

**For discussion
on 2 May 2006**

LEGISLATIVE COUNCIL PANEL ON SECURITY

FIRE SERVICES DEPARTMENT DIVING TRAINING CENTRE IN THE GOVERNMENT DOCKYARD AT STONECUTTERS ISLAND

Purpose

This paper sets out our proposal to construct a Fire Services Department (FSD) Diving Training Centre in the Government Dockyard at Stonecutters Island.

Background

2. FSD's Diving Unit has an establishment of 112 staff, with five teams of active divers deployed to man the diving tenders round the clock at Tung Lo Wan, Tsim Sha Tsui, Sha Tin, Castle Peak Bay and Penny's Bay Fire Station. In addition, there are two teams of divers under the establishment of the FSD Airport Fire Contingent. Apart from responding to emergencies requiring the use of diving rescue techniques or diving equipment, the Diving Unit is also responsible for training and monitoring the performance of all divers. FSD's divers performed an annual average of about 470 diving operations in the past three years.

Proposal

3. We plan to construct a four-storey diving training centre on a site of about 2 182 square metres (m²) at the northwest corner of the Government Dockyard at Stonecutters Island. The project comprises –

- (a) a diving training centre of about 5 550 m² in construction floor area, comprising –
 - (i) a 25 metres (m) (length) x 11 m (width) x 8 m (depth) diving training pool;

- (ii) training facilities including a lecture room/classroom, a workshop and demonstration room, a deep dive training room with a deep dive simulator¹ and a two-compartment decompression chamber², a rapid pool³, a welding tank⁴, an overhead rail and helicopter winch simulator with electric fans⁵ and a wave generator⁶;
 - (iii) supporting facilities including an appliance room, stores, dormitories, a canteen/recreation room with pantry, a kitchen and kitchen store, an infirmary, a rescue command and control room, locker and changing rooms, a diving equipment/uniform drying room, a first aid room, offices, toilets and ablutions, tanks and tank rooms, a lift, pump rooms, two dangerous goods stores, a fire control room, emergency generator rooms and plant rooms;
 - (iv) a drill yard for parade and operational exercise/drills and for parking of reinforcing fire appliances/ambulances; and
- (b) berthing facilities including a crane, a new jetty formed by a pontoon and a mooring dolphin, and a floating jetty formed by extension of the existing boat hoist jetty for berthing of a diving support vessel and diving support speedboats.

The site plan is at **Annex A** and the perspective drawing of the proposed diving training centre is at **Annex B**.

Justifications

Diving Training Centre

4. There is a need for FSD's divers to be adequately and appropriately trained to ensure both the efficiency and safety in performing their diving duties. In Hong Kong, maritime and underwater

¹ The deep dive simulator is a wet chamber used for simulating deep sea diving conditions.

² The two-compartment decompression chamber is used for aptitude test of diving trainees, and treatment of decompression illness stricken divers.

³ The rapid pool of dimensions 15 m (length) x 5 m (width) x 2.5 m (depth) is used for simulating conditions of whirling and rapid currents for swift water rescue training.

⁴ The welding tank is used for training divers in operating underwater thermal cutting and welding tools.

⁵ Overhead rail and helicopter winch simulator with electric fans are used for simulating helicopter winching operation under imitating downwash from a helicopter.

⁶ The wave generator will be placed in the pool to create big wave.

rescue operations are inherently dangerous. Normally, visibility in waters is low due to heavy silt loading which blocks off the sunlight. Rescue operations in typhoon shelters, cargo handling basins and waste water treatment plant are in particular dangerous because in addition to the extremely low visibility, the water can be full of biological and chemical pollutants which impose risk to divers if there is no proper training and protection. The rough sea environment and heavy marine traffic in Hong Kong waters further impose danger on divers.

5. To cope with the challenging work, all FSD's divers must go through initial and advanced diving courses before they can be deployed as a rescue diver. To be professional divers, they also have to acquire advanced diving rescue skills, such as decompression, underwater thermal cutting, light salvage and application of underwater rescue tools. Moreover, they are required to undergo regular training to keep up their competency.

6. Due to the lack of suitable training facilities in Hong Kong, FSD's divers have to conduct training, including initial training, in the open sea. The unfavourable sea conditions in Hong Kong are undesirable for diving training, particularly for initial training. The rough sea environment and the heavy marine traffic adversely affect the teaching of diving and rescue techniques, and impose danger on the diving trainees. The limited underwater visibility also makes it difficult for instructors to observe and monitor the trainees' performance. In addition, initial and advanced diving training are frequently conducted in waters far away from the marine traffic, resulting in long travelling time by fireboats.⁷ Training sessions are often interrupted or even cancelled when the fireboats have to respond to emergencies or when the weather is inclement. The proposed diving training centre will enable diving training to be efficiently and safely conducted under controlled environments. Moreover, Hong Kong lacks the training facilities for conducting training courses on the advanced diving rescue skills mentioned in paragraph 5 above, and FSD has to rely on overseas training to provide such training to its divers. Due to financial and manpower

⁷ FSD's fireboats usually have to sail for more than an hour to reach suitable sites in the open sea for divers to receive diving training.

constraints, only a limited number of divers could attend such overseas diving training each year. With the training facilities of the proposed centre, all divers can readily acquire the advanced diving rescue skills in Hong Kong.

7. Apart from FSD, other Government departments, such as the Hong Kong Police Force and the Customs and Excise Department, also have diving training needs. FSD has assisted some of these departments in training their divers at public swimming pools and in the open sea. The proposed diving training centre can therefore, also provide better training facilities for other departments to meet their training needs.

Berthing Facilities

8. With the commissioning of the proposed diving training centre, divers will still need to undergo training in the open sea to gain practical experience. To achieve efficiency in conveying divers to undergo such training, it is necessary to provide the proposed berthing facilities at the diving training centre. The proposed berthing facilities can provide accommodation for diving vessels. This will facilitate divers to board the vessels at the diving training centre for travelling to suitable sites in the open sea for training, without the need to travel to other fireboat stations to board the vessels.

9. The proposed berthing facilities will also serve as a base for marine rescue operations. The Government Dockyard at Stonecutters Island is centrally located in Hong Kong waters and right next to the major fairways. There are also existing facilities for refuelling, boat hoisting and landing within the Government Dockyard. To take advantage of the strategic location and the existing facilities of the Government Dockyard, we plan to provide permanent accommodation for a diving support vessel and two speedboats, which are temporarily accommodated at Tung Lo Wan Fireboat Station and Eastern Sea Rescue Berth of Chek Lap Kok Airport. Moreover, the Diving Unit head office and a diving tender currently at Tsim Sha Tsui Fire Station will be re-provisioned to the proposed training centre to closely monitor diving training programmes at the centre and to respond to emergencies occurring at the heart of the harbour.

Public Consultation

10. We consulted the Community Affairs Committee of the Sham Shui Po District Council about our proposal in January 1999 and June 2002. The Committee members have no objection to the proposal.

11. In respect of the provision of berthing facilities at the diving training centre, we consulted the Environment and Food Committee of the Sham Shui Po District Council in March 2005. The Committee members raised no objection to the provision of berthing facilities and offered their support to the project. Pursuant to the Foreshore and Sea-bed (Reclamations) Ordinance (Cap. 127), the Lands Department has published notice of the proposed berthing facilities. No objection to the proposal was received.

Environmental Implications

12. The project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). We completed a Preliminary Environmental Review (PER) for the project in February 1998. The PER concluded that the project would have no long-term environmental impact. The Director of Environmental Protection vetted the PER and agreed that an Environmental Impact Assessment would not be necessary.

13. During construction, we will control noise, dust and site run-off nuisances to within established standards and guidelines through the implementation of mitigation measures in the relevant contracts. These include the use of silencers, mufflers, acoustic lining or shields for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel-washing facilities.

Land Acquisition

14. This project does not require any land acquisition.

Financial Implications

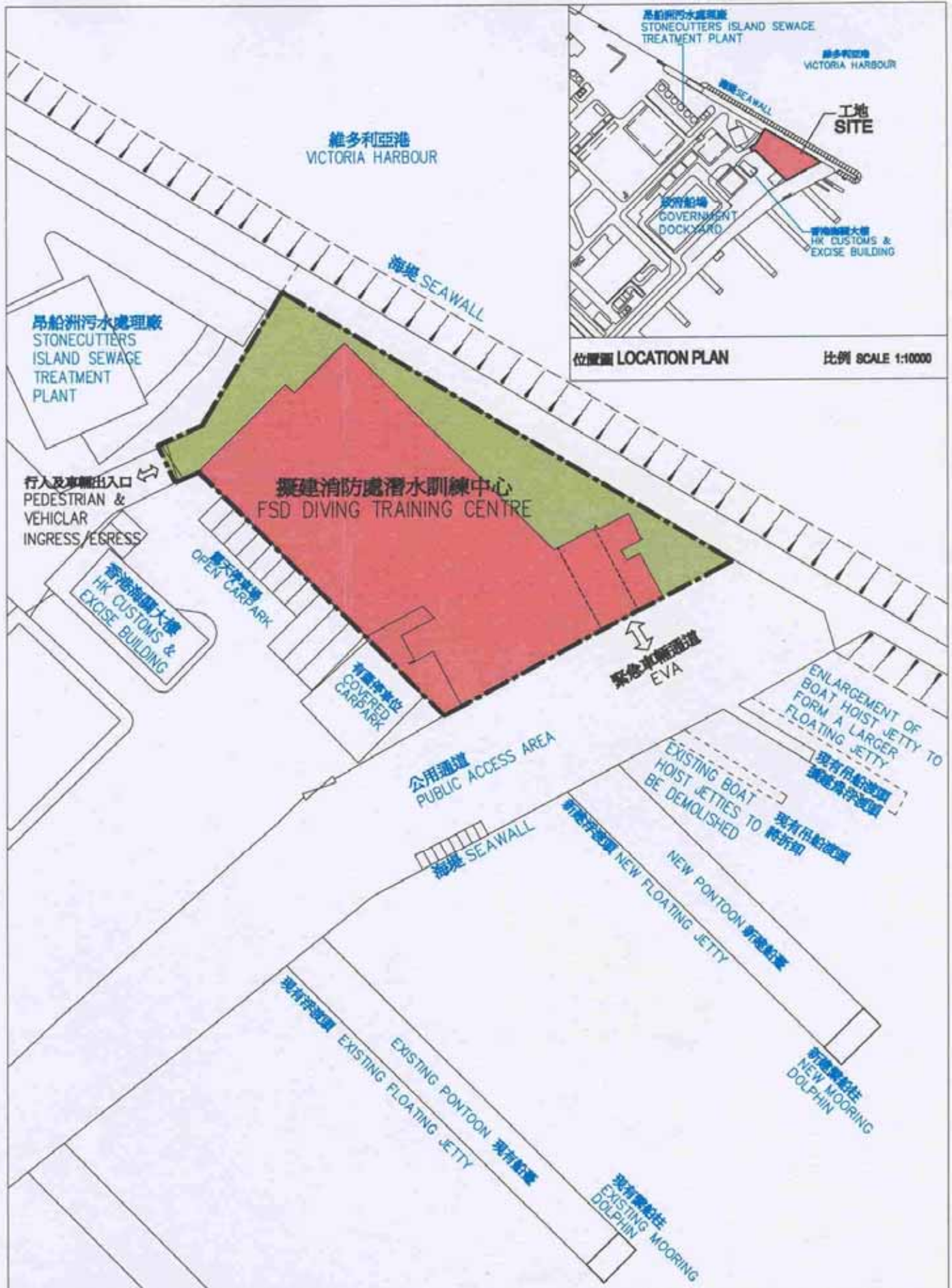
15. The estimated capital cost of the project is \$144.1 million in

money-of-the-day (MOD) prices. A breakdown is at Annex C. The additional annual recurrent expenditure arising from this project is estimated to be \$3.746 million.

Implementation Plan


16. We plan to submit the proposed project to the Public Works Subcommittee and the Finance Committee in May and June 2006 respectively. Subject to funding approval, we plan to start construction in December 2006 for completion in March 2009.

Security Bureau
April 2006



位置圖 LOCATION PLAN

比例 SCALE 1:10000


127BF 昂船洲政府船塢消防處 潛水訓練中心 FSD DIVING TRAINING CENTRE IN THE GOVERNMENT DOCKYARD AT STONECUTTERS ISLAND	drawn by J.L.	date 02.06	drawing no. AB/5970/XA101	scale 1:750
	approved T.H.	date 02.06	 ARCHITECTURAL SERVICES DEPARTMENT	
	office ARCHITECTURAL BRANCH			



消防處潛水訓練中心東北面立面圖（模擬圖）
NORTH-EASTERN ELEVATION OF THE FSD DIVING TRAINING CENTRE (ARTIST'S IMPRESSION)



消防處潛水訓練中心西北面立面圖（模擬圖）
NORTH-WESTERN ELEVATION OF THE FSD DIVING TRAINING CENTRE (ARTIST'S IMPRESSION)

127BF 昂船洲政府船塢消防處 潛水訓練中心 FSD DIVING TRAINING CENTRE IN THE GOVERNMENT DOCKYARD AT STONECUTTERS ISLAND	drawn by C.H.	date 02.06	drawing no. AB/5970/XA102	scale N.T.S.
	approved T.H.	date 02.06		
	office ARCHITECTURAL BRANCH			 ARCHITECTURAL SERVICES DEPARTMENT

Breakdown of the Capital Cost

		\$ Million	
(a)	Site Works	0.8	
(b)	Marine Works	8.4	
(c)	Piling	14.5	
(d)	Building	50.1	
(e)	Building Services	19.4	
(f)	Drainage Works	0.6	
(g)	External Works	8.1	
(h)	Specialist Diving Installations	6.9	
(i)	Furniture and Equipment	17.5	
(j)	Consultants' Fees for Contract Administration	2.4	
(k)	Contingencies	9.0	
		Sub-total	137.7 (in September 2005 prices)
(l)	Provision for Price Adjustment	6.4	
		Total	144.1 (in MOD prices)