

Construction Industry Council

Committee on Environment and Technology

Meeting No. 002/11 of the Committee on Environment and Technology for 2011 was held on 31 March 2011 (Thursday) at 2:30 pm at Hong Kong Construction Association, 16/F, 180 – 182 Hennessy Road, Wanchai, Hong Kong.

Present:

Wo-hei LAM	(WHL)	Chairman
Andrew CHAN	(AC)	
Hau-wai CHEUNG	(HWC)	
Jan-ming KO	(JMK)	
Wai-wai YU	(WWY)	
Siu-tong LAM	(STL)	for Director of Buildings
Clarence FUNG	(CF)	for Permanent Secretary for Transport and Housing (Housing)
Tat-tong CHEUNG	(TTC)	Hong Kong Institute of Surveyors
Ping-wai CHOW	(PCH)	Hong Kong Construction Industry Employees General Union
Dan FUNG	(DF)	Environmental Protection Department
Pun-hing HO	(PHH)	Hong Kong Federation of Electrical and Mechanical Contractors
Russell JONES	(RJ)	Hong Kong Construction Association
Peter LEE	(PL)	The University of Hong Kong

In Attendance:

Jonathan LEUNG	(MHL)	Development Bureau
Wai-keung YIU	(WKY)	Architectural Services Department
Guiyi LI	(GYL)	Senior Manager (Research)
Ivan WONG	(IW)	Senior Manager (Council Services) 2
Summer LEE	(SrL)	Manager (Research)
Phoebe LEUNG	(PLG)	Manager (Council Services) 2

For Agenda Item 2.3 only

Kwok-chuen HUNG	Highways Department
Heung-kan LAM	Highways Department

For Agenda Item 2.4 only

Li-yin SHEN	The Hong Kong Polytechnic University
Yat-hung CHIANG	The Hong Kong Polytechnic University
Jose Jorge OCHOA	The Hong Kong Polytechnic University

Apologies: Conrad WONG (CW)

Siu-hung CHAN	(SHC)	
Wai-wah HO	(WWH)	
James KWAN	(YCK)	
Joseph LEE	(HWL)	
Kam-hung YU	(KHY)	
Jimmy CHAN	(JiCN)	Development Bureau
Derrick PANG	(DP)	Chun Wo Development Holdings Ltd
Long PANG	(LP)	Construction Site Workers General Union
Connie YEUNG	(CYG)	Housing Department

PROGRESS REPORT

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2.1 Confirmation of the Progress Report of the Previous Meeting

Members took note of Paper CIC/ENT/R/001/11 and confirmed the progress report of the last meeting held on Thursday, 13 January 2011 at Hong Kong Construction Association, Hong Kong.

2.2 Matters Arising from the Previous Meeting

2.2.1 Joint Workshop of CIC Research Task Force and HKCA Environmental Committee

Discussed under Agenda Item 2.10

2.2.2 Minimising the number of construction-related cards

This issue was further discussed at the CIC Council meeting. It was noted that Hong Kong Construction Association (HKCA) had explored ways to standardise company cards for construction workers but there were technical constraints on consolidating different cards into one due to:

- (a) storing all relevant data on a single smart card was not viable as information volume would exceed the storage capacity; and
- (b) different smart card systems adopted different data standards and there would be difficult to have a single data standard compatible with all smart card systems.

In that regard, alternative approaches such as legislative

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amendments or administrative measures would have to be explored. The Development Bureau recognised the aforesaid constraints and would explore measures to reduce the burden of carrying multiple construction-related cards alongside the amalgamation of the CIC and the Construction Workers Registration Authority.

2.2.3 Research proposal on Commitment towards Sustainable Urbanisation of the Construction Industry in Hong Kong

Discussed under Agenda Item 2.4

2.2.4 Adoption of modular construction in Hong Kong

Discussed under Agenda Item 2.11

2.2.5 Guidelines on Trip Ticket System (TTS) for Disposal of Construction & Demolition (C&D) Materials

In response to a Member's question on overloading trucks, the Secretariat reported that under the TTS, there would be site supervisory personnel to man each exit from the site to ensure that every truck carrying C&D materials leaving the site would bear a duly completed CHIT or Disposal Delivery Form, and the volume of the C&D materials would be recorded. In that regard, the site staff should be able to spot overloading trucks.

2.3 **Concrete Paving Units with Recycled Glass**

Members received a presentation from MHL on the adoption of concrete paving units with recycled glass in works projects of the Highways Department. MHL advised that concrete paving units with recycled glass had been using in all maintenance term contract of the Highways Department as well as some selected projects of the Housing Department. He appealed the construction industry to use such kind of environmentally-friendly paving units in private works projects with a view to increasing the use of recycled materials while reducing waste glass.

A Member pointed out that the use of recycled materials in local works projects was limited. He added that recycled materials, unlike standard construction materials, would require approval of project consultants and such procedures could be time consuming

and hinder the use of recycled materials. Members also noted that recycled glass had not been used in structural concrete.

After deliberation, Members agreed that greater use of concrete paving units with recycled glass in private works projects warranted consideration. The issue would be explored in the Research on River Sand Substitutes for Concrete Production and Cement Sand Mortar Production.

2.4 **Research Proposal on Commitment towards Sustainable Urbanisation of Construction Industry in Hong Kong**

[Prof Jan-ming KO declared that he and the project proponent were working at The Hong Kong Polytechnic University (PolyU) though he was not involved in the proposed research entitled “Commitment towards Sustainable Urbanisation of Construction Industry in Hong Kong”. As the discussion focused on technical sharing, Members invited Prof KO to stay at the meeting.]

[Representatives of PolyU joined the meeting at this juncture.]

Members took note of the Paper CIC/ENT/P/006/11. In response to Members’ questions, representatives of PolyU clarified the following:

- (a) The definition of Sustainable Urbanisation as proposed in the Paper was adopted by AsiaConstruct.
- (b) Korea withdrew from the joint studies due to their resources constraints.
- (c) The proposed research findings would be able to benchmark the environmental performance of the construction industry in Hong Kong against other Asian cities, and yet the findings would not be directly related to the contractor sector.

[Representatives of PolyU left the meeting at this juncture.]

In respect of the research proposal, Members exchanged their views as follows:

- (a) As the CIC should focus on the practical research, the findings of the proposed research could not be put into immediate and practical use for the construction industry.
- (b) The Environment Bureau had not yet published the carbon reduction targets for Hong Kong after the Public Consultation

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- on Hong Kong's Climate Change Strategy and Action Agenda in December 2010. Without such targets, it would be difficult for the research team to draft the framework of measures to directly relate construction industry activities to the urban sustainability goals of Hong Kong (Task 5 of the proposal).
- (c) The proposed research might overlap with the studies conducted by the Council for Sustainable Development and the alignment of the proposed project with the work of the Council for Sustainable Development required further consideration.
 - (d) For case studies (Task 4 of the proposal), some well-known case studies were available. It might not be worthwhile repeating such research efforts.
 - (e) Some common building types such as ordinary residential buildings (private) and office buildings were not covered in the case studies of the proposed research.
 - (f) The proposal could be enriched by making reference to the Council for Sustainable Development's Report on Building Design to Foster a Quality and Sustainable Built Environment, the new design requirements to be effective on 1 April 2011, the United Kingdom's low carbon construction report and the newly-established Asian Green City Index.

After deliberation, Members considered that only part of the proposed research might deserve pursuing whilst the subject as a whole was not the main priority of the Com-ENT. The Secretariat was requested to advise PolyU that the proposed research did not receive strong support from Members and was declined.

**CIC
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2.5 Research Proposal on Review of the Current IT Applications in Hong Kong Construction Industry

[Prof Jan-ming KO declared that he and the project proponent were working at PolyU though he was not involved in the proposed research entitled "Review of the Current IT Applications in Hong Kong Construction Industry". As the discussion focused on technical sharing, Members invited Prof KO to stay at the meeting.]

Members took note of the Paper CIC/ENT/P/007/11 and considered the proposal was too brief and was not mature enough. Hence, the proposal was rejected. However, Members supported greater use of IT such as web-based project management tools and computer-aided design tools. While the proposed research brief only gave a simple outline, Members viewed that more thought on the scope of study was necessary in order to come up with a study

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brief to address the needs of the construction industry on IT. Members considered that input from developers, consultants, contractors and government departments would be helpful to formulate a comprehensive research brief. The Chairman was requested to discuss with the Task Force on Research Activities if the matter could be deliberated at the Task Force.

**CW/ TF-
Research
Activities**

2.6 Key Performance Indicators (KPIs) for Construction Industry

Members took note of the Paper CIC/ENT/P/008/11.

The Secretariat was preparing an interim report on the KPIs for construction industry with a view to publishing a set of initial KPIs for use in the first quarter of 2012. Members noted that different stakeholders might have different views on the definitions of KPIs while data collection and detailed analysis would also take some time to complete. To expedite the work, Members supported publishing a set of initial KPIs for general use in 2012 while the study would be on-going to improve the data structure and processing for future discussion and adoption.

Regarding the revised KPIs given in the Paper, Members suggested categorising them into the following six areas for more focused presentation:

- (a) Productivity
- (b) Health & Safety
- (c) Environment
- (d) Manpower
- (e) Dispute Resolution
- (f) Volume of Construction Works

In response to a Member's question on the construction cost index for civil works, the Secretariat replied that there were a variety of trades within civil works and it would be impractical to compare different unit costs involved in civil works.

Some Members expressed their concerns on data collection and reliability. A Member advised that the Form GF527 – “Monthly Returns on Site labour Deployment and Wage Rates for Construction Works” was not used to collect data for energy use for construction works, and any changes to the Form GF527 might have adverse implications for contractors' resources and reporting system and thus careful consideration would be necessary before

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implementation. He also suggested the Secretariat to consult with the Labour Department and the Buildings Department in respect of data collection mechanisms before finalising the relevant KPIs. Another Member pointed out that indices produced by the Census and Statistics Department might not be able to reflect the real situation such as the wage statistics might cover other elements and could not reflect the wage received by the workers in the construction industry. Some Members advised that at this initial stage, the Secretariat could make use of readily available data such as those already on the public domain for trend analysis considering that compiling new statistics would entail great resources.

The Secretariat was requested to incorporate the above comments in the interim report for submission to the CIC.

**CW/ CIC
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2.7 Green Labels for Construction Materials

Members took note of the Paper CIC/ENT/P/009/11 and supported commissioning a research project to develop an industry-wide Green Building Product Labelling Scheme (GBPLS) for the Hong Kong construction industry.

Some Members suggested extending the research scope to produce a business plan for promoting the future GBPLS. A Member suggested reducing the research period from 15 months to 9 months.

To expedite the study, the Secretariat was requested to:

**CW/ CIC
Secretariat**

- (a) invite some Members to review the revised research brief with a view to carrying out the expression of interest exercise as soon as possible; and
- (b) seek research funding from the CIC via the Committee on Administration and Finance.

2.8 Research on Establishing a Hong Kong Based Carbon Labelling Framework for Construction Materials – Progress Update

Members took note of the Paper CIC/ENT/P/010/11.

2.9 Research on River Sand Substitutes for Concrete Production and Cement Sand Mortar Production (Phase One) – Revised Research Scope

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Members took note of the Paper CIC/ENT/P/011/11.

Based on the recommendation of the Task Force on River Sand Substitutes Research on the recent tender exercise, Members agreed to reject the tenderer in view of the unreasonably high research fee proposed in its tender submitted on 27 January 2011. As there was high demand of river sand in concrete production and the use of granite fine in high strength concrete was yet to explore, Members advised not to remove the research scope on concrete production at this moment. In the re-tendering exercise, tenderers should be requested to submit two proposals in respect of:

- (a) study on cement sand mortar production only; and
- (b) study on both concrete production and cement sand mortar production.

The Secretariat was requested to proceed with the expression of interest exercise.

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2.10 Task Force on Research Activities – Progress Update

Members took note of the Paper CIC/ENT/P/012/11 on the outcome of the Joint Environmental Workshop with the Environmental Committee of the HKCA. The Task Force on Research Activities (TF-RA) would continue to organise similar joint workshops with professional bodies to explore research and development needs of the industry. A Member suggested that universities could be advised to discuss with TF-RA on their research ideas before making submissions to the CIC.

2.11 Technical Seminar on Use of Prefabrication and Modularisation

Members took note of the Paper CIC/ENT/P/013/11 and were welcome to join the Technical Seminar to be held on 15 April 2011 at 6:30 pm at PolyU.

2.12 Task Force on Adhesion Technologies for External Wall Tiles – Progress Update

Members took note of the Papers CIC/ENT/P/014/11 and CIC/ENT/P/015/11. Members noted that members of the Task Force on Adhesion Technologies for External Wall Tiles (TF-EWT) had different opinions regarding the draft review report on common and/or major causes of debonding or failure of wet-fixed external

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wall tiles in respect of the local climate in Hong Kong.

Members opined that it was not necessary to have a consensus or a consolidated view on the review report. However, different views made by different Task Force members representing their respective sectors of the industry should be recorded clearly so that Members could follow and further discuss their views. Noting the slippage in the study progress, Members suggested finalising the review report as soon as possible and starting the next stage of the research i.e. preparing the study report.

[JMK left the meeting at this juncture.]

Some Members also recapped the main reasons for initiating the research and the objectives. The research aimed to look into problems associated with the adhesion of external wall tiles and rendering from the perspective of:

- (a) Specification at the design stage;
- (b) Workmanship during construction; and
- (c) Inspection and testing for maintenance.

Members viewed that the research team was expected to research into the above three main areas, and amongst others, so as to identify problems and improvements for adhesion technologies for wet-fixed wall tiles and rendering. The research team was also expected to make recommendation with sound justification to impose height limit or not for wet-fixing of external wall tiles.

The Secretariat was requested to deliver the above views to the TF-EWT.

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2.13 Any Other Business

Nil.

2.14 Tentative Date of Next Meeting for 2011

16 June 2011 at 2:30 pm at the 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 5:35 pm.