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Panel on Manpower

**Background brief prepared by the Legislative Council Secretariat
for the meeting on 20 June 2012**

**Measures to improve the occupational safety and health performance of the
construction industry and professional drivers**

Purpose

This paper provides background information on the discussions of the Panel on Manpower ("the Panel") on the subject of measures to improve the occupational safety and health performance of the construction industry and professional drivers in the Fourth Legislative Council ("LegCo").

Background

Latest figures

Construction Industry

2. The number of industrial accidents for all sectors in the first half of 2011 was 6 436, representing a drop of 2% over 6 566 in the same period of 2010. The accident rate per 1 000 workers decreased by 4.6% from 23.4 to 22.3. However, of the 6 436 industrial accidents in the first half of 2011, 1 404 occurred in the construction sector, with an accident rate (per 1 000 workers) of 47.8, representing a rise of 9.7% and 2.2% respectively compared with the same period of 2010. The number of industrial fatalities in the construction industry stood at eight, representing an increase of 60% as compared with five accidents in the first half of 2010. Among the eight cases of construction fatalities, three were related to "fall of person from height", two were related to "striking against or struck by moving object", another two were related to "struck by falling object" and one was related to "drowning". A detailed breakdown of all industrial accidents in the construction industry by types of accidents is at **Appendix I**.

3. In the first half of 2011, the number of accidents in new works sites recorded an increase of 12.6% from 680 to 766. Regarding repair, maintenance, alteration and addition ("RMAA") works sites, there were 638 accidents, representing an increase of 6.3% when compared with 600 accidents in the corresponding period of 2010.

Heat stroke at work

4. Since May 2009, the Labour Department ("LD") has started to collate figures on injury cases owing to heat stroke at work as confirmed by medical practitioners. In 2009, there were five such cases with four involving outdoor work and one involving indoor work. In 2010, there were two such cases which involved physical training and driving vehicles without air-conditioning respectively.

5. During the summer of 2011, LD received 26 notifications from employers on work injury cases that were suspected to be related to heat stroke. Of these cases, there were 22 cases where the employers had admitted liability and the employees concerned received relevant compensation. Among these 26 cases, eight cases involved cleansing workers, four professional drivers and one construction site worker. Employees concerned of the remaining 13 cases were engaged in jobs of different nature such as gardening, maintenance and goods handling. In general, these workers were involved in outdoor manual work, or driving non-air-conditioned vehicles under very hot weather.

Legislation

6. The work safety on construction sites is governed by the Factories and Industrial Undertakings Ordinance (Cap. 59) ("FIUO") and the Occupational Safety and Health Ordinance (Cap. 509) ("OSHO"). Various pieces of subsidiary legislation have been made under FIUO and OSHO to regulate specific work activities and processes and provide for safety management systems and registration of safety officers for administering occupational safety and health. The main provisions of these pieces of subsidiary legislation are summarized at **Appendix II**.

Recent initiatives in enhancing safety of the construction industry and professional drivers

Construction Industry

7. In the first three quarters of 2011, LD had stepped up its special enforcement efforts by launching four territory-wide operations focusing on

new works safety, RMAA works safety, temporary platforms/gangways and electrical safety. Under these special operations, LD inspected 5 828 workplaces and issued 1 669 warnings (as compared to 5 189 workplaces and 1 413 warnings in the same period of 2010). LD also issued 192 suspension notices ("SNs") or improvement notices ("INs") (an increase by 26% over 2010) and initiated a total of 151 prosecutions (more or less the same as 2010). LD had also stepped up patrols and inspections of RMAA works sites during non-office hours (i.e. evenings and during holidays) to deter unsafe work practices.

8. As regards the preventive measures taken to enhance construction safety, LD launched a "Work Safety Alert" on its website to help raise the safety awareness of employers, contractors and workers in August 2011. The Alert summarizes recent fatal and serious work accidents, and highlights general safety precautionary measures. In collaboration with the Occupational Safety and Health Council ("OSHC") and other stakeholders, LD organized a seminar cum workshop in September 2011 for contractors and relevant parties to share their experiences and practices in enhancing occupational safety of large scale infrastructure projects.

Prevention of heat stroke at work

9. The Administration collaborated with OSHC, Construction Industry Council, and relevant employers' associations and workers' unions to launch a series of focused publicity and educational activities between April and September 2011, targeting workplaces with a higher risk of heat stroke, such as construction sites, to enhance the awareness of employers and employees on prevention of heat stroke at work. In 2011, the Administration also collaborated with OSHC and relevant workers' unions to promote occupational safety and health messages among professional drivers, including the prevention of heat stroke at work.

10. During the summer of 2011, LD conducted 28 900 inspections targeting workplaces with a higher risk of heat stroke, with 437 warnings and 14 INs issued, and seven prosecutions taken out. Among these prosecutions, six were related to failure of the contractors/employers to provide potable water for their employees, and one was related to failure of the employer to provide a system of work for the prevention of heat stroke.

11. In 2012, apart from the enforcement actions during the summer, the Administration will continue to partner with OSHC, relevant trade unions and workers' unions to promote the prevention of heat stroke at work among the employees of high risk industries, including construction workers and professional drivers. The activities will include outreaching promotional activities and distribution of souvenir items for heat stroke prevention.

Deliberations of the Panel

Work-at-height safety of the construction industry

12. When the Panel discussed the subject at its meeting on 22 October 2009, members called on the Administration to review, together with all relevant stakeholders in the construction industry, the policy on construction safety and improve construction safety through -

- (a) stepping up enforcement action by making more visits to construction sites;
- (b) extending the construction period of property development; and
- (c) imposing a statutory requirement on the private sector to reserve 2% of the construction budget for occupational safety purposes.

13. According to the Administration, the general duties of employers as required under FIUO and OSHO to provide and maintain safe plants and systems of work and a safe environment, together with the concerted efforts of relevant stakeholders in the industry to promote work safety, had made steady improvement in the safety performance of the construction industry. The number of industrial accidents in the construction industry had dropped from 14 078 in 1999 to 3 033 in 2008. The accident rate per 1 000 workers had dropped from one out of five in 1998 to one out of 20 in the first half of 2009.

14. There was a suggestion that a demerit point system should be introduced such that the licence of an employer or a contractor who had repeatedly breached industrial safety requirements would be suspended. According to the Administration, the Housing Authority and the Development Bureau ("DB") had adopted a system under which an employer or a contractor who had a poor track record in industrial safety would be sanctioned.

15. In response to members' enquiry about the penalties imposed on employers for non-compliance with safety legislation, the Administration advised that while the average fine imposed on an employer or a contractor for more serious offences was about \$15,000, the amount varied with seriousness and nature of each case. LD would provide the Court with information on the defendant's previous offences and fines, if any. The Court would usually impose a higher penalty for repeated offenders.

Safety in the use of tower cranes on construction sites

16. Regarding a tower crane accident at a demolition site in Causeway Bay on 10 July 2007 resulting in the death of two workers and injury of five others, members were concerned that the defendant was fined \$35,000 only and such a low penalty level had conveyed a false message to the public that the offence was not serious. Noting that the Informal Task Force on Safety of Tower Cranes under the Construction Industry Council had formulated a set of Guidelines on Safety of Tower Cranes ("the Guidelines") for adoption by the construction industry, members enquired whether the Administration would consider introducing legislation to enforce the practices as recommended in the Guidelines to enhance deterrence.

17. As explained by the Administration, the broad scope of provisions in existing legislation on safety of tower cranes had the advantage of casting a wider net to hold employers accountable for non-compliance with safety measures at construction sites. There were different tower crane models, and as technology advanced and improved models introduced, the Guidelines which dealt with the detailed process of tower crane operations might not be applicable to all models. Legislating the Guidelines could be counterproductive as unscrupulous employers might translate them into convenient clues to circumvent the law.

18. In response to members' suggestion on the imposition of a limit on the life span of tower cranes, the Administration advised that it was difficult to draw a line on the life span of tower cranes which had hundreds of components. In addition, their degree of wear and tear varied from model to model and from brand to brand. A number of measures had been put in place to ensure the safe use of tower cranes. These included -

- (a) tightening up the requirements for inspection and certification of tower cranes to include, among others, checking of key components before delivery to site;
- (b) tightening up the requirements for site supervision. These included requirements for the appointment of a supervising engineer with qualifications, experience and competence to control, monitor and supervise operations on tower cranes, the conduct of a risk assessment and the carrying out of pre-installation checking;
- (c) requiring the owner of a tower crane to provide a checklist of components for inspection. A competent mechanical engineer would verify the components of a tower crane against the list provided by the manufacturer of the tower crane;

- (d) mandating proper keeping of maintenance and operations record to facilitate checking and verification by a competent examiner; and
- (e) mandating non-destructive testing on no less than 10% of the welded parts of a tower crane which had been used for 15 years. If cracks were identified, all the welded parts would be tested.

Safety in RMAA works

19. Concern was raised over the increase in the number of accidents related to RMAA works. To ensure RMAA works contractors' compliance with relevant safety legislation, members considered that the Administration should conduct more regular inspections, apart from paying surprise inspections, to workplaces. In case of non-compliance constituting an offence for repeated breach of the law, a heavier penalty should be imposed in order to achieve greater deterrent effect.

20. The Administration advised that LD had launched promotion and publicity campaigns vigorously, focusing on construction safety, RMAA works safety, scaffolding safety, catering safety, cargo and container handling safety. Where circumstances warranted, LD had taken rigorous enforcement actions and issued INs or SNs to ensure compliance with relevant safety legislation and to remove imminent risks of death or serious bodily injury.

21. Information was sought on whether LD had any difficulties in planning and conducting safety inspections targetting RMAA works, since RMAA works were usually small in scale and carried out at the home of members of the public or old buildings under renovation, which might not come to the notice of LD.

22. According to the Administration, most RMAA works were small in scale, scattered in nature and very often undertaken by small contractors within a relatively short span of time. Small RMAA contractors were generally less conversant with the occupational safety and health legislation and their workers were less aware of the need to take safety precautionary measures. All these presented challenges to enforcement since LD might not have information on the existence of some of the projects. To address the problems, LD would continue to work closely with the Buildings Department, trade associations and workers' unions to promote safety and health at work through initiatives such as publicity campaigns and targetted programmes. Apart from continuing with the promotion activities, LD had established referral systems with the Housing Department ("HD"), the Hong Kong Housing Society, the Urban Renewal Authority and the Hong Kong Association of Property Management Companies to collect intelligence on RMAA works to facilitate prompt and targetted

enforcement actions on high-risk work activities. In the past few years, cases involving RMAA works had been referred to LD through the established mechanism. At the community level, LD also collaborated with District Councils and property management companies to promote RMAA works safety.

Enforcement measures on the safety of the construction sector

23. Members raised concern about the upsurging numbers of warnings, INs and SNs issued and prosecutions taken out in the first three quarters of 2011 over the same period in 2010. Some members considered that the substantial increase in the issue of warnings, INs and SNs had reflected the extent of the problem of non-compliance and the inadequacy of existing legislation in deterring unsafe work practices.

24. The Administration advised that to ensure contractors' and workers' compliance with relevant safety legislation, LD had stepped up enforcement efforts in 2011. The increase in the issue of warnings, INs and SNs could be attributed to a number of factors, including LD's stepped up enforcement efforts and the rebound of the local economy in the period which led to a corresponding growth in the numbers of infrastructure projects, RMAA works as well as workers engaged in building and construction works. The Administration was well aware that the commencement of a number of major infrastructure projects, against the backdrop of a booming construction industry, would pose a challenge in the years ahead. Hence, the Administration would continue with its unrelenting efforts to inculcate a safety culture in Hong Kong's workplaces through a multifarious strategy of legislation and enforcement, publicity and promotion, as well as education and training.

25. Members noted that in the first three quarters of 2011, LD had initiated 895 prosecutions against breaches of safety legislation, of which 502 were related to unsafe work-at-height activities. Information was sought on the number of cases convicted out of those 502 prosecutions, the heaviest and lightest penalty imposed on those convictions, and the nature and gravity of the offences involved.

26. According to the Administration, during the first three quarters of 2011, the heaviest penalty imposed by the Court on convicted cases involving non-compliance with work-at-height safety was \$200,000 and the average level of fine was in the range of \$14,000 to \$15,000.

27. Members were concerned about the sharp increase in the number of industrial accidents and fatalities in the first three quarters of 2011 in the construction industry, and whether the existing regulatory framework governing occupational safety and health in the construction sector could provide a

sufficient deterrence against unsafe work practices. There was a suggestion that LD should step up cooperation with DB and relevant departments to ensure proper attention to safety issues for the infrastructure projects.

28. The Administration responded that in the first three quarters of 2011, LD had conducted 42 252 inspections to construction sites and, as a result, issued 10 156 warnings and 722 SNs and INs. In the follow-up visits made after the surprise or planned inspections to construction sites, LD would ensure that irregularities were rectified and imminent risks of death and serious bodily injury were removed before the relevant SNs could be lifted. Therefore, contractors had great incentive to remove imminent risks of death or serious bodily injury as soon as possible, or else they could not resume the relevant work processes. With the commencement of major infrastructure projects, LD would further enhance cooperation with various stakeholders, including contractors, project management teams and relevant government departments or project clients, to closely monitor the safety and health performance of the infrastructure projects. A dedicated team in LD would participate in regular site safety management meetings and safety talks of these projects, and take rigorous enforcement actions to ensure that safe systems of work were in place. Besides, it would offer advice to relevant works departments/project clients at the planning stage to ensure due consideration of safety and health requirements from the design stage to subsequent stage of project implementation and delivery.

29. Some members considered that contractors with poor safety records should have less chance of being awarded works contracts in future. They suggested that such information should be provided to the relevant bureaux and departments for their consideration during tender assessment. According to the Administration, LD had all along worked closely with DB and HD in monitoring performance of public works contractors through project and site supervision. DB and HD would definitely take into account the past performance of contractors in evaluating tenders and awarding contracts.

Occupational injury cases suspected to be related to heat stroke

30. Members were concerned about the risk of construction workers and professional drivers suffering from heat stroke while at work. Information was sought on whether employees who suffered from heat stroke were entitled to statutory compensation prescribed under the Employees' Compensation Ordinance (Cap. 282) ("ECO").

31. The Administration responded that under the existing law, employers were required to report cases of occupational injuries, fatal or non-fatal, arising from work accidents to LD. When filing such reports, some employers might,

based on their observation, indicate that the employees' injuries might be heat stroke-induced. As symptoms of heat stroke were similar to those of some other diseases, whether an occupational injury was heat stroke-related could only be confirmed after doctors' diagnosis and LD's investigation of the case concerned. The Administration advised that employees suffering from occupational injuries were eligible for and could claim compensation under ECO, irrespective of whether the injuries were heat stroke-induced.

32. Members held the view that the Administration should investigate into cases of heat stroke at work and assess factors contributing to these incidents. Should the findings of the risk assessment indicate that the work environment of specific trades or industries was more prone to cause heat stroke at work, the Administration should give serious consideration to classifying heat stroke at work as an occupational injury.

33. The Administration advised that it was the responsibility of employers to assess the risk of heat stroke to their employees working in a hot environment and to take appropriate preventive measures commensurate with the needs of different industries and jobs. Such measures included arranging outdoor work in cooler periods during daytime, providing adequate drinking water, providing a shelter at the workplace and rest areas to shield off direct sunlight, enhancing ventilation at the workplace, arranging for workers to take rest breaks at intervals, and providing relevant information, instructions, training and supervision.

Professional drivers' safety and health awareness

34. Pointing out that professional drivers' health was very often affected by long working hours and stressful working conditions, members expressed concern about serious incidents involving professional drivers. They called on the Administration to ensure that professional drivers were in good health and would have sufficient rest to prevent traffic accidents caused by sudden illness, such as heat stroke or heart attack. There was a suggestion that the Administration should study relevant issues and report to the Panel in due time on the Administration's efforts in enhancing the safety and health awareness of professional drivers.

35. The Administration explained that OSHO provided that employers had the general duty to provide a safe and healthy workplace for employees. However, the occupational safety and health of professional drivers were more related to "road safety" which was governed by relevant provisions of the Road Traffic Ordinance (Cap. 374). Notwithstanding this, LD would closely liaise with the Transport and Housing Bureau and the Transport Department with a view to drawing up measures to enhance the safety and health awareness of professional drivers.

Latest development

36. According to the press release issued by the Kowloon Motor Bus Company ("KMB") on 10 May 2012, the last batch of KMB's non air-conditioned buses had been retired from service on 8 May 2012.

Relevant papers

37. A list of the relevant papers on the LegCo website is in **Appendix III**.

Council Business Division 2
Legislative Council Secretariat
14 June 2012

Industrial Accidents in Construction Industry
in 2009 / 2010 and 1st Half of 2010 / 1st Half of 2011
- analysed by Type of Accident -

二零零九年 / 二零一零年 及 二零一零年上半年 / 二零一一年上半年
建造業之工業意外個案以意外類別分析

Type of Accident 意外類別	2009 二零零九年	2010 二零一零年	1st Half of 2010 二零一零年上半年	1st Half of 2011 二零一一年上半年
Trapped in or between objects 受困於物件之內或物件之間	93	85	35	46
Injured whilst lifting or carrying 提舉或搬運物件時受傷	576	546	248	286
Slip, trip or fall on same level 滑倒、絆倒或在同一高度跌倒	513	573	243	293
Fall of person from height 人體從高處墮下	397 (15)	406 (6)	178 (3)	188 (3)
Striking against fixed or stationary object 與固定或不動的物件碰撞	219	302	129	120
Striking against or struck by moving object 被移動物件或與移動物件碰撞	424 (2)	442	208	218 (2)
Stepping on object 踏在物件上	19	27	12	16
Exposure to or contact with harmful substance 暴露於有害物質中或接觸有害物質	8	7	3	9
Contact with electricity or electric discharge 觸電或接觸放出的電流	5	7 (1)	4 (1)	2
Trapped by collapsing or overturning object 受困於倒塌或翻側的物件	0	1	1	2
Struck by falling object 遭墮下的物件撞擊	87 (1)	75	33	28 (2)
Struck by moving vehicle 遭移動中的車輛撞倒	17	7	6	8
Contact with moving machinery or object being machined 觸及開動中的機器或觸及以機器製造中的物件	199	245 (2)	99 (1)	93
Drowning 遇溺	1 (1)	0	0	1 (1)
Exposure to fire 火警燒傷	8	5	2	10
Exposure to explosion 爆炸受傷	4	3	4	2
Injured by hand tool 被手工具所傷	137	102	50	47
Injured by fall of ground 泥土傾瀉受傷	1	0	0	0
Asphyxiation 窒息	0	0	0	0
Contact with hot surface or substance 觸及灼熱表面或物質	21	20	15	10
Injured by animal 被動物所傷	0	0	0	1
Injured in workplace violence 於工作場所暴力事件中受傷	0	0	0	0
Others 其他類別	26	31	10	24
Total 總計	2 755 (19)	2 884 (9)	1 280 (5)	1 404 (8)

Notes:

- Industrial accidents refer to injuries and deaths arising from industrial activities in industrial undertakings as defined under the Factories and Industrial Undertakings Ordinance.
- Figures in brackets denote the number of fatalities.

註釋:

- 工業意外是指在《工廠及工業經營條例》所界定的工業經營內發生的受傷或死亡意外，而這些意外是因工業活動而引致的。
- 括號內的數字顯示死亡人數。

註：節錄自政府當局題為"香港建造業在 2011 年上半年的安全狀況及規管架構"(立法會 CB(2)285/11-12(02)號文件)

Source: Information extracted from the Administration's paper entitled "Hong Kong's Safety Performance in the First Half of 2011 and regulatory framework for construction sector". (LC Paper No. CB(2)285/11-12(02))

Legislative Framework Regulating Construction Safety

Construction Sites (Safety) Regulations

- Stipulate safety requirements regarding use of hoists, work-at-height, excavations, use of electricity and machineries, personal protective equipments, as well as the provision of first aid and welfare facilities. Impose safety obligations on both principal contractors and subcontractors.
- Require contractors to take adequate steps (e.g., provision of suitable working platform, safe access and egress, as well as proper fencing) to prevent any person from falling from a height of 2 metres or more, and ensure the safety in the design, construction and maintenance of any scaffold, ladder or other means of support.
- Require contractors to adopt a risk assessment approach by identifying the hazardous conditions of persons working at height, rectifying these hazardous conditions and safeguarding persons working at a height against all hazardous conditions.

(Lifting Appliances and Lifting Gear) Regulation

- Regulate the use of lifting appliances and lifting gear in an industrial undertaking.
- Stipulate requirements in respect of the construction, test and examination, marking of safe working load for lifting appliances and lifting gear.
- Specify the safety standards in the aspects of operation, erection, alteration and dismantling of cranes, use of cranes in bad weather, multiple lifting, securing of loads, carrying of persons by means of lifting appliances and competency of operators.

(Suspended Working Platforms) Regulation

- Regulate the construction, safety devices, test and examination of suspended working platforms.
- Stipulate the safety precautions to be taken in respect of the erection, alteration and dismantling of suspended working platforms as well as its use in bad weather conditions, and competency of operators.

(Confined Spaces) Regulation

- Provide for safety measures for work in confined spaces.
- Require proprietors/contractors to take safety measures, including appointment of competent persons to conduct risk assessments and certified workers to enter or work in confined spaces, implementation of safety precautions before and during work in confined space, and formulation of proper contingency procedures.

(Safety Officers and Safety Supervisors) Regulations

- Require the employment of safety personnel for providing assistance to contractors to enhance safety and health conditions on construction sites.
- Impose on safety officers duties in advising proprietors on the implementation of safety management system in workplaces.
- Stimulate the requirement for continuous professional development for the purpose of renewal or revalidation of registration of safety officers.

(Safety Management) Regulation

- Require contractors to take ownership for ensuring that the necessary safety management system is developed, implemented and maintained on their construction sites.
- Require contractors to strive for continuous improvement in OSH conditions in their workplaces through regular safety audits and safety reviews.

**Relevant papers on
the occupational safety and health performance of
the construction industry and professional drivers**

Committee	Date of meeting	Paper
Panel on Manpower	21.1.2009 (Item III)	<u>Agenda</u> <u>Minutes</u>
Panel on Manpower	16.7.2009 (Item II)	<u>Agenda</u> <u>Minutes</u>
Panel on Manpower	22.10.2009 (Item III)	<u>Agenda</u> <u>Minutes</u>
Panel on Manpower	21.1.2010 (Item III)	<u>Agenda</u> <u>Minutes</u>
Legislative Council	5.5.2010	<u>Official Record of Proceedings</u> <u>Pages 111 - 171 (Motion)</u> <u>Progress report</u>
Panel on Manpower	20.5.2010 (Item IV)	<u>Agenda</u> <u>Minutes</u>
Legislative Council	2.6.2010	<u>Official Record of Proceedings</u> <u>(Question 8)</u>
Panel on Manpower	20.1.2011 (Item IV)	<u>Agenda</u> <u>Minutes</u>
Panel on Manpower	17.6.2011 (Item IV)	<u>Agenda</u> <u>Minutes</u>
Legislative Council	6.7.2011	<u>Official Record of Proceedings</u> <u>(Question 2)</u>
Panel on Manpower	12.7.2011 (Item III)	<u>Agenda</u> <u>Minutes</u>
Legislative Council	19.10.2011	<u>Official Record of Proceedings</u> <u>(Question 7)</u>

Committee	Date of meeting	Paper
Panel on Manpower	17.11.2011 (Item V)	<u>Agenda</u> <u>Minutes</u>
Legislative Council	14.12.2011	<u>Official Record of Proceedings</u> <u>(Question 1)</u>
Legislative Council	11.1.2012	<u>Official Record of Proceedings</u> <u>(Question 10)</u>
Panel on Manpower	12.4.2012 (Item IV)	<u>Agenda</u>

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