Port of Melbourne Operations Pty Ltd

2026/27 Controlled Flow Excavation Tool Trial - Environmental Management Plan (CFE Trial EMP)

October 2026
Port of Melbourne Operations Pty Ltd

Port of Melbourne

Port of Melbourne

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Revision History

Dates	Revision	Details
12 Oct 2026	1	Initial Document

Glossary

Acronym	Term
CD	Chart datum
CFE	Controlled Flow Excavation
DAFF	Dept. of Agriculture, Fisheries and Forestry (Cwlth)
DCCEEW	Department of Climate Change, Energy, Environment and Water (Cwlth)
DEECA	Department of Energy, Environment and Climate Action (Victoria)
EMP	Environmental Management Plan
EMS	Environmental Management System as defined under ISO 14001
EPA	Environment Protection Authority (Victoria)
EPA Noise Protocol	*Environment Protection Act 2017* (Vic) Publication 1826.4, May 2021
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Cwlth).
FeAST	Feature Activity Sensitivity Tool
m	metre(s)
MNES	Matters of National Environmental Significance
PDS	Project Delivery Standard
PoM	Port of Melbourne Operations Pty Ltd
PV	Ports Victoria

1. Introduction

This Environmental Management Plan (EMP) sets out the environmental management requirements to be followed for the Controlled Flow Excavation Tool (CFE Tool) trial to be undertaken by Port of Melbourne Operations Pty Ltd (PoM) in South Channel. The initial trial is expected to be undertaken over approximately one week, with potential for subsequent trials in early 2027 should preliminary trials prove successful. Exact timing for the initial trial remains subject to approvals from the Department of Energy, Environment and Climate Action (DEECA), vessel availability, suitable metocean conditions and final scheduling and is indicatively expected to commence mid-November 2026. The activity is referred to throughout this EMP as the CFE Tool Trial.

1.1 Obligations

Under the *Delivering Victorian Infrastructure (Port of Melbourne Lease Transaction) Act 2016* (Vic), PoM is required to maintain channels to support safe and reliable navigation. The CFE Tool Trial is being conducted to explore its suitability as a potential ongoing alternative seabed maintenance method that may assist PoM in meeting these obligations, supplementary to the current Dredging Program 2023-2033 (DP23-33) program commitments.

1.2 CFE Tool Trial Operations

South Channel is a critical navigational asset which requires periodic maintenance to maintain safe vessel navigation conditions. Mobile sandy seabed features, including sandwaves, can occur and reduce the available navigable depth. This trial will assess whether the CFE Tool can effectively lower selected sandwave crests by fluidising and directing surficial sand into adjacent troughs, without removing material from South Channel like a traditional dredging campaign would. The trial represents an evaluation of an alternative channel maintenance technology consistent with the DP23-33 change management framework, which expressly recognises in section 7.3 the adoption of new dredging techniques and technologies subject to appropriate risk assessment and management controls.

The objectives of the CFE Tool Trial are to:

- optimise the performance of South Channel;
- identify if the CFE-T can be used to effectively maintain the declared depths of the South Channel, with reduced need for traditional dredging;
- demonstrate the operational capability of the CFE Tool in South Channel conditions;
- assess the extent to which selected sandwave crests can be reduced and the displaced sand redistributed into adjacent troughs;
- verify that the activity and resulting seabed change remain within the approved trial footprint and assessed area of influence;
- collect operational, hydrographic and environmental information to inform whether the CFE Tool may be suitable for future maintenance activities.

The trial is not proposed to excavate, retain or transport sediment for disposal. Operation of the CFE Tool will be limited to the approved footprint and parameters, with pre- and post-trial hydrographic surveys used to assess crest reduction, trough infill and any seabed change outside the intended treatment area. The CFE Tool Trial will be confined to the nominated trial area in South Channel, in the south of Port Phillip Bay, as shown in Figure 1.

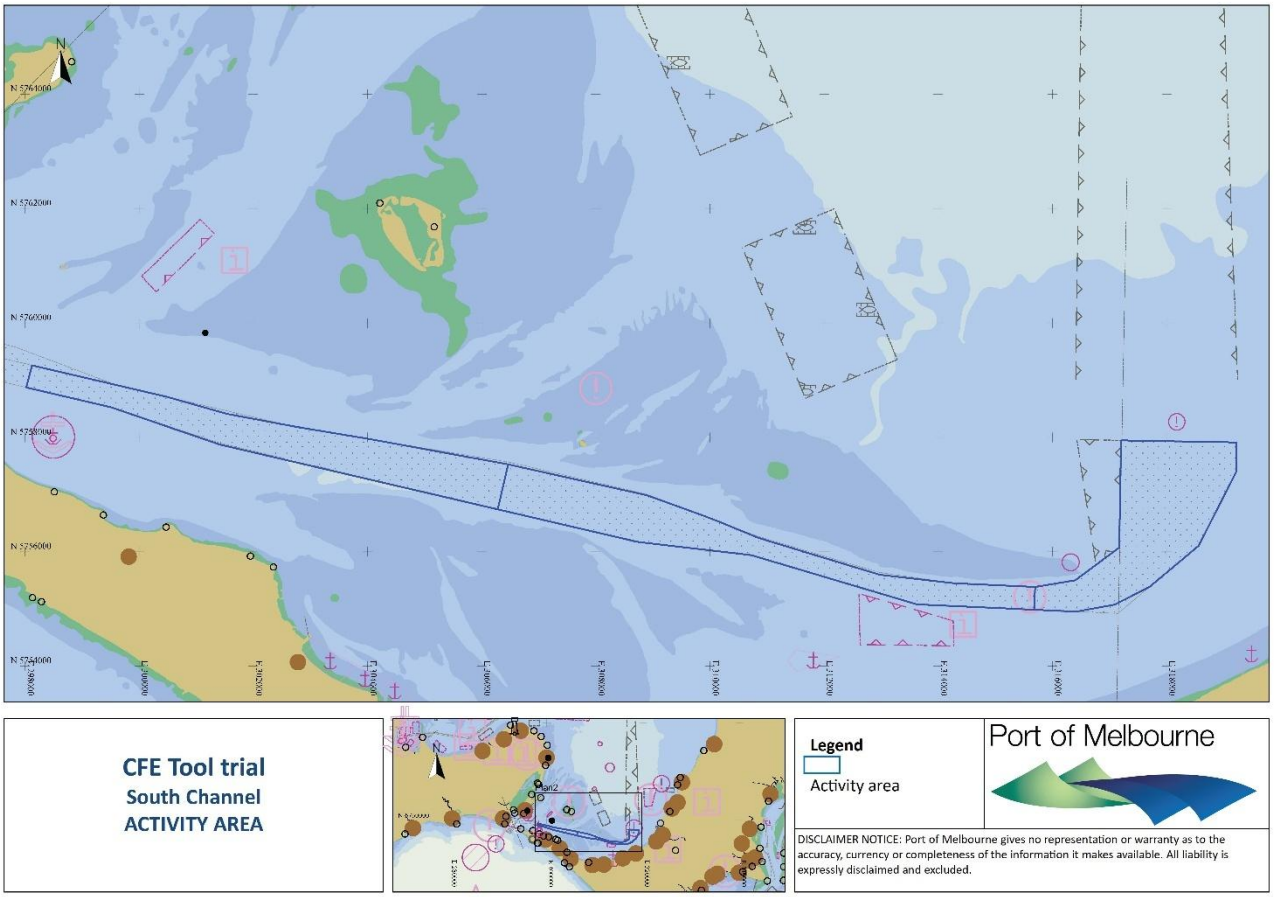


Figure 1 CFE Tool sea trial Activity Area

1.3 Scope of the CFE Tool Trial

The scope of this EMP considers the following:

- the planning, mobilisation, implementation, monitoring and close-out of the CFE Tool Trial;
- the Marine and Coastal Act (MACA) consent pathway and any conditions applying to the trial;
- the applicable existing requirements of the DEECA-endorsed DP23-33 EMP;
- the environmental risk assessment and FeAST assessment prepared for the MACA consent application for this activity;
- the approved trial methodology, equipment configuration, activity footprint, operating limits and monitoring requirements;
- the responsibilities of PoM, the CFE contractor, support-vessel personnel and relevant external parties in implementing this EMP;
- the applicable Project Delivery Standards (PDS) and trial-specific environmental controls; and
- inspection, monitoring, incident response, reporting and close-out requirements for this trial.

This EMP applies only to activities associated with the CFE Tool Trial. PoM has overall responsibility for ensuring that the trial is planned and undertaken in accordance with this EMP, applicable approvals and the approved trial methodology.

The trial is intended to generate evidence on the performance and environmental effects of the CFE Tool at a limited scale. It does not authorise broader use of the equipment outside the approved trial footprint or operating parameters.

The trial will target clean, unconsolidated sandy material forming selected sandwave crests in South Channel areas shown in Figure 1. The CFE Tool is intended to redistribute this material locally to adjacent lower areas of the seabed, as summarised in Table 1.

Area	Material	Management approach
South Channel trial footprint	Clean, unconsolidated sand associated with selected sandwaves	Local redistribution from sandwave crests toward adjacent troughs within the assessed area of influence; no transport to a dredged material ground is proposed

Table 1 - Material and management approach for the CFE Tool Trial

The works will be undertaken using the CFE Tool and associated support vessel or vessels. The final equipment specifics and configuration will be documented in the pre-mobilisation report.

The trial is not proposed to excavate, retain or transport sediment for disposal. Operation of the CFE Tool will be limited to the approved footprint and parameters, with pre- and post-trial hydrographic surveys used to assess crest reduction, trough infill and any seabed change outside the intended treatment area.

If unexpected material, debris or seabed conditions are encountered, the activity will cease in the affected area and the relevant contingency and incident response requirements will be implemented before work recommences.

1.4 Timing Considerations

The specific trial timing will be finalised having regard to applicable vessel availability, arrival of the purpose-built tool in Melbourne from Europe, shipping requirements, weather and metocean conditions, and stakeholder notifications. The preferred window for the trial is November 2026 to January 2027, to ensure seabed conditions are at maximum suitability to observe trial effectiveness. Subsequent trials in early 2027 are being considered, the scope of which would be advised in subsequent pre-mobilisation reports.

Due to the dynamic nature of South Channel the trial will:

- undertake works only within the approved metocean and operational limits;
- coordinate trial activities with Ports Victoria (PV) and channel users to maintain navigational safety for all parties; and
- allow sufficient time for pre-trial survey, mobilisation checks, environmental briefings, post-trial survey and close-out reporting.

1.5 Key Assets, environmental effects and risks

Key Ecological Assets

The key assets, predicted effects and risk events associated with the CFE Tool Trial are summarised below. Detailed information is contained in the trial risk assessment (refer to Section 2.4). The key ecological assets and potential impacts include:

- water quality of marine habitats – temporary and localised increases in suspended sediment and turbidity are anticipated during operation;
- seabed habitat and morphology – unintended movement of sand beyond the assessed area of influence;
- listed and protected species, including cetaceans – potential disturbance from vessel movements, underwater noise and trial activities; and
- marine biosecurity and pollution – risks associated with vessel mobilisation, fuels, oils, hydraulic systems, waste and equipment failure.

Key Social Values and Economic Uses

The key social values, economic uses and potential impacts relevant to the trial include:

- public amenity – short-term visual or noise effects associated with the support vessel and trial equipment;
- recreational activities and navigation – temporary disruption to boating, fishing, diving, charter and tourism activities in the vicinity of the short-term trial;
- commercial activities and navigation – temporary interaction with channel traffic, safety zones and operating restrictions, noting that these trials will be conducted around the movement of commercial shipping;
- cultural heritage – potential identification or disturbance of an unknown heritage place or object, managed through the applicable procedure;
- operational performance – failure to achieve the intended crest reduction or unintended seabed change outside the treatment footprint.

1.6 Environment Policy

PoM's Board-approved Environment Policy provides the overarching policy direction for the CFE Tool Trial.

A summary of the Environment Policy is displayed in the PoM workplace. Key requirements and responsibilities will be communicated via inductions or other training programs.

PoM is committed to delivering the CFE Tool Trial in an environmentally responsible manner and in accordance with applicable statutory approvals, the approved trial methodology and this EMP.

1.7 Environmental Management Plan overview

The implementation of this EMP is underpinned by the systems and procedures of PoM's Integrated Management System (IMS) as discussed further below.

PoM's port-wide 'Safety and Environment Management Plan' (SEMP), which is required under the *Port Management Act 1995* (Vic) (PMA), is applicable for the subject area with the Port's environmental management requirements outlined within this guiding document.

In accordance with the PMA, PoM's SEMP is externally audited every three years by an auditor approved by the Minister for Ports and Freight. The last external audit in 2025 found the SEMP to be fully compliant with the PMA obligations. The next SEMP external audit is due to be undertaken in 2028.

The key objectives of PoM's SEMP are to promote:

- a cooperative approach to safety and environmental management between PoM and Port stakeholders, including but not limited to Ports Victoria, Port tenants, licencees, users and service providers; and
- the delivery of best practice safety and environmental management within the Port.

Complementing PoM's Board-approved Environment Policy and the SEMP, PoM has the following supporting plans and systems to ensure PoM is managing the port in accordance with its contractual responsibilities under the Port Concession Deed and Port Lease in an environmentally sustainable manner:

- a Port Environment Strategy (PES), with a PES Annual Report provided to the State as part of the Port Lease;
- external certification of PoM's IMS to ISO 14001:2015 Environmental management systems, ISO 45001:2018 OH&S management systems, ISO 9001:2015 Quality Management Systems and ISO 55001:2014 Asset Management;
- the DP23-33 EMP; and
- this CFE Tool Trial EMP and the supporting trial approvals, risk assessments, methodology and monitoring documentation.

This EMP has been developed to meet the following objectives:

- establish the processes and controls required to keep the CFE Tool Trial within the approved scope, footprint and environmental risk profile;
- communicate environmental, monitoring, reporting and incident-response requirements to the contractor and other trial personnel;
- verify the location and extent of seabed change through appropriate operational records and pre- and post-trial hydrographic surveys; and
- ensure the trial does not result in unacceptable impacts on the environmental assets, social values and beneficial uses of South Channel and surrounding waters.

1.8 EMP approval and revisions

This EMP is a controlled document and will be approved and revised in accordance with the requirements outlined in Table 2.

Where agency approval is required, this will be sought prior to implementing the change. Where approval is not required, relevant agencies will be notified of the change and issued with a revised EMP as soon as practicable, in accordance with requirements outlined in Table 2.

Revision	PoM	DEECA
Procedural revision (administrative changes e.g. amendment of procedure reference, formatting)	Approved by Executive General Manager (EGM) Commercial and Operations	Notification to DEECA
Minor revision (changes within existing environmental approvals)		
Major revision (changes requiring amendment to environmental approvals)	Approved by EGM Commercial and Operations	Approved as required by DEECA

Table 1 - EMP approval and revision requirements

2. Planning

2.1 Legal requirements

The relevant project approvals, legal requirements and other requirements such as guidelines and codes of practice have been identified by PoM.

Where legislation requires a management action or response, these requirements have been identified within the Project Delivery Standards (PDS) as environmental controls, environmental limits, environmental monitoring programs, or within contingency plans. The PDSs associated with key legislation are identified in Table 3.

Compliance with legal and other relevant requirements will be evaluated in accordance with the PoM's IMS.

Legislation	Applicable Project Delivery Standards
Marine and Coastal Act 2018 (Vic) *Environment Protection Act 2017* (Vic) *Climate Change Act 2017* (Vic) *Marine Safety Act 2010* (Vic) *Aboriginal Heritage Act 2006* (Vic)	All PDSs
Environment Protection and Biodiversity Conservation Act 1999 (Cwlth.)	Annexure 3: Marine-based works Annexure 4: CFE tool operation and sediment plume Annexure 5: CFE Trial schedule
Historic Shipwrecks Act 1976 (Cwlth) *Heritage Act 1995* (Vic)	Annexure 3: Marine-based works
National Parks Act 1975 (Vic) *Wildlife Act 1975* (Vic) *Flora and Fauna Guarantee Act 1988* (Vic)	Annexure 3: Marine-based works Annexure 4: CFE tool operation and sediment plume

Table 2 - Key legislation and associated Project Delivery Standards

2.2 Project Delivery Standards

The PDSs address the key environmental risks, effects and legal requirements. The PDSs include the management and mitigation measures, environmental monitoring and contingency plans for the project. Most of the PDSs in this EMP mirror those in the current DEECA endorsed DP23-33 EMP, which includes provisions for a far larger scale of sediment transport over a 10 year period.

The PDS applicable to the CFE Tool Trial are identified in Annexure 1 of this EMP. The PDS groups applicable to the CFE Tool Trial are:

- **Annexure 2: CFE Tool Trial management**, including hours of operation, noise, waste, energy and greenhouse gases, equipment maintenance, fuels, oils and hazardous goods, and emergency response preparedness;
- **Annexure 3: Marine-based works**, including marine pests, vessel bunkering, cetaceans – vessel manoeuvring, cetaceans – sightings and log, heritage (marine based) identification of potential relics.;
- **Annexure 4: CFE tool operation and sediment plume management**, including pre- and post-sea trial surveys, plume observations and operational limits;
- **Annexure 5: CFE trial schedule.**

The PDS applicable to the CFE Tool Trial are identified in Annexure 1 of this EMP.

2.3 External notification and reporting requirements

Performance against this EMP will be reported to relevant government agencies as described in Table 4.

Subject	Reporting or notification	
	Government agency	**Timeframe**
Environmental limit exceeded	Airborne noise – EPA, DEECA	Notification within 24 hours of verifying that environmental limit has been exceeded. Incident report required.
Pollution event or imminent environmental hazard (as defined in EPA Publication 953.2, 2007)	DEECA, EPA, DCCEEW*	Immediate notification. Incident report required.
Marine and Aboriginal heritage	Heritage Victoria, DEECA	Notification within 10 business days of discovery of shipwreck or potential Aboriginal site is identified. Notification prior to any additional surveys being conducted. Report to be forwarded following heritage inspections.
CFE Trial schedule	DEECA	The schedule for the trial will be forwarded by management no less than 5 business days prior to trial commencement.
Pre-mobilisation Review & Trial Initiation Report	DEECA	Report to be forwarded no less than 5 business days prior to sea trial commencement.
Trial close-out report	DEECA, DCCEEW*	Close-out report to be forwarded within 90 business days of the completion of the trial.
Environmental audit of implementation of this EMP	DEECA, DCCEEW*	Audit report to be provided with 20 business days of the trial close out report.
Project Delivery Standard	DEECA, DCCEEW*	Notification within 1 business day of verifying major non-conformance with a PDS (or part thereof)

*only for components relating to EPBC Act matters of national environmental significance (MNES)

Table 3 - Notification and reporting requirements

2.4 Risk management

Environmental risks associated with the CFE Tool Trial have been identified and documented with reference to the PoM Risk Report Dredging Program 2023-2033 (DP23-33), which was prepared for a much larger scale of sediment movement, using a project risk register consistent with the international Risk Management Standard ISO 31000. The risks relevant to the CFE Tool Trial are consistent with the assumptions and risk profile documented in the DP23-33 Risk Report.

The South Channel CFE Tool trial will be within an area already assessed under the PoM Risk Report Dredging Program 2023-2033 (DP23-33). The environmental values, receptors and risk pathways relevant to the trial, including seagrass, protected species, fisheries, marine mammals, turbidity generation and sediment mobilisation, are described in Section 3.5 and Appendix 2 of the PoM Risk Report Dredging Program 2023-2033 (DP23-33). The activity does not introduce new environmental receptors or fundamentally different environmental risks or potential impact mechanisms from those already assessed for maintenance dredging activities. Section 4.8 and Appendix 3 of the PoM Risk Report Dredging Program 2023-2033 (DP23-33) concludes

that MNES pathways were assessed, the risk remains unchanged from previous programs, existing controls were considered adequate and no significant impact on MNES was identified.

The risks relevant to the CFE Tool Trial are consistent with the assumptions and risk profile documented in the DP23-33 Risk Report.

Risk management, including the applicable review and reporting requirements for the CFE Tool Trial, is outlined in the PoM DP23-33 Risk Report.

Task-based risk assessments (e.g. Job Safety and Environment Assessments) will be undertaken prior to commencement of the sea trial to identify and control work place hazards.

2.5 Organisational structure and responsibility

PoM has overall responsibility for the implementation of the CFE Tool Trial in accordance with the requirements of this EMP and is responsible for communicating responsibilities to the CFE Tool Trial contractor.

The Head of Maritime Operations is accountable for:

- Implementing this EMP;
- Coordinating all activities relating to this EMP; and
- Providing adequate resources to undertake the CFE Trial in accordance with this EMP.

Responsibility for implementing this EMP will be delegated by the Head of Maritime Operations, through the management team to the workforce, the CFE-Tool trial contractor and relevant external parties.

All levels within the management structure have duties and responsibilities associated with implementing this EMP. The specific responsibilities for implementing this EMP will be identified in internal operational procedures.

2.6 Document and record control

Environment documents and records will be managed in accordance with PoM's Records Management Policy and associated documents.

2.7 Continuous Improvement

PoM is committed to exploring opportunities for continuous improvement for channel maintenance and management. Management reviews will identify suitable opportunities for continuous improvement (refer Section 4.2).

The potential addition of the use of the CFE Tool to the ongoing channel maintenance program will be assessed and documented as per the management review and reporting requirements outlined in Section 4. Changes to the ongoing channel maintenance program may include:

- alteration of a dredging schedule;
- modification of work methods within the approved scope of works;
- adjustment of environmental monitoring response levels;
- changes to project description; and
- future changes or improvements to dredging technology.

Changes will be approved by the EGM Commercial and Operations or delegate, with any necessary changes to the DP23-33 EMP handled in accordance with Table 4 of that EMP.

2.8 Training and awareness

All personnel shall be suitably qualified and experienced to undertake their work in an environmentally responsible manner. Personnel who have formal responsibilities under this plan will be trained in the requirements of this EMP.

- Training may include tool box meetings and in-field mentoring. Records of training and inductions will be maintained.
- Relevant personnel will be trained in spotting and identification of cetaceans (whales, dolphins).
- All personnel involved in the CFE Tool trial will be required to complete an induction that incorporates key environmental aspects of the project. All personnel will be required to complete an assessment to demonstrate an understanding of key issues, requirements and responsibilities.

Induction topics include the following:

- PoM Environment Policy;
- key environmental issues and controls;
- monitoring program(s);
- emergency response;
- incident reporting;
- waste management;
- cetacean requirements;
- responsibilities;
- communication requirements; and
- consequences of a departure from the requirements of this EMP.

2.9 Communication

Internal and external communication and consultation arrangements are described below and align with the PoM Dredging Communications and Engagement Plan. The PoM communications delegate will be responsible for meeting all requirements with respect to community liaison.

Internal communication

- internal communication methods include meetings, emails, Intranet content; and
- regular meetings between PoM personnel and contractors will be scheduled.

External communication

A variety of methods will be used to enable information to be distributed to, and be received from, interested members of the community and key stakeholders. These may include the following:

- website (refer www.portofmelbourne.com);
- email or electronic direct mail (eDM);
- media releases;
- direct verbal or written advice (e.g. telephone, letter, email); and
- Notices to Mariners and shipping protocols.

Key communication activities and content include the following:

- The CFE Tool Trial to be available on the website, covering activities occurring in the trial.;
- all complainants will receive a response within 1 business day. Complaints will be managed following the process described in Annexure 8 and resolved as soon as practicable; and
- engage various stakeholder groups just prior to commencement.

Key stakeholders include local, state and Commonwealth government bodies, business and commercial parties, commercial, passenger and recreational bay users and other identified stakeholders.

2.10 Emergency preparedness, response and recovery

Emergency scenarios are identified in PoM Risk Report Dredging Program 2023-2033 (DP23-33). In accordance with legislative requirements, PoM has a comprehensive Emergency Management Plan for managing emergencies that occur in its jurisdictional land and waters.

The contractor will have an emergency response procedure. This procedure will be in accordance with operational requirements, Harbour Master's directions and emergency management provisions contained in the Ports Victoria 'Port Information Guide' and 'Harbour Master's Directions'. The procedure will be reviewed to ensure consistency with PoM's Emergency Management Plan.

Inductions will provide an overview of emergency response requirements. Site specific inductions and training will be undertaken by the contractor.

Following any emergency incident, an investigation will be conducted and corrective actions identified and addressed in accordance with PoM's Emergency Management Plan.

3. Measurement and evaluation

3.1 Incident reporting and investigation

Environmental incidents and hazards, including pollution incidents will be reported and recorded consistent with PoM's incident reporting requirements. This requirement will be included in inductions and reinforced during the project. PoM's external reporting/auditing requirements are identified in Table 5.

Finding level	Description
Conformance	There is sufficient evidence to confirm that actions have been undertaken, prepared and/or implemented in full conformance with the requirements of the auditable element.
Major non-conformance	The evidence shows that actions are not in full conformance with the requirements of the auditable element and this gives rise to the potential that the environment will be significantly affected (as defined in the risk assessment process) if the non-conformance is not rectified.
Minor non-conformance	The evidence shows that actions are not in full conformance with the requirements of the auditable element but it is unlikely that this will cause the environment to be significantly affected (as defined in the risk assessment process).
Not applicable	The auditable element falls outside the scope of the audit, e.g. work relevant to the element being audited has not yet commenced.
Area for improvement	A deficiency in the implementation of this EMP judged to be a risk to the environment, or to environmental management, without constituting an overall failure in the area concerned.
Undetermined	There is insufficient evidence to make a judgement on compliance.

Table 5 - Summary of audit findings classifications

3.2 Audits

PoM's Environmental Services Team will assess the conformance of the CFE tool trial with the requirements of this EMP. The audit process takes into account the following:

- the timing and scope of the trial;
- the environmental risks of the sediment mobilisation management activities; and the relevant PDS (refer Annexure 1).

The audit will evaluate performance on the basis of management records. The audit activities may also include direct observation of activities, as relevant. The audit report will include (as relevant):

- summary of findings;
- audit objective and scope;
- audit activities and reference documents;
- audit findings classification (refer Table 5 above); and
- audit findings and conclusion.

The audit findings will also be used to inform the management review and reporting process as per Section 4.

3.3 Monitoring of environmental performance

Environmental performance will be monitored via three mechanisms:

- process monitoring, inspections and surveys - monitoring of operational activities, physical conditions and post-maintenance activity environmental conditions (e.g. equipment tracking, bathymetric surveys).
- management performance monitoring - monitoring of the implementation and effectiveness of the environmental management system (e.g. nature of complaints, number of corrective actions completed).
- environmental monitoring and contingency plans - monitoring or response levels or environmental limits, with a description of the process to be followed in the event that identified levels or limits are reached.

Process monitoring

Process monitoring identified in the PDS includes the following:

- equipment tracking - Plume PDS;
- hydrographic surveys - Sediment Management PDS; and
- energy consumption and greenhouse emissions - Trial management PDS.

Inspections and surveys

Inspections and surveys identified in the PDS include:

- pre-trial multibeam survey of the approved trial footprint and surrounding comparison area;
- post-trial multibeam survey as soon as practicable after trial completion; and
- marine pest requirements identified in marine-based works (all areas) PDS; and

3.4 Other environmental monitoring and contingency plans

In addition to the monitoring plans described in Section 3 above, environmental monitoring and contingency plans for noise, heritage and complaints, monitor response levels or environmental limits, with a description of the process to be followed in the event that identified levels or limits are reached.

The management actions identified in the contingency plans for noise, heritage and complaints are not an exhaustive list but tangible responses that the project will implement if required. The most appropriate management action will be selected on a case by case basis (refer to Annexures 6-8).

4. Management Review and Reporting

4.1 Pre-Mobilisation Review and Trial Initiation Report

The CFE Tool trial comprises all activities required in a particular timeframe following collection and assessment of hydrographic data that is routinely collected in South Channel. Prior to commencement of the trial, a 'Pre-Mobilisation Review and Trial Initiation Report' (Pre-Mobilisation Report) will be prepared by management to inform the trial.

The Report will document the assessment by management of:

- the project activities to be undertaken for the trial;
- estimated volumes of sediment to be moved;
- hydrographic survey requirements;
- assessment of legal requirements including statutory approvals and other commitments, including listing of new species, habitats, communities and locations under Victorian or Commonwealth review;
- review of the relevant risks associated with the trial activities;
- requirements of audits; and
- a summary of consultation activities.

The report will be sent to DEECA no less than five (5) business days prior to commencement of the trial.

4.2 Campaign Close-Out Report

At the end of the trial, a 'Campaign Close-Out Report' will be prepared by management. The information from this review process will be used to inform subsequent maintenance campaigns under DP23-33 EMP.

The report will consider the following:

- summary of activities undertaken;
- compliance with PDS;
- compliance with legal requirements including statutory approvals and other commitments;
- environmental performance monitoring results;
- results of inspections and surveys;
- results of audits, including the environmental audit;
- any lessons learned including any amendments required to the any future PDS.

Where a material opportunity for continual improvement has been identified as part of the management review process, the following actions may be considered for future trials or dredging campaigns:

- development of new procedures;
- modification of existing procedures;
- modification to project scheduling;
- modification to communications strategy;
- modification to training schedule and/or programs;
- modifications to audit schedule;
- assessment as to whether any input is required from external specialists; and
- consideration of need for further investigations.

Any action arising from the management review will be assigned responsibility and tracked until completion.

The report will be sent within 90 business days of the completion of the trial.

4.3 Environmental Audit Report

At the end of the trial, an 'Environmental Audit Report' will be prepared by PoM's Environmental Services team. The report will document items identified in Section 3.2 of this EMP.

The report will be sent within 20 business days of the trial close-out report.

Annexure 1 Project Delivery Standards – applicable works and trial area

Project Delivery Standard / control group	CFE Tool Trial application
Annexure 2: Trial management	1. Hours of operation. 2. Noise management. 3. Waste management. 4. Energy and greenhouse gases. 5. Equipment maintenance. 6. Fuels, oils, chemicals and hazardous goods. 7. Emergency response preparedness.
Annexure 3: Marine-based works	8. Marine Pests. 9. Vessel Bunkering. 10. Cetaceans - vessel manoeuvring. 11. Cetaceans – sightings and log. 12. Heritage (marine based) identification of potential relics.
Annexure 4: CFE operation and sediment plume	13. Pre- and post- trial surveys. 14. Plume observations. 15. Operational limits.
Annexure 5: CFE Trial schedule	16. Trial schedule

Annexure 2 CFE Tool Trial Management PDS

CFE Tool Trial management	
Objective	Plan and implement the trial so that vessel operations, equipment, waste, emissions, fuels, oils and emergencies are managed in accordance with approvals and this EMP.
Target	Full conformance with the approved methodology, environmental controls and incident-response requirements.
Application	Mobilisation, trial operations and demobilisation.

Environmental controls	**Phase**
1. Hours of operation Operations will only proceed from nautical dawn to nautical dusk.	Activity
2. Noise Management All activities to be undertaken within EPA Noise Protocol guidelines (2021).	All Phases
3. Waste Management ▪ All marine vessels to have sewage containment or treatment facilities. Treatment to comply with Section 23G of *Pollution of Waters by Noxious Substances Act 1986*. ▪ Contractor waste management includes waste containment, segregation, recycling, treatment and/or disposal. ▪ The handling and disposal of unexpected materials identified during the trial (e.g. inert debris such as metallic wastes and timber) to be included in waste management arrangements. All waste to be managed in accordance with: - Environment Protection Act 2017 (Vic) - *Biosecurity Act 2015* (Cwlth.) (applicable vessels) - Pollution of Waters by Oil and Noxious Substances Act 1986 (Vic)	Activity
4. Energy and greenhouse gases The project will identify, calculate and report on energy consumption on major plant and equipment if required under the *National Greenhouse and Energy Reporting Act 2007* (NGER) and/or any other requirements under the *Climate Change Act 2017* (Vic).	Activity
5. Equipment maintenance Maintenance programs will be implemented for all plant and equipment as defined in the *Occupational Health and Safety Regulations 2007* (Vic).	Activity
6. Fuels, oils, chemicals and hazardous goods Storage and handling of chemicals to be in accordance with: - Dangerous Goods Act 1985 (Vic) - International Ship Management (ISM) Code (applicable vessels) - Pollution of Waters by Oil and Noxious Substances Act 1986 (Vic)	All phases

CFE Tool Trial management		
7. Emergency response preparedness ▪ Development and testing of emergency response procedures, aligned with PoM's Emergency Management Plan, including provision for fuel, oil and chemical spills. ▪ Vessel deploying the CFE tool to have oil spill response kits on board. Relevant personnel to be appropriately trained in its use.		Pre-trial and activity
Environmental limit	**Environmental monitoring program**	
Airborne noise	Noise Monitoring and Contingency Plan (Annexure 6)	
Contingencies	Airborne Noise Contingency Plan (Annexure 6) Emergency response managed via Emergency Response Procedures (EMP Section 2.10)	

Annexure 3 Marine-based works PDS

Marine-based works		
Objective	▪ To appropriately manage marine-based works. ▪ To minimise disturbance to and appropriately manage non-Aboriginal heritage. ▪ To minimise impacts on cetaceans due to vessel manoeuvring.	
Target	▪ Conformance with environmental controls specified in this PDS.	
Application	▪ All marine-based CFE tool sea trial activities.	
Environmental controls		**Project phase**
8. Marine pests ▪ Marine pest inspection and certification of monitoring and support vessels is required before mobilisation onto project, where these are sourced from outside Port Phillip. Certification must be received from the final port of call before entry to Port Phillip. ▪ All applicable vessels to comply with the Cwlth 'Australian Ballast Water Management Requirements', Dept. of Agriculture, Fisheries and Forestry		Pre-mobilisation Activity
9. Vessel bunkering ▪ All bunkering to take place in accordance with Ports Victoria Bunkering Guidelines and vessel bunkering procedures.		All phases
10. Cetaceans – vessel manoeuvring ▪ If within 300 m of a whale or dolphin the vessel must not: - approach a whale or dolphin head on; - restrict the path of a whale or dolphin; - pursue a whale or dolphin; - separate any whale or dolphin from a group; - come between a mother and a calf; and - drop or lower an anchor overboard from the vessel. ▪ If within 300 m of a whale or dolphin, the vessel must: - maintain a constant speed that does not exceed 5 knots; - avoid sudden changes in speed and direction; - post a lookout for cetaceans; and - manoeuvre the vessel to a distance of at least 300 m from the whale or dolphin if it shows any signs of disturbance.		All phases
11. Cetacean sightings and log ▪ Personnel on board vessels are to report all sightings of cetaceans. ▪ A log of cetacean sightings and action taken to be kept for all work areas.		Activity
12. Heritage (marine-based) – identification of potential relics If potential relics are identified during maintenance activities, the process described in Annexure 7 will be followed.		Activity

Marine-based works	
Environmental limit	**Environmental monitoring program**
Not applicable to this PDS	Not applicable to this PDS
Contingencies	Not applicable to this PDS

Annexure 4 CFE Operation and Sediment Plume PDS

<table>
<tr><td colspan="3">CFE Tool sea trial operation and plume</td></tr>
<tr><td>Objective</td><td colspan="2">▪ To optimise the performance of South Channel.
▪ To appropriately manage trial activities.
▪ To minimise area of seabed disturbed and appropriately manage material.
▪ To protect assets, beneficial uses and values from long-term adverse effects due to trial-related water quality effects.</td></tr>
<tr><td>Target</td><td colspan="2">▪ Maintain physical CFE Tool trial works within the nominated activity zone.
▪ No turbidity plume outside expected activity boundary.</td></tr>
<tr><td>Application</td><td colspan="2">▪ All CFE Tool trial activities in the designated activity zone in South Channel;
▪ Use of the CFE Tool, deployment vessel and associated equipment.</td></tr>
<tr><td colspan="2">Environmental controls</td><td>Project phase</td></tr>
<tr><td colspan="2">13. Pre and Post-Trial Surveys
▪ Multibeam survey of activity area undertaken prior to trial commencement.
▪ Due to CFE Tool tolerance, actual depth may exceed the declared depths.
▪ A trial activity zone has been identified to limit the footprint of trial activities. The area is identified in Figure 1.
▪ All trial activities to take place within the activity zone. No activities (as a subset of activities) is to take place within 65 m of the outside edge of the activity zone, except to the extent necessary to achieve the declared depth.
▪ Each trial not to exceed a maximum duration of 1 week.
▪ The CFE Tool deployment vessel and associated support vessels are required to manoeuvre outside activity zones, including transit to the activity zone.
▪ Activity zone is identified in Figure 1.</td><td>Activity</td></tr>
<tr><td colspan="2">14. Plume observations
▪ Trial to only be carried out by the CFE-Tool.
▪ Water column multibeam surveys of activity area to be undertaken at the commencement of the sea trial.
▪ All trial activities to take place within the activity zone, as identified in #13 above.</td><td>Activity</td></tr>
<tr><td colspan="2">15. Operational Limits
▪ Trial to be suspended when tidal streams are greater than 6 knots in the activity zone, until the stream falls below this threshold.
▪ Trial to be suspended if winds reach greater than 30 knots over a 30 minute average from the north at South Channel Island wind gauge.
▪ Trial to be suspended if visibility falls below 2 Nautical Miles.</td><td>Activity</td></tr>
<tr><td colspan="2">Environmental limit</td><td>Monitoring program</td></tr>
<tr><td colspan="2">Not applicable to this PDS</td><td>Not applicable to this PDS</td></tr>
<tr><td>Contingencies</td><td colspan="2">Not applicable to this PDS</td></tr>
<tr><td colspan="3">Conformance with environmental controls specified in this PDS.</td></tr>
</table>

Annexure 5 CFE Tool Trial Schedule PDS

CFE Tool Trial schedule			
Objective	▪ To develop an appropriate CFE Tool trial schedule, taking into account shipping, weather, beneficial uses and values, and metocean conditions.		
Target	▪ Conformance with environmental controls specified in this PDS.		
Application	▪ All CFE Tool trial activities in approved activity area.		
Environmental controls			**Project phase**
16. CFE Tool trial schedule ▪ The trial schedule will be submitted to DEECA before implementation, including: - the planned dates of the week long trial; - the CFE Tool vessel configuration (i.e. the vessel and location of the lay up overnight); and - expected timing, duration and sequence of activities in the designated trial area.			Pre–Activity
Environmental limit		**Monitoring program**	
Not applicable to this PDS		Not applicable to this PDS	
Contingencies	Not applicable to this PDS		

Annexure 6 Noise monitoring and contingency planning

This section contains the Airborne Noise Contingency Plan and management actions as described below.

Program / plan	Rationale	Procedure and indicator	Monitoring location	Associated PDS
Airborne Noise Contingency Plan	Comply with EPA 'Noise Limit and Assessment Protocol' (EPA Publication 1826.4, May 2021).	A desktop noise assessment of new deployment vessels and/or major equipment and response to noise complaints.	South Channel Activity Area	CFE Tool trial management

Airborne Noise Contingency Plan

This Contingency Plan relates to a potential or actual exceedance of the EPA 'Noise Protocol' from trial activities.

Response level

Two events will trigger contingency actions to appropriately manage airborne noise emissions, defined by either:

- airborne noise measurement at key locations is evaluated as likely to exceed EPA Noise Protocol unless management contingencies are taken; or
- a noise complaint has been received from an area represented by a key monitoring location within a distance from sea trial activities that audible levels of noise disturbance are possible.

Environmental limit

The airborne noise environmental limit relates to the legislative requirements for noise under the EPA Noise Protocol. This is required for the response to a noise complaint that has been received within a distance from the trial that audible levels of noise disturbance are possible.

The time period classification defined in the Environment Protection Regulations (2021) are shown below.

Time Period	Description
Day	**7am to 6pm Monday to Saturday**
Evening	**6pm to 10pm Monday to Saturday** **7am to 10pm Sundays and Public Holidays**
Night	**10pm to 7am Everyday**

Contingency for potential or actual exceedance

The management actions required for potential/actual noise exceedances are described below. Noise complaints will be managed as per the process in Annexure 8.

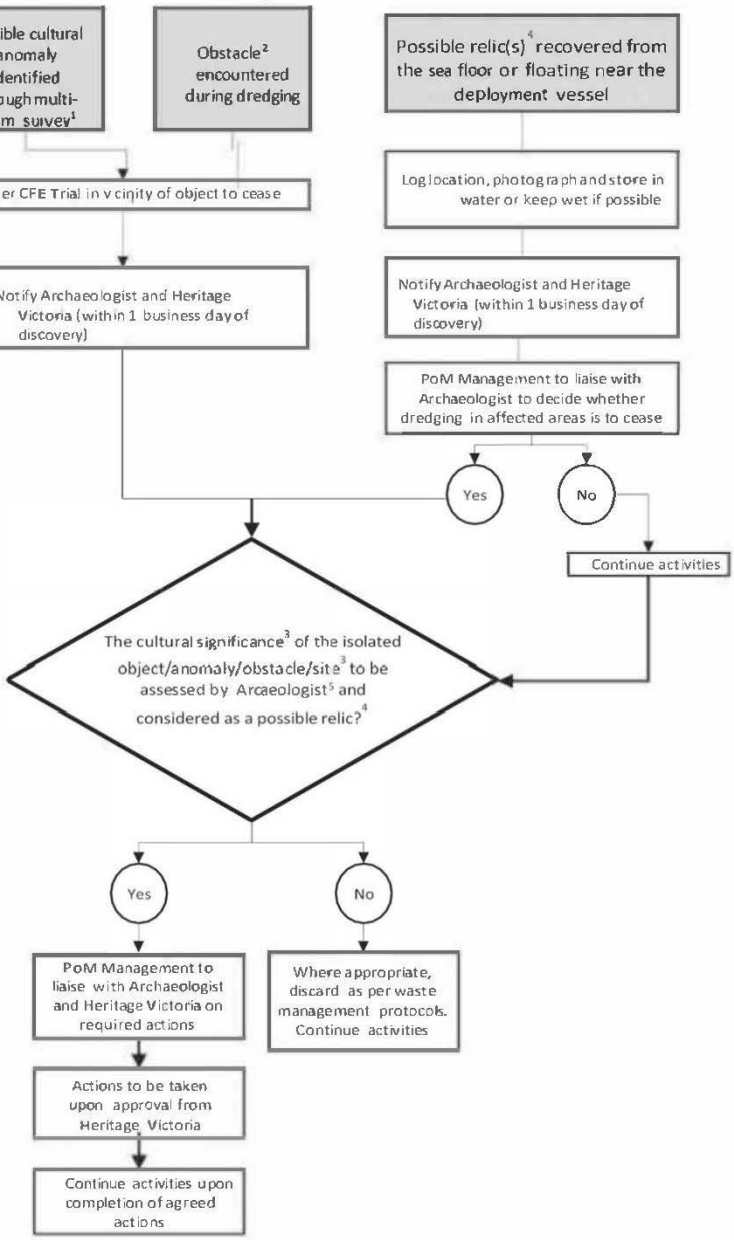
Management actions
- New vessel or equipment management actions where the desktop noise assessment of vessels or equipment indicates it may not conform to EPA Noise Protocol, appropriate action to be taken. Management options include: - selection of alternative vessel/equipment; - modification to vessel/equipment; and - restrictions on use of vessel/equipment.
- In response to complaints, where it is identified to have some basis for the complaint, noise monitoring may be used to assess compliance with the EPA Noise Protocol.
- Management actions if activity does not meet/not likely to meet EPA Noise Protocol. - If noise monitoring results and/or desktop noise assessment predict EPA Noise Protocol limits have been exceeded or may be exceeded unless appropriate management action is taken, then the following options for action may be taken: - rescheduling high noise equipment to operate for daytime works only, or control locations of evening or night-time use to greater distances from key locations sensitive to noise; and/or - evaluate ways to reduce equipment noise emissions if required (e.g. decreasing operating energy, installing additional acoustic dampening covers and mufflers etc.).

Annexure 7 Heritage Marine-based Response

Management actions identified in this Annexure mirror those in DP23-33 EMP Annexure 11. Where it refers to dredging, note that no dredging activities are proposed or planned for this trial.

Annexure 7 Heritage Marine Based Response

The management actions for encountering previously unidentified heritage items/ sites during the trail is shown in Figure 2 below.



1 If multi-beam survey is part of post construction monitoring, references to dredging are not relevant.
2 'Obstacle' refers to the progress of dredging impeded by object(s) on seabed within a discrete area.
3 'Cultural significance' refers to archaeological or historic shipwrecks, shipwreck relics, artefacts or sites as defined by the (Vic) *Heritage Act 1995* and (Cwth) *Historic Shipwrecks Act 1976., unless relics, items or sites have otherwise been exempt as agreed with Heritage Victoria.*
4 'Possible relics' refers to artefacts that may possibly be protected by legislation (see 3). Therefore car tyres, shopping trolleys, and aluminium beer cans etc. are not possible relics. Previously identified timber piles and wharf structures removed during construction or demolition activities are also not possible relics.
5 For this project a site is defined as a collection of artefacts within a discrete area. A ship or plane wreck is a site, as is an area of dumped material.
6 By way of diving inspection, inspection of recovered material and/or review of data collected.

Annexure 8 Complaints Response

The management actions to deal with complaints are described below.

Management actions
Management actions if a complaint is received: - If a complaint is received, a general response will be given to the complainant within 24 hours. The timeframe for a response to a complaint (aside from the initial response) is dependent on the nature of the complaint and the scale of investigation (if required). It is expected that there will be management action within 24 hours of the initial assessment of the complaint. The following options for action may be taken: - if the complaint is a single event then no monitoring may be required if the cause cannot be determined; - if there are a number of complaints relating to the same issue then monitoring may be considered as part of the investigation. - Where the assessment of vessels, equipment or activity indicates that it may not conform to relevant legislation, appropriate action to be taken. Management options include: - selection of alternative vessel/equipment; - modification to vessel/equipment; - restrictions on use of vessel/equipment; and - other actions as deemed appropriate.