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Port Management Act 1995
PILOTAGE SERVICES PROVIDERS
STANDARD – VI
1 August 2023

This Standard is two parts:

PART A. Preface – explanatory and non-binding

PART B. Pilotage Services Providers Standard, 1 August 2023

SPECIAL

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PART A. EXPLANATORY PREFACE

The Standard in Part B sets the requirements and performance standards for Pilotage Services Providers to maintain the necessary systems, resources, equipment and safety management to deliver the highest level of operational coordination and safety performance in Victoria's pilot required waters.

The Standard provides a consistent framework for the delivery of safe and effective pilotage services, where the requirements can be applied flexibly to the range and scale of a particular port or operation.

Ports Victoria will work collaboratively with Pilotage Services Providers to implement and maintain compliance with the Standard.

As part of a shared mission for continuous improvement, Ports Victoria also provides guidance on emerging industry and international best practice and how Victorian Pilotage Services Providers may respond, in order to fulfil their duties to carry out safely, so far as is reasonably practicable, the pilotage services they provide.

Pilots have a critical and influential role. Pilotage Services Providers are required to fully embrace the challenges and expectation of this role, with individual Pilots committed to the highest standards of proficiency and safety in their conduct and communications as Pilots.

PART B. PILOTAGE SERVICES PROVIDERS STANDARD, 1 AUGUST 2023

1. Introduction

- 1.1.1. This Ports Victoria Pilotage Services Providers Standard (**Standard**) is made pursuant to section 73ZK of the **Port Management Act 1995**.
- 1.1.2. The Standard has been developed in response to Victorian Government expectations outlined in the Victorian Commercial Ports Strategy and legislative port reform amendments to establish a non-exclusive licence scheme for pilotage services at commercial ports where Ports Victoria sets the necessary standards for implementation.
- 1.1.3. A Pilotage Services Provider is a person or organisation registered by the Chief Executive of Safe Transport Victoria (the transport and maritime safety regulator). Pilotage Services Providers are licensed by Ports Victoria to provide Pilotage Services.
- 1.1.4. For the period 1 August 2023 – 29 February 2024, this Standard applies to applicants for a Pilotage Services licence.
- 1.1.5. In applying the Standard, safety remains the overarching priority at all times.

2. General

2.1. Authority

- 2.1.1. This Standard has been developed and is administered by Ports Victoria in accordance with the following Victorian legislation
 - (a) **Marine Safety Act 2010 (MSA)**,
 - (b) Marine Safety Regulations 2012 (MSR),
 - (c) **Port Management Act 1995 (PMA)**,
 - (d) **Transport Integration Act 2010 (TIA)**
- 2.1.2. In the event of any inconsistency between this Standard and any applicable Victorian legislation, the legislation will prevail.

2.2. Definitions

This Standard uses terms with defined meanings.

Determination means *Determination: Licensing and Training Requirements for Marine Pilots in Victorian Ports*, 2019, Maritime Safety Victoria. The Determination is administered by Safe Transport Victoria.

Harbour Master means:

- (a) a licensed harbour master, or
- (b) any person authorised under section 229 of the MSA to exercise any of the functions of the harbour master, if the person so authorised is acting in accordance with the authorisation.

Marine Incident has the same meaning as the definition of Marine Incident in section 3 of the MSA.

MSA means the **Marine Safety Act 2010**.

MSR means the Marine Safety Regulations 2012 as amended, superseded or replaced from time to time.

Marine Safety Worker means, for the purposes of this Standard, a Pilot, a pilot vessel master and any crew member of the pilot vessel.

Pilot means a person who does not belong to, but has the conduct of, a vessel in waters of the State of Victoria.

Pilot Licence means a licence granted under section 252 of the MSA.

Pilot Required Waters means those parts of State waters to which a declaration under section 250 of the MSA applies.

Pilotage Services means:

- (a) the service of providing a Pilot to navigate a vessel within, or into or out of, port waters; or
- (b) the service of providing transport and transfer of a Pilot to and from a vessel for which services under paragraph (a) are required; or
- (c) both of the services referred to in paragraphs (a) and (b).

Pilotage Services Licence means a licence issued under section 73ZH(1) of the PMA.

Pilotage Services Provider means a person registered under section 241 of the MSA to provide Pilotage Services.

PMA means the **Port Management Act 1995**.

Port includes any of the following waters, or any part of those waters:

- (a) any harbour or haven, whether natural or artificial,
- (b) any estuary, channel, river, creek or roadstead, and
- (c) any navigable water in which vessels may lie for shelter or for the transfer of cargo or passengers.

Reportable Incident has the same meaning as the definition of Reportable Incident in section 3 of the MSA.

Risk Event means an incident which exceeds the planned safety margin, increasing the risk of an accident. It is an incident which does not involve actual damage or stakeholder complaint. A risk event includes hazardous occurrences, increased risk or the potential for an accident, but which did not constitute a reportable 'incident' under relevant requirements. Under the requirements of this Standard they are to be reported as risk events as set out under section 4.16.

Safe Transport Victoria means the transport and maritime safety regulator for Victoria.

Safety Duties means the relevant duties in Chapter 2 of the MSA.

TIA means the **Transport Integration Act 2010**.

Vessel means any kind of vessel that is used, or capable of being used, in navigation by water, however propelled or moved, and includes:

- (a) a barge, lighter, floating restaurant or other floating vessel, and
- (b) an air-cushion vehicle, or other similar craft, that is used in navigation by water; and

- (c) any aeroplane that is designed for and capable of being waterborne, for so long as that aeroplane is waterborne, and
- (d) a life boat, and
- (e) a thing being towed by a vessel, and
- (f) a thing prescribed to be a vessel, and
- (g) an off-shore industry mobile unit within the meaning of the **Navigation Act 2012** but does not include a facility within the meaning of Schedule 3 to the **Offshore Petroleum and Greenhouse Gas Storage Act 2010**.

2.3. Interpretation

2.3.1. When interpreting this Standard:

- 2.3.1.1. any conflict or difference in meaning between terms defined above and in the applicable Victorian legislation is resolved by applying the meaning in the legislation;
- 2.3.1.2. a reference to a legislative provision or legislation (including subordinate legislation) is to that provision or legislation as amended, re-enacted or replaced, and includes any subordinate legislation issued under it;
- 2.3.1.3. any reference to **in writing** includes correspondence by letter or email;
- 2.3.1.4. headings are for convenience only, and do not affect interpretation.
- 2.3.1.5. a singular word includes the plural, and vice versa;
- 2.3.1.6. If a word or phrase is defined, any other grammatical form of that word or phrase has a corresponding meaning; and
- 2.3.1.7. if an example is given of anything (including a right, obligation or concept), such as by saying it includes something else, the example does not limit the scope of that thing.

2.4. Objectives

2.4.1. The objective of the Standard is to support safe and efficient pilotage operations in Victorian waters through:

- 2.4.1.1. transparent, accountable and effective communication between Ports Victoria, Pilotage Services Providers and other regulators;
- 2.4.1.2. providing consistent performance standards which enable Pilotage Services Providers to further enhance their delivery;
- 2.4.1.3. implementation of a culture of continuous improvement; and
- 2.4.1.4. implementation of an effective assurance and compliance regime.

2.5. Scope

2.5.1. The Standard applies to Pilotage Services Providers who are licensed by Ports Victoria and registered by Safe Transport Victoria to provide Pilotage Services in Pilot Required Waters, including the port waters of Melbourne, Geelong, Hastings and Portland. The Standard will also apply to any other waters declared under section 250 of the MSA.

2.5.2. The Standard applies to all aspects and activities of Pilotage Services including Pilots, pilot vessel operations, those involved in activities that support the delivery of these services including maintenance, procurement, despatch and management of these activities or duties.

2.6. Standards for Pilotage Services

2.6.1. Section 73ZK of the PMA provides for Ports Victoria to determine standards for, or with respect to, the provision of Pilotage Services by Pilotage Services Providers in Pilot Required Waters.

2.6.2. Section 247 of the MSA requires Pilotage Services Providers to comply with the prescribed safety standards.

2.7. Consultation and Development

2.7.1. Ongoing communication on matters such as industry recognised best practice, lessons learned and emerging know how will inform the development of future versions of the Standard.

3. Pilotage Provision Framework

3.1. Pilotage Services Providers

3.1.1. Pilotage Services Providers shall ensure a Pilot they employ, or engage who provides Pilotage Services to an owner of a vessel:

3.1.1.1. is licensed by the Chief Executive of Safe Transport Victoria,

3.1.1.2. is in all aspects fit for duty to carry out the act of pilotage, and

3.1.1.3. meets the requirements of this Standard.

4. Pilotage Services Providers and the MSA

4.1. General

4.1.1. In this Standard, the term ‘ensuring safety’ refers to Part 2.1 of the MSA, section 29:

Section 29:

A person who is not a marine safety worker and who supplies pilotage services to an owner of a vessel must, so far as is reasonably practicable, ensure the safety of those services.

The concept of ensuring safety:

(1) To avoid doubt, a duty imposed on a person under this Act or the regulations to ensure, so far as is reasonably practicable, safety, requires the person to:

(a) eliminate risks to safety so far as is reasonably practicable, and

(b) if it is not reasonably practicable to eliminate risks to safety, to reduce those risks so far as is reasonably practicable.

(2) To avoid doubt, for the purposes of Parts 2.2 to 2.6 of the MSA or regulations made for the purposes of those Parts regard must be had to the following matters in determining what is (or was at a particular time) reasonably practicable in relation to ensuring safety:

(a) the likelihood of the hazard or risk concerned eventuating,

(b) the degree of harm that would result if the hazard or risk eventuated,

(c) what the person concerned knows, or ought reasonably to know, about the hazard or risk and any ways of eliminating or reducing the hazard or risk,

(d) the availability and suitability of ways to eliminate or reduce the hazard or risk, and

(e) the cost of eliminating or reducing the hazard or risk.

4.2. Pilotage as a Primary Control of Risk

- 4.2.1. Pilotage is a primary control measure applied by the State to manage the risk of navigating vessels within the confines of Pilot Required Waters. In these waters the potential hazards to human life, environment and infrastructure are now more significant and serious than at any time in the past, due to increasing size and capacity of vessels and their cargo. To continue to reflect the outcomes expected under the MSA and MSR, appropriate risk management measures will be required.
- 4.2.2. Pilotage Services Providers must comply with all legislative requirements and maintain a due diligence approach to their risk management, ensuring they fulfil their prescribed marine safety duties.
- 4.2.3. Pilotage Services Providers must assess the fitness and competence of all persons appointed to positions with responsibility for marine and navigational safety.
- 4.2.4. In order to provide safe and effective Pilotage Services, Pilotage Services Providers must apply a due diligence and so far as is reasonably practicable principal approach to risk management.
- 4.2.5. These requirements will also foster a culture of continuous improvement to actively manage evolving risks in pilotage in Victoria.
- 4.2.6. Pilots are role models. They demonstrate the standards of expected behaviours, communications and accountabilities across the entire port community. Pilots are always under observation and have a leading role in enhancing a culture of safety and efficiency in every port.
- 4.2.7. Pilotage Services Providers are required to ensure their Pilots evidence individual commitment to the highest standards of proficiency and safety in their conduct and communications as Pilots.

5. Pilotage Services Provider Performance Standards

5.1. Risk Management Framework and Due Diligence

- 5.1.1. Marine safety is a shared responsibility with a principle of accountability that managing risk is the responsibility of the person best able to control that risk. The concept of ensuring safety is for a duty holder so far as is reasonably practicable to eliminate risks to safety and if it is not reasonably practicable to eliminate risks to safety, to reduce those risks so far as is reasonably practicable.
- 5.1.2. The Pilotage Services Provider must be able to evidence a risk management framework in place in accordance with the performance standards set out in Appendix 1. The framework and its contents must have due regard to Harbour Masters' Directions.

5.2. Pilotage Safety Management System

- 5.2.1. The Pilotage Services Provider must have in a place a Pilotage Safety Management System (PSMS), in accordance with the performance standards set out in Appendix 2.
- 5.2.2. The PSMS shall have full regard for the requirements for pilotage provider safety management systems set by the Australian Maritime Safety Authority and any other requirements established by relevant legislative provisions.
- 5.2.3. Any amendment to a PSMS should be notified to Ports Victoria.

5.3. Training and Continuous Professional Development

- 5.3.1. In addition to any pilot licensing training required by Safe Transport Victoria, to ensure Pilotage Services are of the highest standard, Pilotage Services Providers shall carry out and maintain a relevant training and continuous professional development program for Pilots and other key positions, at least in accordance with the performance standards set out in Appendix 3.

5.3.2. In developing internal training and continuous professional development programs, the Pilotage Services Provider shall incorporate requirements at least in accordance with the Determination.

5.4. Bridge Resource Management

5.4.1. The Pilotage Services Provider must implement procedures, training and verification processes to ensure up to date Bridge Resource Management practices are used in the management of bridge operations to maximise the effective utilisation of all resources, including personnel, equipment and information, available for the safe navigation of the vessel, at least in accordance with the performance standards set out in Appendix 4.

5.5. Workplace Health and Safety

5.5.1. The Pilotage Services Provider must have measures in place to:

5.5.1.1. ensure, so far as is reasonably practicable, the health, safety and welfare of its Marine Safety Workers;

5.5.1.2. eliminate, so far as is reasonably practicable, risks to the health, safety and welfare of its Marine Safety Workers; and

5.5.1.3. ensure, so far as is reasonably practicable the health and safety of members of the public is not at risk,

in accordance with the performance standards set out in Appendix 5.

5.5.2. Pilotage Services Providers must be able to demonstrate compliance with all occupational health and safety obligations under Victorian law, including those imposed by the **Occupational Health and Safety Act 2004**.

5.6. Personal Protective Equipment

5.6.1. The Pilotage Services Provider must have in place a Personal Protective Equipment (PPE) Plan, at least in accordance with the performance standards set out in Appendix 6.

5.7. Pilot Health and Fitness

5.7.1. By section 29 of the MSA, a Pilotage Services Provider has a duty to ensure, so far as is reasonably practicable, that a Pilot provided to a vessel owner is medically fit and able to carry out the activity for which the Pilot has been provided.

5.7.2. The Pilotage Services Provider must adhere to a health and fitness program for Pilots, at least in accordance with the performance standards set out in Appendix 7.

5.7.3. The health and fitness program shall apply to all Pilots employed or otherwise engaged by the Pilotage Services Provider, and are in addition to Safe Transport Victoria's medical fitness requirements for the issue of a Pilot Licence, and the Australian Maritime Safety Authority's seafarer medical requirements for Deck Officers.

5.8. Fatigue Management

5.8.1. The Pilotage Services Provider must have in place a Fatigue Risk Management System (FRMS), at least in accordance with the performance standards set out in Appendix 8.

5.8.2. The Pilotage Services Provider must meet the requirements of the MSR regarding development and implementation of fatigue management strategies and regarding the level of consultation required when developing these strategies.

5.8.3. The Pilotage Services Provider must also ensure it meets the requirements relating to fatigue management of the MSA, MSR and **Occupational Health and Safety Act 2004**.

- 5.8.4. A Fatigue Management Report shall be submitted to Ports Victoria each quarter, in a format approved by Ports Victoria. This report will include, as a minimum:
- 5.8.4.1. safety performance indicator measurements,
 - 5.8.4.2. copies of fatigue reports submitted each month for each Marine Safety Worker, categorising their role,
 - 5.8.4.3. fatigue risk trend analysis,
 - 5.8.4.4. any actions taken to remedy or control fatigue hazards or incidents, and
 - 5.8.4.5. details of any fatigue training undertaken.
- 5.8.5. FRMS Fatigue Metrics and Safety Performance Indicators shall be collated and submitted to Ports Victoria on an annual basis.
- 5.8.6. Any sensitive personal information shall be redacted in a version that is made available to auditors.

5.9. Alcohol and Drug Management

- 5.9.1. The Pilotage Services Provider must have in place an Alcohol and Drug Management Plan (ADMP), at least in accordance with the performance standards set out in Appendix 9.
- 5.9.2. The Pilotage Services Provider must meet the requirements of the MSR regarding the development and implementation of strategies to ensure Marine Safety Workers do not carry out marine safety work while having equal to or more than prescribed concentration of alcohol or prescribed concentration of drugs as defined in Section 3 of the **Road Safety Act 1986**, and meets the requirements set regarding the level of consultation required when developing these strategies.
- 5.9.3. The Pilotage Services Provider must also ensure it meets the requirements set out in the MSA, MSR, **Marine (Drug, Alcohol and Pollution Control) Act 1988** and **Occupational Health and Safety Act 2004**.

5.10. Communication

- 5.10.1. The Pilotage Services Provider must have in place a communication policy, at least in accordance with the performance standards set out in Appendix 10.
- 5.10.2. The Pilotage Services Provider shall provide a representative to participate by attendance (if necessary by on line attendance) at each meeting of the Navigational Safety Committee.

5.11. Pilot Transfer Operations

- 5.11.1. The Pilotage Services Provider must ensure that pilot transfer operations are planned, carried out and recorded in accordance with the performance standards set out in Appendix 11.
- 5.11.2. The Pilotage Services Provider must ensure a Pilot is aware of their responsibility to decline pilotage when a vessel has not been able to make the pilot transfer arrangement safe as required by *Marine Order 21 (Safety and emergency arrangements) 2016*, giving effect to *IMO Resolution A.1045 (27) Pilot Transfer Arrangements*, and *IMO Resolution A.1108(29) Amendments to the Recommendations on Pilot Transfer Arrangements*, and any existing Australian Marine Notices.
- 5.11.3. Reference to pilot transfers in this Standard applies only to transfer operations by pilot vessel. The specific operational and administrative requirements of any alternative means of pilot transfer shall be considered on a case by case basis, prior to the operation taking place, by the Pilotage Services Provider in conjunction with Ports Victoria and Safe Transport Victoria.

5.12. Passage Plans

5.12.1. The Pilotage Services Provider must ensure that passage plans are prepared, approved, shared, carried out and recorded at least in accordance with the performance standards set out in Appendix 12.

5.13. Portable Pilot Unit

5.13.1. A Portable Pilotage Unit (PPU) must be integrated into the overall navigation tools and systems used by a Pilot when navigating a vessel in Victorian Pilot Required Waters.

5.13.2. The Pilotage Services Provider must ensure that properly functioning PPUs are available to Pilots and are operated in accordance with the performance standards set out in Appendix 13.

5.13.3. The Pilotage Services Provider shall consult the following when determining the appropriateness of its PPU system:

5.13.3.1. *Guidelines on the Design and use of Portable Pilot Units*, International Maritime Pilots' Association,

5.13.3.2. *Code of Good Practice Portable Pilot Units*, Australasian Marine Pilots Institute,

5.13.3.3. *Fact Sheet: AusENC*, Australian Hydrographic Office, and

5.13.3.4. *Non-Portable Piloting Unit for Vessels Specifications*, Canal de Panama.

5.14. Under Keel Clearance Services Systems

5.14.1. Pursuant to the requirements of Harbour Master's Directions, it is mandatory for deep draft transiting vessels to use Under Keel Clearance (UKC) systems provided.

5.14.2. Pilotage Services Providers must ensure Pilots are trained and competent in the use of UKC systems for safe navigation of a vessel in Pilot Required Waters in accordance with the performance standards set out in Appendix 14.

5.15. Contingency Planning

5.15.1. Pilotage Services Providers must be able to demonstrate effective contingency planning, based on recognised risk management principles, and that this is incorporated into the Pilotage Safety Management Systems in section 4.2, and meets the performance standards set out in Appendix 15.

5.16. Incident and Risk Event Reporting and Investigation

5.16.1. The Pilotage Services Provider must properly report and investigate all Reportable Incidents and Risk Events, in accordance with the performance standards set out in Appendix 16 and must have in place adequate and appropriate policies, procedures and training such that all personnel concerned are aware of and able to fulfil those performance standards.

5.17. Continuous Improvement

5.17.1. The Pilotage Services Provider must demonstrate adherence to continuous improvement in accordance with the performance standards set out in Appendix 17.

6. Conservancy and Sustainability**6.1. Environmental, Social and Governance Accountability**

6.1.1. Australia is a signatory to the United Nations Sustainable Development Goals (UN SDGs) and 2015 Paris Agreement. As a Victorian Government authority, Ports Victoria is committed to ensuring its activities, including those undertaken by its contractors, adopt principles that contribute toward the UN SDGs.

- 6.1.2. Victoria's ports enhance community life and support physical and mental health and leisure activities including recreational boating and fishing, commercial fishing and passenger charters.
- 6.1.3. Pilotage Services Providers should undertake activities that align with the UN SDGs including but not limited to the objectives of, diversity and inclusion, health and wellbeing, decarbonisation, climate change action, modern slavery, and resource use.
- 6.1.4. Wherever practicable, the Pilotage Services Provider shall take all reasonable precautions to protect the ports' marine environment, including:
 - 6.1.4.1. transitioning to clean energy in land and waterborne assets in order to support the Victorian government goal to reach 40 percent renewable energy generation by 2025, and
 - 6.1.4.2. undertake investment decisions that support Australia's drive to achieve net zero emissions by 2050.
- 6.1.5. Within the Quality Assurance Program Pilotage Service Providers should demonstrate how their organisation is addressing these requirements and sustainability in general.
- 6.1.6. Environmental, Social and Governance Metrics and Performance Indicators, aligning with UN SDGs shall be collated and submitted to Ports Victoria on an annual basis.

7. Record Keeping and Reporting

7.1. Record keeping

- 7.1.1. The Pilotage Services Provider shall maintain proper records and auditable systems in respect of each performance standard in section 5.
- 7.1.2. The records and systems must capture the information required for routine reports to be made to Ports Victoria as outlined in section 7.2.
- 7.1.3. The records and systems shall also store information in a form that is readily retrievable and accessible, such information to be provided promptly to Ports Victoria if requested.
- 7.1.4. The records and systems used by a Pilot Services Provider must comply with all requirements under privacy law.

7.2. Reporting

- 7.2.1. Enhanced collaboration and report sharing between Pilotage Services Providers and relevant Harbour Masters shall take place on an ad hoc, routine and regular basis. In addition to any reporting requirements established in the MSA or MSR, reports shall be made to Ports Victoria no later than within the time indicated in the tables in this section.
- 7.2.2. If any report cannot be provided by the required time, the Pilotage Services Provider must notify Ports Victoria as such before the due period expires, along with rationale for the delay and details of when the report will be provided.

Incident or Risk Event	Report Due
Marine Incident resulting in fatality, serious injury requiring hospitalisation, major damage to infrastructure or vessel	Immediately
Risk Event that could have resulted in the outcomes listed above	Within 24 hours of the incident
Incident resulting in minor damage	Within 72 hours of the incident
Marine pollution incident	As required by Harbour Master's Directions

Report	Report Period	Due
Fatigue Management Report (section 5.8 refers)	Quarterly	10 working days following completion of each quarter
Annual Environmental, Social and Corporate Governance Report (section 5.1.6 refers)	Annually	10 working days following completion of each financial year
Pilot transfer operations training, drills and exercises schedule and register (section 5.11 refers)	Quarterly	10 working days following completion of each quarter
Analysis and trends of incidents and risk events along with lead and lag indicators (section 5.16 refers)	Quarterly	10 working days following completion of each quarter
Fatigue Risk Management System Fatigue Metrics and Safety Performance Indicators Report (section 5.8 refers)	Annually	10 working days following completion of each financial year
Annual performance report (section 8.3 refers)	Annually	10 working days following completion of each financial year

8 Quality Assurance Program

8.1 Quality Assurance

- 8.1.1. The Pilotage Services Provider shall provide for a quality assurance program.
- 8.1.2. The program shall include certification, external auditing, and any internal audit regime established by the Pilotage Services Provider.
- 8.1.3. The Quality Assurance Program and any audits required by this Standard are in addition to any audits required by Safe Transport Victoria, including any audits of Safety Duties, as described in chapter 2 of the MSA.

8.2 Certification and Audit

- 8.2.1. The Pilotage Services Provider shall obtain and maintain quality assurance certification for the performance measures set out in section 5. The quality assurance certification shall:
 - 8.2.1.1. be certified by an organisation which is a member of the Joint Accreditation System of Australia and New Zealand, or a comparable organisation approved by Ports Victoria,
 - 8.2.1.2. incorporate the performance standards set out in this Standard, and
 - 8.2.1.3. provide for annual audits.
- 8.2.2. In addition to quality assurance audits scheduled by the Pilotage Services Provider on an annual basis:

- 8.2.2.1. the Pilotage Services Provider may arrange for an audit at any time for any reason,
 - 8.2.2.2. Ports Victoria may require that an audit takes place following a triggering event, incident or Risk Event, and
 - 8.2.2.3. Ports Victoria may require that an audit takes place at any time for any reason.
- 8.2.3. The audits described in 8.2.2.2. and 8.2.2.3. may incorporate all or some of the performance standards and may be undertaken by internal staff, their representatives, or an auditor nominated by Ports Victoria.
- 8.2.4. Any audit arranged by Ports Victoria may be combined with any audit of Safety Duties required by Safe Transport Victoria.
- 8.2.5. Both the Pilotage Services Provider and Ports Victoria, as appropriate, shall provide the other party with at least 28 days prior notification of any audit arranged.
- 8.2.6. Ports Victoria may send an observer to any audit.
- 8.2.7. Copies of all audit reports issued by the auditor, or internal staff, shall be provided to Ports Victoria or the Pilotage Services Provider, as appropriate, within 14 days of completion of the audit.

8.3. Performance Report

- 8.3.1. The Pilotage Services Provider must submit in writing to the Chief Executive Officer Ports Victoria an annual report of its performance in respect of this Standard.
- 8.3.2. The report must include a written declaration whether the Pilotage Services Provider has or has not achieved all its required performance standards.
- 8.3.3. The report must be signed by the Chief Executive of the Pilotage Services Provider or the person in an equivalent role within the organisation, or the person acting in that role.

9. Compliance with performance standards

- 9.1.1. To demonstrate effective implementation, Pilotage Services Providers are required to demonstrate how they meet or exceed the requirements set out in this Standard.
- 9.1.2. If it appears to Ports Victoria that a non-compliance with a required performance standard may have occurred, then Ports Victoria will work collaboratively with the relevant Pilotage Services Provider to remedy the non-compliance.
- 9.1.3. Ports Victoria adopts a risk-based approach to managing Pilotage Services Provider compliance with the Standard through a range of cascading compliance strategies.

10. Miscellaneous

10.1. Costs

- 10.1.1. All costs associated with complying with this Standard, including obtaining and maintaining the required certification, and all costs a Pilotage Services Provider incurs in connection with audits outlined in sections 8.2.1, 8.2.2.1 and 8.2.2.2 shall be borne by the Pilotage Services Provider.

11. Review of the Standard

11.1. Review Process

- 11.1.1. For the Standard to remain current and evolve with advances in maritime industry technology and practices, it will be necessary to carry out frequent reviews and update the Standard accordingly.
- 11.1.2. The Standard shall be reviewed in consultation with key stakeholders within 12 months after the implementation date, and at least every three years.

12. Contacting Ports Victoria

12.1.1. All communications to Ports Victoria in connection with this Standard (including all notifications and reports) should be made using the following contact details:

Email: marine.licences@ports.vic.gov.au

Telephone: +61 3 5225 3500

12.1.2. These details may be amended from time to time. Any such amendment will be provided by Ports Victoria to the Pilotage Services Provider in writing.

Annex

Annex A Acronyms

APPENDICES – Performance Standards

- APPENDIX 1 Risk Management Framework and Due Diligence
- APPENDIX 2 Pilotage Safety Management System (PSMS)
- APPENDIX 3 Training and Continuous Professional Development
- APPENDIX 4 Bridge Resource Management
- APPENDIX 5 Workplace Health and Safety
- APPENDIX 6 Personal Protective Equipment
- APPENDIX 7 Pilot Health and Fitness
- APPENDIX 8 Fatigue Management
- APPENDIX 9 Alcohol and Drug Management
- APPENDIX 10 Communication
- APPENDIX 11 Pilot Transfer Operations
- APPENDIX 12 Passage Plans
- APPENDIX 13 Portable Pilot Unit
- APPENDIX 14 Dynamic Underkeel Clearance Services
- APPENDIX 15 Contingency Planning
- APPENDIX 16 Incident and Risk Event Reporting and Investigation
- APPENDIX 17 Continuous Improvement

Annex A Acronyms and initialisations

ADMP	Alcohol and Drug Management Plan
AIS	Automatic Identification System
CoG	Course over Ground
DR	Dead Reckoning
ECDIS	Electronic Chart Display and Information Systems
ENC	Electronic Navigation Chart
FRMS	Fatigue Risk Management System
GNSS	Global Navigation Satellite System
MSA	Marine Safety Act 2010
MSR	Marine Safety Regulations 2012
NTRIP	Networked Transport of RTCM via Internet Protocol
PFD	Personal Floatation Device
PLB	Personal Locating Beacon
PMA	Port Management Act 1995
PPU	Portable Pilot Unit
PSMS	Pilotage Safety Management System
QA	Quality Assurance
RoT	Rate of Turn
RTCM	Communication Protocol for Sending Differential GPS
RTK	Real-Time Kinematic (Positioning)
RTO	Recognised Training Organisation
SBAS	Satellite-Based Augmentation Systems
SoG	Speed over Ground
STV	Safe Transport Victoria
TIA	Transport Integration Act 2010
UKC	Under Keel Clearance
VTS	Vessel Traffic Services

APPENDIX 1 Risk Management Framework and Due Diligence**1. General Requirements**

The Pilotage Services Provider shall apply a risk management framework and due diligence principles to the pilotage service they are responsible for.

In meeting the duties prescribed in Part 2.1 of the MSA, the Pilotage Services Provider must include the following elements as part of the ongoing process of risk management:

- (a) establishing all credible critical hazards,
- (b) identification of all practicable precautions for each hazard,
- (c) determination of the reasonableness of the practicable precautions, and
- (d) implementation of a safety Quality Assurance (QA) system to ensure precautions are sustained into the future. This QA system must be the basis of certification for other integrated standards within a management system.

2. Processes

The Pilotage Services Provider shall ensure the process of risk management identification, controls and determination of practicable precautions must be carried out in consultation with internal stakeholders, including those directly involved in the delivery of Pilotage Services:

- (a) Pilots,
- (b) pilot vessel crews
- (c) pilot despatch officers or similar,
- (d) other Marine Safety Workers,
- (e) managers of crews and Marine Safety Workers,
- (f) the Designated Person,
- (g) WHS representatives,
- (h) asset managers, and
- (i) procurement representatives.

In addition, the Pilotage Services Provider shall ensure all relevant external stakeholders are engaged, including as a minimum:

- (a) Ports Victoria Harbour Masters,
- (b) towage service provider representatives,
- (c) lines handler representatives,
- (d) berth operators, and
- (e) vessel owner representatives.

Investigations, utilising a just culture policy, of both incidents and other relevant events are to be used to regularly reassess the risk and the effectiveness of designated controls to treat risks.

3. Records

The Pilotage Services Provider shall ensure records are maintained and retained on all aspects of the risk management framework and due diligence activities. These records are to be presented for any audit activity and other occasions when requested by Ports Victoria or Safe Transport Victoria.

APPENDIX 2 Pilotage Safety Management System**1. General Requirements**

The Pilotage Safety Management System (PSMS) shall describe how:

- (a) the Pilotage Services Provider's work practices are conducted safely,
- (b) the Pilotage Services Provider complies with the applicable Fatigue Risk Management System (FRMS) and Alcohol and Drug Management Plan,
- (c) risks associated with all operations of the Pilotage Services Provider are identified, eliminated or minimised using a hierarchy of controls,
- (d) the Pilotage Services Provider complies with requirements of the MSA for Pilotage Services Providers,
- (e) the Pilotage Services Provider ensures that all licensed Pilots, including trainee Pilots, are trained to comply with the requirements of the MSA and MSR, and
- (f) the Pilotage Services Provider ensures compliance with requirements of operational safety for conducting the pilotage movement.

The PSMS shall include:

- (a) the standard operating procedures of the Pilotage Services Provider,
- (b) how the standard operating procedures integrate, align and remain current with the port procedures and Harbour Master's Directions,
- (c) requirements for internal audits,
- (d) how the system is revised and kept up to date,
- (e) a statement of the procedures for carrying out corrective actions,
- (f) incident reporting and investigation methods,
- (g) handling procedures for complaints regarding safety from internal and external sources,
- (h) a drug and alcohol policy for staff of the pilotage provider and people employed or contracted by the Pilotage Services Provider,
- (i) procedures for the licensing, training, induction and familiarisation of Pilots during their initial training and ongoing professional development; and after extended period of absence from work; and integration with port emergency or contingency training,
- (j) procedures for the training, induction and familiarisation of Pilots, and pilot vessel crew in pilot transfer operations, and
- (k) procedures for maintaining fitness for duty for all Marine Safety Workers, including after extended period of times away from operational roles due to illness, injury or other reason.

2. Requirements Regarding Licensed Pilots

The Pilotage Services Provider shall ensure that the PSMS includes provisions requiring licensed Pilots employed or contracted by the Pilotage Services Provider to:

- (a) understand the PSMS,
- (b) conduct pilotages in accordance with the requirements of the PSMS, and
- (c) have appropriate and up to date accessible resources to undertake pilotages.

The Pilotage Services Provider, in implementing the PSMS, shall ensure that licensed Pilots employed or contracted by the Pilotage Services Provider:

- (a) are trained to identify and minimise risks; and
- (b) comply with requirements in the MSA, MSR and this Standard.

3. Roles and Responsibilities

The Pilotage Services Provider must articulate clear roles and responsibilities, including:

- (a) assigning or identifying the Pilot who has conduct for the vessel when there is more than one Pilot onboard a vessel,
- (b) the responsibility of the Pilot to decline pilotage when a vessel has not been able to make the pilot transfer arrangement safe, and
- (c) the responsibility of the Pilot to refuse to conduct pilotage when the vessel to be piloted poses a danger to the safety of navigation, including critical infrastructure or to the environment.

Any such declinations or refusals, together with the reasons, shall be immediately reported to the relevant Harbour Master. They shall also be recorded in writing by the Pilotage Services Provider and the records presented at any audit carried out in accordance with this Standard.

4. Designated Person

The Pilotage Services Provider must identify a Designated Person who is to provide independent assurance to the Chief Executive of the Pilotage Services Provider (or equivalent position holder in the organisation) that the PSMS is working effectively.

The Pilotage Services Provider shall ensure the PSMS includes procedures for record keeping of all PSMS requirements and that the procedures are properly carried out so that the Designated Person can be satisfied the PSMS is working effectively.

The Pilotage Services Provider must ensure the Designated Person is made available to assist with activities during audits.

APPENDIX 3 Training and Continuous Professional Development

1. General

In addition to the requirements set under the Determination, the Pilotage Services Provider shall ensure a training and continuous professional development regime is established, incorporating as a minimum:

- (a) Safe pilot transfers methods and PPE,
- (b) Bridge Resource Management, including master pilot exchange and maximising situational awareness,
- (c) VTS working knowledge and how this relates to whole of port safety and efficiency,
- (d) Advanced marine pilotage training or similar designed training specific to the Victorian port,
- (e) Towage, lines handler and berth operator working knowledge and how this relates to whole of port safety and efficiency,
- (f) Completing two observation pilotages and two towage movements per year,
- (g) Ports Victoria simulator training, and
- (h) Ports, pilotage and VTS conferences or workshop attendance.

When a Pilot is attending to one or more trainee Pilots as well as the primary piloting role on the bridge of a vessel, the Pilot is required to continue to deliver both roles with utmost professionalism and safety.

The Pilotage Services Provider shall establish pilot competence requirements and procedures for Pilots carrying out pilot training activities on a vessel under pilotage at least in accordance with the requirements of the Determination.

All persons involved in management of Pilotage Services Provider functions must have undertaken relevant training for their positions. These persons are to hold both the technical and managerial qualifications and skill sets identified for their positions prior to appointment.

The ongoing training required and its frequency, for each Marine Safety Worker and management position, shall be managed and documented by a person dedicated by the Pilotage Services Provider.

2. Records

The Pilotage Services Provider shall ensure the regime includes procedures to maintain and retain detailed records of all training and continuous professional development activities undertaken.

APPENDIX 4 Bridge Resource Management

1. Bridge Resource Management

Pilotage Services Providers shall ensure all Pilots maintain up to date knowledge in optimal implementation of bridge resource management practices.

Pilotage Services Providers shall ensure, at intervals not exceeding every five years, every Pilot undertakes pilotage focused Bridge Resource Management training comprising of at least two days duration and provided by a maritime Recognised Training Organisation (RTO).

The Pilotage Services Provider shall develop procedures and techniques that maximise situational awareness both onboard the vessel and throughout the port resources including VTS, tugs, lines handling teams.

Maximisation of situational awareness shall be achieved, as a minimum, through effective sharing of pilotage passage plan information, development of a strong communication and speak up culture, as well as the practice of perceptual cycling of available visual and instrumentation navigation.

2. Master Pilot Exchange

The Pilotage Services Provider shall maintain a procedure for the standard exchange of information between the Pilot and master of the vessel, taking into consideration regulatory requirements and best practice.

This procedure for exchange of information must ensure that both the Pilot and master/bridge team have a shared understanding of the intended pilotage passage plan, this includes a verbal understanding, a written understanding and agreement of the electronic passage plan displayed on ECDIS, Radar and PPU.

APPENDIX 5 Workplace Health and Safety

1. Work, Health and Safety Measures

Pilotage Services Providers shall take all reasonable measures to ensure health and safety at their workplaces, including:

- (a) Pilotage Services Providers and their employees shall exchange information and ideas about risks to health and safety and discuss proactive measures that can be taken to eliminate or reduce those risks, this exchange shall be undertaken on a regular basis,
- (b) when carrying out workplace risk identification or making decisions regarding measures taken to control workplace risks the Pilotage Services Providers shall so far as is reasonably practicable consult with employees,
- (c) Pilotage Services Providers shall provide such information, instruction, training or supervision to employees to enable those persons to perform their work in a way that is safe and without risks to health,
- (d) Pilotage Services Provider shall employ or engage persons who are suitably qualified in relation to occupational health and safety to provide advice to the Pilotage Services Provider concerning the health and safety of employees and members of the public,
- (e) maintaining an ongoing monitoring program for the health of all employees, and keep information and records relating to the health and safety of individual employees,
- (f) implementing policies, procedures and training for managing workplace bullying, harassment, and discrimination.

2. Records

The Pilotage Services Provider must ensure all evidence of the required information exchange, consultation, training, monitoring programs and policies is kept up to date and made available to enable confirmation of activities and results during audits.

Any evidence containing private health information shall, if needed, also be recorded in a manner that will not compromise privacy in a version available for review by auditors.

APPENDIX 6 Personal Protective Equipment

1. Personal Protective Equipment Plan

Personal Protective Equipment (PPE) of Marine Safety Workers must be managed within a PPE Plan (Plan). The Plan must:

- (a) identify all items of PPE required for every activity carried out by each Marine Safety Worker,
- (b) ensure that all Marine Safety Workers are provided with fit for purpose PPE for each aspect of the pilotage operation,
- (c) itemise equipment required by Marine Safety Workers in the event of emergency or contingency, and ensure these PPE items are accessible to each Marine Safety Worker, and
- (d) itemise PPE required by Marine Safety Workers when carrying out high risk operations or personnel transfer or accessing a vessel on a wharf through a terminal, and ensure these PPE items are carried by each Marine Safety Worker.

As part of (d) above, the Pilotage Services Provider is to ensure the Plan includes the high risk operation of transferring a Pilot to or from the vessel via a rope ladder, and clearly identifies the most appropriate items of the following PPE to be used:

- (a) shoes,
- (b) clothing,
- (c) gloves,
- (d) head protection,
- (e) personal flotation device,
- (f) personal location beacon, and
- (g) personal life saving devices.

2. Records

A written record shall be made of any occasion when a Marine Safety Worker has not met the requirements of the Plan, the reason the requirements were not met, and any action taken by the Pilotage Services Provider as a result.

A written record shall be made of any failure of any item of PPE during its use, the reason for the failure as far as possible, and any action taken by the Pilotage Services Provider as a result.

The Pilotage Services Provider must ensure the Plan and any attached records are kept up to date and are made available to enable confirmation of activities and results during audits.

APPENDIX 7 Pilot Health and Fitness

1. Pilot Health and Fitness Program

Pilot health and fitness shall be managed within a Pilot Health and Fitness Program at least in accordance with the requirements of the Determination.

The program must have a process that demonstrates Pilots maintain a standard of health and fitness required to fulfil the physical and mental requirements of performing their duties safely. It must include performance of the following:

- (a) climbing a succession of stairs commensurate with those on the vessels to be piloted,

- (b) grip strength,
- (c) upper arm and shoulder strength for ladder climbs,
- (d) jumping between moving platforms as during pilot vessel transfers.

2. Records

The Pilotage Services Provider must ensure documented systems exist to record the training of each Pilot to enable confirmation of the program's activities during audits.

A written record shall be made of any occasion when a Pilot has not met the requirements of the program, the reason the requirements were not met, and any action taken by the Pilotage Services Provider as a result.

APPENDIX 8 Fatigue Management

1. Fatigue Risk Management System

The fatigue management strategies must be managed within a Fatigue Risk Management System (FRMS).

The FRMS must:

- (a) control any risks to safety associated with the fatigue of all Pilots and other Marine Safety Workers carrying out marine safety work for and on behalf of the Pilotage Services Provider,
- (b) be based on fatigue science,
- (c) include validated bio-mathematical models, operational experience and other fatigue risk management processes to quantify and predict the effect of sleep disruption on reaction time and cognitive effectiveness, both at individual fatigue and group fatigue levels,

The FRMS must include the following components:

- (a) policy and documentation,
- (b) fatigue risk assessment,
- (c) independent QA, in addition to the QA of the Standard, and
- (d) education and promotion (including training, awareness and information).

2. Marine Safety Worker Compliance with FRMS

Pilotage Services Providers must ensure that each Pilot, and other Marine Safety Worker engaged:

- (a) complies with the FRMS, and
- (b) maintains a working knowledge of the system

so that no Pilot agrees to undertake a pilotage movement unless that Pilot is fully confident in their own ability to operate at a satisfactory level of performance and safety under all circumstances.

This extends to all other Marine Safety Workers engaged in the operation of pilotage.

This working knowledge includes the understanding of the shared responsibility that exists between individuals and organisations to manage fatigue.

The Pilotage Services Provider must ensure documented systems exist to record this understanding of responsibility to enable confirmation during audits.

APPENDIX 9 Alcohol and Drug Management**1. Alcohol and Drug Management Plan**

The alcohol and drug management strategies must be managed within an Alcohol and Drug Management Plan (ADMP).

The ADMP must:

- (a) help manage the risks of alcohol and other drugs in the workplace;
- (b) outline the Pilotage Services Provider's policy on the use of drugs and alcohol; and
- (c) provide evidence on how the requirements of the legislation are being met.

2. Supporting programs and regimes

The drug and alcohol management strategies and ADMP must include an:

- (a) education program,
- (b) testing regime, and
- (c) response program.

The Pilotage Services Provider must ensure documented systems exist to cover the programs and regimes to enable confirmation of the activities and results during audits.

APPENDIX 10 Communication**1. Communications Requirements**

The Pilotage Services Provider shall take all reasonable measures to ensure a healthy culture of communication exists in the workplace. The level of this health shall be measured by survey or other means that, so far as reasonably practicable, captures the input of all Marine Safety Workers at intervals not exceeding every two years.

The Pilotage Services Provider shall develop, implement and maintain a communications procedure detailing the Pilotage Services Provider's requirements for Pilots' on-water communication to be via VHF radio, and to be fully compliant with any communication requirements of the relevant Harbour Master and VTS.

The communications procedure shall also require Pilots to share with VTS any safety information that could be relevant to any other Pilot or vessel operating in the area.

This procedure should include details of when, where and under what circumstances use of mobile phones by Pilots may be appropriate.

The Pilotage Services Provider shall develop, implement and maintain a distraction policy for Pilots. The policy is to include a requirement that Pilots, while undertaking pilotage duties, only engage in communication relevant to the pilotage being undertaken.

APPENDIX 11 Pilot Transfer Operations**1. General Requirements**

Requirements in this Appendix are to be read in conjunction with those covered under Pilotage Safety Management System and Work, Health and Safety, and the relevant Harbour Master's Directions.

Pilot boarding and disembarking are high-risk activities, and no pilot transfer operation is to be undertaken unless it is deemed safe to do so.

The Pilotage Services Provider is to put measures in place to ensure where a Pilot suspects that the pilot transfer arrangement that is presented is unsafe, the Pilot shall refuse to use the arrangement until it is made safe by the master and crew. These measures shall also ensure the Pilot or Pilotage Services Provider reports the circumstances to the relevant Harbour Master and Australian Maritime Safety Authority.

2. Pilot Vessel Technical Requirements

The Pilotage Services Provider shall ensure all designated pilot vessels, including in harbour pilot launches meet the requirements of the **Marine Safety (Domestic Commercial Vessel) National Law Act 2012** (the national Law) including, but not limited to:

- (a) unique vessel identifier, which must be displayed on the vessel,
- (b) certificate of survey,

- (c) certificate of operation,
- (d) safety management system, and
- (e) certificate of competency for each crew member.

The Pilotage Services Provider shall ensure all designated pilot vessels comply with the National Law and National Standards for Commercial Vessels (NSCV) in regard to design and construction, crew competencies, operations as related to the pilot vessel operation and operating area, and all other general requirements.

The Pilotage Services Provider shall ensure all designated Pilot Vessels comply with the requirements specific to pilot launches in 6.17 of Part C Section 1 of the NSCV.

3. **Transfer Operational Requirements**

The Pilotage Services Provider shall ensure:

- (a) the master of a pilot vessel has command of that vessel at all times,
- (b) when conveying a Pilot to a vessel for pilotage purposes, the master of the pilot vessel and the Pilot must both agree as to the position and manner in which the vessel to be piloted is to be approached,
- (c) the process of identifying all credible critical hazards, precautionary measures and reasonableness of such measures involves representatives from all activities involved in transferring Pilots on / off vessels at sea and in port waters, and
- (d) the process described in (c) shall be carried out prior to commencement of every transfer operation,
- (e) dynamic and formal risk assessments and reviews are undertaken to identify environmental limits of boarding and disembarking operations,
- (f) a framework of safe operational limits is included in the Pilotage Safety Management System, and published to be made available to Harbour Masters, VTS and other port stakeholders to be aware of weather conditions likely to delay or suspend pilot transfer operations,
- (g) an efficient mechanical means of retrieval is provided on each pilot vessel, and
- (h) Pilots and pilot vessel crew properly wear the appropriate PPE (section 4.6 refers) specific to the task of pilot transfer, and for the weather/meteorological conditions present at the time of transfer.

4. **Training**

The Pilotage Services Provider shall ensure all Marine Safety Workers involved in the transfer of a Pilot to and from a vessel are trained in all aspects of the transfer operation, including contingency and emergency events such as a person overboard or fall to vessel deck.

The training shall incorporate:

- (a) scheduled drills and exercises to maintain familiarity and competence with the transfer operation,
- (b) on-water person overboard retrieval exercises at intervals of no more than every twelve months, alternating exercise between darkness and daylight, where a realistic 'dummy' is used as the person overboard,
- (c) for all Marine Safety Workers who operate on or near water, person overboard simulations in a swimming pool controlled environment while wearing all normal PPE. The simulation is to include a test of the auto inflation of a Personal Floatation Device and shall be undertaken at intervals not exceeding every two years,
- (d) individual coaching and regular verification of individual pilot knowledge on the correct use of critical personal protective devices and equipment such as Personal Floatation Devices and Personal Locating Beacons,
- (e) regular maintenance, testing and training on the use of the efficient mechanical means of retrieval is carried out onboard each pilot vessel.

The Pilotage Services Provider shall ensure all Marine Safety Workers involved in the transfer of Pilots complete Medical First Aid training relevant to falls from heights into water. A member of on-watch staff is to have received training in Critical Incident Stress Management.

5. Records

The Pilotage Services Provider shall ensure a pilot transfer operations training, drills and exercises schedule and register is developed and maintained. A copy of each shall be provided to Ports Victoria quarterly.

The Pilotage Services Provider shall ensure supplier, asset management and maintenance records and verification checks of safety and personal protective equipment are maintained.

The Pilotage Services Provider shall ensure evidence is created and maintained showing that these technical requirements and operational measures are being met, and that all records are available for auditors.

APPENDIX 12 Passage Plans

1. Port Passage Planning

The Pilotage Services Provider shall ensure a port passage plan is developed based on the identified hazards and precautionary measures of a particular movement, including:

- (a) regulatory and procedural requirements such as Harbour Master's Directions,
- (b) definitions of standard routes and manoeuvres for piloted vessels, and
- (c) detailed information and requirements of all berths and relevant port infrastructure.

The Pilotage Services Provider shall ensure the port passage plan is approved by the relevant Harbour Master.

The approved port passage plan is to be made available on the website of the Pilotage Services Provider, and a link is to be provided on this site to the Ports Victoria website.

Access to the Pilotage Services Provider's port passage plan is to be available to VTS, tug masters, lines vessel masters, berth operators, shipping agents, pilot exempt masters, non-piloted vessel masters, commercial and other recreational traffic, other Pilotage Services Providers and other regulators.

2. Detailed Pilotage Planning

Using the port passage plan as a basis, the Pilotage Services Provider shall ensure a detailed pilotage plan is developed for the intended movement of a specific vessel at a scheduled time or within a specified time frame using all available information, including:

- (a) route plan,
- (b) manoeuvring plan,
- (c) berthing plan, and
- (d) information exchange.

The Pilotage Services Provider shall ensure the detailed pilotage plan is communicated to the vessel master and VTS at least 24 hours in advance, or if this is not possible then communicated as early as possible prior to arrival or departure. Any amendments to the plan are to be communicated to the vessel and VTS as soon as possible.

The Pilotage Services Provider shall ensure that when the dynamic circumstance of any pilotage requires deviation from the intended plan, this is communicated verbally between the Pilot and the master/bridge team, and communicated to VTS and other port users as necessary to maintain maximum situational awareness.

3. Records

The Pilotage Services Provider shall ensure records of all port passage plans, detailed pilotage plans and their amendments are maintained.

APPENDIX 13 Portable Pilot Unit**1. Technical Requirements – Hardware**

The preferred PPU hardware is the AMPI Class A – Very High Accuracy, or an equivalent unit. Use of a Class B – High Accuracy unit, or of any other unit or classification, is acceptable provided the Pilotage Services Provider has carried out a risk assessment for each pilotage activity where the proposed unit will be used, and this risk assessment has been approved by the relevant Harbour Master.

Notwithstanding these requirements, the Pilotage Services Provider shall ensure that the relevant Harbour Master has approved use of a PPU in the circumstances specified in the relevant Harbour Master's Directions.

The Pilotage Services Provider shall ensure the PPU hardware:

- (a) is capable of operating under all conditions onboard a vessel,
- (b) has independent high positioning accuracy utilising multi constellation GNSS antennae and a dual antenna receiver, with differential corrections provided by NTRIP, RTK, SBAS etc for very high accuracy independent heading berthing system,
- (c) has redundancy of GNSS corrections displaying position source,
- (d) has no requirement for acclimatisation prior to operation,
- (e) is capable of immediate connection and operation,
- (f) is equipped with fittings that maintain operation and physical security in adverse weather,
- (g) is standardised across the pilotage team,
- (h) is capable of being set up within three minutes,
- (i) is capable of being operated on battery life for maximum duration of pilotage +10% verified in operation,
- (j) has a gross weight and size that allows for ease of transfer during pilot boarding and disembarking, and
- (k) is labelled with the 'compass safe distance' where sensors are deployed in the vicinity of a vessel's magnetic compass.

2. Technical Requirements – Software

The Pilotage Services Provider shall ensure the PPU software:

- (a) is designed for precision pilotage and berthing,
- (b) displays a customisable ship predictor based on independent heading, CoG, RoT, SoG, drift and optionally a roll sensor,
- (c) includes a docking mode capability indicating vessel's speed along longitudinal and athwartships axis,
- (d) displays unambiguous visual and audible warnings when position and/or heading accuracy falls below a set threshold, when system reverts to DR mode or there is any other threat to the integrity of the displayed data,
- (e) maintains robust performance monitoring and error display which can be configurable by the users,
- (f) is capable of displaying official electronic charts (ENCs),
- (g) is capable of displaying bathymetric charts and overlays,
- (h) is capable of making allowances for tide data, manual, automatic or live data,
- (i) clearly shows whether the displayed depth contours include or exclude tidal height,
- (j) is capable of displaying safe navigable water based on vessel's draught, UKC allowance and height of tide,

- (k) is capable of displaying full route information equivalent to that of an ECDIS, including track corridor, waypoints, turn radius, safety margins and no go areas,
- (l) is capable of displaying meeting points on same route by vessels on reciprocal courses, taking into account multiple legs (using AIS data),
- (m) is configurable so that a pre-selected default display, scale, route and layout will appear every time on start up with minimum input from the Pilot,
- (n) is capable of automatically recording both display and audio on start up,
- (o) is capable of playback recordings for training, audit, and investigation purposes, and
- (p) is capable of displaying AIS data independently of the pilot plug.

3. **General Capabilities of the PPU**

The Pilotage Services Provider shall:

- (a) ensure the PPU system shares data in real time with VTS, the Harbour Master and other vessels if required,
- (b) provide procedures for equipment calibration, testing, servicing, maintenance, and update of charts and verification prior to use,
- (c) maintain a register of all PPU equipment, including asset identification, planned maintenance, updates and a defect reporting system,
- (d) maintain sufficient equipment levels and spares parts accessible to Pilots, and
- (e) ensure the PPU system is protected under cyber security policy.

4. **Training**

Pilots must be trained and competent in the use of the PPU, and how the unit integrates with the overall monitoring of a vessel's position, including perceptual cycling techniques and switching between instrumentation and visual navigation skills.

The Pilotage Services Provider shall ensure initial and ongoing training for Pilots in the use of PPU is provided, including unit specific training prior to use incorporating description of hardware and component characteristics; understanding accuracy specifications, limitations of equipment, software features, dependencies and limitations, interaction with other bridge equipment.

Before a Pilot may use the PPU the Pilotage Services Provider is to ensure the Pilot is able to demonstrate competence in use of the PPU and its integration with all other aids to navigation.

The Pilotage Services Provider is to identify Pilots or other dedicated person with necessary expertise and experience in the specific PPU equipment to be a dedicated instructor/trainer.

5. **Procedures**

In the event of a failure of a PPU, the Pilotage Services Provider is to ensure that VTS is advised and a vessel defect risk assessment for the movement is conducted.

The Pilotage Services Provider is to provide operational procedures outlining how the Pilot integrates the PPU as one of the tools used to navigate and monitor a vessel's position within open sea and channels, and during berthing and unberthing.

The Pilotage Services Provider is to develop and maintain contingency procedures in the event of PPU equipment failure while under pilotage.

APPENDIX 14 Under Keel Clearance Services Systems

1. **General Requirements**

The Pilotage Services Provider shall establish an appropriate procedure where Underkeel Clearance (UKC) systems are requested for a vessel to be piloted. The procedure must be documented and must follow the requirements set out in the relevant Harbour Master's Directions.

An appropriate procedure will include (without limitation):

- (a) checks to ensure that the limitations of UKC systems and the obligations of the user (the Pilotage Services Provider) as updated from time to time are understood by both Pilotage Services Providers and Pilots; and
- (b) each Pilot using the services is continuously aware of these limitations and user obligations; and
- (c) the responsible Pilot has acknowledged and recorded this understanding prior to each embarkation.

APPENDIX 15 Contingency Planning

1. General Requirements

The Pilotage Services Provider shall ensure, and be able to demonstrate to Ports Victoria, that appropriate contingency planning is carried out for each high-risk activity undertaken, including all port passage plans and detailed pilotage plans.

The Pilotage Services Provider must prepare a register of all events and activities deemed to be high-risk by the Pilotage Services Provider.

All contingency plans prepared by the Pilotage Services Provider for high-risk activities must:

- (a) provide for all credible hazards, including (without limitation):
 - a. weather events (including restricted visibility and unforeseen wind changes);
 - b. loss of engine propulsion or rudder control;
 - c. loss of towage assets due to mechanical or tug line failure; and
 - d. unforeseen obstructions below and above water.
- (b) comply with Harbour Master requirements, port procedures and align with port and state emergency response plans; and
- (c) be regularly reviewed and updated, with detailed records to be kept of each review and/or update.

2. Training and Records

The Pilotage Services Provider shall ensure each Pilot is familiar with ship handling and manoeuvring techniques that optimise safety outcomes during unplanned events. Each Pilot must participate in whole of port contingency training in a simulated environment at intervals of not more than three years.

The Pilotage Services Provider shall ensure that all such planning and training is recorded.

APPENDIX 16 Incident and Risk Event Reporting and Investigation

1. Reporting and Investigation Policy

The Pilotage Services Provider must develop and implement policies and procedures for requirements of reporting and investigating incidents and/or risk events. The policies and procedures must follow the incident reporting requirements set out in the relevant Harbour Master's Directions and any other relevant legislative provisions.

The Pilotage Services Provider must develop and implement policies and procedures to facilitate necessary training for all personnel involved in reporting and investigation of incidents and risk events.

These policies and procedures include the immediate actions required of the Pilot involved in an incident or risk event that triggers investigation. These actions shall include the mandatory requirements:

- (a) to stand down from further work until the incident or risk event is reviewed and/or investigated,
- (b) undertake drug and alcohol testing,

- (c) provide a fatigue report,
- (d) complete reporting requirements,
- (e) store recorded data correctly,
- (f) be offered a support person to assist,
- (g) undertake initial debrief with pilot manager and/or harbour master.

The Pilotage Services Provider, and any of its employees, shall assist as required in any incident or risk event investigation carried out by Ports Victoria.

2. **Reporting and Information Sharing**

The Pilotage Services Provider must have measures in place to ensure that:

- (a) when a Pilot has the conduct of a vessel that is involved in a Reportable Incident, the Pilot immediately reports the incident to the relevant Harbour Master via VTS,
- (b) full particulars of any incident are reported to Safe Transport Victoria, and relevant Harbour Master via the VTS as soon as possible, in writing,
- (c) all risk events are reported to the relevant Harbour Master, and
- (d) In addition to any Safe Transport Victoria requirements, the relevant Harbour Master is provided with a completed internal review or investigation report for each incident or serious risk event.

The Pilotage Services Provider shall ensure there is a process for:

- (a) monitoring and auditing the thoroughness of incident investigation process and validity of the investigation conclusions,
- (b) monitoring the application of lessons learnt from individual and industry experience and incident investigation,
- (c) assessing and auditing the validity and effectiveness of indicators used to measure performance against the requirements and this Standard, and
- (d) assessing the validity and effectiveness of consultation processes used to include all appropriate stakeholders.

The Pilotage Services Provider is to provide a quarterly update of analysis and trends of incidents and risk events along with lead and lag indicators, in such a way that sensitive information is de-identified.

3. **Recording Devices and Evidence Capture and Retention**

The Pilotage Services Provider is to ensure, and be able to demonstrate to Ports Victoria, that all necessary policy and procedures are developed, and training provided for the appropriate deployment of any recording device used during investigations.

These policies, procedures and training must ensure that all evidence and data that may be relevant to an investigation is:

- (a) collected as soon as possible following an incident or risk event; and
- (b) collected, stored and released in accordance with all requirements under privacy law.

These requirements apply to all evidence and data that is collected by a Pilotage Services Provider or an individual Pilot, including where the evidence and data has been provided by third parties.

APPENDIX 17 Continuous Improvement**4. General Requirements**

The Pilotage Services Provider shall have in place and demonstrate adherence to an appropriate policy of continuous improvement with at least the following elements:

- (a) capturing information concerning local, national and international pilotage related incidents to share lessons learned with individual Pilots, and where applicable, amending the Pilotage Services Provider's policies, procedures, standards or training requirements;
- (b) capturing lessons learnt from all components of operational and administrative activities, including capture of relevant lessons learnt from external organisations and sharing these lessons widely within the organisation and specifically with each individual Pilot,
- (c) considering the Pilotage Services Provider's own recommendations arising from such information to the Navigational Safety Committee and participate as appropriate in that Committee;
- (d) recording Navigational Safety Committee outputs and sharing these with all relevant members of the organisation and each individual Pilot,
- (e) sharing the findings from audits of this Standard and of any other documents managed by the Pilotage Services Provider, with key operational staff and each individual Pilot, and
- (f) review and appropriate dissemination of Harbour Master's Pilotage Advisory Notices (or similar notices).

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