

**Construction Industry Council**

**Committee on Environment and Technology**

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Meeting No. 001/14 of the Committee on Environment and Technology for 2014 was held on 16 January 2014 (Thursday) at 2:30 pm at CIC Headquarters, 15/F, Allied Kajima Building, 138 Gloucester Road, Wanchai, Hong Kong.

Present:	Kevin POOLE	(KP)	Chairman
	Robert LAM	(RL)	
	Christopher LEUNG	(CL)	
	Sze-chun WONG	(SCW)	
	Choi-kai AU	(CKA)	Director of Buildings
	Chung-leung WONG	(CLW <sub>o</sub> )	Development Bureau
	Clarence FUNG	(CF)	Hong Kong Housing Authority
	Sam-choi CHAN	(SCC)	Construction Site Workers General Union
	Ringo YU	(RY)	Hong Kong Construction Association
	Ping-wai CHOW	(PWC)	Hong Kong Construction Industry Employees General Union
	Pun-hing HO	(PHH)	The Hong Kong Federation of Electrical and Mechanical Contractors
In Attendance:	Joe FONG	(JF)	Environmental Protection Department
	Ka-chun MAK	(KMK)	Architectural Services Department
	Sek-cheung WONG		Electrical and Mechanical Services Department
	Patrick Lau		Chairman of the Hong Kong Rebar Importers & Stockists Association (HKRISA)
	Joseph Gilfeather		Consultant of HKRISA
	Frank Munoz		Representative of HKRISA
	C. S. Chan		Representative of HKRISA
	William Ko		Representative of HKRISA
	Eric Lee		Representative of HKRISA
	Peng-kun Leung		Representative of HKRISA
	Gary Wong		Representative of HKRISA
	Samanta Pong		Representative of HKRISA
	Daniel Pong		Representative of HKRISA
	Priscilla Wong		Hong Kong Green Building Council
	Ivan WONG	(IW)	Senior Manager - Council Services 2
	Julian LEE	(JL)	Manager - Research

	Belle HO	(CYH)	Manager - Council Services 5
Apologies:	Anthony CHAN	(AnC)	
	Siu-hung CHAN	(SHC)	
	Hau-wai CHEUNG	(HWC)	
	Reuben CHU	(RC)	
	James KWAN	(JK)	
	Thomas NG	(TN)	The University of Hong Kong
	James PONG	(JP)	Hong Kong Institute of Surveyors
	Kenneth POON	(KPN)	Hong Kong Institute of Surveyors
	Connie YEUNG	(CY)	Hong Kong Housing Authority
	Ada FUNG	(AF)	Hong Kong Housing Authority (represented by Clarence Fung)
	Chuen-fai WONG	(CFW)	Environmental Protection Department (represented by Mr. Joe FONG)
	Wai-wah HO	(WWH)	Chair of TF-RSS
	Simon WONG	(SW)	Chair of TF-RFID
	Harry LAI	(HLA)	Electrical and Mechanical Services Department (represented by Mr. S C Wong)

## **PROGRESS REPORT**

### **Action**

#### **1.1 Confirmation of the Progress Report of the Previous Meeting**

Members took note of Paper CIC/ENT/R/004/13 and confirmed the progress report of the last meeting held on Wednesday, 2 October 2013 at CIC Headquarters, 15/F, Allied Kajima Building, 138 Gloucester Road, Wanchai, Hong Kong.

#### **1.2 Matters Arising from the Previous meeting**

##### **1.2.1 Suggestions from the Construction Industry Group**

Item 4.4 of the Previous Progress Report – A reply letter was sent to the Construction Industry Group.

#### **1.3 Testing Guidelines for Steel Reinforcement**

Members took note of Paper CIC/ENT/P/001/14.

Mr. Munoz, representative of Hong Kong Rebar Importers &

Action

Stockists Association which set up in 1989 by the major rebar importers in Hong Kong, gave a presentation regarding the background and difficulties encountered with the current testing regime for steel reinforcement in Hong Kong.

Hong Kong imports about 1 – 1.5 million tons of rebars in the past few years. The concern of the Association was as follows:

- On-site testing by end user - The steel reinforcement could sit on site for a minimum of 10 days without being utilised due to testing requirements.
- Rebar Processing on-site - The on-site processing of rebar is slow, inefficient, of inconsistent quality, generates more wastage (as much as 7% - 10%), and increases the risk of on-site accidents.

The possible solutions proposed by the Association were:

- Sampling of steel reinforcement off-site (witnessed by an independent third party) and tested by an accredited laboratory, which would then be delivered to the site or processing yard under a traceable labelling system
- Cut & bend reinforcement steel in an off-site processing facility.

A Member commented that there was a land shortage in Hong Kong and enquired about the required size of a cut and bend factory. Mr. Munoz said the minimum size would be 6,000 m<sup>2</sup> and a site area of 15,000m<sup>2</sup> site could process about 60,000 ton per year.

CKA said that they need some time to study the proposal in detail. His preliminary view was that the proposals must comply with the requirements under the Buildings Ordinance (Cap 123). If testing was conducted off-site on the stock yard, it must be witnessed by a third party who should be the Registered Structural Engineer (RSE), or a Technically Competent Person (TCP) under the RSE stream, appointed by the site owner for the project which would use the steel reinforcement being tested for the construction works on the site. For the cutting and bending of reinforcement steel in an off-site processing facility, as this operation was part of the building works for the project which would use such reinforcement steel, the cutting and bending must comply with the

Action

approved plans and the supervision requirements for the subject project under the Buildings Ordinance. The present proposals did not address how these statutory requirements could be complied with.

A Member said that the contractor would be concerned that the rebar to be purchased must comply with the requirements of the Buildings Ordinance. Another Member raised the concern of traceability of the rebar delivered to the site after being tested offsite.

The Chairman concluded that the statutory requirements had to be observed to ensure quality of the works. The Association agreed to reconsider the process for complying with the statutory requirements. As the way forward, the Association proposed to approach the Buildings Department directly as the proposed change involved statutory process. The Association could keep CIC updated on the matter such that the CIC could consider if any follow up on this issue would be necessary.

*[Prof. S. C. Wong left at this juncture.]*

**1.4 Briefing on Findings of HKGBC and BEC Joint Working Group on Construction and Demolition Waste**

Ir Pricilla Wong of Hong Kong Green Building Council (HKGBC) gave a presentation on the Construction and Demolition (C&D) Waste Report prepared by the HKGBC and BEC Joint Working Group.

C&D waste accounted for 25% of the total waste disposed at the landfills, of which most could be averted. The targets by 2020 set by the Joint Working Group were: 95% of all C&D waste would be recovered for re-use or recycling including reclamation and 20% of inert materials would be recycled as secondary construction materials excluding reclamation.

Major recommendations proposed by the working group included the followings:

- Develop an Information Sharing Platform
- Open up more innovative pipelines to reduce or prevent waste at-source
- Conduct further study on ascertaining green properties of recycled construction products

Action

- Refine the mechanism of prescribed conditions and credit awarding of BEAM Plus
- Encourage the use of BIM
- Promulgate Waste Management Plans along with a sophisticated Waste Reporting System
- Develop a Waste Index
- Promote Selective Demolition
- Investigate more potential uses of substitutes of wood (or recycled wood)

The Chairman thanked Ir Wong for the presentation and agreed that the use of BIM which CIC was promoting could help reduce waste at the beginning.

1.5 **Task Force on River Sand Substitutes Research**

Members received a brief report by IW on Paper CIC/ENT/P/002/14.

The study objectives of River Sand Substitutes for Concrete Production and Cement Sand Mortar Production (Phase Two) were as follows:

- i. To draft a local construction standard on aggregates for mortar based on existing standards in Europe, UK and China;
- ii. To study the effects of fines content on concrete to determine the optimum and allowable fines contents so as to draft general guidelines for fine aggregate for concrete;
- iii. To study the effects of fines content on various types of mortar to determine the optimum and allowable fines contents so as to draft a set of specifications for aggregate for different types of mortar and a set of requirements for classification of manufactured sand;
- iv. To study the feasibility of crushing and processing waste glass for recycling as aggregate for mortar; and
- v. To study the feasibility of crushing and processing old concrete for recycling as aggregate for concrete and mortar.

The Buildings Department would be included as one of the consultation parties.

## 1.6 Working Group on Roadmap for BIM Implementation

Members received a brief report by IW on Paper CIC/ENT/P/003/14.

The following issues were highlighted:

- The tender for consultancy service to carry out the preparation of BIM standards (Phase One) would be finalised as soon as possible.
- The promotion activities for BIM were listed in Annex B of the Paper.
- Capacity of BIM Professionals - The Secretariat was working with HKIBIM and training institutes in setting out a framework for registration of BIM professionals and accreditation of relevant BIM training courses.

Regarding the submission of building plans in BIM format, a Member commented that, apart from the Buildings Department, the plan should also be accepted by other departments who review building plans, such as Fire Services Department, Transport Department, District Lands Office and Housing Authority, etc. Otherwise, proponents would have to prepare separate sets of plans, both 2D and 3D, which would be problematic. The Chairman agreed and said that the message would be relayed to the working group.

## 1.7 Updates on Carbon Labelling Scheme

JL gave a presentation of the work done in implementing the Carbon Labelling Scheme.

A summary of the work done is as follows:

- Assessment Guides and Quantification Tools for Carbon Footprint of the Products were issued
- Liaised with HKGBC and HKU on implementing the Carbon Labelling Scheme with Cement, Rebar and Structural Steel products
- Lobbied with relevant stakeholders including employers and material suppliers

Action

- Conducted training programmes, including awareness course and auditor course
- Publicity work including seminar/ workshop; website; by-line article/ blog

To enhance the effectiveness of the Scheme, the following incentives would be considered:

- Integrating the Scheme into BEAM Plus
- Convincing employers to specify the use of materials with carbon labels at a certain rating in Public Works
- Launching an Online Listing Service for products with carbon labels

The Scheme was now open for applications. Based on the carbon footprint of the assessed product, ZCBL would issue the carbon label with corresponding class (from 'E' the lowest rating to 'A' the highest rating) for a validity period of one year.

Phase II research would commence in February 2014. Ten other construction materials would be studied, including concrete, timber, stainless steel, aggregates and etc.

## 1.8 **Amendments to the Committee**

IW gave a presentation on the amendments to the Committee which would be effective from 1 February 2014.

The Committee would focus more on the development of future technology and construction innovation. Hence, the Committee would be renamed as "Committee on Environment, Innovation and Technology" or "Com-EIT".

The new terms of reference of Com-EIT would be as follows:

- To promote environmental protection and sustainable development in the construction industry
- To promote good practices in relation to sustainable construction
- To enhance innovation in construction industry to increase productivity and competitiveness
- To encourage the use of innovative techniques for the construction industry
- To advise on the strategy for development of construction standards

**Action**

**1.9 Any Other Business**

CIC Conference 2013 themed “Construction Innovation and Productivity” was successfully held on 29<sup>th</sup> November 2013 with the record-breaking of over 250 delegates. The Chairman thanked Members’ support to the event.

**1.10 Tentative Date of Next Meeting for 2014**

10 April 2014 at 2:30 pm at CIC Headquarters, 15/F, Allied Kajima Building, 138 Gloucester Road, Wanchai, Hong Kong. **All to note**

There being no further business, the meeting was adjourned at 4:30 pm