

ITEM FOR FINANCE COMMITTEE

HEAD 122 – HONG KONG POLICE FORCE

Subhead 603 Plant, vehicles and equipment

Members are invited to approve a new commitment of \$658.41 million for the replacement of 18 police launches for the Marine Region of the Hong Kong Police Force.

PROBLEM

18 police launches (Police Launches 3, 22, 24, 26-29, 31, 46-49, 51-56) have reached the end of their serviceable lives.

PROPOSAL

2. The Commissioner of Police, on the advice of the Director of Marine and with the support of the Secretary for Security, proposes to replace 18 police launches by new vessels with enhanced capabilities at an estimated cost of \$658.41 million. These 18 ageing police launches comprise one Regional Training Launch, six Australian Shipbuilding Industries Divisional Patrol Launches (ASI Patrol Launches) and 11 ‘SeaSpray’ patrol launches. The replacement will enable Hong Kong Police Force (HKPF) to continue giving an effective response to maritime security incidents, as well as preventing and suppressing illegal cross-boundary activities.

JUSTIFICATION

Functions of the Existing Police Launches

Regional Training Launch

3. The existing Regional Training Launch (Police Launch (PL) 3) proposed to be replaced is a steel hull vessel that has been in service for over 26 years. PL 3 was constructed as an offshore maritime search and rescue (SAR)

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launch with a divisional patrol and command capability. Designed to conduct SAR missions beyond the Boundary of Administration of Hong Kong Special Administrative Region, PL 3 has much of its space on board taken up by crew accommodation and other SAR related features. It thus has limited capability for being a major incident command platform which requires more space on board. To ensure the maritime operational efficiency and capability of the Marine Police, the divisional patrol and command functions of PL 3 were handed over to ASI patrol launches in 2002. Since then, PL 3 has mainly been used for training purposes.

ASI patrol launches

4. The present fleet of six 33-metre steel hull ASI patrol launches (PLs 51-56), which were built between 1991 and 1993, have been in service for over 21 years. The ASI patrol launches are key patrol craft in the Marine Police fleet responsible for protecting the more exposed waters of Hong Kong, and providing additional radar coverage in areas not covered by shore-based radar sites. An ‘Operations Room’ was included in the design of these vessels so as to enable them to undertake a limited Divisional coordination role.

‘SeaSpray’ patrol launches

5. The 11 aluminium hull ‘SeaSpray’ patrol launches (PLs 22, 24, 26-29, 31, 46-49) proposed for replacement, which were delivered to the Marine Police between 1992 and 1993, have been in service for over 21 years. Among these 11 ‘SeaSpray’ patrol launches, seven are smaller 9.9-metre craft tasked for inshore patrol, and the remaining four are larger 11.4-metre launches which provide logistical support in addition to inshore patrol. The main responsibilities of ‘SeaSpray’ patrol launches include conducting maritime law enforcement and providing policing support to gazetted beaches, typhoon shelters, sheltered anchorages, outlying islands and remote areas, etc.

Need for Replacement

6. Government craft have a usual serviceable lifespan ranging from eight to 20 years. The expected lifespan of craft with steel hulls, such as the Regional Training Launch and ASI patrol launches is 20 years, while that for craft with aluminium hulls, such as the ‘SeaSpray’ patrol launches, is 15 years. The above 18 police launches are all operating beyond their expected useful life. Besides, their facilities are limited and ageing. To strengthen its operational capability, the Marine Police needs an effective ‘on-scene’ command platform for major maritime incidents. Meanwhile, while the current ASI patrol launches and ‘SeaSpray’ patrol launches are still operational and capable of performing their designated roles, their service efficiency is gradually decreasing due to the lack of

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modern equipment, making it difficult for them to keep up with the evolving role of the Marine Police. Furthermore, one of the 11 'SeaSpray' patrol launches (PL 28) severely damaged in July 2010 was not repaired as it was already operating beyond its expected useful life. The maintenance of the serving ASI patrol launches and 'SeaSpray' patrol launches is becoming increasingly expensive and difficult due to the lack of spare parts. There is an imminent operational need to replace the 18 launches.

7. Condition assessments carried out on all of the above launches by the Director of Marine confirm that, while the launches could remain in service for the coming few years, it is necessary to replace them as soon as practicable. Taking into account the lead time required for completing the procurement, including tendering, construction, delivery, and arranging for commencement of service, HKPF has to begin the replacement process now to ensure that the Marine Police will continue to be appropriately equipped to carry out their maritime law enforcement responsibilities and maintain operational capability.

The Proposed Replacement Vessels

Mobile Response and Command Platform (MRCP)

8. We propose to replace the Regional Training Launch (PL 3) with a Mobile Response and Command Platform (MRCP). MRCP is a purpose-built launch designed to be used as a command platform for major maritime incidents, including serious crime, terrorist-related threats and disaster relief. The proposed MRCP will be a 40 metre long catamaran/multi-hull type craft constructed largely of marine grade aluminium alloy. It will be equipped with a full range of modern navigation, detection and communications equipment as well as a purpose-built command and control suite which is suitable for both handling multi-agency major maritime incidents and day-to-day police operations. The introduction of MRCP will address the present shortfall in the command capability of the Marine Police to effectively handle on-scene command of major maritime incidents on a round-the-clock basis. It will also enhance the Marine Police's capability in conducting protracted shallow water operations and small craft operations in remote areas. When it is not required for on-scene command functions or to support frontline operations, the MRCP will serve as a Regional Training Launch to take up the role currently carried out by PL 3.

9. The enhanced functionalities of the new MRCP are summarized as follows –

- (a) The MRCP will be equipped with a variety of smaller support vessels designed to enhance the ability of the MRCP to handle incidents in shallow waters and beach/foreshore areas where traditional police craft cannot operate;

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- (b) The MRCP has a top speed of 25 knots, which is significantly higher than 14 knots of the present PL 3. It will hence enable the Marine Police to arrive on-scene and take up its major incident management role more promptly;
- (c) The catamaran/multi-hull design provides a more stable working environment and much greater space for the necessary advanced communications equipment, command suites and briefing/staging areas for specialist units. It will also provide improved deck space for enhanced small vessel operations and on-scene initial handling of injured and/or affected persons in a safe and secure environment;
- (d) The MRCP will be equipped with advanced thermal imaging, radar and navigation equipment, enabling incident commanders to make more informed and timely decisions based upon real time information. The incorporation of modern control and navigation equipment will provide greatly improved operational capabilities without the need for increased crew numbers. Live video and data feeds will be relayed to shore facilities for use by central commanders; and
- (e) The MRCP will be equipped with in-built ballistic protection for the bridge, command suites and vulnerable areas.

Versatile Patrol Units (VPUs)

10. We propose to replace the six ASI patrol launches (PLs 51-56) with similar sized Versatile Patrol Units (VPU). VPUs are responsible for patrol duties in designated patrol areas where the safe operation of smaller patrol craft of HKPF is restrained due to the nature of the open sea conditions and the distance from the home base. The proposed VPUs will be an advanced monohull type craft of approximately 30 to 35 metres in length, constructed of steel to ensure robustness in bad weather conditions. They will be fitted with modern detection, communications and navigation equipment, and equipped with two small support vessels for shallow water operations and suitable equipment and facilities which allow the VPUs to conduct rough sea operations for extended periods without immediate support. The VPU would also enhance Marine Police's capability of maintaining maritime security and shallow water/beach landing operations.

11. The enhanced designs or design features of the VPU include –

- (a) improved fuel-efficiency, effectiveness and reliability since the VPUs will be equipped with modern propulsion systems;

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- (b) improved rough weather patrol capability through the use of advanced hull shape which enables the craft to remain on station and operational in rougher weather. With the introduction of active stabilization, VPU will reduce fatigue-inducing movement which allows extended safe operations for the crews;
- (c) improved thermal imaging, night vision, radar and communications technology to improve detection, response and interdiction capabilities;
- (d) provision of updated firefighting equipment which enable a more effective initial response to vessel fires;
- (e) incorporation of launch management systems to enable more effective divisional asset deployment and oversight; and
- (f) ballistic protection for the bridge and operations areas.

Hydrofoil Assisted Catamarans (HACs)

12. We propose to replace the 11 'SeaSprays' patrol launches (PLs 22, 24, 26-29, 31, 46-49) with similar sized Hydrofoil Assisted Catamarans (HAC). The proposed HACs will be 12-metre long catamaran type craft constructed of aluminium alloy. The main day-to-day function of the proposed HACs will be patrolling and policing inshore areas, such as typhoon shelters, sheltered anchorages, cargo/container basins, gazetted beaches, where the larger ASI patrol launches/VPU cannot navigate. The HACs will also be able to handle casualty evacuations and rescue operations in areas where larger launches cannot access. With a higher speed, improved shallow water performance and night vision capability, the HACs will enhance and maintain effective coverage of shallow inshore coastal areas within Hong Kong waters, hence boosting the operational effectiveness of Marine Police.

13. The enhancements in the HAC design include –

- (a) higher speed of 35 knots as compared with the speed of 'SeaSprays' patrol launches of 25 knots, reduced fuel consumption of approximately 10% and associated emissions through the adoption of modern propulsion systems and hydrofoil design;
- (b) improved shallow water and beach landing capability through the carriage of an inflatable small support vessel;

/(c)

- (c) improved thermal imaging, night vision, radar and communications technology to improve detection, response and interdiction capabilities;
- (d) improved casualty handling facilities to assist in disaster response and casualty evacuation tasks; and
- (e) improved manoeuvrability to assist in safe navigation in congested waters such as inside typhoon shelters, anchorages, container/cargo basins, etc.

Benefits of the Replacement Proposal

14. Hong Kong is one of the busiest ports in the world with over 187 000 vessel arrivals reported in 2013. In the same year, a total container throughput of 22.352 million twenty-foot equivalent units was recorded, making Hong Kong the world's fourth largest container port.¹ Over the years, Hong Kong has continued to maintain and strengthen its position as an international entrepôt, especially for promoting maritime trade. Furthermore, with the commissioning of the Kai Tak cruise terminal in 2013, Hong Kong aspires to become a regional transport hub for cruise liners. Maintaining a robust maritime law enforcement capability and keeping local waters free from the threat of terrorism and crime are of paramount importance for upholding the confidence of the shipping and cruise industries in Hong Kong's ability to maintain a safe maritime environment and deal with an International Ship and Port Facility Security Code related incident.

15. HKPF operates on a 24-hour basis round the year and deploys launches throughout Hong Kong Waters to provide a continuous police presence to deter illegal activities. It also enforces relevant legislation and responds efficiently to incidents. Timely replacement of the 18 existing launches with the above proposed vessels which adopt technology advances will equip HKPF with safer, more fuel efficient, greener and more effective craft for discharging its duties and maintaining maritime safety in a professional manner. By including specific equipment, features and capabilities in the vessel designs, the new vessels will enhance the operational efficiency of HKPF in both law enforcement and SAR, and allow faster arrival on scene as well as more effective first response once at scene.

16. From the enforcement point of view, the provision of ballistic protection for the proposed craft will enhance the protection for officers taking enforcement actions against armed criminals. The modernisation of night vision,

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¹ Port of Hong Kong in Figures (2014 Edition) – Marine Department publication.

target radar and thermal detection equipment will allow HKPF to enhance its proficiency in detecting and responding to suspicious craft at sea in both daylight and dark conditions. It will also bring about a more robust enforcement capability, thereby deterring criminal activity and the threat of terrorist incidents in Hong Kong waters. The improved capability in shallow water operation will allow HKPF to maintain effective Police presence and response in shallow inshore coastal areas, such as tidal mud flat, thereby deterring people from exploiting those areas for illegal purposes.

17. As for the rescue capability of HKPF, the proposed craft are equipped to enhance HKPF's capability in providing effective response to maritime incidents. With more advanced night vision, target radar and thermal detection equipment, the proficiency of HKPF in SAR will be enhanced. With updated firefighting equipment and improved casualty handling facilities in some vessels, HKPF will be more proficient in assisting in disaster response and casualty evacuation tasks. Furthermore, the improved capability in shallow water operation will allow the police force to gain direct and speedy access to remote beaches, rocky foreshores and other waterfront areas where man-made installations such as seawalls, piers and jetties are not present, thereby greatly enhancing the effectiveness of the police response in areas frequented by those involved in water sports, coastal hill walking, and similar pursuits when members of the public get into difficulties.

FINANCIAL IMPLICATIONS

Non-recurrent Expenditure

18. The total non-recurrent cost for replacing 18 police launches is estimated to be \$658.41 million. A detailed breakdown is as follows –

	MRCP	HAC	VPU
	\$ '000	\$ '000	\$ '000
(a) Hull and Machinery	73,325	7,220	61,575
(b) Electronic equipment on board	6,675	1,280	2,525
(c) Spare parts	4,000	500	3,000
(d) Contingency	8,400	900	6,710
	Unit Cost:	92,400	9,900
		73,810	
Number of Vessels:	1	11	6
Total Vessel Cost:	92,400	108,900	442,860

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	MRCP	HAC	VPU
	\$ '000	\$ '000	\$ '000
(e) Consultancy	2,250	6,000	6,000
Grand Total:	94,650	114,900	448,860

19. On paragraph 18(a) above, the estimates are for the design and construction of the hulls with all the fixtures therein such as engines, anchors, rudders, fendering, etc.

20. On paragraph 18(b) above, the estimates are for the electronic navigational aids and communications systems on board such as a solid state radars, satellite navigation, gyro compasses, thermal night vision sensors, etc.

21. On paragraph 18(c) above, the estimates are for spare parts needed to keep the proposed vessels in a good state of operational preparedness.

22. On paragraph 18(d) above, the estimates represent 10% of the contingency on the items 18(a) to (c).

23. On paragraph 18(e) above, the estimates represent the estimated consultancy costs in respect of tender drafting and subsequent contract management work.

24. The estimated cash flow requirements are as follows –

Year	\$'000
2014 – 15	300
2015 – 16	8,800
2016 – 17	5,000
2017 – 18	68,500
2018 – 19	303,000
2019 – 20	270,810
2020 – 21	<u>2,000</u>
Total:	658,410

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Recurrent Expenditure

25. The recurrent costs of the 18 new vessels will be \$103.75 million per annum from 2020-21 onwards. This will be partially offset by annual savings of \$58.76 million from the recurrent cost of the 18 existing launches. The additional recurrent cost of \$44.99 million is due to the higher annual maintenance and repair cost of the more sophisticated equipment and machinery of these new vessels. No additional staff costs will be incurred.

26. Maintenance of the 18 new vessels and the new communication systems of the vessels will commence from April 2020 after expiry of the one-year warranty period. The requirements of recurrent expenditure will be reflected in the Estimates of the relevant years.

27. The breakdown of the requirements of recurrent expenditure of the MCRP is as follows –

	2019-20 \$'000	2020-21 onwards \$'000
(a) Maintenance cost (vessel)	32	4,932
(i) Maintenance cost	-	4,900
(ii) Operation store	6	6
(iii) Docking services	26	26
(b) Maintenance cost (vessel communications systems)	-	1,020
(c) Fuel cost	2,000	2,000
Sub-total:	2,032	7,952
<i>Less</i>		
(d) Maintenance cost (vessel)	(1,469)	(1,469)
(e) Maintenance cost (existing vessel communications systems)	(36)	(36)
(f) Fuel cost	(437)	(437)
Sub-total:	(1,942)	(1,942)
Estimated Additional Cost:	90	6,010

28. The breakdown of the requirements of recurrent expenditure of the VPU is as follows –

	2019-20 \$'000	2020-21 onwards \$'000
(a) Maintenance cost (vessel)	20	6,920
(i) Maintenance cost	-	6,900
(ii) Operation store	20	20
(b) Maintenance cost (vessel communications systems)	-	943
(c) Fuel cost	3,292	3,292
Sub-total:	3,312	11,155
<i>Less</i>		
(d) Maintenance cost (vessel)	(3,781)	(3,781)
(e) Maintenance cost (existing vessel communications systems)	(324)	(324)
(f) Fuel cost	(3,658)	(3,658)
Sub-total:	(7,763)	(7,763)
Total:	(4,451)	3,392
Estimated Additional Cost for six VPUs:	(26,706)	20,352

29. The breakdown of the requirements of recurrent expenditure of the HACs is as follows –

	2019-20 \$'000	2020-21 onwards \$'000
(a) Maintenance cost (vessel)	5	2,105
(i) Maintenance cost	-	2,100
(ii) Operation store	5	5
(b) Maintenance cost (vessel communications systems)	-	221
(c) Fuel cost	298	298
Sub-total:	303	2,624
		<i>/Less</i>

	2019-20 \$'000	2020-21 onwards \$'000
<i>Less</i>		
(d) Maintenance cost (vessel)	(600)	(600)
(e) Maintenance cost (existing vessel communications systems) ²	-	-
(f) Fuel cost	(331)	(331)
Sub-total:	(931)	(931)
Total:	(628)	1,693
Estimated Additional Cost for 11 HACs:	(6,908)	18,623

30. On paragraphs 27(a), 28(a) and 29(a), the estimates are for the maintenance and repair cost for the hulls, mechanical parts and consumables on board of the new vessels.

31. On paragraphs 27(b), 28(b) and 29(b), the estimates are for the maintenance of the navigation and communications systems of the new vessels.

32. On paragraphs 27(c), 28(c) and 29(c), the estimates are for the fuel costs of the new vessels.

IMPLEMENTATION PLAN

33. Subject to the approval of the Finance Committee, HKPF plans to implement the replacement project according to the following schedule –

Activities	Target Completion Date
(a) Procurement of small support vessels ³	
(i) Preparation of tender document	December 2014
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² The zero communications maintenance cost of the present craft is due to the fact that the equipment is obsolete – repairs are done by cannibalising parts from other faulty equipment.

³ These refer to the small support vessels to be procured as part and parcel of some of the MRCP, the VPUs and the HACs to be replaced.

Activities	Target Completion Date
(ii) Tender evaluation and Award	March 2015
(iii) Construction	October 2015
(iv) Inspection and delivery	January 2016
Main launches ⁴ procurement	
(b) Preparation of consultancy document for the procurement of launches	November 2015
(c) Consultant selection	June 2016
(d) Preparation of tender documents	November 2016
(e) Tendering, evaluation and approval	August 2017
(f) Award of tender	September 2017
(g) Design and construction	August 2019
(h) Inspection and delivery	September 2019
(i) Training and commissioning	December 2019

PUBLIC CONSULTATION

34. We consulted the Legislative Council Panel on Security on 13 May 2014. Members supported the proposal and requested for additional information about the capital cost incurred and capital cost savings achieved from the implementation of Versatile Maritime Policing Strategy. We provided such information to the Panel on 19 June 2014.

BACKGROUND

35. The existing Marine Police fleet comprises a total of 118 vessels, ranging from a 40-metre training launch to small 5-metre rigid-inflatable craft, broken down as follows –

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⁴ These refer to the MRCP, six VPUs and 11 HACs.

- Two Training Launches
- 12 Divisional Patrol Launches
- 17 Medium Patrol Launches
- 23 Inshore Patrol Craft
- 12 Divisional Fast Patrol Craft
- Eight Fast Pursuit Craft
- Five High Speed Interceptors
- Four Barge Operating Platforms
- 35 Miscellaneous craft (tenders and specialist craft. etc.)

36. Of the 118 vessels, 18 are in need of replacement to maintain the enforcement capability of the Marine Police.

Security Bureau
July 2014