

**Construction Industry Council**

**Committee on Environment**

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Meeting No. 002/17 of the Committee on Environment for 2017 was held on 23 May 2017 (Tuesday) at 2:30 pm at Construction Industry Council ZCB Multi-Purpose Hall, 8 Sheung Yuet Road, Kowloon Bay, Kowloon, Hong Kong.

Present:	Kevin POOLE	(KP)	Chairman
	Shu-jie PAN	(PSJ)	
	Ivan FU	(FI)	
	Stephen LAI	(SLI)	
	Robert LAM	(PHL)	
	Christopher LEUNG	(KYL)	
	Ringo Shek-man YU	(RiYu)	Chairperson of Task Force on Strategy for Management and Reduction of Construction and Demolition Waste in Hong Kong (TF-MRW)
	Tin-cheung CHEUNG	(TnC)	Buildings Department (BD)
	Raymond CHEUNG	(WMC)	Development Bureau (DevB)
	Harry LAI	(HLA)	Electrical and Mechanical Services Department (EMSD)
	Wai-kwong WONG	(WWK)	Architectural Services Department (ArchSD)
	Benny CHOW	(BCw)	Hong Kong Green Building Council (HKGBC)
	Edward Chek-pui LO	(CPL)	Hong Kong General Building Contractors Association (HKGBCA)
	Thomas Shiu-tong NG	(TN)	The University of Hong Kong (HKU)
In Attendance:	Stephen YIM	(SnY)	Hong Kong Housing Authority (HKHA)
	Albert CHENG	(CTN)	Executive Director
	Hau-wai CHEUNG	(HWC)	Executive Director
	Justin LI	(JL)	Assistant Director – Environmental & Sustainability

	Sally LEUNG	(SYLg)	Manager – Council Services
	Penny LAU	(PeL)	Manager – Construction Innovation and Technology Application Centre
	James WONG	(JsW)	Manager – Research & Development
Presenter:	Jian-guo DAI	(JGD)	Hong Kong Polytechnic University (PolyU)
	Yu-ye XU	(YYX)	Hong Kong Polytechnic University (PolyU)
	Jun-qi HUANG	(JQH)	Hong Kong Polytechnic University (PolyU)
Apologies:	Ada FUNG	(AF)	for Permanent Secretary for Transport and Housing (Housing)
	Kenneth MO	(KM)	
	Sai-yen YU	(SYYu)	
	Dorothy MA	(DMa)	Environmental Bureau (EnB)
	Sunny CHAI	(SyCi)	Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies (LSCM)
	Ka-lung CHAN	(KLCn)	Hong Kong Federation of Electrical and Mechanical Contractors (HKFEMC)
	Sam-choi CHAN	(SC)	Construction Site Workers General Union (CSWGU)
	Ping-wai CHOW	(PCH)	Hong Kong Construction Industry Employees General Union (HKCIEGU)
	Shun-cheng LEE	(LeSC)	The Hong Kong Polytechnic University (PolyU)

## **PROGRESS REPORT**

### **Action**

#### **2.1 Confirmation of the Progress Report of the Com-ENV Meeting No. 001/17 held on 7 March 2017**

Members took note of and confirmed the Progress Report CIC/ENV/R/001/17 of the last Com-ENV meeting held on Tuesday, 7 March 2017.

#### **2.2 Matters Arising from the Previous Meeting**

PeL updated Members on the following 7 matters:

Agenda item 1.2a Regarding the status update of the research project “Better Utilisation of Ultimate Strength Gain of Concrete with Pozzolanic Materials for Sustainable Development of Construction Works in Hong Kong”, the Hong Kong Concrete Institute (HKCI) submitted a site verification plan to the Standing Committee of Concrete Technology (SCCT) under the Development Bureau on 6 March 2017. After deliberation, SCCT suggested HKCI to approach a contractor and proposed to carry out a pilot test on a government project to justify the research findings. At the same time, SCCT will issue a guidance note for project engineers to assess the proposal of using the strength gain of concrete with pozzolanic materials.

Agenda item 1.2b Regarding the research project “Feasibility of Delivering High-rise Low Carbon Buildings in Hong Kong”, CIC Secretariat circulated the draft summary report to Members of Com-ENV for comments on 10 March 2017. After much deliberation of the concerns of Members as to the practical application of the report, Members opined that whilst the report represents a sound

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academic study from a research and conceptual perspective, there are many questions as to its practical application. Members requested the Task Force on Research to consider the number of published academic reports funded by the CIC, are published, possibly by including a caveat when publishing the report stating that “the CIC has funded this research but has concerns about the practicality of the research findings. Readers should seek appropriate independent advice from their professional advisers where possible and readers should not treat or rely on this publication as a substitute for such professional advice for taking any relevant actions”.

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Agenda item 1.2c Regarding the twelve (12) previously funded research projects related to Environment and Sustainability, CIC Secretariat had updated the status of these 12 previously funded research projects, such as the progress of the outstanding researches, and a copy of the updated list was left on Members’ seats for their review. Members took note of the updated list

Agenda item 1.4 Regarding the Progress Update of Task Force on Strategy and Reduction of Construction & Demolition Waste in Hong Kong (TF-MRW) and its Consultancy Services, details were reported under Agenda item 2.4.

Agenda item 1.5 Regarding the BEAM-Plus NB v2.0 revamp, CIC Secretariat circulated the first draft of the BEAM-Plus NB v2.0 to Com-ENV Members and the extracted copy to TF-MRW Members for their comments on 16 March 2017 and 21 March 2017 respectively. Comments from Members were received and communicated to Hong Kong Green Building Council (HKGBC) accordingly. Details were reported under Agenda item 2.7.

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Agenda item 1.6 Regarding the update of the McKinsey Interim Report follow up, CIC Secretariat had updated and briefed Member of Com-ENV the status of the McKinsey follow-up, namely:

- CIC Council had approved the Survey Report on the Potential Utilisation of Prefabrication Yards in Hong Kong;
- Status of the trial tests of the River Sand Substitutes conducted at CIC Training Ground and also Architectural Services Department (ArchSD)'s three maintenance projects;
- The research project on the “Better Utilisation of Ultimate Strength Gain of Concrete with Pozzolanic Materials for Sustainable Development of Construction Works in Hong Kong as previously elaborated under Agenda item 1.2a;
- CIC Secretariat may consider displaying the prototype of the research project “Recycling Used Timber Formwork into Lightweight, Thermal-insulating Cement-bonded Particleboards” in the Construction Innovation and Technology Application Centre to further explore the application of such particleboards in Hong Kong;
- The new tentative date of the CIC Sustainable Construction Awards; and
- CIC Council had approved in principle the “Consultancy Services on Strategy for Management and Reduction of Construction and Demolition Waste in Hong Kong” subjected to minor fine-tuning of the recommendations presented in the report.

Agenda 1.7 Regarding the “Survey on the Potential Utilisation of Prefabrication Yards in Hong Kong – Survey Report”, details were reported under Agenda item 2.3.

*(TN joined the meeting at 2:50pm)*

**2.3 Progress Update of Potential Utilisation of Prefabrication Yards in Hong Kong**

Members of Com-ENV were informed that the CIC Council Members had approved the final version of the “Survey on the Potential Utilisation of Prefabrication Yards in Hong Kong – Survey Report” at the CIC Council Meeting No. 002/17 held on 28 April 2017.

Council Members would like CIC Secretariat to produce a readable brief report or a fact sheet such as infographics with Mercado Solutions Associates Limited (MSA) for better dissemination of the survey findings on the CIC website.

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The draft tender assignment brief of the follow-up feasibility study of utilising prefabrication components was discussed. Prior to the discussion, Members were informed to declare any potential conflict of interest and no Members declared such conflict of interest. The proposed scope of the Consultancy Service of the follow-up feasibility study include:

- (i) To study the feasibility of establishing a prefabrication yard / yards in Hong Kong, including identifying barriers and proposing the possible solutions;
- (ii) To set out the criteria and prerequisites of establishing a prefabrication yard in Hong Kong, such as technological requirements, relevant skills set required to operate the prefabrication yard, etc;
- (iii) To quantify the demand for prefabrication components in Hong Kong, including prefabricated mechanical, electrical and plumbing (MEP) components in addition to the prefabricated concrete elements commonly used in Hong Kong;
- (iv) To list and compare the tangible benefits of using prefabricated components vs. conventional methods;
- (v) To study the impact on construction labour through the use of prefabrication; and

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- (vi) To study the feasibility of bringing prefabrication in Hong Kong to the next level – Design for Manufacturing and Assembly (DfMA) and identify which sector will be most receptive to such a paradigm change.

The Consultancy Service is expected to take eight (8) months to complete. After deliberation, Members of Com-ENV endorsed commissioning the “Consultancy Services on the Potential Utilisation of Prefabrication Yards and Prefabricated Components in Hong Kong” with the addition of studying the commercial viability of setting up prefabrication yards in Hong Kong, the intangible benefits, and the types of prefabricated components which could be produced in Hong Kong. Members also agreed that the technical proposal should have a higher weightage than the fee proposal, i.e. 70% vs. 30% respectively.

CIC Secretariat would amend the tender assignment brief accordingly and issue the tender soon.

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*(CTN left the meeting at 3:35pm)*

[Post Meeting Note: the request for proposal (RFP) of the provision of infographics for the Survey Report was procured from 19 July 2017 to 2 August 2017.

The tender for “Consultancy Services of Potential Services of Prefabrication Yards and Prefabricated Components in Hong Kong” was procured from 11 July 2017 to 1 August 2017.]

#### 2.4 **Progress update of the Task Force on Strategy for Management and Reduction of Construction & Demolition (C&D) Waste in Hong Kong (TF-MRW) and its Consultancy Services**

Members of Com-ENV were informed that the final version of the Consultancy Report was submitted to CIC Council for approval at its Meeting No. 002/17 held on 28 April 2017. CIC Council Members raised a few questions regarding the recommendations proposed in the

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Consultancy Report and after much deliberation, approved the Consultancy Report in principle.

CIC Council Members entrusted the Executive Director (ED) of the CIC to attend the forthcoming TF-MRW meeting to explain the views and concerns of the Council and see if a consensus could be reached. The following are the comments from the CIC Council Members:

- Item 3 of the Recommendation (Mandatory Auditing of Waste Management Plan) – CIC Council Members had reservation on having a dedicated BEAM Professional to monitor the progress of the implementation of the IDM P4 (Construction and Demolition Waste Management Plan)
- Item 4 of the Recommendation (Concession of Gross Floor Area), Precast prefabrication can be considered as one of the requirements for granting GFA concession. CIC Council Members queried about the mechanism for quantifying and justifying the amount of prefabrication to be deemed qualified as non-accountable Gross Floor Area
- Item 10 of the Recommendation (Provide optional “Bare-Shell” housing for public housing), CIC Council Members commented that public housing came in almost “Bare-Shell” these days and added perhaps further study could be done to see if such could be applied to private housing
- For recommendations involving HKGBC, CIC Council Members queried the need to involve HKGBC in implementing these recommendations

Members of Com-ENV discussed the aforementioned concerns raised and agreed to amend the recommendations to address the views of CIC Council Members. As the concerns were discussed in the Com-ENV Meeting, Members agreed that the concerns need not be discussed with TF-MRW.

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[Post Meeting Notes: The Consultancy Report was published in August 2017.]

## 2.5 **CIC Breakfast Roundtable Meeting**

Members of the Com-ENV were briefed about the CIC Breakfast Roundtable Meeting that was held on 26 April 2017 at Harcourt Room, Hong Kong Club. The objectives of the CIC Breakfast Roundtable



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Meeting were to consult more views from the industry stakeholders on the future direction of Com-ENV and to let these stakeholders know more on what Com-ENV has been doing.

The summary of the discussion and suggestions for CIC's consideration to take a lead role was discussed. CIC Secretariat would categorise the suggestions and propose ways to proceed further. CIC Secretariat would also incorporate some of the suggestions into the McKinsey Interim Report follow up.

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*(PolyU joined the meeting at 4:10pm)*

**2.6 Development of Precast BFRP Grid-Reinforced Geopolymer Sandwich Wall Panels for Green Building Construction**

The Hong Kong Polytechnic University (PolyU) presented the captioned research project. The research project commenced from January 2015 and is targeted for completion in December 2017.

PolyU presented the project background, project innovations, project objectives, achievements up to now, and future work.

Members of Com-ENV encouraged PolyU to touch base with Buildings Department to ensure that the research findings meet the local statutory requirements.

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*(PolyU left the meeting at 4:45pm)*

[Post Meeting Note: the powerpoint presentation slides were emailed to Director of Buildings Department on 25 May 2017. Buildings Department (BD) then shared a Practice Note on the Testing of Building Materials for PolyU to take note, especially the requirements for a recognised laboratory to carry out fire testing, on 29 May 2017. A briefing session with BD was subsequently organised on 14 July 2017.]

**2.7 Update from HKGBC**

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Hong Kong Green Building Council (HKGBC) updated Members of Com-ENV the status of the BEAM-Plus NB v2.0 revamp. More than 900 comments were recorded from the second eSurvey conducted.

HKGBC also briefed Members of Com-ENV the status update of “ACT-Shop”.

Members of Com-ENV took note of the progress updates from HKGBC.

*(RiYu left the meeting at 5:02pm)*

**2.8 Any Other Business**

- (i) Members of Com-ENV were informed that the CIC Sustainable Construction Awards that was presented and discussed in Com-ENV Meeting No. 002/17 had been postponed to Q1/Q2 of 2018 as per agreement by CIC top management and the working group.
- (ii) Members of Com-ENV were informed to take note of the Research Journal on Innovation Construction (iCON) left for them at their seats.

**2.9 Tentative Date of Next Meeting**

5 September 2017 (Tuesday) at 2:30pm at the Construction Industry Council ZCB in Kowloon Bay.

All  
to note

There being no further business, the meeting was adjourned at 5:05pm.

**CIC Secretariat  
July 2017**