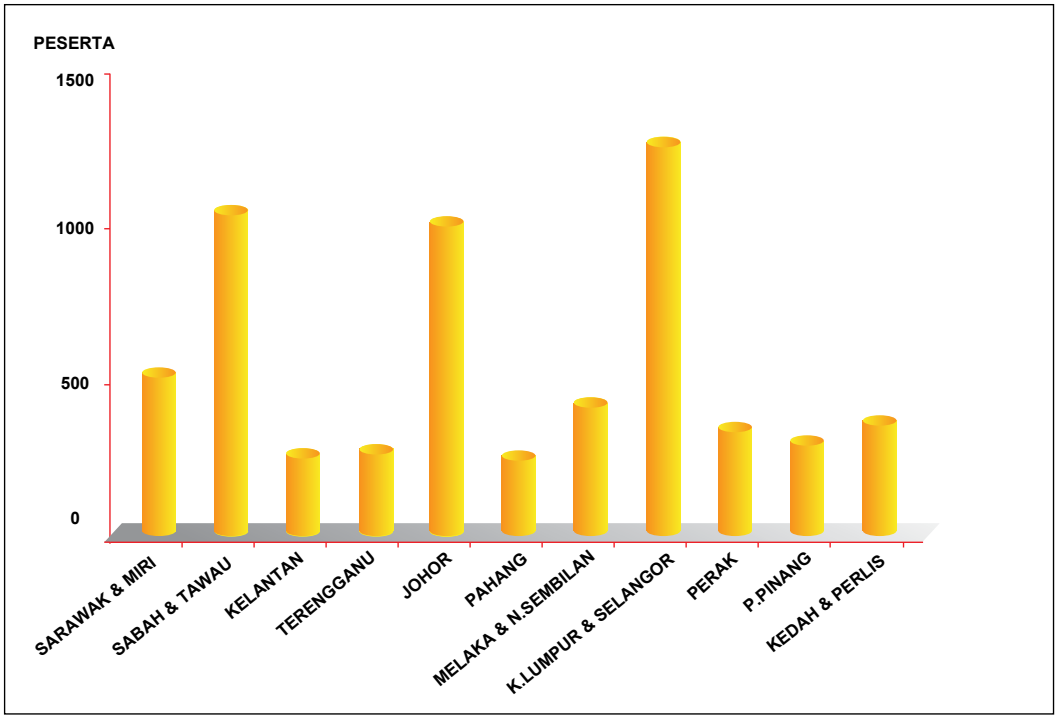
KALENDAR KURSUS INTEGRITI KONTRAKTOR SELURUH NEGARA SEPANJANG JANUARI - DISEMBER 2010

NEGERI / BULAN	JAN	FEB	MAC	APR	MEI	JUN	JUL	OGOS	SEPT	OKT	NOV	DIS
KEDAH /PERLIS			9hb-Selasa	29hb-Khamis	2hb	15hb-Selasa			14hb-Selasa			7hb-Selasa
PULAU PINANG	28hb-Khamis		23hb-Selasa		13hb-Khamis	17hb-Khamis	15hb-Khamis	5hb-Khamis	22hb-Rabu	20hb-Rabu	11hb-Khamis	9hb-Khamis
PERAK	20hb-Rabu	23hb-Selasa	17hb-Rabu	20hb-Selasa		23hb-Rabu			29hb-Rabu		11hb-Khamis	
K.LUMPUR /SELANGOR	14hb-Khamis	4hb-Khamis	11hb-Khamis	8hb-Khamis	6hb-khamis	10hb-Khamis	8hb-Khamis	5hb-Khamis	23hb-Khamis	14hb-Khamis	4hb-Khamis	9hb-Khamis
	21hb-Khamis	11hb-Khamis	18hb-Khamis	22hb-Khamis	13hb-Khamis	17hb-Khamis	22hb-Khamis			21hb-Khamis	11hb-Khamis	23hb-Khamis
	28hb-Khamis	18hb-Khamis	25hb-Khamis	29hb-Khamis	20hb-Khamis	24hb-Khamis	29hb-Khamis		30hb-Khamis	28hb-Khamis	25hb-Khamis	30hb-Khamis
MELAKA/ NEGERI SEMBILAN	13hb-Rabu	24hb-Rabu	24hb-Rabu	21hb-Rabu	26hb-Rabu	16hb-Rabu	21hb-Rabu			13hb-Rabu	10hb-Rabu	15hb-Rabu
	27hb-Rabu											
PAHANG	11hb-Isnin			14hb-Rabu						28hb-Khamis	25hb-Khamis	
JOHOR	28hb-Khamis	24hb-Rabu	25hb-Khamis	29hb-Khamis	10hb-Isnin	24hb-Khamis	29hb-Khamis	5hb-Khamis	30hb-Khamis	28hb-Khamis	25hb-Khamis	
					12hb-Rabu							
					26hb-Rabu							
KELANTAN		15hb-Isnin			17hb-Isnin		19hb-Isnin			11hb-Isnin	11hb-Khamis	20hb-Isnin
TERENGGANU	13hb-Rabu	10hb-Rabu	10hb-Rabu	27hb-Selasa	12hb-Rabu	9hb-Rabu	14hb-Rabu		29hb-Rabu	13hb-Rabu	13hb	
SABAH	27hb-Rabu	24hb-Rabu	29hb-Isnin	28hb-Rabu	26hb-Rabu	22hb-Selasa	27hb-Selasa		28hb-Selasa	27hb-Rabu	27hb	21hb-Selasa
	28hb-Khamis	25hb-Khamis	30hb-Selasa	29hb-Khamis	27hb-Khamis	23hb-Rabu	28hb-Rabu		29hb-Rabu	28hb-Khamis	28hb	22hb-Rabu
SARAWAK	28hb-Khamis	24hb-Rabu	25hb-Khamis	20hb-Selasa	26hb-Rabu	24hb-Khamis	27hb-Selasa	5hb-Khamis	29hb-Rabu	26hb-Selasa	26hb	30hb-Khamis
TAWAU	6hb-Selasa				26hb-Rabu		28hb-Rabu		29hb-Rabu			1hb-Rabu
	7hb-Rabu						29hb-Khamis					
MIRI		18hb-Khamis			25hb-Selasa				29hb-Rabu			15hb-Rabu

RAMADAN (11hb Ogos-9hb Sept)

*Tertakluk Kepada Pindaan & Perubahan

STATISTIK PESERTA KURSUS INTEGRITI JAN - SEPT 2010



HASIL KARYA ANDA DIPERLUKAN!

Panggilan Menyumbang Hasil Karya Ke Dalam Bina Integriti

Orang awam / wakil organisasi / badan kerajaan / badan korporat / badan bukan kerajaan / ahli akademik / pelajar / individu dll dijemput bagi menghantar hasil karya untuk disiarkan di dalam BINA Integriti.

Hasil karya boleh berbentuk penulisan atau ilustrasi dan hendaklah asli.

Hasil karya juga hendaklah menyentuh aspek-aspek nilai, sikap, etika dan integriti. Keutamaan diberikan kepada hasil karya yang memberi fokus kepada industri pembinaan.

Hasil karya bolehlah ditulis di dalam bahasa Malaysia atau bahasa Inggeris.

Terma Rujukan Penulis Luar

Untuk memahami terma dan syarat bagi menyumbang hasil karya, sila layari laman web CIDB. www.cidb.gov.my

BAGAIMANA MENGHANTAR KARYA ANDA?

Hasil karya bolehlah dihantar terus kepada binaintegriti@cidb.gov.my dalam bentuk soft-copy.

RESPECT

Respect, like courtesy, do not cost anything, but showing respect to all those around us makes the environment more cordial.

However, respect must be earned and not expected or demanded. It is better to be respected than feared. Yet being respectful seems to be diminishing trait.

We must be respectful to our elders, to our seniors, to our colleagues and friends. We should also respect other people's feelings, opinions and decisions, although we may not entirely agree with them.

More important we must respect other people's religions, customs, cultures, etc which is imperative for a peaceful society and a united nation.

How to Promote & Practice:

- Show respect to our elders, our peers and all other individuals.
- All human beings have self respect, so never look down on anyone, as it will only cause resentment and non-cooperation, and even sabotage.
- As mentioned, we do not lose anything if we show respect, on the contrary we gain respect by doing so.

Excerpted from 'Promoting & Practising Universal Values and Good Work Ethic' Published By international Trade & Industry Committee Associated Chinese Chambers of Commerce & Industry Malaysia (ACCIM). This handbook is circulated to ACCIM members.

SEMINAR KESEDARAN INTEGRITI KONTRAKTOR PERINGKAT NEGERI SARAWAK

Oleh : Nur Faeeza Hamdan Fadel, Bahagian Pembangunan Kontraktor, CIDB Malaysia

Bagi meningkatkan kefahaman penggiat industri pembinaan terhadap kepentingan pembudayaan integriti di dalam rantaian nilai industri pembinaan, CIDB giat menganjurkan program-program kesedaran yang mensasarkan para kontraktor binaan tanahair. Pada 28 Julai 2010 telah berlangsung Seminar Integriti peringkat negeri Sarawak di Hotel Grand Margaritha yang terletak di bandar Kuching, Sarawak. Seminar ini merupakan siri pertama seminar anjuran CIDB peringkat negeri bagi tahun 2010 yang dianjurkan di peringkat negeri. 280 peserta yang majoritinya merupakan kontraktor binaan telah menghadiri seminar ini dengan jayanya. Objektif utama seminar ini dilaksanakan adalah bagi meningkatkan kesedaran peserta terhadap peri pentingnya pembudayaan integriti di dalam perlaksanaan projek.

Seminar ini telah menampilkan empat penceramah daripada latar belakang dan kepakaran yang berbeza bersesuaian dengan topik pembentangan masing-masing. Prof. Dr Khairuddin Abdul Rashid pensyarah Universiti Islam Antarabangsa Malaysia telah memulakan sesi seminar dengan kertas kerja yang yang menarik bertajuk Developing a Construction Industry-Specific "Ethical Infrastruture". Pada akhir pembentangannya, beliau menyarankan agar satu rangka kerja pemantapan integriti yang komprehensif dengan nama 'infrastruktur etika' diwujudkan di dalam industri pembinaan. Menurut beliau, berbanding dengan pelbagai inisiatif pemantapan etika dan integriti sedia ada yang memfokuskan profesyen atau organisasi tertentu di dalam industri pembinaan, 'Infrastruktur etika' yang dicadangkan adalah satu rangka kerja pemantapan integriti dan etika yang diselaraskan di antara keseluruhan penggiat industri merentasi kesemua penggiat industri termasuk profesional dan bukan profesional.

Kertas kerja kedua disampaikan oleh Penolong Kanan Penguasa Suruhanjaya Pencegahan Rasuah Malaysia (SPRM) Negeri Sarawak, PkPs Mohd Zaini Bin Hassan. Pembentangan beliau telah membuka mata peserta tentang senario sebenar permasalahan rasuah yang berlaku di dalam sektor pembinaan tanahair. Beliau mengupas jenis-jenis masalah rasuah yang pernah yang telah ditangani oleh SPRM. Beliau juga menegaskan bahawa jenayah rasuah bukan sahaja amat merugikan kerana pembaziran kos terhadap kos rasuah, namun, rasuah di dalam sektor pembinaan juga mengundang bahaya apabila kualiti pembinaan dikompromikan.

Wakil daripada Sarawak Housing and Real Estate Developers Authority (SHEDA), Dr. John Panil pula berkongsi pandangan mengenai isu-isu etika dan integriti di dalam industri pembinaan daripada persepktif SHEDA. Merujuk kepada prinsip-prinsip yang terkandung di dalam Kod Etika Kontraktor, Dr. Panil memberi contoh isu-isu permasalahan etika yang kebiasaannya berlaku di dalam industri pembinaan yang dikenalpasti menyalahi prinsip-prinsip tersebut.

Sesi seminar ditamatkan dengan pembentangan daripada Majlis Amanah Rakyat negeri Sarawak, Encik Bisnu bin Hj Majnis dengan tajuk 'Integriti Dalam Pembangunan Usahawan'. Pembentangan beliau secara santai dan bersahaja berjaya menggamatkan dewan seminar dengan kupasan takrifan integriti dan keberkaitannya dengan amalan perniagaan dan keusahawanan.

Bagi menyuntik motivasi para peserta untuk terus melibatkan diri di dalam program-program kesedaran ajuran CIDB, kesemua peserta telah dianugerahkan sijil kehadiran yang menyumbang 4 mata CCD. Penganjuran siri seminar seperti ini akan terus dianjurkan oleh CIDB dari masa ke semasa di dalam usaha untuk mempertingkatkan kesedaran kesemua penggiat industri pembinaan khususnya para kontraktor terhadap kepentingan integriti. ■

STANDARD ISO UNTUK MENGURANGKAN KESAN BANGUNAN KEPADA ALAM SEKITAR

Oleh: **Mohana Priya**
Persatuan Pengguna-Pengguna Standard Malaysia

Organisasi Standardisasi Antarabangsa (ISO) telah memperkenalkan standard ISO baru 21931-1:2010 yang bertujuan untuk meningkatkan prestasi bangunan kepada alam sekitar dengan menyediakan rangka kerja antarabangsa yang dipersetujui. Rangka kerja tersebut adalah mengenai kaedah yang digunakan dalam menilai penjagaan mereka terhadap alam sekitar.

Dalam kitaran seharian, bangunan-bangunan ini menyerap pelbagai sumber dan menyumbang kepada transformasi persekitaran. Akibatnya, pembinaan bangunan-bangunan ini juga memberikan kesan terhadap alam sekitar. Untuk mengukur dan memahami kesan ini, kaedah penilaian digunakan untuk menentukan prestasi bangunan ini terhadap alam sekitar.

Apakah yang dirangkumi oleh kaedah ini dan bagaimanakah sektor pembinaan bangunan dapat memastikan dengan tepat bahawa penilaian yang dibuat adalah konsisten?

Rangka kerja yang diterangkan di dalam ISO 21931-1:2010, Sustainability in building construction-Framework for methods of assessment of the environment performance of construction works-Part 1: Buldings, mengenal pasti dan menerangkan isu-isu yang perlu dipertimbangkan dalam sesuatu pembangunan dan kaedah penilaian bangunan terhadap alam sekitar bagi bangunan- bangunan yang baru dan lama.

Penilaian seperti berikut boleh digunakan untuk memantau perkembangan sektor ini ke arah lestari .

"Sektor pembinaan bangunan dikatakan membebaskan 40% karbon secara global, dan menggunakan 40% daripada sumber alam dan 40% sisa buangan dan sampah dihasilkan di seluruh dunia," kata Jacques Lair, ketua jawatankuasa kecil yang bertanggungjawab mengembangkan standard. "ISO 21931-1 merupakan

langkah penting untuk mengurangkan kesan bangunan terhadap persekitaran dan mencapai kesinambungan lestari yang sebenar dalam pembinaan bangunan."

Standard baru ini juga bertujuan untuk mengurangkan jurang antara kaedah-kaedah yang digunakan di peringkat serantau dan nasional dengan memberikan rangka kerja umum untuk mendapatkan pandangan mereka. Ini diaplikasikan di semua tahap projek pembinaan, perekaan sehingga pembinaan, operasi, penyelenggaraan, pembaikan dan perobohan bangunan . Ini adalah untuk memastikan bahawa proses ini juga adalah mesra alam.

Edisi pertama ISO 21931-1 membatalkan dan menggantikan ISO spesifikasi teknikal ISO/ TS 21031-1:2006.

Sumber: www.konsumerkini.net.my
Bagi maklumat lanjut, sila hubungi KonsumerKINI di alamat emel editor@konsumerkini.net.my ■

WHAT'S IN THE NAME 'BINA INTEGRITI'

BINA

Reflects the construction industry in Malaysia

INTEGRITI

Refects the objective of the publication that emphasises a knowledge sharing platform for the integity program, that is geared towards nurturing a new work culture that's centered on "integrity" amongst the construction community. It also reflects CIDB's contribution towards reinforcing the value of intergrity in the Construction Industry.

CIDB MALAYSIA
MEMBINA KEJAYAAN ANDA

PEJABAT CIDB NEGERI

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81200 Johor Bahru,Johor
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Kompleks Perniagaan Asas Jaya,
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CIDB PAHANG
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CIDB MELAKA
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CIDB PERAK
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CIDB KELANTAN
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Jalan Tunku Petra Semerak,
15000 Kota Bharu,Kelantan
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CIDB TERENGGANU
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CIDB SARAWAK (Cawangan Miri)
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Tel: 085-417 431 Fax: 085-417 432

CIDB NEGERI SABAH (CAWANGAN TAWAU)
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91009 Tawau, Sabah.
Tel: 089-777 841/842
Fax: 089-777 840

IKRAR INTEGRITI MALAYSIA

Kami, Rakyat Malaysia Merdeka, Berwawasan dan Berdaulat, Dengan Tulus dan Suci Hati, Berikrar, Memantap dan Memperkukuhkan, Maruah dan Integriti Kami, Keluarga dan Masyarakat, Agama, Bangsa dan Negara Kami. Ke Arah Itu Kami Akan :

- Mematuhi Sepenuhnya Perlembagaan Persekutuan, Undang-undang dan Peraturan Semasa;
- Mematuhi dan Mengamalkan Prinsip-Prinsip Rukun Negara;
- Sentiasa Berusaha Memupuk dan Mengamalkan Nilai-nilai Murni, Etika dan Integriti;
- Bekerjasama Sepenuhnya Dengan Mana-mana Pihak untuk Mencegah Sebarang Perlakuan Jenayah, Salah Laku Dan Perbuatan Tidak Berintegriti;
- Bertindak Tegas Terhadap Mereka Yang Melanggar Undang-undang Dan Peraturan
- Bertindak Tegas Terhadap Mereka Yang Cuba Menggugat Integriti, Imej Masyarakat dan Negara;
- Secara Kolektif dan Berterusan Membudayakan Integriti Masyarakat Malaysia

Sumber : Pelan Intergriti Nasional

GREENBUILD ASIA 2011

INTERNATIONAL EXHIBITION & CONFERENCE ON SUSTAINABLE BUILDING, DESIGN & CONSTRUCTION

22-24 NOVEMBER 2011 • PUTRA WORLD TRADE CENTRE, KUALA LUMPUR

10 August 2010

Dear Industry Professional,

RE: GREENBUILD ASIA 2011 – ASIA'S INTERNATIONAL EXHIBITION & CONFERENCE ON SUSTAINABLE BUILDING, DESIGN & CONSTRUCTION

I am pleased to inform you that the Construction Industry Development Board, Malaysia will host the Region's Premiere Exhibition and Conference on Sustainable Building, Construction and Design - **GreenBuild Asia 2011** at the Putra World Trade Center, Kuala Lumpur from 22-24 November 2010. Attached is your copy of the Show Brochure for your information.

GreenBuild Asia 2011 will welcome over 10,000 delegates and trade visitors from the region representing architects, interior design firms, builders, contractors, decorators, property developers, manufacturers, suppliers, agents & traders, government department, importers and exporters. The Exhibition, covering 10,000 sqm, will showcase green residential, commercial and industrial properties, consultancies, construction equipment and building material and technology.

Themed "Green Solution For Sustainable Building, Design And Construction", GreenBuild Asia 2011 is the regional platform for the industry to get update on the latest trends and technology in the constructions and developers.

It is my pleasure to invite your organization to participate in this event, which I am confident, will generate important business opportunities and contacts. Kindly fill in and fax the reply for to +603 4045 4989 or email rina@ambexpo.com or miza@ambexpo.com to benefit from GreenBuild Asia 2011 today.

Yours sincerely,

Tan Sri Dato' Dr.Ahmad Mustaffa Babjee
President, AMB Exhibitions Sdn.Bhd/
Secretariat, GREENBUILD ASIA 2011

Hosted by

CIDB MALAYSIA
Construction Industry Development Board

Organised & managed by :

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REPLY FORM

✓ **YES, I would like to benefit from GreenBuild Asia 2011**

- ❑ Please send me a proposal for _____ square meter (min. 9 sq.m.)
- ❑ Please contact me earliest possible.

Name: _____ Designation: _____

Company: _____

Address: _____

_____ Country: _____

Tel: _____ Fax: _____ E-mail: _____

PLEASE COMPLETE AND FAX TO: (603) 4045 4989

www.greenbuildasia.org