

## **PILOTAGE ADVISORY COMMITTEE WORKING GROUP**

### **Discussion on Training, Assessment and Examination Arrangements for Apprentice, Class II and Class I Pilots**

#### **Purpose**

The purpose of this paper is for members' to discuss and comment on the proposed training, assessment and examination arrangements for apprentice, Class II and Class I Pilots under the framework endorsed in the Pilotage Advisory Committee (PAC) meeting held on 18 January 2013 (*Annex I*).

#### **Training, Assessment and Examination Arrangements**

2. Subsequent to the PAC working group (PACWG) meeting held on 14 December 2015, further discussions were conducted between Marine Department (MD) and the Pilots. A revised set of proposed arrangements for training, assessment and examination for apprentice and Class II Pilots as well as Class I Pilots are prepared at *Annex II*.

#### **Class II Pilots**

3. The examination syllabuses for Class II Pilots currently in use, *Annex III*, were endorsed by PAC in the meeting held on 30 June 2005.

4. After consultation conducted in the last PACWG meeting, examination syllabuses for the new 6-level structure of Class II Pilots are prepared and attached as *Annex IV*.

## **Class I Pilot**

5. The examination syllabuses for upgrading to Class I Pilot currently in use, *Annex V*, were endorsed by PAC in the meeting held on 30 June 2005.

6. After consultation conducted in the last PACWG meeting, examination syllabuses for the new Class I Pilot are prepared and attached as *Annex VI*. In respect of the syllabus for oral examination; the requirements on simulation; practical training and practical assessment, no negative feedback was received since last meeting.

7. In respect of the syllabus for practical examination, discussion between MD and the Pilots is still on-going with a view to formulate a safe, effective and practicable arrangement for the practical examination leading to upgrading from Class IIA to Class I Pilots.

### **Advice sought**

8. Members' views and comments are sought on the proposed syllabuses, training, assessment and examination arrangements for Pilots.

9. Members' advices are also sought on the presentation of this matter to the PAC.

**Pilotage Unit  
Marine Department  
April 2016**

**Training, Assessment and Examination Arrangements**  
**endorsed in PAC meeting held on 18 January 2013<sup>1</sup>**

## Appendix

**Proposed Training, Assessment and Examination Arrangement**

Pilot Class	Maximum Length (Proposed)	Training & Assessment for Upgrading to next higher class
I	Any length	Continued Proficiency Development Programme (including simulation practice in a 5-year cycle since 2007)
II A	350m	Oral Examination (by PAC members) 2 practical vessel-training 1 practical assessment by HKPA 3 joint practical assessments by HKPA and MD Simulation training conducted by HKPA and MD
II B	300m	2 practical vessel-training 1 practical assessment by HKPA Simulation training conducted by HKPA and MD
II C	250m	2 practical vessel-training 1 practical assessment by HKPA Simulation training conducted by HKPA and MD
II D	210m	2 practical vessel-training 1 joint practical assessment by HKPA and MD Simulation training conducted by HKPA and MD
II E (new)	180m	2 practical vessel-training 1 practical assessment by HKPA Simulation training conducted by HKPA and MD
II F (new)	160m	2 practical vessel-training 1 practical assessment by HKPA Simulation training conducted by HKPA and MD
Apprentice	Training as per Cap. 84C Schedule 1	4 practical assessments, of which, 1 shall be jointly assessed by HKPA and MD Simulation training conducted by HKPA and MD Oral Examination (by PAC members) & Written Examination

Remarks: All practical vessel training and assessments are set for vessel of next higher class.

For both the simulation training and practical assessment, PAC members would be invited to attend as observers.

<sup>1</sup> Retrievable from Appendix to minutes of PAC meeting held on 18.1.2013 at [http://www.mardep.gov.hk/en/aboutus/pdf/pac\\_m130118.pdf](http://www.mardep.gov.hk/en/aboutus/pdf/pac_m130118.pdf)

**Proposed Arrangements for Training, Assessment and Examination for Apprentice, Class II and Class I Pilots<sup>2</sup>**

	<b>Apprentice To IIF</b>	<b>IIF To IIE</b>	<b>IIE To IID</b>	<b>IID To IIC</b>	<b>IIC To IIB</b>	<b>IIB To IIA</b>	<b>IIA To I</b>	<b>I</b>
<b>Simulation Training (MD &amp; Pilots)</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>-</b>
<b>Practical Vessel Training (Pilots)</b>	<b>Cap.84C, S1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>-</b>
<b>Practical Assessment (Pilots)</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>-</b>
<b>Practical Examination (MD &amp; Pilots)</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>3*</b>	<b>-</b>
<b>Oral Examination (PAC)</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>
<b>Written Examination (MD)</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Continued Proficiency Development Programme (Pilots)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>

Note\*: Subject to further discussion

<sup>2</sup> Revised from Annex II to PACWG Paper No. 5/2015, retrievable from [http://www.mardep.gov.hk/en/aboutus/pdf/pacwgp5\\_15.pdf](http://www.mardep.gov.hk/en/aboutus/pdf/pacwgp5_15.pdf)

Pilot Class	Maximum Length	Training, Assessment and Examination for Upgrading to Class IIF	
Apprentice	NA	Simulation training (MD and Pilots)	Simulation training conducted by MD and Pilots
		Practical vessel-training (Pilots)	Training as per Cap. 84C Schedule 1
		3 practical assessments (Pilots)	(i) Piloting & berthing a bulker or tanker ship with LOA from >80m to ≤160m on 2 occasions; (ii) Piloting & berthing a container ship with LOA from >80m to ≤160m on 1 occasion.
		1 joint practical examination (MD and Pilots)	Piloting & berthing a ship of any type with LOA from >80m to ≤160m on 1 occasion.
		Oral examination (PAC)	As per <i>Annex IV</i> to PACWG Paper No. 1/2016
		Written examination (MD)	As per <i>Annex IV</i> to PACWG Paper No. 1/2016

Pilot Class	Maximum Length	<b>Training, Assessment and Examination for Upgrading to Class IIE</b>	
IIF	160m	Simulation training (MD and Pilots)	Simulation training should comprise of at least 6 exercise scenarios, include piloting, berthing, anchoring and crisis management of vessels with LOA from >160m to ≤ 180m or a length appropriate to the role played in various locations within HK waters. Candidate should complete all 6 training scenarios and :- (i) taking the role of pilot-in-charge in 2 scenarios; (ii) taking the role of a member of the bridge team in 2 scenarios; and (iii) taking any roles in the wheelhouse in 2 scenarios.
		2 practical vessel-training (Pilots)	(i) Piloting & berthing a bulker or tanker ship with LOA from >160m to ≤180m on 1 occasion; and (ii) Piloting & berthing a container ship with LOA from >160m to ≤180m on 1 occasion.
		1 practical assessment (Pilots)	Piloting & berthing a ship of any type with LOA from >160m to ≤180m on 1 occasion.

Pilot Class	Maximum Length	<b>Training, Assessment and Examination for Upgrading to Class IID</b>	
IIE	180m	Simulation training (MD and Pilots)	Simulation training should comprise of at least 6 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. Candidate should complete all 6 training scenarios and :- (i) taking the role of pilot-in-charge in 2 scenarios; (ii) taking the role of a member of the bridge team in 2 scenarios; and (iii) taking any roles in the wheelhouse in 2 scenarios.
		2 practical vessel-training (Pilots)	(i) Piloting & berthing a bulker or tanker ship with LOA from >180m to ≤210m on 1 occasion; and (ii) Piloting & berthing a container ship with LOA from >180m to ≤210m on 1 occasion.
		1 practical assessment (Pilots)	Piloting & berthing a ship of any type with LOA from >180m to ≤210m on 1 occasion.

Pilot Class	Maximum Length	<b>Training, Assessment and Examination for Upgrading to Class IIC</b>	
IID	210m	Simulation training (MD and Pilots)	Simulation training should comprise of at least 6 exercise scenarios, include piloting, berthing, anchoring and crisis management of vessels length from >210m to ≤ 250m or a length appropriate to the role played in various locations within HK waters. Candidate should complete all 6 training scenarios and :- (i) taking the role of pilot-in-charge in 2 scenarios; (ii) taking the role of a member of the bridge team in 2 scenarios; and (iii) taking any roles in the wheelhouse in 2 scenarios.
		2 practical vessel-training (Pilots)	(i) Piloting & berthing a bulker or tanker ship with LOA from >210m to ≤250m on 1 occasion; and (ii) Piloting & berthing a container of ship with LOA from >210m to ≤250m on 1 occasion.
		1 joint practical examination (MD and Pilots)	(i) Piloting & berthing a bulker or tanker ship with LOA from >210m to ≤250m on 1 occasion.

Pilot Class	Maximum Length	<b>Training, Assessment and Examination for Upgrading to Class IIB</b>	
IIC	250m	Simulation training (MD and Pilots)	Simulation training should comprise of at least 6 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. Candidate should complete all 6 training scenarios and :- (i) taking the role of pilot-in-charge in 2 scenarios; (ii) taking the role of a member of the bridge team in 2 scenarios; and (iii) taking any roles in the wheelhouse in 2 scenarios.
		2 practical vessel-training (Pilots)	(i) Piloting & berthing a bulker or tanker ship with LOA from >250m to ≤300m on 1 occasion. (ii) Piloting & berthing a container ship with LOA from >250m to ≤300m on 1 occasion
		1 practical assessment (Pilots)	Piloting & berthing a bulker or tanker ship with LOA from >250m to ≤300m on 1 occasion.

Pilot Class	Maximum Length	<b>Training, Assessment and Examination for Upgrading to Class IIA</b>	
IIB	300m	Simulation training (MD and Pilots)	Simulation training should comprise of at least 6 exercise scenarios, include piloting, berthing, anchoring and crisis management of vessels length from >300m to ≤ 350m or a length appropriate to the role played in various locations within HK waters. Candidate should complete all 6 training scenarios and :- (i) taking the role of pilot-in-charge in 2 scenarios; (ii) taking the role of a member of the bridge team in 2 scenarios; and (iii) taking any roles in the wheelhouse in 2 scenarios.
		2 practical vessel-training (Pilots)	Piloting & berthing a ship of any type with LOA from >300m to ≤350m on 2 occasions.
		1 practical assessment (Pilots)	Piloting & berthing a ship of any type with LOA from >300m to ≤350m on 1 occasion.

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 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. Candidate should complete all 6 training scenarios and :- (i) taking the role of pilot-in-charge in 2 scenarios; (ii) taking the role of a member of the bridge team in 2 scenarios; and (iii) taking any roles in the wheelhouse in 2 scenarios.
		2 practical vessel-training (Pilots)	Piloting & berthing a ship of any type with LOA >350m but need not be >360m on 2 occasions.
		1 practical assessment (Pilots)	Piloting & berthing a ship of any type with LOA >350m but need not be >360m on 1 occasion.
		3 joint practical examination (MD and Pilots)	Subject to further discussion
		Oral Examination (PAC)	As per <i>Annex VI</i> to PACWG Paper No. 1/2016

<b>Pilot Class</b>	<b>Maximum Length</b>	<b>Training &amp; Assessment</b>	
I	Any Length	Continued Proficiency Development Programme (Pilots)	In a 5-year cycle comprises of lectures on professional topics, application of modern electronic navigational aids and simulation practice.

**Syllabuses for class II Pilots endorsed in PAC meeting held on 30 June 2005<sup>3</sup>**

**Class II Pilots  
Examination Syllabus  
(Revised Version, June 2005)**

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.
  - (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.

---

<sup>3</sup> Retrievable from Appendix 4 to PAC Paper No. 4/2005 at [http://www.mardep.gov.hk/en/aboutus/pdf/pacp04\\_05.pdf](http://www.mardep.gov.hk/en/aboutus/pdf/pacp04_05.pdf)

- (f) Use and limitation of various types of tugs
  - (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.) damage to ship which might affect 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.
  - (d) Undue interference from Master.
- (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.

#### 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.  
(It is assumed the candidate is able to transmit distress signal by using VHF Digital Selective Call (DSC).)
- (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, and port regulations and pollution prevention rules.
- (v) Use of VHF in accordance with the International recognized standards
- (vi) Hong Kong Merchant Shipping Notice and Hong Kong Merchant Shipping Information Note
- (vii) Collection of evidence in incidents

#### Note

- (i) *Candidates will be required to produce their training record to the examiners, including a record of any internal and external training and courses attended.*

**Proposed Examination Syllabuses for Class II Pilots**

**Examination Syllabus**  
(Proposed in April 2016)

**For amending from Apprentice Pilot to Class IIF Pilot**

**Practical Examination**

The practical examination consists of one berthing of a dry cargo/bulker ship, a tanker ship, or a container ship with LOA of not less than 80m and not greater than 160m to any dry cargo/bulker/tanker 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.

.../

## **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 training records to the Pilotage Authority:

- (i) Simulation training;
- (ii) 3 practical assessments; and
- (iii) any other training and courses attended.

**For amending from Class IIF to Class IIE Pilots  
And from Class IIE to Class IID Pilots**

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

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

## **For amending from Class IID to Class IIC Pilot**

### **Practical Examination**

The practical examination consists of one berthing of a dry cargo/bulker ship or a tanker ship with LOA >210m to ≤250m to any dry cargo/bulker/tanker berth as appropriate.

### **Other Requirements**

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

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

**For amending from Class IIC to Class IIB Pilots  
And from Class IIB to Class IIA Pilots**

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

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

**Syllabus for Class I Pilots endorsed in PAC meeting held on 30 June 2005<sup>4</sup>**

**Class I Pilots  
Examination Syllabus  
(Revised Version, June 2005)**

Practical Examination

The practical examination should consist of three berthings as follows:

- (i) Berthing a container vessel of not less than 260m in length to Kwai Chung terminal.
- (ii) Berthing a dry cargo vessel/bulker of not less than 260m\*<sup>1</sup> in length to any dry cargo vessel/bulker berth.
- (iii) Berthing an oil tanker of not less than 260m\*<sup>2</sup> in length to any oil tanker berth.

\*<sup>1</sup> If a dry cargo vessel/bulker of not less than 260m is not available within 3 months prior to the date of upgrading, the candidate may take the practical examination with a dry cargo vessel/bulker of less than but as far as practical close to 260m in length.

\*<sup>2</sup> If an oil tanker of not less than 260m is not available within 3 months prior to the date of upgrading, the candidate may take the practical examination with an oil tanker of less than but as far as practical close to 260m in length.

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.)

---

<sup>4</sup> Retrieval from Appendix 3 to PAC Paper No. 4/2005 at [http://www.mardep.gov.hk/en/aboutus/pdf/pacp04\\_05.pdf](http://www.mardep.gov.hk/en/aboutus/pdf/pacp04_05.pdf)

- (v) Berthing and unberthing at various wharves, piers, buoys, etc. in Hong Kong under the influence of wind, current and tide. (Models will be used for demonstration.)
- (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.  
(It is assumed the candidate is able to transmit distress signal by using VHF Digital Selective Call (DSC).)
- (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, and port regulations and pollution prevention rules.
- (xi) Use of VHF in accordance with the International recognized standards
- (xii) Hong Kong Merchant Shipping Notice and Hong Kong Merchant Shipping Information Note
- (xiii) 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.

Note

- (i) *Examination Syllabus of Class II Pilots may be included in Class I examination.*
- (ii) *Candidates will be expected to achieve a higher standard in the oral examination than Class II candidates.*
- (iii) *Candidates will be required to produce their training record to the examiners, including a record of any internal and external training and courses attended.*

**Proposed Examination Syllabuses for Class I Pilot**

**Examination Syllabus**  
(Proposed in April 2016)

**For amending from Class IIA to Class I Pilot**

**Practical Examination**

(Subject to discussion)

**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 etc. in a narrow channel or fairway; and
- (xiv) Knowledge required in the examination syllabus of class II Pilots.

### **Other Requirements**

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

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