REPORT

Noakes Floating Dry Dock

Operational Management Plan

Client: Noakes Group

Reference: PA2897-RHD-ZZ-XX-RP-Z-0001

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1 Introduction

This Operational Management Plan (OMP) has been prepared to support a Development Application prepared by Hamptons Property Services Pty Ltd on behalf of Stannards Marine for the mooring of a floating dry dock (FDD) at 6 John Street, MacMahons Point (the Site). The OMP shall be updated as required to include Conditions of Consent, as applicable. The OMP shall be reviewed after 6 months of operation and then every 3 years thereafter. The OMP is considered a work in progress until the Conditions of Consent have been issued.

1.1 Background

The aim of this Operational Management Plan (OMP) is to provide detailed frameworks, policies, performance criteria and procedures to minimise the physical, social and environmental impact of activities during operations of a Floating Dry Dock at 6 John Street, McMahons Point. In particular, the OMP includes monitoring and reporting mechanisms whereby the performance of the system can be measured and agreed with corrective actions implemented in a timely manner in the event of an incident. The OMP has been prepared in accordance with the Guideline for the Preparation of Environmental Management Plan (Department of Infrastructure, Planning and Natural Resources, 2004), and sound engineering and environmental practice.

The OMP only considers operation of the FDD. The OMP does not consider construction related activities, which would be required prior to operation of the FDD.

1.2 Environmental Protection License

An Environmental Protection License (EPL No. 10893) has been issued for the site, which comprises Lot 2 DP 77853, Lot 1 DP 127195, Lot 2 DP 179730, Lot B DP 420377, Lot A DP 420377, Lot 1 DP 449731, Lot 987 DP 752067 and the Water Lease Boundary. All works shall comply with requirements of the EPL.

1.3 Facility Description

1.3.1 Location

The operational area, accessed via 6 John Street, McMahons Point, is within Berrys Bay and on the western side of McMahons Point, Sydney Harbour. The site is owned by Stannards Marine. Noakes Group are the tenant and the operator of the FDD.

1.3.2 Operational activities

The principal use of the site at 6 John Street is as a boat repair and maintenance facility. The FDD enables vessels to be dry docked for repair and maintenance. The FDD would be berthed alongside the wharf at 6 John Street with gangways at either end to provide access to the FDD.

Docking and unloading of vessels would involve the following:

- Cold move slew the FDD to the edge of the water lease boundary. Cold move slew means to relocate by mooring lines with the assistance of hand operated capstans (winches).
- The FDD is lowered into the water by pumping water into both the hull and sides of the FDD.
- A vessel is then moved into the FDD using a combination of the vessel's propulsion, workboat assistance and docking lines.

- The water is then pumped out of the FDD to create buoyancy. The vessel comes to rest on the deck of the FDD where works can be undertaken in the dry.

Vessel maintenance activities would include:

- vessel maintenance, cleaning and antifouling;
- mechanical repairs (i.e. engine, propellor etc.);
- structural repair (i.e. repair to fibreglass, carbon, steel of timber structures); and
- repainting of the superstructure of a vessel.

The FDD would be used for maintenance of existing vessels and would not be used for construction of a new vessel.

The FDD will be fitted with:

- carbon filtration system to capture Volatile Organic Compounds (VOCs) generated as part of the vessel maintenance activities;
- acoustic curtains at each end of the FDD to enable the FDD to be enclosed when noise-generating vessel repair or maintenance work is carried out;
- sound absorption panels installed on the inside walls of the FDD;
- a cover over the FDD that encloses the work area; and, ,
- wastewater and stormwater bunds to capture wastewater and stormwater. Contaminated wastewater and stormwater would be pumped ashore for treatment at a wastewater treatment plant.

1.4 Hours of Operation

In accordance with the existing EPL, works and activities would only be undertaken between 7:00 am and 6:00 pm, Mondays to Saturdays. Works and activities must not be undertaken at the premises on Sundays or Public Holidays.

Works and activities are permitted to be undertaken outside of the hours specified above for:

(i) the delivery of equipment and materials as requested by Police or other authorities for safety reasons; and,

(ii) emergency work to avoid the loss of lives, damage to property and/ or to prevent environmental harm.

1.5 Purpose of the OMP

The primary purpose of this OMP is to ensure activities associated with the FFD are undertaken in accordance with good environmental practice and to satisfy the requirements of the project approvals including Conditions of Consent.

1.6 Applicable Legislation

Table 1 defines the legislation that applies to the operation of the FDD. In the event of any inconsistency arising between the implementation of the OMP and state or local government regulations, the legislative requirements take priority.

Legislation	Intent	Regulatory Authority
Environmental Planning and Assessment Act 1979	To assess the impact of the development's operations on the environment.	NSW Department of Planning Infrastructure and Environment
Marine Pollution Act 2012	To protect the State's marine and coastal environment from pollution by oil and certain other marine pollutants discharged from ships.	Transport for NSW (delegated to Port Authority of NSW)
Protection of the Environment Operations Act 1997	To regulate activities so as to prevent pollution of the environment	NSW Environment Protection Authority
Protection of the Environment Operations (Clean Air) Regulations 2010	Details the requirements a business is required to adhere to with the aim of ensuring the long-term quality of natural air.	NSW Environment Protection Authority
Protection of the Environment Operations (Noise Control) Regulations 2008	Details the requirements that a business is required to adhere to with the aim of controlling and minimising noise pollution.	NSW Environment Protection Authority
Protection of the Environment Operations (Waste) Regulations 2005	Gives specific details as to how businesses should manage any waste or by-products generated during business activities.	NSW Environment Protection Authority
NSW Noise Policy for Industry (EPA, 2017)	Specifies acceptable noise criteria and methodologies for monitoring industrial noise sources.	NSW Environment Protection Authority
NSW Biosecurity Act 2015	Specifies how to prevent, eliminate, manage or minimise biosecurity risks	NSW Department of Primary Industries
Commonwealth Biosecurity Act 2015	Requirements to manage biosecurity risk at designated first points of entry	Requirements to manage biosecurity risk at designated first points of entry
Navigation Act 2012	Promote the safety of life at sea; and, promote safe navigation, prevent pollution of the marine environment and ensure that AMSA has the necessary power to carry out inspections of vessels and enforce national and international standards.	Australian Maritime Safety Authority

Maritime Safety (Domestic Commercial Vessel) National Law Act 2012	Implement Australia's international obligations in relation to the safety of domestic commercial vessels	Australian Maritime Safety Authority
Marine Safety Act 1998	Ensure safe operation of vessels and framework for enforcement of marine legislation.	Transport for NSW and Port Authority of NSW
Work Health and Safety Act 2011	Provide for a balanced and nationally consistent framework to secure the health and safety of workers and workplaces.	SafeWork NSW

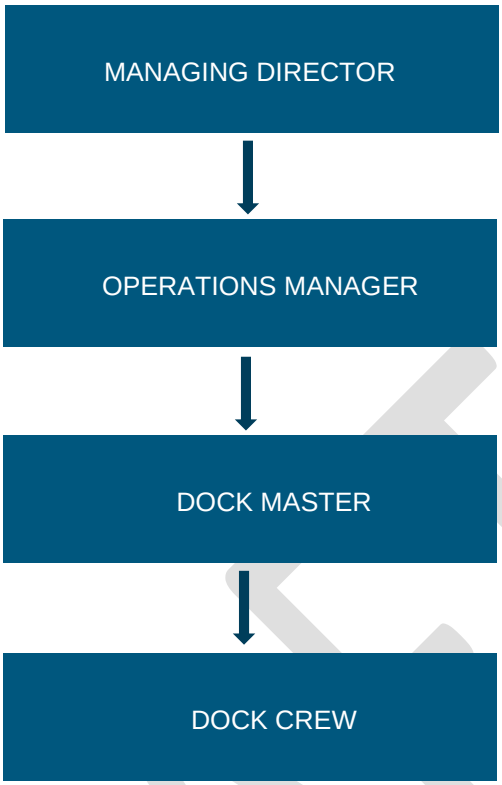
1.7 OMP Objectives

The objectives of the OMP are to:

- Identify all appropriate environmental safeguards and demonstrate how they will be implemented on-site;
- Manage site activities effectively;
- Enable adverse impacts on the environment to be minimised;
- Provide for the conservation of the site's environment;
- Identify suitable emergency preparedness and response procedures;
- Provide details of complaints management procedures;
- Meet all requirements of relevant legislation and assist with ensuring compliance of the Project Approval; and,
- Monitor and manage environmental and social impacts.

1.8 Roles and Responsibilities

All relevant staff and contractors employed and appointed by Noakes to work on the FDD shall be formally advised of their obligations under the OMP and informed of the significance of the OMP. This process will be achieved via implementation of a site-specific induction. In addition, responsibilities shall be outlined in position descriptions, Standard Operating Procedures and safety and quality management systems. It is the responsibility of all workers on site to actively manage and respond to environmental risks and compliance. There is a duty of care to the environment by all personnel. All members within the chain of command are identified below, along with their roles and responsibilities, including environmental responsibilities. The organisational structure as it relates to environmental management is outlined below.



1.8.1 Managing Director

The Managing Director, is responsible for the management and resourcing of the environmental functions for the FFD, approving the OMP and generally supporting the Operations Manager to deliver the objectives and controls of the OMP. The Managing Director is also responsible for incident and emergency response; and supporting operational staff in the management of environmental risks and implementation of control measures.

1.8.2 Operations Manager

The overall operational responsibility for the FFD lies with the Operations Manager. In addition, specific environmental responsibilities include:

- oversight, training and management of the FFD Dock Crew;
- provide oversight of the operation as required;
- review all Checklists, record all defects; and,
- ensure all defects or maintenance issues are logged and communicated to managing authorities. Generally ensure OMP compliance during operations.

The Operations Manager will be the Environmental Representative.

1.8.3 Dock Master

The Dock Master is required to manage the environmental issues affecting the FFD, ensure compliance with applicable legislation and has the following responsibilities:

- implement and maintain an OMP, including undertaking assessments and reviews of the OMP, monitoring, recording and rectification for the EMP and annual compliance reporting for the OMP; and,
- manage onsite dock crew to ensure compliance with the OMP.

1.8.4 Dock Crew

FFD dock crew will be trained in all responsibilities listed below. Specific environmental responsibilities include:

- advising the Operations Manager of any non-compliance with this OMP;
- control drainage from the FFD by completing check of the water retrieval system;
- monitor wind and weather conditions and report all major changes; and,
- ensure works in the FFD are fully contained in the FDD.

1.9 Glossary of Abbreviations

Abbreviation	Description
AMSA	Australian Maritime Safety Authority
EIS	Environmental Impact Statement
EPA	Environmental Protection Authority
EPL	Environmental Protection License
FDD	Floating Dry Dock
OMP	Operational Management Plan
VOCs	Volatile Organic Compounds
VTS	Vessel Traffic Service

2 Environmental Risk Assessment and Implementation of Mitigation Measures

2.1 Risk Assessment

The environmental risks associated with activities that occur at the site have been assessed. During the Environmental Impact Statement (EIS) process the level of risk associated with environmental aspects is described in terms of its impact. The following aspects have been identified as being of significant risk as to require particular management measures:

1. Navigation and Safety
2. Stormwater and Water Quality Management
3. Air Quality Management
4. Acoustic Management
5. Biosecurity
6. Waste Management

Full details of the impacts and mitigation measures can be found in the EIS.

2.2 Environmental Aspects and Mitigation Measures

Environmental control measures are implemented prior to undertaking activities which are likely to generate environmental risks or impacts and maintained as long as is necessary to control the risk or impact. Some control measures will be implemented periodically (e.g. inspections and routine maintenance tasks). The frequency of periodic measures will be determined according to relevant obligations, standards, codes of practice and/or guidelines. Contingency or remedial measures will be implemented as required to address impacts when they occur. The table set out in the following sections outline the environmental objectives, control measures, monitoring and reporting requirements for each of the identified environmental aspects that apply to the site.

2.2.1 Navigation and Safety

Navigation and Safety	
Environmental Objectives	

• To avoid impact on safety of navigation
• To comply with the following legislation:
  ○ *Commonwealth Government legislation*
  ▪ *Navigation Act 2012*
  ▪ *Maritime Safety (Domestic Commercial Vessel) National Law Act 2012*
  ▪ *Marine Safety (Domestic Commercial Vessel) National Law Regulation 2013*
  ○ *NSW Government legislation*
  ▪ *Marine Safety Act 1998*
  ▪ *Marine Safety Regulation 2016*
  ▪ *Work Health and Safety Act 2011*
  ▪ *Work Health and Safety Regulation 2017.*
• To comply with the conditions of approvals associated with the site	

Potential Environmental Impacts	
1. Impact on other users of Berrys Bay 2. Marine incident (i.e. capsize, collision etc.) **3.** Non-compliance with legislative requirements	
Control Measures	**Responsibility**

Stability Booklet to be kept onboard the FDD at all times. Various requirements to be satisfied including:
• Loading and unloading of vessels not to occur when operational limits are individually or jointly exceeded. Operational limits for loading/loading vessels are:
  ○ Wind < 25 knots
  ○ Current < 2 knots
  ○ Wave < 0.4m
  Current and waves based on visual assessment. Wind recordings available from Bureau of Meteorology.
• Heel and trim of FDD not to exceed 5° at any time.
• The ballast tanks are to be emptied as much as practically possible to achieve a level in the ballast tanks of 10% or less.
	Noakes FFD Operations Manager.

The FDD and vessels to be docked on the FDD shall:	Noakes FFD Dock Master.

• operate under the control of licensed and experienced Masters; • operate under the supervision of experienced Noakes Group personnel or representatives from Noakes Group; • operate in accordance with the Safety Management System prepared for the FDD; and • operate in accordance with the requirements of all licenses and permits issued for the FDD.	
All vessels to comply with requirements of Port Authority of New South Wales, including participation in Vessel Traffic Services.	Noakes FFD Dock Master.
Under Keel Clearance (from FDD to seabed) of 0.5m to be maintained during all phases of operation. Predicted water level and tidal anomalies to be assessed. Tidal anomalies at Fort Denison available from Port Authority of NSW. Alternatively, a depth sounder shall be installed on the NW corner of the FDD (depth-critical location).	Noakes FFD Dock Master.
Noakes to assess manoeuvrability of vessels and provide a workboat to assist in manoeuvring vessels as required.	Noakes FFD Dock Master.
Monitoring	**Responsibility**
Monitoring program to be developed for: • wind; and, • water level (or Under Keel Clearance). Visual monitoring of currents and waves to be undertaken.	Noakes FFD Site Environmental Representative.
Reporting	**Responsibility**
Marine incidence to be reported to Australian Maritime Safety Authority (AMSA). Public website to be maintained (refer **Section 4.1**).	Noakes FFD Site Environmental Representative
Performance Indicators	
• No marine incidents or collisions.	
Corrective Actions	
Non-conformance with this OMP shall be documented alongside the corrective actions taken.	

Corrective actions may include:

- Updating operating procedures and associated documentation (such as this OMP) as a result of a non-conformance
- Re-training staff in the event of a non-conformance to address the area of skills lacking
- Review the effectiveness of the induction training program
- Corrective works in the event of a design flaw/ malfunction
- Additional mitigation measures as required by AMSA

2.2.2 Stormwater and Water Quality Management

Stormwater and Water Quality Management	
Environmental Objectives	

• To avoid detrimental impact on the water quality and marine environment of Berrys Bay.
• To maintain and protect the integrity of Berrys Bay and other surrounding waterways.
• To comply with the following legislation:
  ○ *Protection of the Environment Operations Act 1997*
  ○ *Protection of the Environment Operations Regulation 2009*
  ○ *Environmental Planning and Assessment Act 1979*
  ○ *Marine Pollution Act 2012*
  ○ *Navigation Act 2012*
  ○ *Work Health and Safety Act 2011*
• To comply with the conditions of approvals associated with the site	

Potential Environmental Impacts	
1. Detrimental impact on the water quality and marine environment of Berrys Bay 2. Non-compliance with legislative requirements	
Control Measures	**Responsibility**
All wastewater derived from operations on the FDD deck will be captured in two sumps and pumped to the onsite reverse osmosis treatment plant before being discharged to the sewer	Noakes FFD Site Environmental Representative and all Noakes FFD staff.
All surface runoff from the entire operational area will be captured in two sumps and pumped to the onsite reverse osmosis treatment plant before being discharged to the sewer	Noakes FFD Site Environmental Representative and all Noakes FFD staff.
A full sweep, clean and wash of the dock will be undertaken immediately after completion of maintenance works and before the next submersion. The captured wastewater will be directed to the onsite treatment plant.	Noakes FFD Site Environmental Representative and all Noakes FFD staff.
All operational works will be fully contained within the perimeter of the FDD such that it would not be possible for objects to be accidentally “dropped” into Berrys Bay	Noakes FFD Site Environmental Representative and all Noakes FFD staff.
Monitoring	**Responsibility**
Monitoring program to be specified via a suitable condition of consent.	Noakes FFD Site Environmental Representative.
Reporting	**Responsibility**

The results of the periodic monitoring will be documented in a report detailing compliance to water quality parameters specified in relevant approvals.	Noakes FFD Site Environmental Representative

Performance Indicators

- No spills resulting in detrimental impact on the water quality and marine environment of the local area.
- Stormwater discharge requirements are met.
- Compliance with water quality parameters specified in relevant approvals.

Corrective Actions

Non-conformance with this OMP shall be documented alongside the corrective actions taken.

Corrective actions may include:

- Updating operating procedures and associated documentation (such as this OMP) as a result of a non-conformance
- Feedback from emergency exercises will be incorporated into operating procedures should unacceptable risk be identified.
- Re-training staff in the event of a non-conformance to address the area of skills lacking
- Review the effectiveness of the induction training program
- Corrective works in the event of a design flaw/malfunction

2.2.3 Air Quality Management

Air Quality Management	
Environmental Objectives	

• To avoid detrimental air quality and odour-related risks associated with the operational phases within Berrys Bay
• To comply with the following legislation:
  ○ *Protection of the Environment Operations Act 1997;*
  ○ *Protection of the Environment Operations (Clean Air) Regulation 2010;*
  ○ *Approved Methods for the Modelling and Assessment of Air Pollutants (August 2005) (DEC) [now (2016) (EPA)];*
  ○ *Approved Methods for the Sampling and Analysis of Air Pollutants (January 2007) (DEC);*
  ○ *Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards (2012) Health NSW);*
  ○ *Assessment and management of odour from stationary sources in NSW – Technical framework (November 2006) (DEC); and*
  ○ *Assessment and management of odour from stationary sources in NSW – Technical notes (November 2006) (DEC).*
• To comply with the conditions of approvals associated with the site	

Potential Environmental Impacts	

1. Impacts during operations include:
  ○ Odours and VOCs from application of paint and antifoul onto vessels
  ○ Particulate matter and heavy metals from sand blasting and soda blasting
  ○ Particulate matter and heavy metals from welding	

Control Measures	**Responsibility**

• All vehicles and vessels shall be switched off when not in use and avoid excessive idling emissions.
• Diesel- or petrol-powered generators shall be avoided and mains electricity or battery powered equipment used where practicable.
• The FDD shall be enclosed and placed under negative pressure when air emission generating activities (painting, antifoul application, abrasive blasting) are in progress. This requires:
  ○ Closing the acoustic curtains provided on the bow and stern and the top cover with joints overlapping by at least 100mm.
  ○ Operating the Fowlerex air extraction system
• The FDD pollution control system (air extraction, baghouse and carbon filter) shall be operated in accordance with manufacturer's instructions and not deactivated when air emission generating activities are in progress.
	Noakes Operations Manager

• The air extraction and pollution control systems shall be regularly (annually or as recommended by the pollution control system manufacturer) inspected and maintained in accordance with the manufacturer requirements.
• The acoustic curtains and top cover shall be inspected regularly so any damage or tears to the sheets are identified and repaired as soon as practicable to retain airflow.
• The acoustic curtains provided on the bow and stern and the top cover shall be closed when sandblasting operations are being conducted in the FDD. Joints should overlap by at least 100mm.
• The simultaneous use of multiple high odour risk material shall be avoided wherever possible, scheduling operations so they are used separately rather than concurrently.
• The potential for air quality and odour impacts shall be assessed prior to any increase in the annual frequency of air emission generating activities from the frequency assessed.
• In addition to general environmental awareness training, specific training will be provided to relevant staff, which will include:
  ○ The regulatory requirements associated with the EPL;
  ○ Potential environmental impacts which may be caused during normal and abnormal circumstances;
  ○ Prevention of accidental emissions and actions to be taken when accidental emissions occur; and
  ○ Procedures for compliant handling, investigation, resolution and reporting back to the complainant and EPA.
• All employees will be instructed to remain vigilant to and report any unusual odour around the site immediately to the Operations Manager.
• Good housekeeping will be maintained, including the cleaning down of all areas within the FDD to ensure the removal of any potentially odorous or dusty materials.	

• Carbon filtration system and stack design, in accordance with recommendations from Fowlerex.	Noakes Operations Manager
Monitoring	**Responsibility**
Daily site inspections will be undertaken in order to identify and mitigate offensive odours and visible dust from the site before the emissions can lead to impact at sensitive receptor locations.	Noakes Dock Master
Reporting	**Responsibility**
• The Noakes Operations Manager will respond to any complaints as soon as possible after the complaint is received so that effective appraisal of the complaint can be carried out by subjective	Noakes Operations Manager

assessment. This assessment will include travel to the location of the complaint in order to verify source of odour/dust. • The complaint investigation will be carried out in accordance with Noake's complaints handling procedures outlined in **Section 3.3** of this OMP. • The complaints log would be made available to the applicable authorities when requested. • Record any exceptional incidents causing air/ odour emissions, either on or off site.	
Performance Indicators	
• Air quality objectives detailed above are met. • No air quality related complaints are received	
Corrective Actions	
Non-conformance with this OMP shall be documented alongside the corrective actions taken. Corrective actions may include installation of additional carbon filtration and delaying works until conditions are favourable	

2.2.4 Acoustic Management

Acoustic Management	
Environmental Objectives	
• To avoid detrimental noise pollution to Berrys Bay and surrounding area • To comply with the following legislation: ○ *NSW Noise Policy for Industry* • To comply with the conditions of approvals associated with the site	
Potential Environmental Impacts	
1. Detrimental noise level impact on Berrys Bay residents and surrounding environment 2. Non-compliance with legislative requirements	
Control Measures	**Responsibility**
• The acoustic curtains provided on the bow and stern and the top cover shall be closed when sandblasting operations are being conducted in the FDD. Joints should overlap by at least 100mm. • No more than two sandblasting machines should be used in the FDD at any one time. • No other noisy operations, such as sanding, grinding or water blasting, should be conducted in the FDD at the same time as sandblasting. • No more than three noisy operations (excluding sandblasting) should be conducted in the FDD concurrently. • When only painting is conducted in the FDD, the acoustic curtains need not be closed at all. • Acoustic silencers on intake and exhaust vents within the FDD ventilation system enclosure should be inspected regularly and maintained in good condition. • Sound absorptive lining on the inside walls of the ventilation system plantroom and FDD should be inspected regularly and maintained in good condition. • The four air intake silencers (two in the bow of the FDD and two in the stern) should be inspected regularly and maintained in good condition.	Noakes Operations Manager
Monitoring	**Responsibility**
Noise monitoring records must record the date, time and location the sample was taken. The activity being carried out in the FDD during noise measurements must be recorded. All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form; b) kept for at least 5 years after the monitoring, or event to which they relate, took place; and c) produced in a legible form to any authorised officer of the EPA or Council when requested.	Noakes Operations Manager
Reporting	**Responsibility**

The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to noise pollution arising from any activity associated with the FDD. All complaints must be kept for at least 5 years after the complaint was made. Record must be produced to any authorised officer of the EPA or Council when requested. .	Noakes Operations Manager
Performance Indicators	
• Noise requirements are met • Complaints are responded to and resolved promptly	
Corrective Actions	
Non-conformance with this OMP shall be documented alongside the corrective actions taken.	

2.2.5 Biosecurity

Biosecurity	
Environmental Objectives	

• To minimise impacts on the flora and fauna of Berrys Bay.
• To ensure compliance with the following legislation:
  ○ *Threatened Species Conservation Act 1995*
  ○ *National parks and Wildlife Act 1974*
  ○ *Fisheries Management Act 1994*
  ○ *Noxious Weeds Act 1993*
  ○ *Environment Protection and Biodiversity Conservation Act 1999*
  ○ *NSW Biosecurity Act 2015*
  ○ *Commonwealth Biosecurity Act 2015*
• To be in accordance with the Marine Pest Plan 2018-2023 and the Notifiable Marine Pests in NSW fact sheet
• To comply with the conditions of approvals associated with the site	

Potential Environmental Impacts	
1. Noxious pest or other vertebrate/ invertebrate species to land or water 2. Noxious weed incursion	
Control Measures	**Responsibility**

• If a vessel has been in international waters or in a location where noxious aquatic species are known to occur, the following shall apply:
  ○ Implement weed control programs in accordance with the requirements of the Noxious Weeds Act.
  ○ Implement appropriate pest eradication programs.
  ○ Notify Biosecurity agents of any suspected invasive or exotic pests on site and work with them to control/ prevent an incursion.
  ○ Provide biosecurity identification training to operational staff and contractors to assist in identifying and responding to potential biosecurity threats.
  ○ Ballast water and hull fouling from vessels should not be released to waters.
  ○ Develop and maintain Biosecurity Incident Response Procedures in consultation with the Department of Agriculture Water and the Environment.
  ○ Ensure biosecurity incident kit is available at the FFD.
	Noakes Dock Crew

Monitoring	**Responsibility**

• Pre docking assessment of vessels, to determine bio security risk, including:
  ○ Vessel movements including movements since last application of anti-fouling
  ○ Anti-fouling documentation
• Visual inspections during docking of vessels
• Visual inspections of landside areas for weed and pest incursions.
	FFD Dock Master

Reporting	**Responsibility**
• Failure of any aspect of the biosecurity management system shall result in a review of the reasons for the failure and the implementation of corrective actions. • Any pest incursions are reported to relevant authorities. • All documents required under the project approval will be available for public inspection on request (subject to confidentiality).	FFD Operations Manager
Performance Indicators	
• Absence of weed and pest incursions.	
Corrective Actions	
Corrective actions may include: • Updates to the Biosecurity Procedures may be required following any weed or pest incursions if faults within the procedures are identified • Updating associated documentation (such as this OMP) as a result of a non-conformance • Re-training staff in the event of a non-conformance to address the area of skills lacking. Review the effectiveness of the induction training program.	

2.2.6 Waste Management

Waste Management	
Environmental Objectives	

• To minimise waste generated at the site and reduce the volume of waste requiring disposal to landfill.
• To prevent disposal of waste from the site to receiving environments.
• To ensure compliance with the following legislation:
  ○ *Protection of the Environment Operations Act 1997*
  ○ *Protection of the Environment Operations (Waste) Regulation 2005*
  ○ *EPA Waste Classification Guidelines 2014*	

Potential Environmental Impacts	
1. Litter entering surrounding marine environment 2. Waste not sent to correct waste facilities or being recycled.	
Control Measures	**Responsibility**
• Ensure the FFD work area bunds are intact and all outlets are closed before commencing works. • Carry out all works within bunded area. • Ensure the bunded area is cleaned up before leaving the site. • Store hazardous materials, including fuel, oils and chemicals, in correctly segregated, bunded and covered areas. • Ensure all storage containers have lids on and are in good condition. • Place spill clean-up kits at likely spill locations and train all staff in their use. • Develop an emergency response procedure for chemical spills and train all staff on how to prevent and manage spills. • Erect signage to remind staff and client of your commitment to protect the environment. • Ensure all staff are properly trained in the correct use of hazardous materials, including paints. Consider avoiding the use of hazardous materials and replacing them with less toxic materials or use work practices that minimise their use. • Ensure that the use of resources (raw materials) is reduced and lower the volume of waste materials generated by reviewing operational procedures. • Investigate and consider changing the materials used in order to generate a waste product which has a lower or no toxicity. • Segregate different waste types to allow for easier recycling. • Prepare an environmental action plan and set site targets for recycling and monitor progress towards targets.	FFD Dock Crew, FFD Operations Manager

• Use small wheelie bins around the site which are easier to manoeuvre and ensure their lids contain the rubbish in windy conditions. • Ensure any waste skips are covered with tarpaulins or equivalent during windy conditions. • Ensure any vehicle loads are covered and sealed so as to prevent leakage of waste materials, prior to leaving the site. • Ensure correct operational procedures for transport and disposal of all hazardous and dangerous materials used on site, following appropriate laws and guidelines. • Ensure all waste containers are appropriately affixed to immovable objects, or locked into cages where they are prevented from leaving the site. • Ensure all hazardous waste containers are stored in a covered area where flooding would not cause them to spill.	
Monitoring	**Responsibility**
• Carry out a waste audit 1 month after operation of the FDD to check waste storage capacities within the current storage area. • Ensure car parks and yard areas are free from litter and monitor regularly during site inspections. • Ensure drains and collection pits are clear of debris and inspect daily and before rain events. • Ensure all waste bins/ containers are not overflowing and are able to have their lids closed and secured when not in use.	
Reporting	**Responsibility**
• Failure of any aspect of the waste management system shall result in a review of the reasons for the failure and the implementation of corrective actions. • All documents required under the project approval would be available for public inspection on request (subject to confidentiality)	FFD Operations Manager
Performance Indicators	
• Absence of visual waste and litter accumulating on the site • No contaminated wastewater discharged into Berrys Bay • Compliance with the Work Health and Safety Act 2011, regulations for waste management and public health and the guidelines for relevant statutory authorities • Compliance with Australian Quarantine Act and Regulations.	
Corrective Actions	
Any waste spillage that occurs on-site shall be cleaned up immediately using appropriate methods. If required, the FFD Operations Manager shall arrange professional cleanup services. If a failure in the waste management system has occurred (as a result of a spillage or extensive littering), the identified	

failure in the waste management procedure shall be identified and corrected. Corrective actions may include:

- Updating operating procedures and associated documentation (such as this OMP) as a result of a non-conformance
- Feedback from emergency exercises would be incorporated into operating procedures should unacceptable risk be identified.
- Re-training staff in the event of a non-conformance to address the area of skills lacking
- Review the effectiveness of the induction training program
- Corrective works in the event of a design flaw/malfunction.

3 Environmental Management Procedures

The following sections outline management actions to be undertaken on the site.

3.1 Environmental Monitoring and Inspections

The following monitoring must be undertaken on the site.

Aspects	Action	Parameter & limits	Method	Frequency
Navigation and Safety	Docking of vessels	Wave height less than 0.4m and currents less than 2kts	Visual monitoring of currents and waves to be undertaken.	Continuous throughout docking operations
Navigation and Safety	Docking of vessels	Water depth to maintain UKC >0.5m	Depth sounder or water level records at Fort Denison	Continuous throughout docking operations
Stormwater and Water Quality Management	General operation of the FDD	Water quality discharge limits set in approvals	To be confirmed in approvals documentation	To be confirmed in approvals documentation
Stormwater and Water Quality Management	Submerging the FDD	Plumes and other waste (oils, sold waste)	Visual monitoring	During FDD submersions
Air Quality Management	General operation of the FDD	Detectable odour	Olfactory monitoring	Daily during general FFD operations
Air Quality Management	General operation of the FDD	Visible dust	Visual monitoring	Daily during general FFD operations
Noise	General operation of the FDD	Project Noise Trigger Level of 53 dBA measured at the locations specified by the EPA in Condition U1.2 of EPL 10893	Post-commissioning acoustic testing as required by the EPA in Condition U1.2 of EPL 10893	As specified in EPL 10893
Biosecurity	Docking of vessels	International movement of vessels	Witnessing of documentation relating to vessel movements and anti-fouling application	Prior to vessel docking

Biosecurity	Docking of vessels	Presence of potential biosecurity risks	Visual inspections of vessels during docking	During vessel docking
Biosecurity	General operation of the FDD	Presence of potential biosecurity risks	Visual inspections of landside areas for weed and pest incursions	Daily during general FFD operations
Waste	General operation of the FDD	Adequate waste storage capacity	Waste audit of the site	1 month post commissioning of the FDD
Waste	General operation of the FDD	Car parks and yards free of litter	Visual inspection of car parks and yards	Daily
Waste	General operation of the FDD	Drains and collection pits free of debris	Visual inspections of drains and collection pits	Daily and before rain events
Waste	General operation of the FDD	Bins with capacity	Visual inspections of bins	Daily

3.2 Induction and Training

All staff and contractors working at the site will need to complete site-specific induction prior to commencing any work or activity at the site. The site-specific induction will include:

- Control procedures for operational activities that can be followed to minimise environmental impacts (as outlined in the OMP)
- Site layout
- Safety procedures
- Hazardous materials and their safe use
- Environmental emergency response procedures
- Fire fighting
- Fuel handling and spillage
- Biosecurity response requirements from relevant government departments
- Documentation systems

This will foster an awareness of environmental issues, minimise environmental impacts and inform staff and contractors of their responsibilities and duties.

3.3 Complaints Response Procedures

This procedure applies to communications directed to staff and contractors with regards to site activities at the FFD. Community/stakeholder complaints and general enquiries could be received through a number of avenues. The contact details for the public to make general enquiries or lodge complaints about operations at site are:

- Office Hours: TBC
- Telephone: TBC
- Postal: TBC
- Email: TBC

All general queries will be forwarded through to the relevant staff member who will respond or disseminate to other staff as appropriate. Early resolution to any complaints will be sought, a response provided and effort made to resolve the query/complaint in a timely manner. All environment queries will be directed to the Operations Manager. The Noakes Group website also has an online form on the Contact Us page where members of the public could register environmental concerns such as noise and odour.

- All complaints received will be recorded in the complaints register. The information captured in this register will include:
    - date and time of the contact or complaint;
    - means by which the contact or complaint was made (telephone, mail or email);
    - any personal details of the individual who provided the information or complaint, or if no details were provided, a note to that effect;
    - the nature of the comment or complaint;
    - record of operational and meteorological condition contributing to the comment or complaint;
    - any action(s) taken in relation to the comment or complaint; including any follow-up contact with the individual who provided the information or complaint; and
    - if no action was taken in relation to the comment or complaint, the reason(s) why no action was taken.

3.4 Emergency Contacts and Incident Response

3.4.1 Incident Classification

Environmental incidents are classified as being one of three levels of incidents:

Minor: Incidents are generally able to be resolved through the application of local or initial resources only (e.g. first-strike capacity), does not trigger any obligations to report under Environmental Law

Notifiable: triggers an obligation to report the incident to government authorities under Environmental Law, or an incident which results in a formal regulatory response (e.g. clean up notice, formal warning, penalty notice, prosecution) from a government agency.

Emergency: Imminent threat of major harm to human health or environment, requires immediate assistance of specialist agencies plus notifications to regulators. Incidents are generally characterised by a degree of complexity that requires the responsible party to report to external jurisdictions and response coordination may be supported by numerous parties and resources.

3.4.2 Incident and Emergency Response Procedure

FDD Dock Crew are required to notify the Operations Manager in the event of any notifiable or emergency incident or when significant pollution has occurred. Dock Crew are responsible for the clean-up, reporting and follow up response for any pollution incidents that have occurred as a result of their activities.

Where a pollution incident has occurred Dock Crew will undertake the following steps:

1. Where required by environmental law, notify the relevant Government Authority;
2. Take all reasonable steps to protect every person and the Environment from exposure to the Pollution Incident, until the nature and cause of the Pollution Incident has been identified and any Clean Up Action has been completed (if required) to the reasonable satisfaction of any relevant Government Authority that was or should have been notified; and,
3. Promptly comply with any notice, order or direction of any Government Authority in relation to any Pollution Incident at the FFD (but only to the extent to which the FFD has caused or contributed to the Pollution Incident).

3.4.3 Incident and Emergency Notification and Reporting

In accordance with the *Protection of the Environment Operations Act 1997*, any person carrying on the activity (including the occupier of the premises or the employer) which causes a pollution incident which causes material harm to the environment or threatens such harm, is to notify immediately each relevant authority as identified in the procedure below. **Table 1** outlines the phone numbers of the relevant government agencies and emergency services that may be required to be contacted during and in response to an emergency.

The procedure for notification in the event of an incident or emergency is to call 000 in the first instance if the incident presents an immediate threat to human health or property. Fire and Rescue NSW, the NSW Police, the NSW Ambulance Service and PANSW (for waterside pollution incidents only) are the first responders, as they are responsible for controlling and containing incidents.

If the incident does not require an initial response agency, or once the 000 call has been made, notify the relevant authorities in the following order:

1. Environment Protection Authority
2. Australian Maritime Safety Authority
3. Health NSW via the Local Public Health Unit
4. WorkCover Authority
5. North Sydney Council

The Operations Manager will notify the EPA of any incident with actual or potential significant off-site impacts on people or the bio-physical environment within 6 hours of occurring. Written details will be provided within 24 hours of the incident or potential incident occurring and a further detailed report containing information on causes and additional necessary preventative measures will be submitted no later than 14 days after the incident or potential incident.

Complying with these notification requirements does not remove the need to comply with any other obligations for incident notification, for example, those that apply under other environment protection legislation or legislation administered by WorkCover.

Table 1: Table of contacts.

Agency	Phone Number
Emergency (Police, Fire, Ambulance)	000
Noakes Group	02 9925 0306
After hours emergency, Operations Manager	TBC

Non-emergency Police incident, North Sydney PAC	02 9956 3199
Non-emergency Fire incident, Fire and Rescue Lane Cove	02 9901 2420
Non-emergency health Incident, Royal North Shore Hospital	02 9926 7111
Environment Protection Authority (EPA)	131 555 (24 hours)
Health NSW	02 9382 8333
North Sydney Council	02 9936 8100
WorkCover	13 10 50
Sydney Water	13 20 90 (24 hours)
Department of Planning, Industry and Environment	1300 305 695
Australian Maritime Safety Authority	1800 641 792
NSW DPI – Fisheries	1300 550 474
NSW DPI – Aquatic Pest & Disease Reporting hotline	1800 675 888
NSW DPI – Invasive Plants and Animals enquiries	1800 680 244
Port Authority of NSW	02 9296 4999

3.5 Spill Response Procedures

The design features of the FFD ensure that spills that occur on the FFD are contained and prevented from entering the waters of Berrys Bay. Either end of the FFD is enclosed by a bund that is intended to contain any accidental minor spills or leaks of petroleum or other chemicals. This bunded area is connected to a collection sump which can be pumped to the wastewater treatment facility on land.

In the event of a spill from the FFD into the waters of Berrys Bay the following steps should be undertaken:

1. isolate the cause of the spill and prevent as much product from entering the water as possible;
2. notify the Operations Manager;
3. the Operations Manager will then notify the EPA; and,
4. provide information and undertake an investigation of the spill as directed by the EPA.

3.6 Biosecurity Incidents

Exotic pests or diseases may be detected during a biosecurity incident, or they may only be suspected. For example, discovering webbing, borer holes, egg masses, or soil contamination are all examples of an actionable biosecurity incident. In the event of a biosecurity incident the following steps should be taken:

1. isolate the detected or suspected biosecurity risk immediately;
2. notify the operations manager;

3. the Operations Manager will then notify Department of Agriculture, Water and Environment (1800 798 636) and the NSW Department of Regional NSW including the Department of Primary Industries (1800 680 244); and,
4. follow direction of biosecurity officers.

The site should have a biosecurity incident kit including:

- Gloves
- Face mask
- Minimum of 2 specimen collection jars
- Hazard tape
- Knockdown spray
- Medical grade disinfectant

3.7 De-ballasting System Failure

In the event that the de-ballasting system of the FDD fails (pumps, generators, or electrical connection to land) the FDD must be removed from site to deeper water to avoid grounding on low tide. All vessels 30m and over in length, must comply with the Sydney Harbour Vessel Traffic Service (VTS) including the requirement to maintain a listening watch on VHF channel 13. The FDD shall comply with all other requirements outlined on the license certificates. In the event the de- ballasting system fails and the FDD is moved, the Sydney Harbour office of the Port Authority of NSW should be contacted on (02) 9296 4999 to discuss the movement of the FDD.

3.8 Marine Collision or Incident

In the event of a marine collision or incident, AMSA and PANSW shall be notified. An incident alert (Form 18) shall be submitted to AMSA within 4 hours and an incident report (Form 19) must be issued within 72 hours.

3.9 Incident Records

All environmental incidents and emergencies that occur at the FFD will be recorded in an incident register. The incident details that are to be recorded include:

- name and position of person reporting the incident
- date and time of the incident
- incident location, including address
- incident description/ category (i.e. water pollution, odour, landside pollution etc.)
- incident classification as per **Section 3.4.1**
  details of the incident including contributing factors
- whether the incident was reported to external authorities, including date/ time of notification
- details of the incident response, including clean-up/ remedial actions, who attended etc
- details of damage, short and long term
- if any follow up or corrective actions are required, who is responsible, what timeframe etc.
- if required, close out of follow up action.

4 Reporting and Auditing

4.1 Records

All records required to be kept by this OMP shall be kept for a minimum of five (5) years and shall be available for examination by a suitably qualified person authorised to inspect the OMP. A copy of the project approval and all relevant environmental approvals will be available at the site at all times. All documents required under the project approval will be available for public inspection on request (subject to commercial confidentiality).

A public website shall be maintained that provides information on use of FDD, including:

a. schedule for loading and unloading vessels, including time and date for loading and unloading vessels and the name of the vessel.
    - the schedule shall be available 7 days in advance;
    - emergency dockings are exempt from the requirement to provide a schedule 7 days in advance. However, the schedule should be updated as soon as practical; and,
    - a change in date of dockings to suit the weather, within a 7 day period of the original planned date, shall be exempt from the requirement to provide the schedule 7 days in advance. However, the schedule should be updated as soon as practical.
b. name, tonnage, dimensions and registration of all vessels that have been or are scheduled to be docked on the FDD.
c. record of vessel loaded and unloaded on the FDD including:
    - time at commencement of FDD being submerged;
    - time when submergence of FDD is complete; and,
    - time when flotation of FDD is complete (Phase 5).
d. measured tidal water level during loading and unloading of vessels.
e. weather conditions during loading and unloading of vessels.

4.2 Document Currency

The currency of all copies of the OMP shall be reviewed annually to ensure that current versions of the OMP are available to staff and contractors and obsolete versions are removed to avoid errors and confusion. OMP currency will also be maintained via controlled distribution of new revisions, as they become available, to relevant staff and contractors (with obsolete versions removed concurrently).

4.3 Action Tracking Register/Compliance Tracking

Non-conformances/corrective actions as a result of events, incidents, audits or inspections will be documented in a FFD action register.

5 OMP Review

The OMP shall be reviewed after the first 6 months of operations to ensure that it adequately addresses the identified issues. Follow up reviews shall take place every three (3) years after that, or when operational change warrants an update of the OMP. The review will be undertaken by Noakes FFD Managing Director and will consider as a minimum:

- FFD staff input;
- any relevant agency input;
- maintenance/ operational activity details;

- environmental monitoring outcomes;
- incidences and non-conformances;
- changes in organisational structure and responsibilities;
- changes in standards and legislation; and,
- all relevant sub-plans.

6 References

Department of Infrastructure, Planning and Natural Resources. (2004). *Guideline for the Preparation of Environmental Management Plan .* Sydney .