

**Construction Industry Council**

**Committee on Construction Site Safety**

---

Meeting No. 002/12 of the Committee on Construction Site Safety was held on Wednesday, 27 June 2012 at 3:00 pm at Meeting Room No. 1, CIC Headquarters, 15/F, Allied Kajima Building, 138 Gloucester Road, Wan Chai, Hong Kong.

Present:	CHEUNG Hau-wai	(HWC)	Chairman
	AU Choi-kai	(CKA)	Director of Buildings
	CHEW Tai-chong	(TCC)	
	KO Jan-ming	(JMK)	
	KWAN Yuk-choi, James	(YCK)	
	James BLAKE	(JB)	Chairperson of Task Force on Working in Hot Weather (TF-WHW)
	TSO Sing-hin	(SHT)	Chairperson of Task Force on Work Safety of Repair, Maintenance, Alterations and Additions (RMAA) Sites (TF-RMA)
	Francis WONG	(FW)	Chairperson of Task Force on Site Housekeeping (TF-SHK)
	Joel CHAN	(CSC)	Hong Kong Institute of Architects, Authorised Person (HKIA, AP)
	Dominic LAM	(DL)	Hong Kong Federation of Insurers (HKFI)
Winson YEUNG	(WY)	Occupational Safety and Health Council (OSHC)	
WONG Wai-man	(WMW)	Construction Site Workers General Union (CSWGU)	
Michael FONG	(FW)	Development Bureau (DevB)	
In Attendance :	LEUNG Chi-kai	(CKaL)	Buildings Department (BD)
	CHENG Hung-leung	(HLC)	Drainage Services Department (On behalf of Mr CHAN Kin-kwong)
	Derrick PANG	(DP)	Hong Kong Construction Association (HKCA) (On behalf of Mr Thomas Ho as an Observer)

	HUNG Tsz-lok	(TLH)	Hong Kong General Building Contractors Association (HKGBCA) (On behalf of Mr David TSE as an Observer)
	WONG Chi-lap	(CLW)	CIC Training Academy (On behalf of Mr Charles Wong as an Observer)
	Alex LEUNG	(AL)	Senior Manager (Council Services) 1
	Angela YUEN	(AaY)	Manager (Council Services) 1
	Sally LEUNG	(SYLg)	Manager (Council Services) 3
In Attendance:	Heng LI		The Hong Kong Polytechnic University (HKPU)
(For Experience Sharing Session only)	Tim HUANG		The Hong Kong Polytechnic University (HKPU)
	Eric LUO		The Hong Kong Polytechnic University (HKPU)
(For the presentation of the Hot Weather Study only)	Steve ROWLINSON	(SR)	The University of Hong Kong (HKU)
	Andrea JIA	(YYJ)	The University of Hong Kong (HKU)
Apologies :	CHOW Luen-kiu	(LKC)	
	Thomas HO	(TH)	
	Lawrence NG	(LN)	
	WAN Koon-sun	(KSW)	
	Mike WONG	(MW)	
	Ada FUNG	(AF)	Chairperson of Task Force on Site Safety of Working in Lift Shaft (TF-WLS)
	Victor KWONG	(VK)	Chairperson of Informal Task Force on Site Safety Incidents (ITF-SSI)
	LAU Chi-kin	(CKiL)	Chairperson of Task Force on Review of Major Construction Method Statements (TF-CMS)
	Gilbert TSANG	(GtT)	Hong Kong Federation of Electrical and Mechanical Contractors (HKFEMC)
	David TSE	(DdT)	Hong Kong General Building Contractors Association

Charles WONG	(CWG)	(HKGBCA) Director (Training & Development), Convenor of Task Force on Site Safety Training (TF-SST)
Terry CHING	(TCG)	Hong Kong Housing Authority (HKHA)

## **PROGRESS REPORT**

*See items 2.3, 2.4 and 2.5 which were reported before items 2.1 and 2.2*

### **Action**

#### **2.1 Confirmation of the Progress Report of the Com-CSS Meeting No. 001/12 held on 15 March 2012**

Members took note of Progress Report CIC/CSS/R/001/12 and confirmed the Progress Report of the last meeting held on 15 March 2012.

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

Agenda item 1.3 The proposed list of Co-opted Members was submitted to the Council for approval on 27 April 2012. Subsequent to the approval of the Co-opted Members from the Council, appointment letters were issued on 10 May 2012.

Agenda item 1.6 Experience sharing sessions were arranged at the meeting of the Task Force on Site Housekeeping held on 2 May 2012. Details would be discussed under Agenda item 2.6.

Agenda item 1.12 This item would be discussed under Agenda Item 2.11.

Agenda item 1.15 An informal meeting among HWC, the

**Action**

Chairman of Com-CSS, and most of the Task Force Chairpersons was held on 14 June 2012 to review and discuss the future action plan for the Com-CSS which would be related to the respective Task Forces.

Agenda item 1.16 A reply letter was issued to Mr. LEE Cheuk-yan on 4 May 2012.

2.3 **Experience Sharing Session - "Logistics enabling technologies for construction industry to manage on-site people/equipment flow and safety through real-time location-based service"**

*(Professor LI, Tim HUANG and Eric LUO of HKPU joined the meeting at 3:15 pm.)*

Professor Heng LI (Professor LI) of HKPU was invited to share the new research titled "Logistics enabling technologies for construction industry to manage on-site people/equipment flow and safety through real-time location-based services".

Professor LI briefed that the new project would be carried out by the HKPU in near future. The main purpose of the research study is to provide a "third" eye for the workers to cater for blind spot areas on site. Sensors would be placed in the most hazardous zones and warning signals would be triggered to alert workers in danger before accidents occur. Some trial-runs are being implemented at a number of HKHA's construction sites.

Some Com-CSS Members opined the accuracy and tolerance of the system in the severe environment would be one of the major concerns. Professor LI stated that the research team would take note of the comments and would further refine and improve the accuracy in the upcoming research project.

Professor LI expressed his team would like to solicit support from CIC with a letter (without financial commitment) for the research proposal to be submitted to the Innovation and Technology Commission (ITC).

**Action**

Chairman led the Com-CSS Members' discussion on the topic. After deliberations, Com-CSS Members agreed to support the research initiative and the Chairman suggested the CIC Secretariat to prepare a supporting letter according to the above discussions.

CIC  
Secretariat

*(Professor LI, Tim HUANG and Eric LUO of HKPU left the meeting at 3:30 pm.)*

[**Post meeting note:** CIC had issued a supporting letter (without financial commitment) to Professor LI of HKPU on 29 June 2012.]

2.4 **Progress Report of Meeting No. 002/12 of the Task Force on Working in Hot Weather**

AL introduced the paper CIC/CSS/P/011/12 in reporting the progress of the Task Force on Working in Hot Weather. The last meeting of this Task Force was held on 24 April 2012. The HKU Research Team had been invited to present their findings and proposed revised Guidelines in this meeting and the details would be discussed under Agenda item 2.5.

2.5 **Presentation by HKU Research Team**

*(SR and YYJ of HKU joined the meeting at 3:33 pm.)*

Chairman briefed that as suggested by JB, the Chair of the Task Force on Working in Hot Weather (TF-WHW), a presentation by the HKU Research Team to Com-CSS was arranged at this meeting. The Review of Current Safety Practices Assessment of Heat Stress Management at Construction Sites (the Review Report) and the proposed revised Guidelines had been submitted by HKU Research Team and had been circulated to Com-CSS Members on 20 June 2012.

***Presentation by HKU Research Team***

HKU Research Team (HKU) stated that based on the comments received from the Task Force meeting held on 24 April 2012, the Review Report and the proposed Guidelines had been revised.

**Action**

The key issues of the presentation were highlighted as below:

- (i) There were two major recommended measures for management of working in Hot Weather in the proposed revised Guidelines including engineering measures and threshold measures;
- (ii) The engineering measures would include the provision of movable shelter for the construction areas, provision of sufficient fresh air being blown into the confined space, heat sources in the work area should be carefully managed, reduction of the physical demand on workers by minimising manual work through use of mechanical aids, and supply of drinking water on a regular basis; and
- (iii) The categories of workloads were simplified and divided into two levels, i.e. Particularly heavy work (T1) and Ordinary work (T2). The triggering point of the period of continuous working time (CWT) for the respective workload levels (thresholds) had been revised. The recommended heat action plan was shown as below:

<b>Recommended Regimen</b>	<b>T1 (Particularly Heavy Work)</b>	<b>T2 (Ordinary Work)</b>
90 min CWT	28.5°C WBGT or 40.5°C Humidex	32.5°C WBGT or 45.5°C Humidex
Self- pace	34°C WBGT or 47°C Humidex	37°C WBGT or 51°C Humidex

Remark: CWT stand for continuous working time

***Comments and enquiries raised by the Members at the meeting***

The comments and enquiries raised by the Members throughout the presentation were recorded as below:

- (i) TCC enquired whether the radiant heat had been considered;

(Responses from HKU: the reading of the WBGT was a

**Action**

combined reading whereas the radiant heat had already been taken into account);

(ii) DP expressed that HKCA had reservation about the proposed revised Guidelines prepared by HKU Research Team. Their major concerns included:

a) the scientific basis of the suggested triggering points for action plans;

(Responses from HKU: the suggested triggering points were derived based on the ISO standard and the results came out from a series of equations. SR of HKU opined the Com-CSS should determine and decide the duration of the continuous working time in a practical way.)

b) it was quite arguable if the site management need to decide the duration of the rest or other heat stress related action plan based on their own judgements;

(Responses from HKU: the proposed heat stress action plan under the proposed revised Guidelines was a suggestion of good practice. It would be a pragmatic decision for the site management to decide how/when to implement as the site staff should know the actual working situation of the workers.)

c) As the construction sites had their own site planning and work schedule like four-day cycle for the building site, different work trades such as timber formwork, bar-bending, concreting, etc would be required to finish their work on time before another work trade commence their works. If some work trades would be required to take rest according to the proposed heat stress action plan whereas others do not require taking rest, it would be quite difficult for the site management to manage and control the overall works programme.

**Action**

- d) DP also expressed that it would be quite difficult for the site management to execute and implement the heat stress action plan as proposed in the draft Guidelines. It would generate lots of unexpected site administration works. The site management would be quite difficult to predict and control the overall site progress. The site management would rather have some fixed and clear measures from the Guidelines for them to determine their respective heat stress action plans according to their own site situations.
  - e) DP briefed that HKCA was working with Labour Department to launch a pilot scheme in over twenty construction sites. The main purpose of the Scheme was to provide additional rest breaks in both morning and afternoon sessions for the specific work trade i.e. bar-bending workers.
  - f) DP suggested that CIC could form a Task Group to consider in particular on the practicality for implementation of the suggested heat stress action plan as proposed in the draft Guidelines submitted by HKU.
- (iii) MF of DevB stated that as he was also one of the Task Force Members, he noted that the proposed revised Guidelines and the scientific basis provided by HKU Research on 24 April 2012 (Task Force meeting) and on 27 June 2012 (Com-CSS meeting) were substantially different. MF opined the HKU Research Team should present their newly proposed changes to the Task Force so that different experts including Hong Kong Observatory (HKO), LD or others would have the opportunity to review and deliberate the proposed action plan and its scientific basis behind.
- (iv) MF stressed that the Guidelines should be provided in an easy to read manner and simple format such that both site personnel and the workers could easily understand and implement those measures. MF understood that the



**Action**

categories of workloads had been simplified in the latest version of the Guidelines. Nevertheless, it was still quite complicated for the site management staff to differentiate ordinary work and particularly heavy work by using respective metabolic rate. One triggering point for all types of workers might be considered.

- (v) SHT stated that numerous documents such as the results of the questionnaires for both managers and workers, and other supporting documents for the proposed heat stress action plan were not yet provided by the HKU Research Team. Under such circumstance, LD would not be able to verify and countercheck the rationale and accuracy of the HKU Research Team's proposal.

- (vi) According to the feedback from the representative of LD who attending the TF meetings, SHT stated that the presentation delivered by the HKU Research Team in this Com-CSS meeting was substantially different from the one was presented during the Task Force meeting held on 24 April 2012.

(Responses from James Blake: The comments received from the Task Force Members had been incorporated into the proposed revised Guidelines.)

- (vii) JMK stated that the Review Report and the proposed revised Guidelines submitted by HKU should be reviewed and agreed by the Task Force (TF-WHW) before putting forward to Com-CSS.

- (viii) TCC expressed that it should be crucial to take appropriate safety measures to protect site personnel working in hot weather. He would further liaise with their contractors to explore the feasibility of implementing the suggested heat stress action plan under the proposed revised Guidelines during the coming summer months to enhance the safety of site personnel.

- (ix) FW of HKPU stated that his research team had a similar research project titled "Experimental Research on Health

Action

and Safety Measures for Working in Hot Weather" which had been completed recently. He would be willing to share their findings and results to the Com-CSS and the Task Force for consideration.

***The Way Forward***

Chairman summarised that both Members of the Com-CSS and the Task Force (TF-WHW) did not agree on the Review Report and the proposed revised Guidelines submitted by HKU. It was also noted that Chairman of the Task Force believed the documents submitted by HKU were in order.

Chairman suggested the HKU Research Team should go back to the Task Force to present their proposed revised Guidelines with sufficient scientific supports and to resolve the enquiries raised by Task Force Members. Agreement of the Review Report and proposed revised Guidelines at the Task Force level should be necessary before putting them forward to Com-CSS.

HKU  
Research  
Team and  
TF-WHW

Chairman recommended a Task Group would be formed under the existing Task Force on Working in Hot Weather to work together with relevant industry stakeholders to discuss and agree on feasible solutions and implementation plans to protect workers working in the hot weather condition.

To have a comprehensive view on the heat stress issues prior to determine the heat stress action plan, the Chairman expressed that both the findings from HKPU's similar research project and the results from the pilot scheme initiated by HKCA and LD should be taken into account. He invited FW and his teammate to attend the upcoming Task Force and Com-CSS meeting to share their precious findings and results.

*(SR and YYJ left the meeting at 4:35 pm.)*

**(Post Meeting Note:** FW and his research team agreed to attend the upcoming Task Force meeting held on 20 July 2012 and the next Com-CSS meeting held on 5 September 2012 to deliver their research findings.)

**Action**

**2.6 Progress Report of Meeting No. 001/12 of the Task Force on Site Housekeeping**

FW, the Task Force Chairperson, introduced Paper CIC/CSS/P/012/12 in reporting the progress of the Task Force. The latest progress was reported as below:

- (i) Experience Sharing Sessions  
Four main contractors (i.e. Hip Hing, Yau Lee, Paul Y and Kum Shing) were invited to share their local experience in construction site housekeeping and cleanliness. They had shared a number of site housekeeping and cleanliness measures which were currently adopted with the construction sites to the Task Force Members.
- (ii) Upcoming tasks of the Task Force  
The CIC Secretariat updated and circulated a list of site housekeeping tasks for Task Force Members to prioritise and comment. Based on the prioritised list to be complied, the Task Force Members might prepare some alerts on Site Housekeeping to be issued in the near future.

Members took note of the progress of the Task Force on Site Housekeeping.

**2.7 Progress of Activities of the Informal Task Force on Site Safety Incidents**

AL introduced the paper CIC/CSS/P/013/12 on the “Progress of Activities of the Informal Task Force on Site Safety Incidents”.

Subsequent to the Com-CSS meeting held on 15 March 2012, the CIC Secretariat received comments from the LD on 23 March 2012 on the draft Safety Alert of pressure tests for water pipe laying works. LD also recommended CIC to withhold the issuance of the new safety alerts on truss-out bamboo scaffolds and use of portable ladders.

The draft Safety Alert of “Water Piping Layout works – Pressure Test (Road Works)” (Chinese version) was circulated to HKCA,

**Action**

Hong Kong Plumbing & Sanitary Ware Trade Association Ltd. (HKPSWTA), HKCIEGU, and the CIC Training Academy on 30 March 2012 for their review and comment.

The revised draft Safety Alert of “Water Piping Layout works – Pressure Test (Road Works)” (Chinese and English versions) were distributed to the above mentioned Associations and Members of the Informal Task Force on Site Safety Incidents (ITF-SSI) on 12 June 2012 for their review and comment.

CIC  
Secretariat  
and  
ITF-SSI

Comments received from LD had been incorporated and latest comments received from the Buildings Department (BD) were incorporated in the latest version tabled for members’ review and endorsement.

The members endorsed the Safety Alert subject to inclusion of possible drawing(s) (suggestion from HWC) before issuance. The new Safety Alert would be submitted to the Council for information.

(TCC left the meeting at 4:38pm.)

[Post Meeting Note: The revised safety alert (with addition of one drawing) was circulated for Members’ final review on 20 July 2012. The final version incorporated with appropriate comments received was circulated to Member on 30 July 2012 (see Annex A).]

**2.8 Progress Report of Meeting No. 001/12 of the Task Force on Review of Major Construction Method Statements**

AL introduced the paper CIC/CSS/P/014/12 in reporting the progress of the Task Force on Review of Major Construction Method Statements. The latest progress was reported as below:

- (i) The Task Force Members identified 15 numbers of High Risk Construction Activities to be included in the future consultancy study.
- (ii) It was agreed that the format of the draft method

**Action**

statement on “Fabricating of reinforcement cages for bored piles” should be followed and adopted as sample reference by the future consultant. Task Force Members had been invited to send comments to the Secretariat for incorporation before submitting the final draft to Com-CSS for endorsement.

- (iii) For the future consultancy study, the Task Force agreed to adopt an open tender basis.
- (iv) The evaluation scheme for the future consultancy service would be 30% weighing on Price and 70% on Technical aspect.
- (v) Members discussed and suggested to include University experts to team up with consultants for the upcoming study. In addition, Authorised Signatory (AS) of Registered General Building Contractors (RGBC) and Safety Officer were suggested to be included in the consultancy team as well.

**2.9 Progress of Activities of the Task Force on Site Safety of Working of Lift Shaft**

AL briefed Members on the paper CIC/CSS/P/015/12 on the “Progress of Activities of the Task Force on Site Safety of Working in Lift Shaft”.

- (i) Technical Seminar for the promotion of the Volume 2 of the Guidelines

The CIC had organised a Technical Seminar for introduction of the “Guidelines on Safety of Lift Shaft Works (Volume 2 – During Lift Installation Stage until issue of Occupation Permit and Handing Over to Developer) (Volume 2 of the Guidelines)” to industry stakeholders was held on 19 March 2012. The seminar was successfully conducted with an overwhelming response of over 200 participants.

**Action**

On 29 May 2012, an internal Technical Seminar on the same topic was held by the HKHA with CIC as the supporting organisation. The internal seminar of HKHA was attended by 350 industry practitioners with audience including staff from HKHA as well as some of their contractors.

In view of the overwhelming responses on these two Technical Seminars, an additional session is now being arranged and will be held on 16 July 2012.

**(Post Meeting Note:** The additional session of the Technical Seminar was held on 16 July 2012 with over 160 practitioners attended.)

(ii) Drafting of Volume 3 of the Guidelines

In parallel, the Task Force Members immediately commenced to review the safety situation for lift shaft works under Stage 3 - Throughout Occupation Stage (Volume 3 of the Guidelines).

To visualise the actual safety hazards, the associated safety precautionary measures, as well as the corresponding lift contractors and the property management responsibilities in relation to the daily repair and maintenance works, four site visits had been organised for Members of the Task Force and Task Group accordingly. The site visits had included varies type of daily repair and maintenance works such as annual inspection of machine roomless lift, traditional lift, high-speed lift, geared lift and lift rope replacement.

Subject to the observations of those site visits, the Task Force would continue with the drafting of Volume 3 of the Guidelines shortly.

**(Post Meeting Note:** The next Task Force meeting would be held on 10 August 2012.)

Members took note of the progress of the Task Force on Site Safety of Working in Lift Shaft.

**Action**

**2.10 Progress of Activities of the Task Force on Safety of Repair, Maintenance, Alterations and Additions (RMAA) sites**

SHT, the Task Force Chairperson, reported the progress of the Task Force.

- (i) Progress of distribution of Safety Banners to Operation Building Bright (OBB) Sites  
LD had sent out 31 no. of Banners of the LD and CIC to the OBB sites. Up to April 2012, 13 no. of banners had been successfully hoisted at OBB sites.
  
- (ii) Progress of Task Group on Safety & Health of Workers Engaging in Renovation Works on Occupied Commercial Premises (TG-RCP)  
Subsequent to the kick-off meeting of the Task Group held on 29 February 2012, two additional members were recruited to join the Task Group accordingly namely Mr. Johnny WONG of Registered Minor Works Contractor Signatory Association (RMWCSA) and Mr. PEI Wing-fu of Hong Kong General Building Contractors Association Ltd (HKGBCA).

The next Task Group meeting would be held on 29 June 2012. The responsibilities of the Owners of the Premises, Property Management Company, Main Contractor for the renovation works and workers would be discussed in the upcoming meeting.

Members took note of the progress of the Task Force on Safety of Repair, Maintenance, Alterations and Additions (RMAA) sites.

**2.11 Progress of Activities of the Task Force on Site Safety Training**

CLW, the Senior Manager of CIC Training Academy, reported the progress of the Task Force.

- (i) Latest progress of the development of safety training courses for the construction industry

A consultation letter was sent out to relevant stakeholders

**Action**

soliciting their views and comments on the proposed syllabi and exemption criteria on 13 February 2012. 16 numbers of companies, organisations and professional bodies had returned their comments and suggestions to CIC Training Academy. Most of the returned feedbacks were quite positive and showed their support to the proposed training courses.

The informal meeting among DevB, HKHA, OSHC, LD and CIC Training Academy would be held on 6 July 2012.

- (ii) Letter to universities in Hong Kong and professional bodies to take note of Site Safety in Course Curriculum and Qualification Requirements

Letters were issued to the relevant faculties of the universities in Hong Kong and the relevant professional bodies on 9 March 2012, inviting the universities to put the work safety concepts throughout the classroom and industrial training of construction courses and suggesting the professional institutions to include awareness of safety elements as one of the criteria for the professional accreditations. Most of the returned feedbacks were quite positive and showed their support to put the work safety concepts throughout the classroom and industrial training of construction courses.

Members took note of the progress of the Task Force on the development of site safety training for construction industry in Hong Kong.

## 2.12 **Safety Campaign 2012 – Construction Safety Week**

AL reported the Safety Campaign 2012 – Construction Safety Week, a five-day programme held from 20 to 24 May 2012.

The Safety Week was jointly organised by DevB, CIC and HKCA with more than 20 no. of relevant organizations, government departments, professional institutions, and workers' unions as the supporting organizations for the Safety Week.



**Action**

The key message announced throughout the Safety Week was the promotion of “Zero Accident”.

The outline of activities were reported, namely the Kick-off Ceremony, Job Fair, Roving Exhibition, Summit, Conference, Site Visit, Considerate Contractors Site Award Scheme (CCSAS) 2011 Award Presentation Ceremony and Joint Declaration.

Chairman expressed gratitude to DevB, CIC and HKCA in the successful organisation of the Safety Week. He also led the discussion regarding feedbacks from various industry stakeholders. WMW suggested the promotional work to frontline site workers could be further strengthened through different channels such as morning briefing sessions in construction sites, and more promotional banners could be hanged in the prominent locations at site.

AL stated that the Organising Committee would hold a review meeting on 28 June 2012, and the suggestions from the Com-CSS Members would be taken into consideration.

**2.13 Any Other Business**

AL reported that the Guidelines on Pay for Safety Scheme (PFSS) for the industry had been drafted and would circulate it to Members for comment after the meeting. The main objective of the Guidelines was to promulgate the principles of PFSS and its adoption to the construction industry. Details of the contractual arrangement were not intended to be mentioned in the Guidelines.

**(Post Meeting Note:** The draft Guidelines on Pay for Safety Scheme was circulated to Com-CSS Members, HKCA and REDA for their review and comment on 28 June 2012.)

**2.14 Next Meeting**

5 September 2012 (Wednesday) at 2:30 pm at Meeting Room No. 1, CIC Headquarters.

**Action**

There being no further business, the meeting adjourned at 5:40 pm.

**CIC Secretariat**  
**August 2012**