

PILOTAGE ADVISORY COMMITTEE WORKING GROUP

Review on Training, Assessment and Examination Arrangements for Pilots

Purpose

The purpose of this paper is to seek members' comments and advice on the review on existing arrangements (*Annex I*) and the proposal in respect of training, assessment and examination for upgrading pilots from apprentice through Class II to Class I.

Background

2. In tandem with the amendments of Schedules 1 and 3 ("the Schedules") to the Pilotage Order (Cap. 84C) in 2016, the Pilotage Authority, after consulting the Pilotage Advisory Committee ("PAC"), had endorsed two PAC papers, namely PAC paper No. 5/2016 on 29 June 2016 and PAC paper No. 1/2020 on 30 March 2020, and stipulating the training, assessment and examination arrangements for apprentices and Class II pilots and from Class IIA to Class I pilots respectively. In the PAC video conference held on 18 January 2022, owing to the sea experience for some pilot apprentices-to-be was relatively green, the need on additional training such as simulation was discussed, and the meeting agreed on the additional training need and agreed to discuss the details in the PAC Working Group.

3. As at August 2025, 7 pilots had attained their Class I licence after the endorsement of PAC papers No. 5/2016 and No. 1/2020 and another 4 pilots would be attending their examination for Class I licence in the fourth quarters of 2025. Currently there are 34 Class II pilots and 9 apprentice pilots going through the system.

4. Due to the change in shipping trade during and after COVID-19 period, Hong Kong Pilots Association ("HKPA") has expressed that there was a need to review the experience requirements in the Schedules because apprentices and Class IIA pilots have had fewer opportunities in attaining the

required experiences.

5. It is considered that the revision of the Schedules and the training, assessment and examination arrangements should be conducted in a holistic approach.

The Review

6. Marine Department (“MD”) has caused a review on the requirements stipulated in PAC papers No. 5/2016 and No. 1/2020 and had a few meetings with HKPA regarding these matters. While the revision of the Schedules will be discussed in a separate PACWG paper, this paper discusses the training, assessment and examination arrangements under PAC’s purview.

7. The existing model and overall structure of requirements of training and assessment including simulation training, practical vessel training, practical assessment at *Annex I* is considered as appropriate. Some enhancements to simulation training and fine tuning of the expression of the requirement on practical examination should be considered.

8. Apart from the proposed enhancement to simulation training deliberated in paragraphs 10 and 11 below, the existing examination syllabi for apprentice to Class IIF pilot; Class IID to Class IIC pilot and Class IIA to Class I pilot (*Annexes II, V & VIII*) are considered as appropriate and still valid, in general.

Simulation Training

9. HKPA has agreed with the comments about some pilot apprentices-to-be was relatively green in their sea experience¹ and considered enhancement to simulation training would be beneficial to apprentice pilots’ learning of ropes.

10. The following adjustments to simulation training is therefore proposed:

(i) Increase simulation training for apprentice pilots from 1 to 2 sessions, each session should comprise of at least 5 exercise scenarios (paragraph 10.(ii) refers) on different berthing, navigation and emergency situations. One session should be conducted in the early stage of apprenticeship by the Pilot’s Association for introduction of knowledge and skills. The other session should

¹ Comment made in the PAC video conference held on 18 January 2022.

be conducted in the later stage of apprentice jointly between MD and the Pilot's Association for consolidation; and

(ii) Adjust the minimum number of exercise scenarios from 6 to 5 for all classes of pilotage. This would better balance the time allocation between simulated works and briefing/debriefing.

Practical Examination

11. The existing expression used in the requirement on practical examination for upgrading from Class IID to Class IIC and from Class IIA to Class I pilots has led to misinformed expectations. It is therefore proposed to amend them to clearly reflect the original intent of the requirement as highlighted in *Annex V* for upgrading from Class IID to Class IIC and in *Annex VIII* for upgrading from Class IIA to Class I pilots.

Written and Oral Examination

12. The syllabi of written and oral examinations for applying for Class IIF and Class I pilot (*Annex II* and *Annex VIII* refers) currently in use are considered as valid and appropriate, no amendment is required.

Other requirements

13. While the requirement in experience under the Schedules to the Pilotage Order Cap.84C is under review in separate papers, the requirement in practical vessel training and practical assessment as applicable in all classes from apprentice up to class IIA for upgrading to the next class are considered as appropriate and still valid (*Annex II* to *Annex VIII* refers).

Proposal

14. As a result of the review, a revised Training, Assessment and Examination Arrangements for pilots is summarised at *Annexes IX* together with the details of requirement and syllabi in *Annex II* to *Annex VIII* are proposed for members' consideration.

15. Subject to the endorsement by the PAC and approval by the Pilotage Authority, requirements in this paper will supersede those requirements stipulated in PAC paper No. 5/2016 and PAC paper No. 1/2020.

Presentation

16. MM/Pilotage will present this paper.

Advice sought

17. Members' comments and advice are sought on the proposed arrangements at the *Annexes II to VIII* and summarised at *Annex IX*.

Marine Department
August 2025

Existing Arrangements for Training, Assessment and Examination

	Apprentice To IIF	IIF To IIE	IIE To IID	IID To IIC	IIC To IIB	IIB To IIA	IIA To I
Simulation Training (MD & Pilots)	1	1	1	1	1	1	1
Practical Vessel Training (Pilots)	-	2	2	2	2	2	2
Practical Assessment (Pilots)	3	1	1	-	1	1	1
Practical Examination (MD & Pilots)	1	-	-	1	-	-	3
Oral Examination (PAC)	1	-	-	-	-	-	1
Written Examination (MD)	1	-	-	-	-	-	-
Experience required	Schedule 1 to Cap.84C	Schedule 3 to Cap.84C	Schedule 3 to Cap.84C	Schedule 3 to Cap.84C	Schedule 3 to Cap.84C	Schedule 3 to Cap.84C	Schedule 3 to Cap.84C

Note : Summarised from PAC Paper No. 5/2016 and No. 1/2020

Examination Syllabi

For amending from Apprentice Pilot to Class IIF Pilot

Practical Examination

The practical examination consists of one berthing of a ship of any type with LOA from >80m to ≤160m to any berth as appropriate.

Written Examination

- (i) Knowledge of Pilotage Ordinance (Cap. 84) and the Berthing Guidelines;
- (ii) Navigational knowledge of the Hong Kong waters :-
 - (a) Tidal streams, depths and shoals throughout Hong Kong waters;
 - (b) Characteristics of all lights, buoys, beacons, bridge lighting system and harbour facilities throughout Hong Kong waters;
 - (c) Depths and scope of berth at all Government mooring buoys; and
 - (d) Limits of local pilotage areas including prohibited areas, anchorages and areas of restriction of any kind;
- (iii) Knowledge of ship handling:-
 - (a) Berthing and unberthing at various wharves, piers, buoys, etc. in Hong Kong under the influence of wind, current and tide;
 - (b) Manoeuvring behaviour of the types of ships expected to be piloted and the limitations imposed by particular propulsion and steering systems;
 - (c) Precautions to be taken when passing close to other vessels underway or at moorings;
 - (d) The effects of and the uses to which transverse thrust may be put. The effects when used in conjunction with a bow thruster;

- (e) Turning short round. The use of the anchor when manoeuvring or berthing;
 - (f) Use and limitation of various types of tugs; and
 - (g) Precautions to be taken when using lines to mooring buoy;
- (iv) Relationship with Master:-
- (a) Information which pilot should obtain from Master upon boarding e.g. Handling characteristics of ship, type of cargo (D.G. etc.), defect or damage to ship which might affect ship handling;
 - (b) Information which pilot should offer to Master upon boarding e.g. Preparations for mooring, berthing, anchoring, signals required, use of VHF etc.;
 - (c) Advice to Master riding out typhoons in Hong Kong harbour or anchorages; and
 - (d) Undue interference from Master;
- and
- (v) Handling emergency conditions, i.e. collision with other vessel, grounding, loss of steering, loss of propulsion, failure of vital systems and automation etc. in a narrow channel or fairway.

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Oral Examination

A comprehensive knowledge of :-

- (i) Syllabus contained in the written examination;
- (ii) The bridge equipment and navigational aids used for navigation, i.e. radar, Automatic Identification System (AIS), Electronic Chart Display and Information System (ECDIS) etc.;
- (iii) Systems of radio navigational warning broadcasts in Hong Kong and the type of information broadcast;
- (iv) International Regulations for Preventing Collisions at Sea 1972 as amended, port regulations and pollution prevention rules;
- (v) Use of VHF in accordance with the International recognized standards;
- (vi) Hong Kong Merchant Shipping Notice, Hong Kong Merchant Shipping Information Notes and Marine Department Notices (MDN); and
- (vii) Collection of evidence in incidents.

Other Requirements

The candidate is required to produce the following records to the Pilotage Authority:

- (i) Appropriate experience as required under Schedule 1 to Cap.84C;
- (ii) ~~1~~ 2 Simulation training (*existing requirement is 1, proposed to adjust to 2*);
- (iii) 3 practical assessments; and
- (iv) Any other training and courses attended.

Requirement for amending

from Class IIF Pilot to Class IIE Pilot;

The candidate is required to produce the following records to the Pilotage Authority:

- (i) Experience required under Schedule 3 to Cap.84C;
- (ii) Simulation training;
- (iii) 2 practical vessel training;
- (iv) 1 practical assessment; and
- (v) Any other training and courses attended.

Requirement for amending

from Class IIE Pilot to Class IID Pilot;

The candidate is required to produce the following records to the Pilotage Authority:

- (i) Experience required under Schedule 3 to Cap.84C;
- (ii) Simulation training;
- (iii) 2 practical vessel training;
- (iv) 1 practical assessment; and
- (v) Any other training and courses attended.

Requirement for amending
from Class IID Pilot to Class IIC Pilot

Practical Examination

The practical examination consists of one berthing of a ~~bulker or~~ tanker ship with LOA from $>210\text{m}$ to $\leq 250\text{m}$ to any ~~bulker or~~ tanker berth ~~as appropriate~~.

*note *: If a tanker ship of LOA $>210\text{m}$ to $\leq 250\text{m}$ is not available upon the candidate has accumulated 10.5 months experience in class IID the candidate may be permitted to take the practical examination with a bulker ship LOA $>210\text{m}$ to $\leq 250\text{m}$.*

Other Requirements

The candidate is required to produce the following records to the Pilotage Authority:

- (i) Experience required under Schedule 3 to Cap.84C;
- (ii) Simulation training;
- (iii) 2 practical vessel training; and
- (iv) Any other training and courses attended.

Requirement for amending

from Class IIC Pilot to Class IIB Pilot;

The candidate is required to produce the following records to the Pilotage Authority:

- (i) Experience required under Schedule 3 to Cap.84C;
- (ii) Simulation training;
- (iii) 2 practical vessel training;
- (iv) 1 practical assessment; and
- (v) Any other training and courses attended.

Requirement for amending

from Class IIB Pilot to Class IIA Pilot

The candidate is required to produce the following records to the Pilotage Authority:

- (i) Experience required under Schedule 3 to Cap.84C;
- (ii) Simulation training;
- (iii) 2 practical vessel training;
- (iv) 1 practical assessment; and
- (v) Any other training and courses attended.

Examination Syllabi for

Amending from Class IIA Pilot to Class I Pilot

Practical Examination

- (i) piloting and berthing a container ship with LOA >350m to any Kwai Chung berth on one occasion;
- (ii) Unberthing and piloting a container ship with LOA >350m from any Kwai Chung berth on one occasion; and
- (iii) piloting and berthing a dry cargo/bulker ship with LOA >350m **or draft >16.0m*** to any dry cargo /bulker berth on one occasion.

*note *: If a dry cargo/bulker ship of LOA >350m **or draft >16.0m** is not available **upon the candidate has accumulated 10.0 months experience in class IIA** ~~within 3 months prior to the date of upgrading,~~ the candidate may **be permitted to** take the practical examination with a dry cargo/bulker ship of less than but as far as practical close to 350m in length **or 16.0m in draft.***

Oral Examination

A comprehensive knowledge of -

- (i) Tidal streams, depths and shoals throughout Hong Kong waters;
- (ii) Characteristics of all lights, buoys, beacons, bridge lighting system and harbour facilities throughout Hong Kong waters;
- (iii) Depths and scope of berth at all Government mooring buoys;
- (iv) Limits of local pilotage areas including prohibited areas, anchorages and areas of restriction of any kind;
(These will be indicated by the candidate on a plan of Hong Kong waters.)
- (v) Berthing and unberthing at various wharves, piers, buoys, etc. in Hong Kong under the influence of wind, current and tide;

- (vi) Manoeuvring behaviour of the types of ships expected to be piloted and the limitations imposed by particular propulsion and steering systems;
- (vii) Use and limitation of various types of tugs;
- (viii) The bridge equipment and navigational aids used for navigation, i.e. radar, Automatic Identification System (AIS), Electronic Chart Display and Information System (ECDIS), etc.;
- (ix) Systems of radio navigational warning broadcasts in Hong Kong and the type of information broadcast;
- (x) International Regulations for Preventing Collisions at Sea 1972 as amended, port regulations and pollution prevention rules;
- (xi) Use of VHF in accordance with the International recognized standards;
- (xii) Hong Kong Merchant Shipping Notice, Hong Kong Merchant Shipping Information Notes and Marine Department Notices (MDN);
- (xiii) Handling emergency conditions, i.e. collision with other vessel, grounding, loss of steering, loss of propulsion, failure of vital systems and automation, complete blackout etc. in a narrow channel, fairway, or near submarine infrastructures, and
- (xiv) Knowledge required in the examination syllabus of class II Pilots.

Other Requirements

Candidate is required to produce the following training to the Pilotage Authority:

- (i) Simulation training;
- (ii) 2 practical vessel training;
- (iii) 1 practical assessment; and
- (iv) any other training and courses attended.

Proposed Arrangements for Training, Assessment and Examination

	Apprentice To IIF	IIF To IIE	IIE To IID	IID To IIC	IIC To IIB	IIB To IIA	IIA To I
Simulation Training (MD & Pilots)	2 (Note 1)	1	1	1	1	1	1
Practical Vessel Training (Pilots)	-	2	2	2	2	2	2
Practical Assessment (Pilots)	3	1	1	-	1	1	1
Practical Examination (MD & Pilots)	1	-	-	1	-	-	3
Oral Examination (PAC)	1	-	-	-	-	-	1
Written Examination (MD)	1	-	-	-	-	-	-
Experience required	Schedule 1 to Cap.84C	Schedule 3 to Cap.84C	Schedule 3 to Cap.84C	Schedule 3 to Cap.84C	Schedule 3 to Cap.84C	Schedule 3 to Cap.84C	Schedule 3 to Cap.84C

Note 1: One session to be conducted by the pilot's association solely and the other jointly with MD.

Applicant	Maximum Length	Training, Assessment and Examination for Applying for Pilot's Licence (Class IIF)	
Apprentice	NA	2 Simulation training	1 Simulation training conducted by Pilots; and 1 Simulation training conducted by MD and Pilots
		3 practical assessments (Pilots)	Piloting & berthing a ship of any type with LOA from >80m to ≤160m on 3 occasions.
		1 joint practical examination (MD and Pilots)	As per <i>Annex II</i> to this paper.
		Oral examination (PAC)	As per <i>Annex II</i> to this paper.
		Written examination (MD)	As per <i>Annex II</i> to this paper.
		Experience required	As required under Schedule 1 to Cap. 84C.

Pilot Class	Maximum Length	Training, Assessment and Examination for Upgrading to Class IIE	
IIF	160m	Simulation training (MD and Pilots)	Simulation training should comprise of at least 6 5 exercise scenarios, include piloting, berthing, anchoring and crisis management of vessels with LOA from >160m to \leq 180m or a length appropriate to the role played in various locations within HK waters.
		2 practical vessel-training (Pilots)	Piloting & berthing a ship of any type with LOA from >160m to \leq 180m on 2 occasions.
		1 practical assessment (Pilots)	Piloting & berthing a ship of any type with LOA from >160m to \leq 180m on 1 occasion.
		Experience required	As required under Schedule 3 to Cap.84C.

Pilot Class	Maximum Length	Training, Assessment and Examination for Upgrading to Class IID	
IIE	180m	Simulation training (MD and Pilots)	Simulation training should comprise of at least 6 5 exercise scenarios, include piloting, berthing, anchoring and crisis management of vessels length from >180m to ≤210m or a length appropriate to the role played in various locations within HK waters.
		2 practical vessel-training (Pilots)	Piloting & berthing a ship of any type with LOA from >180m to ≤210m on 2 occasions.
		1 practical assessment (Pilots)	Piloting & berthing a ship of any type with LOA from >180m to ≤210m on 1 occasion.
		Experience required	As required under Schedule 3 to Cap.84C.

Pilot Class	Maximum Length	Training, Assessment and Examination for Upgrading to Class IIC	
IID	210m	Simulation training (MD and Pilots)	Simulation training should comprise of at least 6 5 exercise scenarios, include piloting, berthing, anchoring and crisis management of vessels length from >210m to \leq 250m or a length appropriate to the role played in various locations within HK waters.
		2 practical vessel-training (Pilots)	Piloting & berthing a ship of any type with LOA from >210m to \leq 250m on 2 occasions.
		1 joint practical examination (MD and Pilots)	As per <i>Annex V</i> to this paper.
		Experience required	As required under Schedule 3 to Cap.84C.

Pilot Class	Maximum Length	Training, Assessment and Examination for Upgrading to Class IIB	
IIC	250m	Simulation training (MD and Pilots)	Simulation training should comprise of at least 6 5 exercise scenarios, include piloting, berthing, anchoring and crisis management of vessels length from >250m to ≤300m or a length appropriate to the role played in various locations within HK waters.
		2 practical vessel-training (Pilots)	Piloting & berthing a ship of any type with LOA from >250m to ≤300m on 2 occasions.
		1 practical assessment (Pilots)	Piloting & berthing a ship of any type with LOA from >250m to ≤300m on 1 occasion.
		Experience required	As required under Schedule 3 to Cap.84C.

Pilot Class	Maximum Length	Training, Assessment and Examination for Upgrading to Class IIA	
IIB	300m	Simulation training (MD and Pilots)	Simulation training should comprise of at least 6 5 exercise scenarios, include piloting, berthing, anchoring and crisis management of vessels length from >300m to \leq 350m or a length appropriate to the role played in various locations within HK waters.
		2 practical vessel-training (Pilots)	Piloting & berthing a ship of any type with LOA from >300m to \leq 350m on 2 occasions.
		1 practical assessment (Pilots)	Piloting & berthing a ship of any type with LOA from >300m to \leq 350m on 1 occasion.
		Experience required	As required under Schedule 3 to Cap.84C.

Pilot Class	Maximum Length	Training, Assessment and Examination for Upgrading to Class I	
II A	350m	Simulation training (MD and Pilots)	Simulation training should comprise of at least 6 5 exercise scenarios, include piloting, berthing, anchoring and crisis management of heavy laden bulkers, tankers and vessels with LOA >350m or a length appropriate to the role played in various locations within HK waters.
		2 practical vessel-training (Pilots)	Piloting & berthing a ship of any type with LOA >350m on 2 occasions.
		1 practical assessment (Pilots)	Piloting & berthing a ship of any type with LOA >350m on 1 occasion.
		3 joint practical examination (MD and Pilots)	As per <i>Annex VIII</i> to this paper.
		Oral Examination (PAC)	As per <i>Annex VIII</i> to this paper.
		Experience required	As required under Schedule 3 to the Pilotage Order, Cap. 84C