Technical and Safety Standards for Pilotage and the Provision of Pilotage Services – Port of Darwin

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1. **PREAMBLE**

1.1. **Title**

Technical and Safety Standards for Pilotage and the Provision of Pilotage Services for the port of Darwin (the Pilotage Standards).

1.2. **Authority**

These Pilotage Standards are made by the Pilotage Authority for the port of Darwin pursuant to Section 67 of the *Ports Management Act*.

1.3. **Application**

These Pilotage Standards set the technical and safety standards for pilotage and the provision of pilotage services in relation to the port of Darwin and apply to:

- The Port Operator for the port of Darwin pursuant to Section 8 of the *Ports Management Act*;
- The Pilotage Services Provider for the port of Darwin pursuant to Section 85 of the *Ports Management Act*; and
- Ship masters as defined in section 7(1) of the *Marine Act*.

1.4. **Applicable Legislation**

- *Navigation Act 2012 (Cth)*
- *Marine Act*
- *Marine (General) Regulations*
- *Ports Management Act*
- *Ports Management Regulations*
- *Work Health and Safety (National Uniform Legislation) Act*
- *Marine Pollution Act*
- *Marine Pollution Regulations*
- *Waste Management and Pollution Control Act*

1.5. **Objective**

The objective of this document is to make technical and safety standards for pilotage and the provision of pilotage services in relation to the port of Darwin. These Pilotage Standards:

- Describe the minimum standards to be met by the Pilotage Services Provider;
- Describe the privileges of use of a pilot licence;
- Describe the requirements to be met in order to obtain, upgrade or renew a pilot licence;
- Describe the privileges of use of a pilotage exemption certificate; and
- Describe the requirements to be met in order to obtain, upgrade or renew a pilotage exemption certificate.
2. DEFINITIONS

**AIS** – means an Automatic Identification System.

**Check pilot** – means a pilot who holds a Fully Endorsed pilot’s licence for the Port and is approved as a check pilot by the Pilotage Services Provider and the Pilotage Authority.

**Chief mate** – means the deck officer next in rank to the master. The terms ‘first mate’ and ‘chief officer’ are taken to have the same meaning.

**Examination Board** – means a board chaired by the Pilotage Authority and comprising a management representative of the Pilotage Services Provider and a check pilot, brought together specifically to conduct an oral examination for a pilot licence candidate.

**Fatigue** – means a physical condition manifest as impaired physiological performance (e.g. reaction time, hand-eye coordination) and psychological functions (e.g. morale, judgement or mood).

**IMO** – means the International Maritime Organisation.

**Length** – means:
- For all domestic and international registered vessels, the length shown on the registration certificate, or
- For Domestic Commercial Vessels that are not otherwise registered, the length specified on DCV survey certificate.
- In the case of tug and tow combinations, the combined length of the tug and the object being towed excluding tow lines, wires and bridals.

**Master** – means the person having lawful command or charge of the vessel, but does not include a pilot.

**Navigational Control** – means conduct of the navigation of the vessel; that is, monitoring the vessel’s position relative to the passage plan, controlling wheel and telegraph orders and conducting berthing or unberthing of a vessel.

**Pilot** – means any person, not being the master or a member of the crew of the ship, who is an employee of and has been allocated by the Pilotage Services Provider, is in possession of a pilot licence for that port and has pilotage charge of the ship.

**Pilotage Charge** – means the act of taking navigation control of a ship within the compulsory pilotage area, either by a pilot or the holder of a Pilotage Exemption Certificate.

**Pilotage Authority** – pursuant to Section 66 of the *Ports Management Act*, means the person who is, or is appointed to be, the Regional Harbourmaster for the port of Darwin pursuant to Section 19 of that Act.

**Pilotage Exemption Certificate (PEC)** – means a valid (or current) certificate issued under Part 8, Division 4 of the *Ports Management Act* to a ship’s master which exempts that person from the need to take on board a pilot in the port of Darwin.
Pilot licence – means a valid (or current) licence issued under Part 8, Division 4 of the Ports Management Act to an employee of the pilotage services provider by and in accordance with the requirements of the Pilotage Authority.

Pilotage Services Provider – means a person appointed by the Minister under section 85 of the Ports Management Act to be a pilotage services provider for the port of Darwin. The Pilotage Services Provider carries on the operation of providing pilotage services.

Port of Darwin – means the area of water and land designated as the port of Darwin under section 7 of the Ports Management Act.

Port Operator – means the entity declared by the Minister under section 8 of the Ports Management Act to be the operator of the port of Darwin.

Regional Harbourmaster (RHM) – means the person appointed to be the regional harbourmaster for the port of Darwin under section 19(1) of the Ports Management Act.

Tug and tow – means a ship towing or pushing another ship.

Voyage – means one entry into and one departure from the port of Darwin.
3. PILOTAGE FRAMEWORK

3.1. Compulsory Pilotage

Pursuant to section 68 of the *Ports Management Act* and NT Government Gazette S73 of 1 July 2015, pilotage is compulsory in the port of Darwin;

- North of 12° 25'S for vessels of 200 metres length or greater or of 10.7m draft or greater;
- South of 12° 25'S for all vessels of 35 metres length or greater.

All vessels of 35 metres length or greater south of 12° 25'S must either carry a licenced pilot or be under the lawful command of a master who holds a pilotage exemption certificate endorsed for the appropriate zones of the Port and for the vessel being navigated within them.

3.2. Pilotage Zones

The Pilotage Area of the port of Darwin is divided into 7 pilotage zones as follows:

- **Zone A** – Outer Harbour Zone; Bounded by a line joining Charles Point and Lee point through a position 12°18.2'S 130°41.1'E, in the north, and a line joining Talc Head and Emery Point in the south.
- **Zone B** – City Zone; Bounded by a line joining Talc Head and Emery Point, in the north, and a line joining Talc Head and eastern end of Stokes Hill Wharf, via Wickham Point, in the south.
- **Zone C** – East Arm Zone; Bounded by a line joining Wickham Point and the entrance to Reichardt Creek, via the eastern end of Stokes Hill Wharf, in the west and north and a NE/SW line passing through South Shell Island, in the south.
- **Zone D** – Middle Arm Zone; That area of the port upriver of a line joining Talc Head and Wickham Point.
- **Zone E** – Frances Bay Zone; That area of the port north of a line from the eastern end of Stokes Hill Wharf to the entrance to Reichardt Creek.
- **Zone F** – Hudson Bladin Zone; That area of the port upriver of a NE/SW line passing through South Shell Island.
- **Zone G** – Marine Supply Base; Connects zone C to the Marine Supply Base (MSB) berths and is specific for exempt seaman for these berths. The zone commences at beacon B03 and buoy number 16 and follows the channel into the Marine Supply Base.
3.3. Regional Harbourmaster

The Regional Harbourmaster is appointed by the Minister to perform regulatory functions as required by the Ports Management Act. The Regional Harbourmaster for the port of Darwin is the Pilotage Authority for the port of Darwin.
3.4. Pilotage Authority

The Pilotage Authority:

- May declare pilotage as compulsory in the whole or specified parts of a pilotage area for which it is the Pilotage Authority;
- May require the master of a ship to take on a licenced pilot pursuant to the section 69, Special Pilotage Requirements, of the *Ports Management Act*;
- Issues or renews pilot licences and pilotage exemption certificates;
-Suspends or cancels pilot licences or pilotage exemption certificates pursuant to section 78 of the *Ports Management Act*, Suspension or Cancellation; and
- May initiate an inquiry into misconduct by a licenced pilot pursuant to section 82 of the *Ports Management Act*, Inquiry into Misconduct by Licenced Pilot.

The Pilotage Authority may wish to attend and observe an act of pilotage. In such cases the Pilotage Authority will advise the Pilotage Services Provider in writing no later than 12 hours before the pilotage act. The Pilotage Authority may wish to:

- Validate the appositeness of:
  - Underpinning knowledge and skills;
  - Berth/Ship endorsements;
  - Pilotage exemption processes;
- Observe:
  - Pilot licence mid-term assessments;
  - Pilot licence revalidations;
  - Pilotage exemption assessments; or
- Maintain the Pilotage Authority’s own currency of understanding of pilotage within the pilotage area.

3.5. Pilotage Services Provider

The Pilotage Services Provider:

- Provides, transports and transfers licenced pilots to navigate a vessel within the port of Darwin;
- Recruits, employs, trains and monitors the performance of pilots;
- Conducts the day-to-day operations of the pilotage service; and
- Is responsible for the safety and management of marine pilots.
3.6. Pilots

It is the responsibility of pilots, subject to the authority of the master, to guide vessels that require pilotage through the Port.

A person must hold a pilot licence to act as a pilot within the Port.

Where, due to the conditions of wind and sea, the safe transfer of the pilot may be adversely affected, the pilot may disembark early and, in the pilot boat, lead the vessel to sea or the Pilotage Services Provider can decline to provide pilotage and the ship’s departure will be delayed until conditions improve.

3.7. Pilotage Exempt Masters

The Pilotage Authority, in accordance with Division 4 of the Ports Management Act, may issue a master a pilotage exemption certificate. A Pilotage Exemption Certificate will be endorsed for a particular vessel or vessels and for the applicable zones of operation within a compulsory pilotage area.
4. PILOTAGE SYSTEMS

4.1. Port Safety Plan

The Port Operator for the port of Darwin is required by Section 28 of the Ports Management Act to provide a Port Safety Plan that:

- Identifies the nature and extent of the safety hazards and risks associated with the operation of the port that are reasonably likely to cause death or serious injury to any person or loss of, or serious damage to, property; and
- Assesses the likely impact of those hazards and risks on the port and the surrounding area; and
- Specifies the measures and strategies to be implemented to eliminate or reduce those hazards or risks; and
- Describes the system that the port operator has in place for implementing those measures and strategies, including the issue and enforcement of any port notices; and
- Sets out the processes proposed to involve service providers in the port with the implementation of the plan by the port operator; and
- Is approved by the Regional Harbourmaster.

The Port Safety Plan is to include consideration of the risks or reportable incidents associated with pilotage, including but not limited to collision, allision, grounding, tug girting, line handling, pilot transfer and fatigue; the consequences of the realisation of those risks on safety, property and the environment; and the control strategies to be implemented by the Port Operator or Pilotage Services Provider.

4.2. Reportable Incident Notification

The Port Operator and Pilotage Services Provider for the port of Darwin are required by Sections 18 and 87 of the Ports Management Act to keep records containing the particulars of all reportable incidents that occur within the port or pilotage area and to notify the Regional Harbourmaster of any such incidents.

Pursuant to Ports Management Regulation 25, a reportable incident means an event that involves:

- A collision of a vessel with another vessel;
- A collision by a vessel with an object (allision);
- The grounding, sinking, flooding or capsizing of a vessel;
- A loss of stability of a vessel that affects the safety of the vessel;
- The structural failure of a vessel;
- A situation in which vessels pass each other, or a vessel passes another vessel, a person or an object, in such proximity that a reasonable person would conclude that in all the circumstances there was a risk of an imminent collision;
- An event that results in, or could have resulted in, a vessel becoming disabled and requiring assistance;
The fouling or damaging by a vessel of:
- any pipeline or submarine cable; or
- an aid;

Any other event that:
- is a reportable incident under section 50 of the Marine Pollution Act; or
- must be notified under section 14 of the Waste Management and Pollution Control Act to the Northern Territory Environment Protection Authority.

An event of a kind that only involves actual or potential loss of, or damage to, property is a reportable event only if the value of the loss or damage is greater than $20,000.

The prescribed particulars of a reportable incident that are to be kept or reported are details that are sufficient to describe:
- The nature of the incident and the circumstances surrounding it;
- The time and location of the incident;
- The persons involved in the incident;
- The vessels (if any) involved in the incident;
- The response of the port operator or pilotage services provider to the incident;
- For an event that involves actual or potential harm to the environment:
  - how that harm occurred, is occurring or may occur; and
  - action taken to prevent, reduce, control or remove that harm.

The prescribed period after the occurrence of a reportable incident is:
- 1 hour – if the reportable incident involves:
  - the death of a person; or
  - an injury to a person that requires or results in immediate treatment for:
    - the amputation of any part of the person's body; or
    - a serious head injury; or
    - a serious eye injury; or
    - a serious burn; or
    - the separation of the person's skin from an underlying tissue (such as degloving or scalping); or
    - a spinal injury; or
    - the loss of a bodily function; or
    - serious lacerations; or
  - the loss of a vessel; or
  - the loss of a person from a vessel; or
  - the loss of, or damage to, property to the value of $20,000 or more; or
  - actual or potential harm to the environment; or
• In any other case – 12 hours or, if the reportable incident is also required to be reported by the port operator or pilotage services provider under another Act within a shorter period, the shorter period.

4.3. Individual Pilotage Record System

The Pilotage Services Provider shall maintain a record of each of its pilots that shows:

• Current and historical status, currency and expiry date of each element of Underpinning Knowledge and Skills;
• Current and historical status, currency and expiry date of each Berth/Ship Endorsement;
• Current medical status;
• Mid-term Assessment date; and
• Licence expiry date.

4.4. Professional development

The Pilotage Services Provider shall have in place a formal system for the professional development of its pilots to assist them to keep up to date with changes in the professional environment which will, or may impact on pilotage. Such changes may include the development and introduction of new technology, changed laws and regulations, human factor training developments, changes in risk or risk management techniques and responses to emergency situations.

4.5. Compliance Auditing

A compliance audit to determine whether the Port Operator is complying with the whole or any part of the Port Safety Plan is to be undertaken as required by Section 35 of the Ports Management Act. Such auditing will examine compliance with this standard and with the pilotage-related sections of the Port Safety Plan.
5. OPERATIONAL REQUIREMENTS

5.1. Ship Arrival Information

The Pilot Services Provider shall have in place a formal system for a ship’s master or agent to advise the ship’s ETA and to book a pilot. The system must allow adequate lead time for the booking of a pilot, tugs, berth, line handlers and other port services as necessary. The booking application system shall include, but not necessarily be limited to, the following information:

- Vessel name, call sign and IMO number;
- Ship’s agent;
- Date and time of arrival at pilot boarding ground;
- Ships length, beam, draft, GRT and flag state;
- If the ship’s master is pilotage exempt, the master’s pilotage exemption certificate number;
- Berthing information and any preference / requirement for a particular side to;
- Tug requirements;
- Line handler requirements;
- Port services requirements; and
- Cargo information including the quantities of any dangerous goods.

5.2. Obligations of Master, Bridge Personnel and Pilot

Despite the duties and obligations of a pilot, the pilot’s presence on board does not relieve the master or officer in charge of the navigation watch from their duties and obligations for the safety of the ship.

The master, bridge officers and pilot share a responsibility for implementing sound BRM practices, good communications and having an understanding of each other’s role for the safe conduct of the vessel in the Port pilotage waters.

5.3. Master – Pilot information exchange

It is important that, when a ship embarks a pilot and before the act of pilotage commences, the master, bridge personnel and the pilot are aware of their respective roles in the safe passage of the ship.

The master and the pilot must exchange information regarding navigation procedures, local conditions and rules and the ship’s characteristics. This information exchange shall be initiated immediately prior to the commencement of the act of pilotage and be a continuous process for the duration of the pilotage.
5.4. Port Passage Plan

The Pilotage Services Provider must develop a standard information exchange practice for use by its pilots. This is best achieved using a standard port passage plan into which the relevant information for the passage in pilotage waters is entered. The passage plan shall contain as a minimum:

- The plans and procedures for the passage;
- Contingency plans for emergencies;
- Water depth and Under Keel Clearance information;
- Anticipated tidal information including tide times, tidal heights and tidal streams;
- Berthing arrangements, the number, characteristics and use of tugs, mooring boats or any other port service facilities;
- Information on mooring arrangements;
- Confirmation that the English language will be used for all communication during the pilotage; and
- Information on cyclone procedures during the cyclone season.

5.5. Pilot Card

The pilot shall be provided with information regarding the ship and its characteristics by the ship’s master. This is best presented in the form of a standard pilot card. Additional information on rates of turn at different speeds, turning circles, stopping distances and any other information relevant to the passage should also be readily available to the pilot.

5.6. Voyage Planning

IMO Resolution A893(21), SOLAS Chapter V and Part 2 (Voyage Planning) to Part A-VIII/2 of Chapter VIII of the STCW Code (Part A) place a requirement for voyage planning on a ship’s master. This shall take the form of a detailed passage plan from berth to berth, including passage in the Port’s pilotage waters.

The ship’s passage plan and respective port passage plan presented by the pilot should be compared, discussed and agreed for the forthcoming act of pilotage at the time of the master – pilot information exchange. It must be noted that the passage plan sets an outline to promote common understanding by the pilot, master and bridge team, and that deviation from the plan can take place providing the deviation is discussed, agreed and communicated to the bridge team.

Masters and bridge officers have a duty to support the pilot and to ensure that his or her actions are monitored at all times and that any deviation from the agreed passage plan is discussed.

5.7. Pilot transfer information

The Pilotage Services Provider shall make information regarding pilot transfer arrangements and positions readily available in printed form and on its website.
6. PILOTS

6.1. Privileges of a pilot licence

A pilot is entitled to pilot ships of the size and type, and within the zones and at the facilities in the Port, consistent with the pilot licence held and subject to the endorsements of that licence, provided that he or she is allocated to do so by the Pilotage Services Provider.

6.2. Medical fitness

Whilst Marine Orders Part 76 Health – Medical Fitness does not apply to Darwin Port Pilots, the standards set by this Part are applied across the marine industry and therefore it is appropriate that they are applied to pilots working in the Port. Therefore, pilots shall obtain a certificate of medical fitness from an AMSA approved medical practitioner at intervals not exceeding two years. Where a pilot is aged 55 years or over a certificate of medical fitness shall be obtained annually.

Where a pilot has experienced a serious injury or illness, the medical fitness of the pilot must be reassessed prior to his or her return to pilotage duty.

6.3. Refusal of pilotage services

A pilot shall have the right to refuse pilotage when a ship to be piloted is considered to pose a danger to the safety of navigation, the safety of the environment, the safety of the pilot or the safety of Pilotage Services Provider employees and/or assets. Any such refusal, together with the reason, should be immediately reported to the Pilotage Services Provider and the Pilotage Authority.

6.4. Pilotage Not Required in Certain Cases

If the Port Operator, pursuant to Section 73 of the Ports Management Act, authorises a vessel to be immediately brought into, moved within or taken out of a compulsory pilotage area without a pilot on board, the Port Operator is to inform the Pilotage Authority at the first practicable opportunity.
7. PILOT ENTRY

7.1. Pilot Entry Criteria

The criteria for entry to pilotage training are to be based upon the suitability, competency, fitness and skill of an applicant.

Pilot licence candidates must demonstrate, to the satisfaction of the Pilotage Services Provider:

- Significant accumulated practical seagoing experience; and
- Substantial ship management skills; and
- Substantial fundamental navigation skills and knowledge.

The following contribute substantially to the demonstration of the above criteria but are not intended to limit the means by which they can be demonstrated:

- A current Certificate of Competency as an Australian Master Unlimited; or
- A current Certificate of Recognition issued by AMSA; or
- A current Certificate of Competency as Master Unlimited, not issued by AMSA but eligible for the issue of a Certificate of Recognition by AMSA through bilateral agreement with the issuing Flag State;
- Ship command;
- Pilotage experience.

For candidates who are not qualified Master Unlimited or equivalent, the Pilotage Authority is to be consulted before the candidate commences employment or training.

Pilot licence candidates must meet the requirements for medical fitness as outlined in article 6.2 of this Standard.

Pilot licence candidates should be able to demonstrate the ability to speak and write the English language to a standard adequate to enable the pilot to express communications clearly.
8. PILOT LICENCE SYSTEM

8.1. Pilot Licence Structure

Pilots will be licensed by the Pilotage Authority according to ship length and berthing facility.

Pilots gain a licence by demonstrating to the Pilotage Authority that they have two elements of competence;

- **Underpinning Knowledge and Skills** (henceforward referred to as Skills) – these underpin and facilitate navigation and shiphandling. They form pre-requisites for Berth/Ship endorsements.
- **Berth/Ship Endorsements** (henceforward referred to as Endorsements) – these are discrete competencies relating to ship length and berth combinations. Each endorsement has pre-requisites from Skills and less complex Berth/Ship Endorsements.

8.2. Initial Licence

An initial Restricted Pilot Licence may be issued after the pilot licence candidate has demonstrated proficiency in at least the following;

- Skills;
  - Local knowledge for at least one zone of the harbour,
  - Bridge Instruments and Pilotage Equipment,
  - Basic Shiphandling,
  - Navigation, and
  - Emergency Procedures
- Written examination;
- Oral examination; and
- One Endorsement.

8.3. Restricted Licence

A pilot’s licence will be classed as Restricted so long as any extant elements of Skills or Endorsements have not yet been attained. A Restricted licence will be reissued as additional elements of Skills and Endorsements are attained.

8.4. Fully Endorsed Pilot Licence

When a Pilot has attained all extant elements of Skills and Endorsements his or her licence will be annotated as Fully Endorsed.

A Fully Endorsed Pilot Licence does not entitle the holder to conduct pilotage in circumstances not described by the extant endorsements. Such cases are novel acts of pilotage and article 9.8 applies.
Where Endorsements are added in accordance with article 9.6, it will not affect the classification of the holder of a Fully Endorsed pilot licence but pilotage to or from that berth will be subject to conditions determined by the Pilotage Authority in agreement with the Pilotage Services Provider until the pilot has demonstrated competence in accordance with those conditions.

8.5. Termination of Employment or Engagement

Where a licenced pilot’s employment with, or engagement by, the Pilotage Services Provider is terminated, the Pilotage Services Provider is to notify the Pilotage Authority. The licence of that pilot will be suspended for a period of 6 months. If within 6 months the pilot is re-employed or re-engaged by the Pilotage Services Provider, then the licence will be reactivated. If not, then the licence will be cancelled.
9. PILOT TRAINING

9.1. Pilot Training Programme

The Pilotage Services Provider shall have in place a structured pilot training programme which shall include:

- A statement describing the purpose of the training programme;
- A syllabus which incorporates the requirements to attain each of the Skills and the method by which they are to be delivered and evaluated;
- A description of how the training programme for an individual pilot licence candidate or pilot will be tailored to account for prior pilotage experience; and
- A process for the provision of tailored pilot training logs for the recording and signing off of all the required Skills and Berth/Ship endorsement pre-requisites.

9.2. Endorsement Pre-requisites and Prior Pilotage Experience

Shown at Appendices A and B are two endorsement matrices.

The "With" matrix provides pre-requisites for the endorsement based on the pilot licence candidate having had prior pilotage experience in every class of vessel across the full spectrum of the matrix.

The "Without" matrix provides pre-requisites for the endorsement based on the pilot licence candidate having had no prior pilotage experience at all.

Many pilot licence candidates will have some, but not all, of the pilotage experience required for the "With" matrix. In that case, each such pilot licence candidate is to be evaluated by the Pilotage Services Provider and a tailored matrix developed for that individual.

Factors affecting a decision to reduce endorsement pre-requisites shall include:

- The duration of previous pilotage experience;
- The number, type and size of ships piloted previously;
- The grade of pilot licence previously held; and
- The nature of the operation(s) where previous pilotage experience was gained.

Upon completion of the assessment, the Pilot Services Provider shall recommend in writing an appropriate tailored endorsement matrix to the Pilotage Authority.

9.3. Evaluating Underpinning Knowledge and Skills

Skills are core competencies that facilitate navigation and shiphandling. The means by which a pilot or pilot candidate gains these knowledge and skills is immaterial; the ability to demonstrate them to the Pilotage Authority is. In that respect, the principles of Recognition of Prior Learning (RPL) play a significant role in evaluating these competencies. RPL however is not the only means by which they could be demonstrated. Written, blank chart and oral examinations are a traditional means of evaluating many of these competencies. Documented and structured experience may also be used to provide a subjective measure of assurance; such experience may be conducted in the real-world or in simulated environments where variables are more easily controlled and consequences managed.
9.4. Underpinning Knowledge and Skills

The key Skills that must be demonstrated to the Pilotage Authority as pre-requisites for various Endorsements are:

9.4.1. Local Knowledge (Skills 1, 2, 3, 4, 5, 6 & 7)

Port limits; compulsory pilotage area; relevant legislative framework; aids to navigation including the characteristics of the lights and their arcs of visibility; names and characteristics of the fairways, shoals, headlands and points; depths of water throughout the port; tidal stream effects and factors that can cause tidal anomalies; range and duration of the tides; the use of tide tables and real-time tidal information; proper courses and distances; designated and emergency anchorages; communications and radio reporting procedures; harbour control procedures; current Regional Harbourmaster's Directions and current navigation information affecting the port; standard operating procedures in use at the port; emergency and contingency plans for the port; and safe embarkation and disembarkation procedures.

9.4.2. Navigation (Skill 8)

Proficiency in using visual navigation techniques to determine position and movement; blind pilotage.

9.4.3. Basic Shiphandling (Skill 9)

Manoeuvring behaviour of ships and the limitations imposed by particular propulsion and steering systems; factors affecting ship performance such as wind, current, tide, channel configuration, water depth, bottom, bank and ship interaction including squat; principles of turning and stopping ships and the variation in pivot point when doing so; anchoring and mooring; berth approach tactics; dredging anchors; capabilities, limitations, dangers and use of tugs.

9.4.4. Bridge Instruments and Pilotage Equipment (Skill 10)

Radar; Portable Pilot Units (PPU); Automatic Identification Systems (AIS); satellite positioning systems; and other electronic devices; their limitations and capabilities as navigation and collision avoidance aids.

9.4.5. Bridge Resource Management for Pilots (BRM-P) (Skill 11)

The use and co-ordination of all the skills, knowledge, experience and resources available to the pilot to achieve safe and efficient pilotage. In particular, methods to maximise situational awareness, detect and interrupt error chains, understand and exploit human factors and the dynamics of the bridge group performance and the use of effective communication and command and leadership.

9.4.6. Use of Tugs (Skill 12)

Knowledge and experience of local tugs' capabilities and limitations.
9.4.7. Emergency Procedures (Skill 13)

Such as man overboard; loss of propulsion; loss of steering; collision, allision; grounding; fire; loss of electronic navigation systems and total blackout of the ship.

9.4.8. Advanced Marine Pilotage Training (Skill 14)

Provides pilots with updates on the latest pilotage techniques and practise. Further develops and updates the knowledge of human factors in pilotage.

9.4.9. Advanced Shiphandling & Tug utilisation (Skill 15)

The manoeuvring behaviour of large ships in shallow water using multiple tugs. Including further exploration of the factors affecting large ship performance (building on the basic shiphandling element) such as; wind, current, tide, channel configuration, water depth, bottom, bank and ship interaction including squat; principles of turning and stopping large ships, especially with low under keel clearance; berth approach tactics with particular emphasis on the various methods of slowing down; capabilities, limitations, dangers (including girting) and use of tugs; tug utilisation including positioning and securing arrangements, tug utilisation considerations in the approach phase including indirect towing and its use in turning and slowing, tug utilisation considerations in the berthing phase and utilisation of dissimilar tug types.

9.4.10. Berth Specific Skills (Skill 16)

Peculiarities of construction, equipment, tidal streams and limiting shiphandling factors for the berth/ship combination.

9.4.11. LNG/LPG (Skill 17)

Specific knowledge of additional risk controls associated with gas carriers and berths.

9.5. Providing Underpinning Knowledge and Skills

While RPL can be used to acknowledge the component Skills, typically a pilot licence candidate will not possess all of those required. The following provides alternative means of gaining and evaluating those components not acknowledged through RPL.

9.5.1. Local Knowledge (Skills 1, 2, 3, 4, 5, 6 & 7)

Can be achieved through a combination of real-world experience; simulation; and study.

Can be evaluated through trip records; check pilot reports; reports from a simulation provider; blank chart, oral and written examinations. The Pilotage Authority requires the following minima for each of the pilotage zones:

- 6 pilotage trips
- 2 night pilotage trips
- Blank Chart examination
- Written examination
9.5.2. Navigation (Skill 8)

Can be achieved through a combination of real-world experience; simulation; and study.

Can be evaluated through trip records; check pilot reports; reports from a simulation provider; oral and written examinations.

9.5.3. Basic Shiphandling (Skill 9)

Can be achieved through a combination of real-world experience; simulation (including manned model simulation); study; or through a tailored course.

Can be evaluated through trip records; check pilot reports; reports from a simulation provider; oral and written examinations; or through reports from a course provider.

9.5.4. Bridge Instruments and Pilotage Equipment (Skill 10)

Can be achieved through a combination of real-world experience; simulation; study; or through a tailored course.

Can be evaluated through check pilot reports; reports from the simulation provider; oral and written examinations; or through reports from a course provider.

In the event that a substantially new type of Bridge Instrument or Pilotage Equipment is introduced or becomes prevalent, the Pilotage Services Provider is to develop a training package to provide the required knowledge and skills to all licenced pilots. The training plan is to be provided to the Pilotage Authority for endorsement before implementation. Progress reports on attainment of knowledge and skills for the new equipment are to be provided to the Pilotage Authority as identified milestones are met.

9.5.5. Bridge Resource Management for Pilots (BRM-P) (Skill 11)

As a recognised course, the BRM-P component is best gained through attendance on that course.

Can be evaluated through reports or certificates from the BRM-P course provider.

9.5.6. Use of tugs (Skill 12)

Can be achieved through a combination of real-world experience; simulation; and study.

Can be evaluated through trip records; check pilot reports; reports from a simulation provider; oral and written examinations. The Pilotage Authority requires that the candidate experience trips in tugs for the following minima:

- 5 berthings
- 5 unberthings
- At least 2 moves in each class of tug (including new classes of tug)

In the event that a substantially different class of tug is introduced into service in the harbour, the Pilotage Services Provider is to develop a package to provide the required knowledge to all licenced pilots. The training package is to be provided to the Pilotage Authority for endorsement
before implementation. Progress reports on attainment of knowledge and skills for the new class of tug are to be provided to the Pilotage Authority as identified milestones are met.

9.5.7. **Emergency Procedures (Skill 13)**

Can be achieved through oral and written examinations; and simulation. Simulation provides an environment where a pilot or pilot candidate’s reactions can be tested and where variables can be controlled and consequences managed.

Can be evaluated through reports from a simulation provider; check pilot reports; oral and written examinations.

9.5.8. **Advanced Marine Pilotage Training (Skill 14)**

As a recognised course, the AMPT component is best gained through attendance on that course.

Can be evaluated through reports or certificates from the AMPT course provider.

9.5.9. **Advanced Shiphandling & Tug utilisation (Skill 15)**

Can be achieved through a combination of real-world experience; simulation (including manned model simulation); and study.

Should include detailed post-run analysis of pivot point and force vectors, both linear and rotational, and how they were manipulated and managed by the candidate and discussion of alternative methodologies to better utilise the available controllable and uncontrollable forces acting on the ship.

Can be evaluated through trip records; check pilot reports; reports from a simulation provider; oral and written examinations.

9.5.10. **Berth Specific Skills (Skill 16)**

Can be achieved through a combination of real-world experience; simulation; and study. The emphasis is on simulation and exploration of the limiting shiphandling factors.

Can be evaluated through trip records; check pilot reports; reports from a simulation provider; oral and written examinations.

9.5.11. **LNG/LPG (Skill 17)**

Can be achieved through a combination of real-world experience and study.

Can be evaluated through check pilot reports; oral and written examinations.
9.6. Berth/Ship Endorsements

Berth/Ship endorsements are discrete competencies defined by two arguments; ship length; and the berths to and from which they are to be navigated.

In the event that a new berth is constructed or commissioned in the harbour, or a new length-class of ship is calling to an existing berth, the Pilotage Authority, in consultation with the Pilotage Services Provider, will:

- Determine whether a berth specific element of Skills is required for the new berth;
- Determine the pre-requisites for the endorsement and the observation, mentoring and assessment requirements for them. These will be added to the matrices at Appendices A and B by way of a new sub-version to these Pilotage Standards; and
- Where necessary, re-issue pilot licences to reflect the change.

In the event that a berth is demolished or decommissioned in the harbour, or a length-class of ship is no longer calling to an existing berth, the Pilotage Authority will:

- Remove that endorsement from the matrices Appendices A and B by way of a new sub-version to these Pilotage Standards; and
- Where necessary, re-issue pilot licences to reflect the change.

The majority of the berth/ship endorsements assume that a ship being navigated has her main source(s) of propulsion available. On occasion a ship will not be fitted with propulsion or will not have her propulsion available. In those cases, known herein as a cold move, there are two additional categories of endorsement;

- **Single-tug Cold Move (SA)** – these endorsements describe a set of competencies that allow a pilot to move a ship without propulsion using only one tug made fast. A second tug may assist the move by leaning on.

- **Multi-tug Cold Move (MA)** – these endorsements describe a set of competencies that allow a pilot to move a ship without propulsion using more than one tug made fast.

These endorsements are supplementary to the berth/ship endorsements. That is, to conduct a cold move to or from an alongside berth, the pilot would need the appropriate berth/ship endorsement for that length of ship and that berth in addition to the cold move endorsement.

9.7. Evaluating Berth/Ship Endorsements

The means by which a pilot licence candidate or pilot gains these competencies is experience; such experience may be gained in the real-world or in a combination of the real-world and simulated environments.

The Endorsements are shown at Appendices A and B. They can be evaluated through trip records; check pilot reports; reports from a simulation provider.

An Endorsement evaluation consists of 4 discrete elements:

- Pre-requisites – these may be skills or endorsements or both;
- Observation runs – these are acts of pilotage undertaken by a licenced pilot or exempt master and observed by the candidate;
- Mentored runs – for these acts, the endorsement candidate will have navigation control, but the licenced pilot is to retain navigation charge. The candidate will be provided with guidance, advice and training. Except for endorsements where skills element 16 applies, mentored runs may be conducted in a full-mission simulator, and in such cases, either simulator staff or a licenced pilot can act as mentor. Up to 50% of the specified mentored runs can be simulated on a 2:1 basis. That is, for every one real-world mentored act, two simulated mentored acts are required.

- Assessment runs – for these acts, the endorsement candidate will have navigation control, but a Check Pilot is to retain navigation charge. The Check Pilot will assess the candidate’s conduct of the pilotage and submit a Check Pilot Report as described at article 9.9.2. The Check Pilot should, so far as practicable, refrain from offering advice or guidance. Any need to do so should prompt consideration of whether the candidate has demonstrated the required standard of skill and competence.

9.8. Novel Pilotage

Situations may arise where there is a need to conduct a novel act of pilotage that is not described by any of the Berth/Ship endorsements. The Pilotage Services Provider, in consultation with a pilot who holds a Fully Endorsed licence, is to undertake a risk assessment and forward its recommendation to the Pilotage Authority.

Where the Pilotage Authority is satisfied that the residual risks associated with the novel pilotage are as low as reasonably practicable, approval to undertake the novel pilotage will be provided. Where not satisfied, the Pilotage Authority will consult with the Pilotage Services Provider.

Where the Pilotage Service Provider advises that a novel pilotage is a likely precursor to similar future requirements, the Pilotage Authority will establish an endorsement and determine the pre-requisites for the endorsement and the observation, mentoring and assessment requirements for it. These will be added to the matrices at Appendices A and B by way of a new sub-version to these Pilotage Standards.

9.9. Evaluation Methods

9.9.1. Trip Records

These are records maintained by the pilot licence candidate or pilot of all acts of pilotage whether as an observer, mentored pilot or pilot. They provide a measure of experience in the real world. While they contain no objective evidence of competence, they contribute to building a cumulative case for it.

9.9.2. Check Pilot Reports

These are reports compiled by a check pilot, according to the reporting requirements of the Pilotage Authority, during a pilotage on-the-job assessment. They provide a detailed objective evaluation, by a trusted agent, of the pilot licence candidate’s or pilot’s competence and knowledge and make an explicit statement to the affect that the pilot licence candidate or pilot has (or has not) demonstrated a satisfactory standard of skill and competence.
9.9.3. Simulation Reports

These are reports compiled by a simulation service provider and/or accompanying check pilot, according to the reporting requirements of the Pilotage Services Provider, during simulated pilot training. They provide a detailed objective evaluation, by a trusted agent, of the pilot licence candidate’s or pilot’s performance during simulated training. They may, depending upon the training package provided, include a statement of attainment of a set of competencies.

9.9.4. Course Reports

These are reports compiled by a course provider, according to the reporting requirements of the Pilotage Services Provider, during pilot training. They provide a detailed objective evaluation, by a trusted agent, of the pilot licence candidate’s or pilot’s performance during training. They may, depending upon the training package provided, constitute or include a certificate or statement of attainment of a set of competencies or knowledge.

9.9.5. Blank Chart Examination (Skill 18)

These are examinations invigilated by the Pilotage Services Provider, according to the examination requirements of, and upon the blank charts supplied by, the Pilotage Authority. The examination consists of a series of charts upon which key navigation information has been obscured. The pilot licence candidate or pilot is required to supply the obscured information. The examinations are to be marked by a check pilot or by the Pilotage Authority. 85% is the minimum acceptable mark. Where an examinee has achieved the 85% pass mark but has answered some questions incorrectly, the incorrect answers will be discussed during the oral examination.

9.9.6. Written Examination (Skill 18)

These are examinations invigilated by the Pilotage Services Provider, according to the examination requirements of, and answering questions set by, the Pilotage Authority. The examination consists of a series of questions that examine the pilot licence candidate’s or pilot’s local knowledge and understanding of; local tugs’ capabilities and limitations; bridge instruments and pilotage equipment; basic shiphandling; navigation; emergency procedures; advanced shiphandling and tug utilisation; berth specific information; and LNG/LPG additional risk controls. The examinations are to be marked by a check pilot or by the Pilotage Authority. 85% is the minimum acceptable mark. Where an examinee has achieved the 85% pass mark but has answered some questions incorrectly, the incorrect answers will be discussed during the oral examination.

9.9.7. Oral Examination (Skill 19)

These are oral examinations conducted by an Examination Board appointed by the Pilotage Authority. The Examination Board may examine any of the skills components. The examination consists of a series of verbal questions posed by board members according to a script prepared by the Pilotage Authority. The results of the examination will be discussed amongst the board who will, collectively determine whether the pilot licence candidate or pilot satisfactorily demonstrated the required knowledge.
10. ONGOING MAINTENANCE OF PILOT LICENCE

10.1. Pilotage Services Provider’s Responsibility

A pilot licence has effect for a period of 3 years from the date of issue. When a pilot achieves a Fully Endorsed licence, it will be issued with a full term, three year validity.

It is the Pilotage Services Provider’s responsibility to maintain the currency of their pilots’ licences by monitoring currency requirements and expiry dates and applying for revalidation, in writing, to the Pilotage Authority.

The Pilotage Services Provider must maintain a record of all pilotage acts that its pilots carry out. These are to be provided to the Pilotage Authority along with mid-term assessments and applications for licence revalidation.

10.2. Skills Currency Requirements

10.2.1. Local Knowledge

The pilot licence holder must complete at least 36 acts of pilotage in an 18-month period starting from the date of issue of the pilot’s licence. At least one act of pilotage must be conducted through each of the zones for which the licence is endorsed. Evidence of currency is to be provided to the Pilotage Authority along with the Mid-term Assessment Report required at article 10.6.

10.2.2. Navigation

Having achieved an initial endorsement for this element of the Skills there are no further currency requirements for the pilot licence holder.

10.2.3. Basic Shiphandling

Having achieved an initial endorsement for this element of the Skills there are no further currency requirements for the pilot licence holder.

10.2.4. Bridge Instruments and Pilotage Equipment

Having achieved an initial endorsement for this element of the Skills there are no further currency requirements for the pilot licence holder.

10.2.5. Bridge Resource Management for Pilots (BRM-P)

Having achieved an initial endorsement for this element of the Skills there are no further currency requirements for the pilot licence holder.

10.2.6. Use of tugs

Having achieved an initial endorsement for this element of the Skills there are no further currency requirements for the pilot licence holder.
10.2.7. Emergency Procedures

Emergency procedures are to be undertaken not more than every 3 years starting from the date of issue of the pilot’s licence. This is to be supplemented by oral examination of emergency procedures during mid-term assessments described at article 10.6. Evidence of currency is to be provided to the Pilotage Authority along with the Mid-term Assessment Report or application for revalidation.

10.2.8. Advanced Marine Pilotage Training

To be undertaken not more than every 6 years starting from the date of issue of the pilot’s licence. Evidence of currency is to be provided to the Pilotage Authority along with an application for revalidation as required at article 10.7.

10.2.9. Advanced Shiphandling & Tug Utilisation

Having achieved an initial endorsement for this element of the Skills there are no further currency requirements for the pilot licence holder.

10.2.10. Berth Specific

Having achieved an initial endorsement for this element of the Skills there are no further currency requirements for the pilot licence holder.

10.2.11. LNG/LPG

Having achieved an initial endorsement for this element of the Skills there are no further currency requirements for the pilot licence holder.

10.3. Consequences of Skills Non-Currency

In the event of a pilotage licence holder becoming non-current in any of the Skills, the following consequences result and remediation strategies apply:

10.3.1. Local Knowledge

Where insufficient acts of pilotage can be demonstrated, the pilot’s licence will be temporarily suspended and the Pilotage Services Provider, in collaboration with the Pilotage Authority, will develop a tailored, individual plan to restore the pilot’s currency.

Where an act of pilotage has not been conducted in any zone for which the licence was endorsed, the pilot’s licence will be altered to temporarily suspend that zone endorsement of their licence. This will have the effect that the pilot may conduct pilotage in other zones but not in the zone for which the endorsement has been removed. The pilot may regain the Local Knowledge element zone endorsement, as described at article 9.4.1 using the methodologies described at article 9.5.1.

10.3.2. Emergency Procedures

The pilot’s licence will be temporarily suspended. This will have the effect that the pilot may not conduct pilotage in Darwin Harbour until this element has been regained. The pilot may regain the Emergency Procedures element endorsement, as described at article 9.4.7 using the methodologies described at article 9.5.7.
10.3.3. Advanced Marine Pilotage Training

The pilot's licence will be temporarily restricted to vessel endorsements of less than 140m Length until Advanced Marine Pilotage Training has been undertaken.

10.4. Endorsement Currency Requirements

The currency requirements for each of the Endorsements are at Appendix C.

Where Local Knowledge currency is maintained but an endorsement currency requirement cannot be met in the real-world, the pilot can undertake not less than four simulated shiphandling acts to the berth to satisfy the currency requirements.

10.5. Consequences of Endorsement Non-Currency

In the event of a pilot licence holder becoming non-current in any of the Berth/Ship Endorsements, the pilot's licence will be altered to temporarily suspend the endorsement from their licence. This will have the effect that the pilot may conduct pilotage in accordance with Berth/Ship Endorsements that remain current but not for the Berth/Ship combination which has been removed. The pilot may regain the Berth/Ship Endorsement, having been assessed by a check pilot or after simulation as described in article 10.4. The check pilot's report or simulation report will be reviewed by the Pilotage Authority and, where the Pilotage Authority is satisfied with the pilot's demonstration of competence, the pilot's licence will be altered to restore the Berth/Ship Endorsement.

10.6. Mid-term Assessment

In addition to the currency requirements above, each licenced pilot must receive a satisfactory report from a check pilot during a mid-term assessment. This assessment is to be carried out 18 months after the latest award of a licence; that is halfway through the period of the licence. The mid-term assessment can be for an inward or outward transit of the port and shall evaluate the application of all of the Skills. Emergency procedures are to be examined orally by the check pilot during the mid-term assessment. The Pilotage Authority shall be provided with a copy of the assessment report within one working week of the assessment date.

Where any aspect of pilotage is reported as unsatisfactory, the Pilotage Services Provider will develop a corrective action plan and timeline and report this to the Pilotage Authority. The Pilotage Authority will notify the Pilotage Services Provider of any temporary restrictions to the pilot's licence. The Pilotage Services Provider is then to manage the corrective action and report to the Pilotage Authority when it has been completed.

The corrective action shall be followed by a further review by a check pilot.

Failure to obtain a satisfactory assessment report after the follow-up action is completed may result in permanent restrictions to the pilot's licence.

10.7. Revalidation

A pilot licence has effect for a period of 3 years from the date of issue. The Pilotage Services Provider is to apply, in writing, for revalidation not later than the expiry date of the licence.

Failure to lodge an application will result in the licence being suspended for a period not exceeding 6 months. Subject to the requirements of article 10.8 below, if no application for revalidation is received within that period the licence will be cancelled.
An application for pilot licence revalidation is to include:

- The licence holder’s record as described at article 4.3;
- A report of assessment by check pilot. This assessment is to be carried out not more than 2 months before the date of expiry of the licence. The assessment can be for an inward or outward transit of the port and shall evaluate the application of all of the Skills. Emergency procedures are to be examined orally by the check pilot during the revalidation assessment;
- A report of having undertaken emergency procedures training as described at articles 9.4.7 and 9.5.7; and
- A valid medical certificate in accordance article 6.2.

Where the licence holder is fully current, the Check Pilot assessment is satisfactory and a valid medical certificate is provided, the Pilotage Authority will reissue a Pilot Licence.

Where any of the revalidation criteria cannot be met, the Pilotage Authority will inform the Pilotage Services Provider and, collaboratively, develop a strategy to either restore the missing elements of the licence or issue a restricted licence.

10.8. Extended Absence

Where, for any cause, a pilotage licence holder is absent for an extended time, particularly where that absence results in the pilot becoming non-current in any or all skills, the Pilotage Services Provider, in collaboration with the Pilotage Authority, will develop a tailored, individual plan to restore the pilot’s currency.
11. PILOTAGE EXEMPTION CERTIFICATES (PEC)

The Pilotage Authority, in accordance Part 8 Division 4 of the Ports Management Act, may issue a master a pilotage exemption certificate. A Pilotage Exemption Certificate will be endorsed for a particular vessel or vessels, or class of vessel and for the applicable zones of operation within the compulsory pilotage area.

11.1. Privileges of a PEC

A current PEC entitles its holder, when appointed in the capacity of master, to be in pilotage charge of those ships, or classes of ship named in the PEC, in the zones of the port specified by the Pilotage Authority. The use of the PEC will be subject to any limitations endorsed on the PEC by the Pilotage Authority.

11.2. PEC Eligibility Criteria

The Pilotage Authority may grant a PEC to a suitably qualified and experienced master who holds either:

- A current Certificate of Competency as an Australian Master appropriate for the size of vessel; or
- A current Certificate of Recognition issued by AMSA; or
- A current Certificate of Competency as Master appropriate for the size of vessel, not issued by AMSA but eligible for the issue of a Certificate of Recognition by AMSA through bilateral agreement with the issuing Flag State.

Applicants should be able to demonstrate the ability to speak and write the English language to a standard adequate to enable the applicant to express communications clearly.

11.3. Medical Fitness

All applicants must hold a valid medical certificate in accordance with Marine Orders Part 76.

11.4. Aids to Vision or Hearing

Where an applicant is required by Marine Orders part 76 to have vision or hearing aids, he/she shall comply with the requirements noted on the medical certificate.

11.5. PEC Validity Period

A PEC is valid for a period of two years in accordance with the Ports Management Act.

11.6. PEC Endorsed Vessels

A PEC may be issued for up to four named vessels. The vessels shall be nominated by the applicant and, where suitable experience has been demonstrated, the Pilotage Authority shall name the vessels on the exempt seaman’s certificate. In the case of a class of vessels where the Pilotage Authority is satisfied with the similarity of the vessels, the class may be annotated on the exempt seaman’s certificate.
11.7. PEC Upper Limit

The maximum vessel length, or combined length in the case of a tow, for the granting of a PEC is 100 metres.

11.8. Pilotage Zones

A PEC will be issued for specified zones within the compulsory pilotage area, through which the vessel has a requirement to transit and of which the master has suitable experience and knowledge. The zones shall be annotated on the exempt seaman’s certificate issued by the Pilotage Authority.
12. PEC TRAINING REQUIREMENTS

12.1. Darwin Harbour Operating Experience

An applicant for a PEC shall produce to the Pilotage Authority documented evidence of experience operating the vessel for which exemption is sought in the port of Darwin as follows:

- Within 12 months immediately preceding the date of application:
  - Completed not less than 4 voyages through the compulsory pilotage area of the Port, with a licenced pilot, in command of the vessel for which the application is made; or
  - Completed not less than:
    - 3 voyages through the compulsory pilotage area of the Port as chief mate (on duty on the bridge throughout the entire voyage) on the vessel for which the application is made; and
    - 2 voyages through the compulsory pilotage area of the Port, with a licenced pilot, in command of the vessel for which the application is made;
- For a PEC to be issued for night time operations, a minimum of one inward and one outward transit shall be conducted at night. For a run to be considered to have taken place at night, it must commence no earlier than 30 minutes after sunset and be completed no less than 30 minutes before sunrise.

12.2. PEC Training Syllabus

An applicant for a PEC must be able to demonstrate satisfactory knowledge of the following.

12.2.1. General Knowledge

- International Regulations for Preventing Collisions at Sea, 1972 as amended;
- Bridge equipment and navigational aids;
- Use of radar and other electronic devices, their limitations and capabilities as navigation and collision avoidance aids;
- Factors affecting ship performance such as wind, current, tide, channel configuration, water depth, bottom, bank and ship interaction including squat;
- IMO Standard Marine Communication Phrases;
- IMO Code for the investigation of marine casualties and incidents;
- Current Marine Orders and Marine Notices ; and
- Ability to prepare a berth to berth passage plan in accordance with Chapter V of SOLAS, IMO Resolution A.893 (21) Guidelines for voyage planning and Part 2 (Voyage Planning) to Part A-VIII/2 of Chapter VIII of the STCW Code (Part A).

12.2.2. Darwin Harbour specific Knowledge

- The Limits of the port of Darwin and its pilotage area;
- Knowledge of Port Notices in the port of Darwin;
- The system of buoyage;
- Characteristics of the lights and their arcs of visibility;
- The use of AIS on buoys;
- Names, positions and characteristics of the light houses, buoys, beacons, structures and leading marks;
- Names and characteristics of the channels, shoals, headlands and points;
- Depths of water throughout the Port, including tidal effects and factors that can cause tidal anomalies;
- General set, rate, range and duration of the tides and the use of tide tables and real-time tidal information;
- Proper courses and distances;
- Designated and emergency anchorages;
- Ship handling for, anchoring, berthing and unberthing, and emergency situations;
- Communications and radio reporting procedures;
- Where current Regional Harbourmaster’s Directions, Port Notices and current navigation information affecting the Port can be accessed;
- Systems of radio navigational warning broadcasts and the type of information likely to be included;
- Vessel traffic services and similar vessel management systems;
- Pollution prevention;
- Knowledge of port cyclone procedures; and
- Any other relevant knowledge considered necessary by the Pilotage Authority from time to time.
13. PEC ASSESSMENT REQUIREMENTS

13.1. PEC Examination and Assessment

An applicant for a PEC will be required to demonstrate a satisfactory level of knowledge and skill in order to be issued with a PEC. The assessment of knowledge and skills will comprise the following components:

- A written exam and blank chart set by the Pilotage Authority, achieving a mark of not less than 75%. Where the candidate fails either the written exam or the blank chart the outstanding assessment item must be reattempted. At the discretion of the Pilotage Authority, small deficiencies in either the written exam or the blank chart may be assessed orally.

- An inwards and outwards assessment with a licenced pilot through the zones of the compulsory pilotage area for which the application is made. These assessments will include oral examination of the candidate’s knowledge of the PEC syllabus.

An applicant who does not meet the required standard in any component of the PEC examination and assessment process may, at the discretion of the Pilotage Authority, be required to complete further port transits under the supervision of a licenced pilot prior to being re-examined and/or re-assessed.

Note: An applicant shall be deemed to have failed an assessed run if a written passage plan has not been produced for the passage through the compulsory pilotage area.

13.2. Examination and Assessment Period

A PEC applicant must complete the examination and assessment process within six calendar months of lodging his or her application. Failure to comply with this requirement will result in the application being cancelled and the applicant will have to submit a new application and resit the examination and complete new assessments.

13.3. Additional Knowledge

In recognition of the benefits to be gained by the completion of Bridge Resource Management and emergency procedures training, the Pilotage Authority encourages PEC applicants to have completed such training at an AMSA accredited training provider.

13.4. Upgrade of a PEC

Where an existing exempt seaman wishes to upgrade their PEC for a different vessel or to add additional zones of the compulsory pilotage area not currently endorsed on their PEC, they shall:

- Apply in writing to the Pilotage Authority on the form provided stating the nature of the desired upgrade;

- For a vessel upgrade where the Pilotage Authority deems the vessels are not similar in manoeuvring characteristic or the upgraded vessel poses additional risk, an inwards and outwards assessment with a licenced pilot through the relevant zones of the compulsory pilotage area;

- For a zone upgrade the applicant shall meet the initial issue requirements for the area concerned, including voyages and assessments.
Each and all of the above requirements will apply where an existing exempt seaman wishes to seek endorsement for a different vessel and zone or zones of the compulsory pilotage area of the Port.

Where an exempt seaman wishes to upgrade to a towage PEC the requirements in Part 14 shall be met.
14. TOWAGE PECs

14.1. Scope

This section applies to the movement of dumb barges, pontoons or similar (the object) with a tug
towing, pushing or rigidly connected as a composite unit (tow). This section does not apply to harbour
towage where tugs assist with the manœuvring of vessels for the purpose of berthing, unberthing or a
dead ship (cold) move with a pilot embarked.

14.2. Maximum Length and Restrictions

The maximum permissible combined length for which a towage PEC can be issued is 100 meters.

The exempt seaman shall only have one vessel connected to the object. A second vessel may assist the
move by leaning on but not connecting to the object. Where two or more vessels are connected to the
object a licenced pilot shall conduct the move.

The exempt seaman is to take positive control of the assisting vessel and shall have an agreed
procedure including agreed method and phraseology for communication. The exempt seaman has
overall responsibility for the safe conduct, planning and execution of the move.

The assisting vessel shall not pass ahead of the tug and tow without direction and the master or
coxswain of the assisting vessel shall assess the risk of passing ahead.

The exempt seaman who holds a towage PEC may undertake a tow of objects up to the maximum
combined length stated on his PEC. There is no requirement for objects to be named on the PEC.

A towage PEC may be issued for up to four named tug vessels. The vessels shall be nominated by the
applicant and, where suitable experience has been demonstrated, the Pilotage Authority shall name
the vessels on the exempt seaman’s certificate. In the case of a class of vessels where the Pilotage
Authority is satisfied with the similarity of the vessels, the class may be annotated on the exempt
seaman’s certificate.

14.3. Towage PEC Training Syllabus

In addition to the training syllabus at article 12.2;

- Ship handling whilst towing;
- The limitations and benefits of different configurations such as towing astern, being hipped
  up and pushing ahead;
- The International Regulations for the Prevention of Collision at Sea requirements for lights
  and shapes for vessels engaged in towing;
- The risks posed to vessels including girding and collision; and
- The additional constraints and considerations for connecting dumb barges and pontoons to
  moorings.
14.4. Darwin Harbour Operating Experience

An applicant for a towage PEC shall produce to the Pilotage Authority documented evidence of experience operating the vessel for which exemption is sought in the port of Darwin as follows:

- Within 12 months immediately preceding the date of application:
  - Completed not less than 4 voyages through the compulsory pilotage area of the Port with a licenced pilot, in command of tug and barge combination of the maximum Length the application is made for; or
  - Completed not less than:
    - 6 voyages through the compulsory pilotage area of the Port as chief mate (on duty on the bridge throughout the entire voyage) on a tug and barge combination of the maximum Length the application is made for; and
    - 1 voyage through the compulsory pilotage area of the Port with a licenced pilot, in command of the tug and barge combination of the maximum Length the application is made for;
- For a PEC to be issued for night time operations, a minimum of one inward and one outward transit shall be conducted at night. For a run to be considered to have taken place at night, it must commence no earlier than 30 minutes after sunset and be completed no less than 30 minutes before sunrise.

14.5. Upgrading a Towage PEC

Where an existing exempt seaman wishes to upgrade their Towage PEC to a higher combined length they shall:

- Apply in writing to the Pilotage Authority on the form provided stating the nature of the desired upgrade;
- Complete 1 assessment with a licenced pilot, in command of the tug and barge combination.

14.6. Upgrading an existing PEC to a Towage PEC

Where an existing exempt seaman wishes to upgrade a PEC for towing they shall comply with the requirements for a vessel upgrade and in addition to inwards and outwards assessments, shall pass a towage supplement exam (achieving a mark of 75% or more).
15. ONGOING MAINTENANCE OF A PEC

15.1. Exempt Seaman’s Responsibility

It is the exempt seaman’s responsibility to maintain the currency of his exemption by monitoring the expiry date and applying for a revalidation, in writing, to the Pilotage Authority prior to its expiry.

The exempt seaman shall maintain a record of voyages through the compulsory pilotage area. The record must show, at a minimum, the date, time and the starting and ending points of the voyage.

15.2. PEC Revalidation

A PEC may be revalidated by the Pilotage Authority on the written application of its holder. An application for revalidation shall be lodged not later than the expiry date shown on the PEC.

Failure to lodge an application within this timeframe will result in the PEC being cancelled and the applicant will have to apply for a new PEC.

In order to revalidate a PEC its holder must meet the following requirements:

15.2.1. Trip record

The exempt seaman shall produce documented evidence of completing not less than 12 transits of the pilotage zones on the exempt seaman’s PEC during the 24 month validity period of their PEC. The Pilotage Authority will evaluate the transits of the pilotage zones and indicate the zones for which the PEC can be revalidated.

Where a PEC is held for a zone within the compulsory pilotage area into which the exempt seaman requires access only for emergency management (eg cyclone moorings) or to service emergency management equipment, two trips per year will be deemed sufficient and the PEC zone endorsement shall be annotated “(∑)” to indicate that the exemption for that zone applies only for the purposes of servicing emergency management equipment or in the case of emergency preparation (eg assuming a cyclone mooring).

Note: Responsibility for keeping and producing documented records at the time of revalidation is the exempt seaman’s.

15.2.2. Assessment

The exempt seaman is to conduct an inwards assessment (check run) with a licenced pilot through the zones of the compulsory pilotage area annotated on the exempt seaman’s certificate.

15.2.3. Medical fitness

The exempt seaman shall produce a valid medical certificate in accordance with Marine Orders Part 76.

15.2.4. Certificate of Competency

The exempt seaman shall produce a COC or COR as per initial requirements.
16. PROMULGATION & REVIEW

16.1. Transitional Matters

Upon the commencement of this version of the Pilotage Standards, a pilot licence issued under previous versions of these Pilotage Standards is taken to be a pilot licence issued under these Pilotage Standards and in accordance with Part 8, Division 4 of the Ports Management Act and continues in force for the balance of the term for which it was issued and will be subject to the conditions and requirements of these Pilotage Standards.

On and from the commencement of these Pilotage Standards, a pilotage exemption certificate issued under previous versions of these Pilotage Standards is taken to be a pilotage exemption certificate issued under these Pilotage Standards and in accordance with Part 8, Division 4 of the Ports Management Act and continues in force for the balance of the term for which it was issued and subject to the conditions to which it was subject immediately before the commencement.

16.2. Review Period

These Pilotage Standards shall be reviewed every 24 months for currency and applicability to the shipping trade at the time of the review. These Pilotage Standards may be reviewed at any time a change in legislation or pilotage regulations dictate or as deemed necessary by the Pilotage Authority.

Captain Tony O'Malley
Regional Harbormaster – Darwin
Pilotage Authority – Darwin

6 February 2019
### Pilotage Standards – Darwin

#### Appendix A (4 Mar 19)

**Berth Ship Endorsement Matrix – With**

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With 4 Mar 19

Alpha Anchorages
Bravo Anchorages
Tango Anchorage
Charlie Anchorages
Delta Anchorages
Echo Anchorages
... or C7 then also N5-7
Pre-requisites;
1,2,5,8,9,10,11,13,18,19
Observe (any) - 1
Assessed - 1
With 4 Mar 19

Berth Ship Endorsement Matrix – With
## Berth Ship Endorsement Matrix – With

<table>
<thead>
<tr>
<th>With</th>
<th>Berth</th>
<th>Single Tug Cold Move</th>
<th>Multi-Tug Cold Move</th>
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### Pre-requisites

- **1,2,3,6,8,9,10,11,12,13,14,15,16,17,18,19**
- **K5-7, L5-7, M1-4, N5-7**
- **Observe - 3**
- **Mentored - 6 (NLT 4 in) or 4 (NLT 3 in) if C6 or T6**
- **Assessed - 1 in, 1 out**

### Area

1. **Area A** - Outer Harbour Area
2. **Area B** - City Area
3. **Area C** - East Arm Area
4. **Area D** – Middle Arm Area
5. **Area E** – Frances Bay Area
6. **Area F** – Hudson Bladin Area
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8. **Navigation**
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10. **Bridge Instruments and Pilotage Equipment**
11. **Bridge Resource Management for Pilots (BRM-P)**
12. **Use of Tugs**
13. **Emergency Procedures**
14. **Advanced Marine Pilotage Training (AMPT)**
15. **Advanced Shiphandling & Tug Utilisation**
16. **Berth Specific Skills**
17. **LNG / LPG**
18. **General Knowledge Exam**
19. **Oral Exam**
## Berth Ship Endorsement Matrix – Without

### Without

**4 Mar 19**

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<tr>
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<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
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<th>J</th>
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<td>N1-4</td>
<td>Observe (&lt;150)</td>
<td>2</td>
<td>Mentored - 5 (NLT 3 in) or 2 (NLT 1 in) if C1</td>
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**Ship**

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# Berth Ship Endorsement Matrix – Without

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**Without 4 Mar 19**

**Ship**

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**Pre-requisites:**

- K: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 18, 19
- L: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 18, 19
- M: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 18, 19
- N: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 18, 19
- O: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 18, 19
- P: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 18, 19
- Q: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 18, 19
- R: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 18, 19
- S: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 18, 19
- T: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 18, 19

**Observe:**

- 1
- 2
- 3
- 4
- 5
- 6
- 7

**Mentored:**

- 10
- 20

**Assessed:**

- 1 in, 1 out
- 2 in, 2 out
- 3 in, 3 out

**Note:**

- Pre-requisites for specific berths and limitations apply as indicated in the table.
## Berth Ship Endorsement Matrix – Without

### Without

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**Berth Specific Skills**

**Single Tug Cold Move**

1. Pre-requisites: 11, 12
2. Observe (any): 1
3. Assessed: 1

**Multi-Tug Cold Move**

1. Pre-requisites: Any 3 of A1 to F1, H1 to J1 or R1
2. Observe (any): 1
3. Assessed: 1

### Area

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<td>Area B - City Area</td>
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<td>Area E – Frances Bay Area</td>
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<td>Area F – Hudson Bladin Area</td>
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<td>Navigation</td>
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<td>Advanced Shiphandling &amp; Tug Utilisation</td>
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<td>16</td>
<td>Berth Specific Skills</td>
</tr>
<tr>
<td>17</td>
<td>LNG / LPG</td>
</tr>
<tr>
<td>18</td>
<td>General Knowledge Exam</td>
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<tr>
<td>19</td>
<td>Oral Exam</td>
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**Area Pre-requisites**

- **1** - Area A: 11, 12, A1 to F1, H1 to J1 or R1
- **2** - Area B: 11, 12, A1 to F1, H1 to J1 or R1
- **3** - Area C: 11, 12, A1 to F1, H1 to J1 or R1
- **4** - Area D: 11, 12, A1 to F1, H1 to J1 or R1
- **5** - Area E: 11, 12, A1 to F1, H1 to J1 or R1
- **6** - Area F: 11, 12, A1 to F1, H1 to J1 or R1
- **7** - Area G: 11, 12, A1 to F1, H1 to J1 or R1
- **8** - Area Navigation: 11, 12, A1 to F1, H1 to J1 or R1
- **9** - Area Basic Shiphandling: 11, 12, A1 to F1, H1 to J1 or R1
- **10** - Area Bridge Instruments and Pilotage Equipment: 11, 12, A1 to F1, H1 to J1 or R1
- **11** - Area Bridge Resource Management for Pilots (BRM-P): 11, 12, A1 to F1, H1 to J1 or R1
- **12** - Area Use of Tugs: 11, 12, A1 to F1, H1 to J1 or R1
- **13** - Area Emergency Procedures: 11, 12, A1 to F1, H1 to J1 or R1
- **14** - Area Advanced Marine Pilotage Training (AMPT): 11, 12, A1 to F1, H1 to J1 or R1
- **15** - Area Advanced Shiphandling & Tug Utilisation: 11, 12, A1 to F1, H1 to J1 or R1
- **16** - Area Berth Specific Skills: 11, 12, A1 to F1, H1 to J1 or R1
- **17** - Area LNG / LPG: 11, 12, A1 to F1, H1 to J1 or R1
- **18** - Area General Knowledge Exam: 11, 12, A1 to F1, H1 to J1 or R1
- **19** - Area Oral Exam: 11, 12, A1 to F1, H1 to J1 or R1
# Currency Requirements

<table>
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<th>Single Tug Cold Move</th>
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**Note:** Currency per 36 months as of 4 Mar 19.