

## **ITEM FOR FINANCE COMMITTEE**

### **HEAD 122 - HONG KONG POLICE FORCE**

#### **Subhead 603 Plant, vehicles and equipment**

#### **New Item “Two dumb lighters and six high-speed interceptors for Marine Police Region”**

Members are invited to approve a new commitment of \$24.43 million for the replacement of three police water jet boats with two dumb lighters and six high-speed interceptors.

### **PROBLEM**

Three existing police water jet boats (WJBs), PL6, PL7 and PL8, which were purposely built in 1986 to operate in the shallow waters of Deep Bay, are reaching the end of their serviceable life. They are no longer capable of providing effective support to the Marine Police operations and need to be replaced.

### **PROPOSAL**

2. The Commissioner of Police (CP), on the advice of the Director of Marine (D of M) and with the support of the Secretary for Security, proposes to replace the three WJBs with two dumb lighters and six high-speed interceptors to operate in the shallow waters of Deep Bay.

### **JUSTIFICATION**

3. The three existing WJBs belong to the Marine Police West Division (MWDIV) at Tai Lam. They operate in the shallow waters of Deep Bay and are mainly responsible for anti-smuggling and anti-illegal immigration operations.

4. D of M has advised that the estimated life expectancy of these WJBs is normally around 15 years after which they will be beyond economical repair. In fact, owing to obsolescence, the maintenance downtime has been increasing and the performance of these boats has been deteriorating. The annual average downtime rate in the past two years was 23% or 12 weeks. They were originally capable of a speed of 22 knots, but can now only achieve a maximum speed of 12 knots.

5. The Marine Police originally planned to procure three new WJBs as replacement. However, after critically reviewing their current and future operational needs detailed in paragraphs 6 and 7 below, they now propose that the three WJBs be replaced by two dumb lighters and six high-speed interceptors to police the waters of Deep Bay.

6. In considering how these WJBs should be replaced, the Marine Police have taken into account their actual operational experience in Deep Bay. The increasing use of high-speed sampans in illegal activities and the geographical limitations of Deep Bay necessitate the quick response of the Marine Police to identify and intercept suspicious vessels before they reach the shore or exit the Hong Kong waters. At present, the Marine Police have temporarily deployed small high-speed rigid-inflatable craft from the Small Boat Unit (SBU) to MWDIV to carry out operations in Deep Bay. The high-speed rigid-inflatable craft are capable of operating in shallow water and pursuing target vessels to the shoreline. Because of their deteriorating performance in speed, the three WJBs are often used as radar and command platforms for radar surveillance and deployment of the small craft. The WJBs have proved to be effective as radar platforms since they can direct high-speed vessels to intercept targets. Deploying this approach, the Marine Police have successfully made a total of 198 arrests in Deep Bay since June 1998.

7. However, the small craft of SBU cannot be permanently re-deployed to Deep Bay as they are also required to perform other operational tasks, such as assisting the Anti-smuggling Task Force and carrying out crowd control duties during major events. Hence, the existing redeployment arrangement cannot fully meet the operational requirements of MWDIV which needs to provide round-the-clock coverage in Deep Bay. If no suitable replacement is provided, the Marine Police's ability to intercept illegal immigrants and other suspicious vessels in the area will diminish.

8. In the light of the above operational experience, the Marine Police have concluded that their requirements could best be met by two dumb lighters and six high-speed interceptors. The two dumb lighters will replace the three WJBs to provide a stable radar and command platform and a base for small high-

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speed boats tasked to intercept suspicious targets in the shallow water. As the optimum range of a radar radius is about three nautical miles for detecting small vessels, two dumb lighters will be required in Deep Bay to cover an area extending approximately nine nautical miles. If only one dumb lighter was deployed, many vessels would be able to evade radar detection and the high-speed interceptors would also have to travel further to intercept suspicious vessels. Therefore, the deployment of two dumb lighters is strategically important for the Marine Police to maintain law and order in the Deep Bay area.

9. The dumb lighters will be equipped with advanced technological facilities such as satellite navigation system and thermal imaging camera to better meet the more demanding operational needs. The satellite navigation system will be used for accurate referencing to boundaries and target vessels on the radar screen while thermal imaging camera will be for visually identifying radar contacts under poor vision condition. This is particularly important for locating survivors in the water during search and rescue operation. The estimated economic life of a dumb lighter is 20 years.

10. On a routine basis, each dumb lighter will operate two high-speed interceptors which, for operational and safety reasons, will need to work in pairs. The interceptors can move at a top speed of 35 knots to intercept fast moving vessels. The third high-speed interceptor will be held as a maintenance/operational reserve in order to provide sufficient coverage round-the-clock in Deep Bay, where the operational environment is very unfavourable with many underwater obstructions and navigational hazards. Should a high-speed interceptor sustain operational damage, and if a spare boat is not readily available, operational efficiency will immediately be impaired. The Marine Police therefore envisage it necessary to keep two interceptors as maintenance/operational reserve. The estimated economic life of a high-speed interceptor is ten years.

## FINANCIAL IMPLICATIONS

### Non-recurrent Cost

11. We estimate that the non-recurrent cost of two dumb lighters and six high-speed interceptors will be \$24.43 million, broken down as follows -

<b>Item</b>	<b>\$'000</b> <i>(unit cost)</i>	<b>\$'000</b>
(a) Two dumb lighters		
(i) one dumb lighter with life raft, deck crane and associated mooring equipment	4,600	9,200

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Item	\$'000 <i>(unit cost)</i>	\$'000
(ii) generator and electrical equipment	1,050	2,100
(iii) deckhouse and associated fittings	1,100	2,200
(iv) electronic surveillance equipment	2,684	5,368
(v) launching system for high-speed interceptor	250	500
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Sub-total	9,684	19,368
(b) Six high-speed interceptors	473	2,840
(c) Contingency (10% of (a) and (b))		2,221
<b>Total</b>		<b>24,429</b>
		<b>Say 24,430</b>

12. As regards paragraph 11(a)(i) above, the estimate of \$9.2 million is to cover the cost of two purpose-built 30-metre dumb lighters each installed with a life raft, hydraulic crane and associated equipment needed to safely moor the vessel in Deep Bay.

13. As regards paragraph 11(a)(ii) above, the estimate of \$2.1 million is to cover the cost of two generators and the installation of various electrical equipment on the two dumb lighters.

14. As regards paragraph 11(a)(iii) above, the estimate of \$2.2 million is for the construction of deckhouse accommodation with an operations/command room, storeroom, kitchen, restroom and washing facilities.

15. As regards paragraph 11(a)(iv) above, the estimate of \$5,368,000 is for the purchase and installation of thermal imager and radar system on each of the two dumb lighters. This equipment will enable the Police to identify suspicious targets and guide the high-speed interceptors safely to the location where physical inspection of the subject vessels can be carried out.

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16. As regards paragraph 11(a)(v) above, the estimate of \$0.5 million is to cover the cost of a special launching and storage system for one high-speed interceptor on board. Keeping the interceptor out of the water but ready for quick deployment will help to prolong its operational life.

17. As regards paragraph 11(b) above, the estimate of \$2.84 million is to cover the cost of six 5.5-metre high-speed interceptors. Each boat will be fitted with a single 90 horsepower outboard engine, with one spare engine as reserve.

18. The estimated cashflow will be as follows -

	<b>\$'000</b>
2000-2001	12,215
2001-2002	12,215
Total	<u>24,430</u>

### **Recurrent Cost**

19. D of M and CP estimate that there will be a net saving of \$940,000 in the annual operating cost arising from the proposed procurement of two dumb lighters and six high-speed interceptors, broken down as follows -

	<b>\$'000</b>
(a) Maintenance of two dumb lighters including towing costs and consumable stores	1,054
(b) Maintenance of six high-speed interceptors	252
(c) Maintenance of electronic equipment	500
(d) Fuel costs for dumb lighters and interceptors	<u>570</u>
Sub-total	2,376
<u>Less</u>	
(e) Recurrent operating and maintenance cost of three existing WJBs	<u>(3,316)</u>
<b>Saving</b>	<u><b>(940)</b></u>

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20. As regards paragraph 19(a) above, the estimate of \$1,054,000 is to cover the cost of annual routine maintenance for the two dumb lighters, the cost of towing the vessels to the dockyard and the replacement of such consumable stores as ropes and fenders.

21. As regards paragraph 19(b) above, the estimate of \$252,000 is to cover the cost of routine maintenance for the six high-speed interceptors.

22. As regards paragraph 19(c) above, the estimate of \$0.5 million is to cover the cost of routine maintenance to the thermal imager, radar system and other miscellaneous electronic items.

23. As regards paragraph 19(d) above, the estimate of \$0.57 million is to cover the annual cost of fuel used by the generators on the two dumb lighters and the high-speed interceptors.

24. As regards paragraph 19(e) above, it is the annual recurrent operating and maintenance cost of the three existing WJBs.

25. CP will deploy existing staff to man the two dumb lighters and six high-speed interceptors. No additional staff is required.

### **OTHER PROPOSALS CONSIDERED**

26. CP has considered replacing the existing WJBs with vessels of similar design and function but decided against this course of action in view of the change in operational requirements. D of M has advised that the latest estimated cost of replacing the three WJBs with three vessels of design and function upgraded to meet present day operational needs is about \$36 million. CP has also considered procuring the same type of rigid-inflatable craft used by SBU instead of the proposed high-speed interceptors but also decided against this course of action because a rigid-inflatable craft costs almost four times more than a high-speed interceptor and is less versatile for operations in the more shallow waters of Deep Bay. CP envisages that the proposal of procuring two dumb lighters and six interceptors will improve the efficiency and effectiveness of Marine Police in patrolling shallow waters at a lower cost.

### **Implementation**

27. CP plans to procure the two dumb lighters and six high-speed interceptors in accordance with the following schedule -

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	<b>Target date</b>
(a) Preparation of tender specifications	January to March 2000
(b) Tendering	April to June 2000
(c) Tender evaluation and contract award	July to September 2000
(d) Construction	October 2000 to September 2001
(e) Delivery of two dumb lighters and six high-speed interceptors	October 2001

### **BACKGROUND INFORMATION**

28. The Marine Police Region is responsible for policing the Hong Kong waters and some 240 islands within the Hong Kong Special Administrative Region (HKSAR). The Marine Police perform a wide range of duties, such as immigration control, anti-smuggling, maritime safety, conservancy and maritime law enforcement.

29. Deep Bay is located in the northwest corner of the HKSAR, some 34 kilometres (km) away from the MWDIV operational base. The bay itself is approximately 18 km in length with a width in most areas of about 4.5 km. Navigation is mainly along the channel in the centre of the length of the Bay with a depth of water of over one metre. Water on the Hong Kong side outside the channel is less than one metre deep and during times of low tide (usually twice a day) large areas of the bay cannot be safely navigated by conventional craft due to exposed mud and/or jagged oyster beds. Therefore purpose-built vessels with high-speed and shallow draught characteristics are needed to effectively patrol this area.

30. We consulted the Legislative Council Panel on Security of the proposal on 11 November 1999. The Panel noted that the replacement of these WJBs with two dumb lighters and six high-speed interceptors was essential to the operation of the Marine Police and supported the proposal in principle.