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Mr Raymond LAM
Clerk to Panel
Legislative Council Panel on Security
Legislative Council Building
8 Jackson Road, Central
Hong Kong

Dear Mr Lam,

**Fire Services Department Diving Training Centre in
the Government Dockyard at Stonecutters Island**

At the meeting of the LegCo Panel on Security on 2 May 2006, Members discussed the proposal to construct a Fire Services Department Diving Training Centre in the Government Dockyard at Stonecutters Island. The supplementary information requested by Members at the meeting is set out below:

- (1) Comparison of the expenditure on constructing the Diving Training Centre in Hong Kong and sending divers overseas for various diving training

Besides providing training to divers, the Diving Training Centre proposed by the Fire Services Department (FSD) will also serve as a base for marine rescue operations. About \$38 million of the total capital cost of the project (about \$144.1 million) is related to the construction of the facilities for marine rescue operations. In other words, the capital cost of the diving training facilities is about \$106 million. As regards recurrent expenditure, the recurrent

expenditure related to diving training is about \$2.6 million and the recurrent expenditure related to diving rescue operations is about \$1.1 million.

If all diving training were to be conducted overseas, and all FSD divers would be sent to attend various diving courses overseas, namely initial diving course, advanced diving course and special skills diving course to achieve a satisfactory competency level, in 12 years, the cumulative expenditure involved (i.e. \$140 million) will exceed the capital cost of constructing the diving training facilities and the extra cumulative recurrent expenditure of 12 years (\$137 million).

(2) Utilisation of diving training facilities

FSD's divers need to complete the requisite training courses and possess professional diving rescue skills in order to perform their diving duties effectively and safely.

The proposed Diving Training Centre will provide facilities for divers and trainees to be trained in various courses. These facilities include a diving training pool (with a wave generator and a helicopter winch simulator), a lecture room, and training facilities for special diving skills (i.e. a deep dive simulator, a rapid pool and a welding tank).

Taking into account FSD's present operational needs and course design, the various courses to be conducted at the Diving Training Centre would add up to about 4 647 hours each year. In respect of the individual facilities, the diving training pool would be used for 1 620 hours each year whereas the lecture room would be used for 784 hours each year. In the case of the training facilities for special diving skills, they would be used for a total of 2 243 hours each year. The rest of the diving training (about 550 hours) needs to be conducted outside the Diving Training Centre to enable divers to gain practical experience.

(3) Possible utilisation of the Diving Training Centre by other departments

Apart from FSD divers who will receive diving training at the Diving Training Centre, other Government departments can also participate in the training courses or utilise the training facilities at the Centre. The Hong Kong Police Force (HKPF) and the Customs and Excise Department (C&ED) have indicated that they would use the training facilities of the Centre. The diving training provided by FSD to other departments in the past three years is summarised below -

Date	Department	Training Duration	No. of Trainees	Training Content
Sept 2003	HKPF	3 hours	12	Training for adapting to deep dive pressure ¹
Sept 2004	HKPF	3 hours	14	Training for adapting to deep dive pressure ¹
Feb 2006	C&ED	166 hours	6	Initial Diving Training ²
Mar 2006	HKPF	3 hours	12	Training for adapting to deep dive pressure ¹

When the Centre is commissioned, the above training can be conducted at the Centre more effectively and safely. The actual utilisation of the Centre will depend on the future operational needs of the departments concerned and it is difficult for them to make an accurate estimate at this moment. The HKPF has initially indicated that they might take part in the training on the use of underwater break-in equipment provided by the Centre after its commissioning.

¹ As there is no Diving Training Centre at present, FSD does not have a deep dive simulator and can only simulate the pressure at deep sea in the decompression room to allow the trainees to adapt to deep dive pressure. In future, the relevant training can be conducted more effectively in the deep dive simulator at the Diving Training Centre.

² When the trainees complete the course, they can dive into the water up to 20 meters.

(4) Proposed canteen facility at the Centre

Apart from providing training for divers, the proposed Diving Training Centre will also serve as a base for marine rescue operations. 23 staff (i.e. the divers of the Diving Unit and the staff manning the diving tender, the diving support vessel and the two diving speed-boats) will station at the Centre daily to respond to emergencies in the sea. The statistics of the past three years indicate that the number of incidents which happened in the Victoria Harbour accounted for more than half of the total marine incidents in local waters.

The proposed canteen at the Centre, is in fact a multi-purpose resting room, with an area of approximately 20m², for duty officers to have meals, rest and enjoy recreational activities (e.g. watching TV, reading, etc). Simple amenities such as TV, video recording machine, sofas, dining tables and folding chairs will be provided. The kitchen, with an area of only 9.6m², will provide basic cooking utensils and area for food storage.

For operational efficiency, all frontline FSD officers (including divers) cannot have meals outside their stations during the duty hours. Besides, during inclement weather conditions, including typhoons or thunderstorms, frontline officers have to stay inside the stations and respond to emergencies. Therefore, the FSD officers working at Stonecutters Island need to take meals in the multi-purpose resting room of the Centre. FSD's contract caterer will provide lunch and dinner to the frontline officers stationed at the Centre.

(5) Whether divers' workload will be increased after enhanced training

FSD's main aim in constructing the Diving Training Centre is to provide adequate and appropriate training to divers under controlled environments to ensure both the efficiency and safety in performing diving duties.

Divers' working hours are the same as other frontline fire officers, i.e. 54 hours per week. Divers' occupational safety has always been FSD's priority. FSD has set limits on diving time with reference to the UK Royal Navy's diving benchmarks and the guidelines of the Health and Safety Executive (UK), for example –

Maximum diving time at a depth of 27m	Maximum diving time at a depth of 42m
50 minutes	25 minutes

Furthermore, FSD also requires that if a FSD diver needs decompression of 20 minutes or more after a diving duty, he should not go underwater for the rest of his shift. He should only perform above surface duties by assisting in the training of other divers or other diving operations. With the commissioning of the proposed Diving Training Centre, the working hours of FSD divers will not be increased and FSD will continue to observe the relevant diving safety guidelines to ensure the safety of the divers.

(6) Breakdown of FSD's diving operations

In 2003-2005, the breakdown of the marine and land incidents requiring the use of diving rescue techniques or diving equipment is as follows –

	2003	2004	2005
<u>Marine Incidents</u>			
Underwater rescue (e.g. falling overboard and drowning incidents)	269	178	269
Vessel-related incidents (e.g. leaking, collision and falling below deck)	109	119	101
Fire	38	36	41
Others (e.g. assisting in other departments' operations, handling explosives, and stand-by for aircraft maritime incidents)	40	11	21
Sub-total	456	344	432

<u>Land Incidents</u>	50	78	46
Underwater rescue (e.g. drowning incidents in reservoirs, rivers and wastewater treatment facilities, flooding)	32	65	46
Others (e.g. assisting in other departments' operations or stand-by)	6	3	9
Sub-total	38	68	55
Total	494	412	487

Yours sincerely,

(Miss Queenie LEE)
for Secretary for Security

c.c. Director of Fire Services (Attn : Mr CHEUNG Yin-chiu)