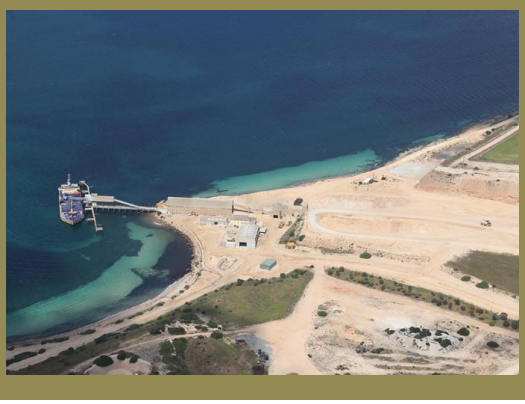
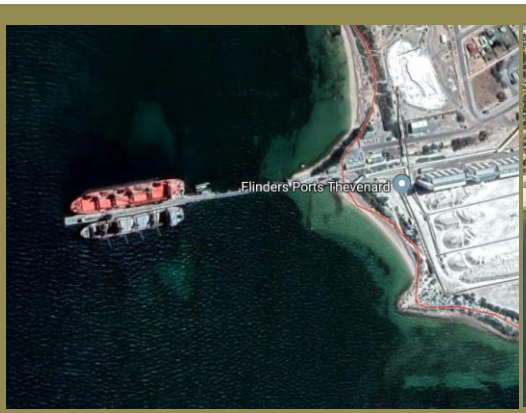
Flinders Port Holdings

Version 7.0 2019


South Australian Flinders Ports

OIL SPILL CONTINGENCY PLAN




Contents

1. Acronyms and Definitions

AIIMS	Australasian Inter-Service Incident Management System
AFAC	Australasian Fire and Emergency Service Authorities Council
AMOSC	Australian Marine Oil Spill Centre
AMSA	Australian Maritime Safety Authority
CFS	Country Fire Service
Control Agency	Agency or Company assigned by legislation or within the relevant contingency plan, to control response activities to a maritime environmental emergency
Designated Port Waters	Those waters as indicated at Appendix A of this Plan, for the Flinders Ports managed ports of Port Adelaide, Klein Point, Port Giles, Port Lincoln, Port Pirie, Thevenard and Wallaroo. (Reference to South Australia's Harbors and Navigation Regulations 2009 Schedule 4)
DEWNR	Department of Environment, Water and Natural Resources
DPTI	Department of Planning, Transport and Infrastructure
EEZ	Exclusive Economic Zone
EMA	Emergency Management Australia
EPA	Environmental Protection Agency
ESC	Environmental Scientific Coordinator
FSP	Flinders Ports First Strike Plans for each port
GMMO	Flinders Ports General Manager Marine Operations
HFO	Heavy Fuel Oil
IAP	Incident Action Plan
IBC	Intermediate Bulk Container (capacity 1000 litres)
IC	Incident Controller
ICC	Incident Control Centre
IFO	Intermediate Fuel Oil
IMT	Incident Management Team
Level 1	A level 1 spill is defined as an incident that can be resolved through the application of local or initial resources only
MFS	Metropolitan Fire Service
NATPLAN	National Plan for Maritime Environmental Emergencies
NEBA	Net Environmental Benefit Analysis
NOPSEMA	National Offshore Petroleum Safety & Environmental Management Authority
OSCP	Oil Spill Contingency Plan
OSRA	Oil Spill Response Atlas
OSTM	Oil Spill Trajectory Model
SA	South Australia
SAMSCAP	South Australian Marine Spill Contingency Action Plan 2016
SDS	Safety Data Sheet
SEMP	State Emergency Management Plan
SITREP	Situation Report
SMPC	State Marine Pollution Controller
TSB	Towable Storage Bladder

2. CONTEXT

This Oil Spill Contingency Plan (OSCP), and the individual Flinders Ports First Strike Plans (FSP) for each port, should be read in conjunction with the South Australian Marine Spill Contingency Plan (SAMSCAP) 2016.

2.1 Purpose

This Plan outlines the arrangements for Flinders Ports, in responding to Level 1 marine oil pollution incidents, that impact on, or have the potential to impact on, designated Port Waters (as defined by the SA Harbors and Navigation Act 1993), and as managed by Flinders Ports.

A level 1 incident is defined as generally a small spill, or a spill of non-persistent oil, which does not normally threaten to significantly impact shorelines, or other sensitive resources. The control agency (Flinders Ports) will generally be able to respond to, and clean up the spill, using local resources.

These arrangements include the preparedness for and the response to a spill, and the capability maintenance at Flinders Ports.

This Plan and the FSP's document the response actions, the local response resources, the generic sensitivities at risk, and the reporting procedures, consistent with the identified risks.

2.2 Objectives

The objectives of the Flinders Ports OSCP are to –

- Describe the responsibilities of Flinders Ports in preparing for, and responding to, a marine pollution incident in designated Port waters.
- Describe the procedures to be followed for a response to marine pollution incidents in designated Port waters.
- Outline response priorities and the strategies required to minimise the impact of a marine pollution incident on the natural, commercial and socio-economic sensitivities of the affected area.
- Identify resources (people, vessels and equipment) required to affect an appropriate response to a spill.
- Provide an interface with the Department of Planning, Transport and Infrastructure (DPTI) for the request and co-ordination of assistance from state, national and other jurisdictions, when required.
- Integrate the Flinders Ports OSCP with the South Australian Marine Spill Contingency Action Plan (SAMSCAP), and other Plans as necessary.

2.3 Authority and Responsibility

2.3.1 Commonwealth legislation

The key Commonwealth legislation relevant to marine pollution is the Protection of the Sea (Prevention of Pollution from Ships) Act 1983 and its Regulations. This legislation implements the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) and the International Convention on Oil Pollution Preparedness, Response and Co-operation 1990 (OPREC), and applies to all waters within Australia's Exclusive Economic Zone (EEZ).

2.3.2 State legislation

The key South Australian legislation relevant to marine pollution, is the Protection of Marine Waters (Prevention of Pollution from Ships) Act 1987, and its 2013 Regulations. This legislation prohibits the discharge of oil, noxious or hazardous substances (including garbage) within State waters from ships and land sources and makes provision to –

- Allow prescribed authorities to remove oil, noxious and hazardous substances in order to mitigate the effects of marine pollution.
- Empower the Minister for Transport and Infrastructure to take possession of a ship, apparatus or cargo in order to prevent or mitigate pollution
- Recover all direct expenses and liabilities arising from the discharge of oil, noxious or hazardous substances
- Intervene in any pollution incident or suspected pollution incident.

2.4 State and National arrangements

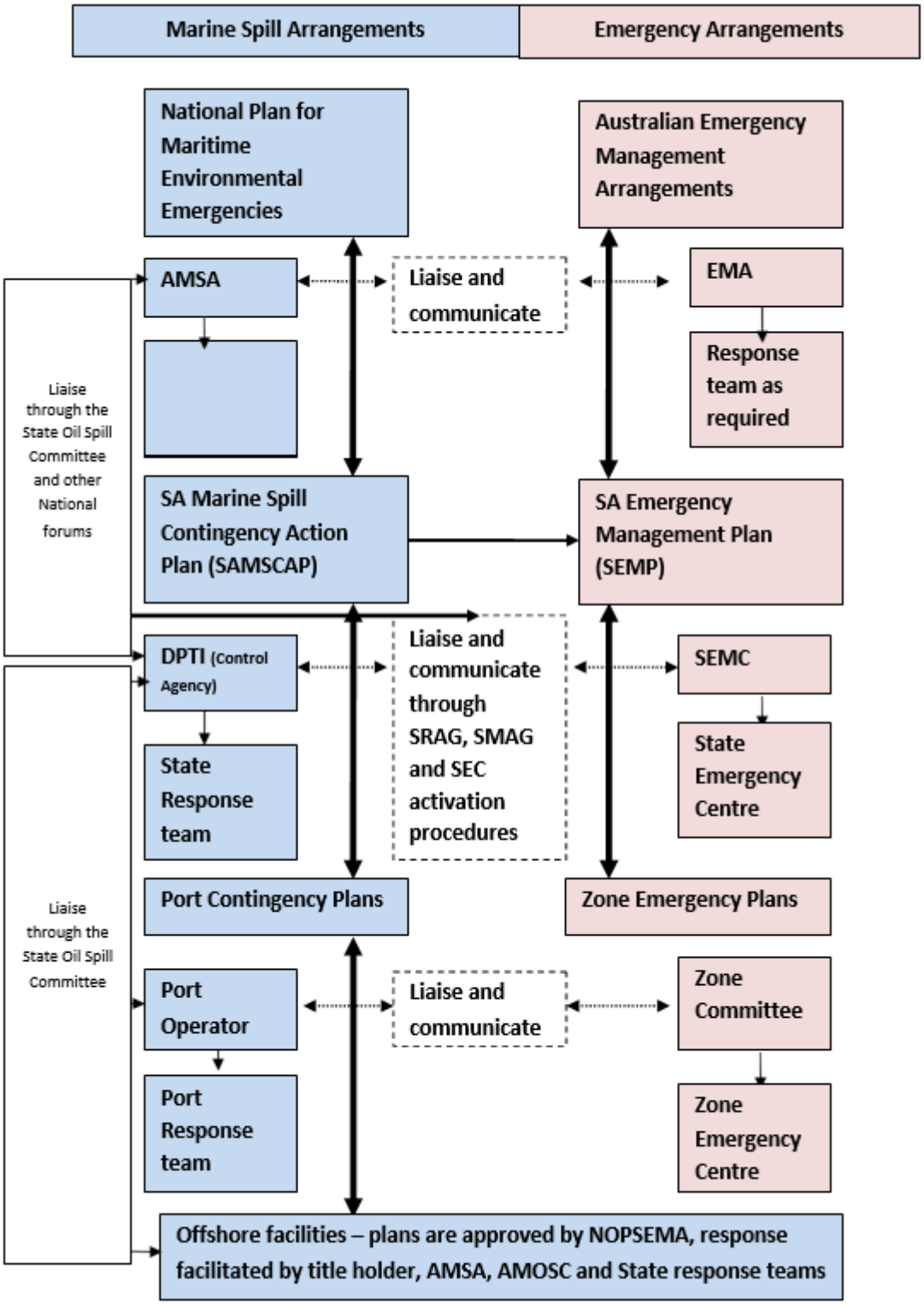
2.4.1 Plan integration

Flinders Ports OSCP operates within the framework of the National Plan for Environmental Emergencies. The National Plan requires jurisdictions to establish contingency planning requirements within their jurisdiction, and ensuring that those plans are current and effective.

The South Australian contingency plan (SAMSCAP), which is an annex to the State Emergency Management Plan (SEMP), requires the Port and Facility operators to produce an oil spill contingency plan (OSCP). The Flinders Ports OSCP integrates within the framework of the SAMSCAP. The Flinders Ports OSCP supports Flinders Ports First Strike Plans (FSP) for each of its seven ports - Port Adelaide, Klein Point, Port Giles, Port Lincoln, Port Pirie, Thevenard and Wallaroo.

The Flinders Ports OSCP and the FSP's are noted by the Dept. of Planning, Transport and Infrastructure (DPTI). Under the requirements of the State Plan (SAMSCAP), Flinders Ports is the Response or Control Agency for level 1 oil spills, in Flinders Ports designated port waters. The procedures and support mechanisms under SAMSCAP may be initiated to provide additional assistance, not available locally, when a marine pollution incident exceeds the capacity of the port to effectively contain and/or clean up the spill. Other Plans, including the SA Response Plan for Oiled Wildlife, may be enacted in the event of an oil spill. The Flinders Ports OSCP will integrate with those Plans, as depicted in the following flowchart.

Integration of State Oil spill and Emergency arrangements



Flowchart from: South Australian Marine Spill Contingency Plan (SAMSCAP) 2016, Section 3.1

2.5 Plan Activation

The Authority to activate this Plan will come from the designated Incident Controller for each port, or the General Manager Marine Operations (GMMO). The Plan will be activated when a confirmed oil spill of a level 1 scope, is required to be responded to by Flinders Ports, within its designated Port waters. The Plan may also be activated in larger spills in Port, State or Commonwealth waters, at the initiation of the State Marine Pollution Controller or AMSA Incident Controller (IC).

3. SCOPE

3.1 Geographic areas of operation

This OSCP applies to all level 1 marine oil spills that occur in, or are present in, the designated port waters of **Port Adelaide, Klein Point, Port Giles, Port Lincoln, Port Pirie, Thevenard** and **Wallaroo**. This includes the shorelines adjacent to these waters, if impacted by a marine oil spill from within port waters. Plans of the Ports, indicating the areas of these designated port waters, are attached Appendix A.

3.2 Incident Control Centre (ICC) locations

The location of the specific ports ICC's are listed at Appendix C of this plan, and in the First Strike Plans for each port. The Flinders Ports Crisis Management Control Centre is located at Flinders Ports Marine Operations Centre, GATE C, Berth 2, Level 1 Passenger Terminal, Outer Harbor, Port Adelaide, South Australia.

3.3 Equipment storage locations

The location of each ports response equipment and resources is included in each port specific First Strike Plan at section 5.3.

3.4 Stakeholders

The following table contains a list of potential stakeholders and their function, who may be involved with a marine oil spill in port waters. It is not a definitive list.

Stakeholder	Function
Australian Maritime Safety Authority (AMSA)	Manages the National Plan. Combat Agency for spills in Commonwealth waters
Australian Marine Oil Spill Centre (AMOSC)	Provides personnel, equipment & training to Oil Industry participants
Dept. of Planning, Transport & Infrastructure (DPTI)	South Australian government department responsible for marine pollution response. State Statutory and Control agency.
Dept. of Environment, Water and Natural Resources (DEWNR)	Statutory Authority for protection of wildlife. Control Agency for oiled wildlife response
Environment Protection Authority SA (EPA)	Review compliance with facilities licences. Provide Environmental Scientific Coordinator. Coordinates OSRA.

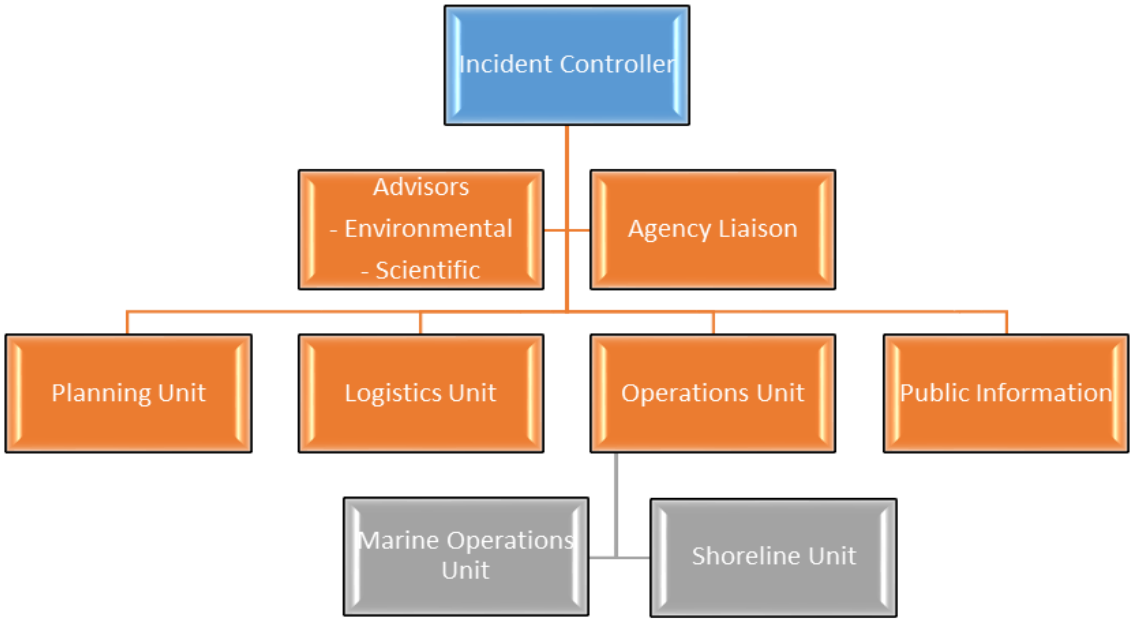
Department of State Development (DSD)	Statutory authority for spills from offshore exploration and production activities in State waters.
SA Police	Emergency management issues. Public order and security.
SA Metropolitan Fire Service (MFS) and Country Fire Service (CFS)	Control Agencies for land based and in-water hazardous material incidents in inland waters
Port Authorities	Control or Response agency for level 1 spills in port waters
Local Councils	Provision of assistance in a spill incident – equipment & personnel for shoreline response
Industry Oil companies	Trained spill response equipment/personnel available for immediate response from their facility.

4. PREPAREDNESS

Flinders Ports will ensure that it has the capability to provide the resources to manage, and respond to, a Level 1 oil spill incident in its port waters. This capability will be provided by, and maintained through, the provision of resources, training and exercising. The management of any incident will utilise the following guiding principles.

4.1 Incident Control Structure

The control structure of any incident will be managed utilising the AIIMS based model of incident management. This incident control structure is based on functional management, is flexible and scalable to suit any level of response. The AIIMS incident management principles are explained in detail in the AIIMS manual 2017 Edition produced by the Australasian Fire and Emergency Service Authorities Council (AFAC). With a level 1 oil spill incident, the Incident Management Team (IMT) will typically follow the structure in Figure 1. The scale and complexity of the response, and the amount of resources required to respond, will determine what positions are to be filled in the structure. Figure 1: Typical Level 1 IMT structure



4.2 Incident Management Team (IMT)

Flinders Ports Incident Management Team will consist of an Incident Controller in the first instance.

The Incident Controller for all Level 1 incidents will be the General Manager Marine Operations or the Chief Pilot in Port Adelaide. This may be delegated to the Regional Manager on as needs basis.

Regional Port Managers will respond to incidents at Klein Point, Port Giles, Port Lincoln, Port Pirie, Thevenard and Wallaroo as the initial Incident Controller.

The General Manager Marine Operations may assume the role of Incident Controller at any stage of the incident, with notification to the Regional Port Managers and the Chief Pilot.

Upon clarification of an oil spill incident that requires a response by Flinders Ports, the Incident Controller will implement an Incident Management Team, commensurate with the size, complexity, actual & potential sensitivity impacts, potential duration of the response, and the resource requirements.

The functions within the IMT, will be filled by personnel locally at the ports, and by Flinders Port's personnel at Head office.

The following Incident Management Team roles and responsibilities will vary depending on the scale of the response.

The following Roles and Responsibilities are taken from the **National Plan** developed Incident Control Aide-memoire, which is derived from the Australasian Fire and Emergency Service Authorities Council's Incident Management System Aides-Memoires Fourth Edition 2013, and have been scaled down to reflect a response under a level 1 incident rating.

4.2.1 Incident Controller Role & Responsibilities

Roles

- Overall responsibility for the management of all activities and personnel, deployed to resolve the incident
- Establishment of systems and procedures for the safety, health, and welfare of all response personnel and the community who may be involved
- Issuing of warnings and incident information to the community and affected stakeholders
- Management of the relationship with agencies and people affected, or likely to be affected, by the incident
- Liaison with the DPTI Duty Officer, and/or the State Marine Pollution Controller, (if activated), to ensure the response is managed and coordinated effectively.

Responsibilities

- Take charge and exercise leadership, including the establishment of the incident management structure
- Set objectives for the incident response, considering the safety of responders and the community as a priority

- Develop and approve plans and strategies to control the incident
- Implement the Incident Action Plan (IAP) and monitor its progress
- Provide information and warnings to communities so that they can make informed decisions
- Establish effective liaison and cooperation with all relevant agencies, affected communities and others external to the IMT
- Obtain and maintain human and physical resources required for the resolution of the incident
- Apply a risk management approach, and establish systems and procedure for the safety and welfare of all response personnel
- Ensure effective communications with the DPTI Duty Officer and/or State Marine Pollution Controller, when activated
- Ensure appropriate financial delegations are in place and these delegations are made known to the appropriate response personnel.
- Ensure relief and recovery considerations are addressed
- Ensure collaborations between response and recovery agencies.

4.2.2 Operations Unit

Roles
- Implementation of strategies to resolve the incident
- Management of all activities that are undertaken in the field
- Management of all resources (people and equipment) assigned to the Operations Unit.

Responsibilities
- Obtain a briefing from the Incident Controller
- Establish the Operations Unit appropriate to the size and complexity of the incident
- Appoint sub-unit coordinators as required and delegate tasks
- Manage the personnel within the Operations Unit
- Adjust structure of the Operations Unit throughout the incident if required
- Provide a safe working environment for personnel in Operations Unit
- Establish & maintain a log of activities & decisions for the Operations Unit
- Communicate Unit performance to the Incident Controller
- Prepare shift handover and brief incoming Operations Officer
- Manage the continuity of Operations activities across shift changes.

4.2.3 Planning Unit

Roles
- Evaluation and analysis of intelligence on the current and forecast situation
- Preparation of options analysis, and development of incident objectives and strategies
- Undertake risk assessments
- Prepare and distribute the IAP, monitor and review the IAP implementation
- Develop a Communications Plan for the incident (as part of the IAP) & other plans, as required
- Collect and maintain information on resources allocated to the incident
- Provision of management support services.

Responsibilities

- Obtain a briefing from the Incident Controller
- Establish the Planning Unit appropriate to the size & complexity of the incident
- Appoint sub-unit coordinators as required and delegate tasks
- Manage the personnel within the Planning Unit
- Adjust the structure of the Planning Unit throughout the incident
- Provide a safe working environment for personnel within the Planning Unit
- Establish and maintain a log of activities and decisions for the Planning Unit
- Communicate Unit performance to the Incident Controller
- Prepare shift handover and brief incoming Planning Officer
- Manage the continuity of Planning activities across shift changes

4.2.4 Logistics Unit

Roles

- Providing support for control of the incident through the organisation and provision of –
  - Human and physical resources
  - Facilities (Such as the ICC, equipment staging area, shoreline staging areas, wildlife rehabilitation facilities, forward operating bases, etc.)
  - Services
  - Materials
- Providing support and control for the demobilisation of equipment and services

Responsibilities

- Obtain a briefing from the Incident Controller
- Establish the Logistics Unit appropriate to the size and complexity of the incident
- Appoint sub-unit coordinators as required and delegate tasks
- Manage the personnel within the Logistics Unit
- Adjust the structure of the Logistics Unit throughout the incident
- Provide a safe working environment for personnel in the Logistics Unit
- Establish and maintain a log of activities & decisions for the Logistics Unit
- Communicate Unit performance to the Incident Controller
- Prepare shift handover and brief incoming Logistics Officer
- Manage the continuity of Logistics activities across shift changes

4.2.5 Public Information Unit

Roles

- Dissemination of information, advice and safety messages to the public
- Provision of timely and relevant information and safety messages to those who may be impacted by the incident
- Ensure that the State Marine Pollution Controller is involved in the development and approval of media releases
- Ensure that the State Marine Pollution Controller is kept up-to-date regarding media conferences and media releases

Responsibilities

- Obtain a briefing from the Incident Controller
- Establish the Public Information Unit (PIU) appropriate to the size and complexity of the incident
- Appoint sub-unit coordinators as required and delegate tasks
- Manage the personnel within the PIU
- Adjust the structure of the PIU throughout the incident
- Obtaining information on the current and projected incident situation from the Planning or Intelligence Unit when established
- Maintain ongoing communications with the Planning/Intelligence Unit regarding accuracy of information released to the public
- Disseminate incident information & liaise with public & affected communities
- Liaise and coordination with other agencies media personnel to endure one consistent picture is provided to the public and affected communities
- Provide a safe working environment for personnel within the PIU
- Establish and maintain a log of activities and decisions for the PIU
- Communicate Unit performance to the Incident Controller
- Prepare shift handover and brief incoming Public Information Officer
- Manage the continuity of Public Information activities across shift changes

4.3 Levels of Response

The National Plan provides for three levels of response for a marine pollution incident. Flinders Ports is required to respond to incidents of a level 1 scope, within its port waters.

Level 1 response is defined as –
*Local Response. A small spill requiring a local response. A spill response undertaken by a Port or Facility Operator or other Responsible Party. These are generally small spills or spills of non-persistent oils which do not threaten to impact shorelines or other sensitive resources. The Responsible Party or the facility in which the spill occurred is responsible for response, which will generally be able to respond to and clean-up a spill using local resources. In areas where a responsible party cannot be located, DPTI may respond. **

Level 2 and 3 responses usually require regional, state and/or national assistance.

Where the Level 1 response by Flinders Ports is –

- beyond the capability of Flinders Ports; and/or
- is of a spilled volume that exceeds 10 tonnes; and/or
- the potential for economic or environmental harm exceeds *Low* or *Not Significant* harm,

the response has to be escalated to level 2 or higher, through notification to DPTI Incident Controller or SMPC.

When this escalation situation occurs, a written handover to the DPTI Incident Controller or SMPC, indicating acceptance of the responsibility in responding, must be received in writing at the time of the handover, by the Flinders Ports Incident Controller. *Note that the SAMSCAP refers to both Level 1 and Tier 1 spills. The Tier 1 spills are referenced as a spilled volume of < 10 tonnes.*

* From the South Australian Marine Spill Contingency Action Plan (SAMSCAP)

4.4 Risk Identification

This section identifies general risks associated with shipping and port operations. More specific port-based risks are identified in the **Port First Strike plans** referenced at section 4.5 of those Plans.

4.4.1 Spill risks

Flinders Ports receive an average of around 1830 ship visits per annum across the 7 ports (past five-year average). The 2017 calendar year numbers show a five-year 2% year on year increase in numbers, broken down to the following ports –

- Klein Point – 266
- Port Adelaide – 1388
- Port Giles – 25
- Port Lincoln – 93
- Port Pirie – 68
- Thevenard – 100
- Wallaroo - 33

4.4.2 Types and Quantities of potential spills

Using 2017 data, of the ships utilising Flinders Ports, 130 visits (9.5% of all ships) were by tankers into Port Adelaide, one tanker (1.5% of all ships) into Port Pirie, and 8 tankers (8.5% of all ships) into Port Lincoln, representing approximately 2,600,000 (Port Adelaide), 5,500 (Port Pirie) and 60,000 (Port Lincoln) tonnes of bulk liquids discharged or loaded. The vast majority of these cargoes will be refined petroleum products – Diesel, ULP, PULP and Avgas types, but also included vegetable and animal oils.

The other vessel types are made up of predominantly dry bulk and container vessels (Adelaide). The specific risk from these types of vessels, is from a spill of fuel carried as bunkers, normally an HFO 380 or IFO 180. The risk is from a bunkering operation, or fuel transfer operation on-board the ship, or from a rupture of a tank through a collision or grounding. Smaller quantities of diesel and other lighter products are also carried by these types of vessel.

Smaller commercial vessels and cruise vessels normally tend to utilise diesel or marine diesel as their bunker fuel.

All vessels will carry smaller quantities of lubricating and hydraulic oils.

The more probable risk for Flinders Ports lies with small spills from tanker cargo transfer operations, normally less than 20 tonnes volume, and would normally be a refined product. There are inherent risks associated in dealing with these products listed at section 4.5.2 of this Plan.

A vessel grounding or collision may also result in a spill. Recreational and smaller commercial vessels are susceptible to lesser spills of lighter products, and larger commercial vessels will potentially spill bunker fuel oils. A grounding is an uncontrolled event, and the ability to rapidly prevent a loss of oil, is limited by many factors. The loss of oil in a grounding with a larger vessel, is usually an instantaneous loss, and the volume could exceed hundreds of tonnes of oil.

Shore-based facilities that handle hydrocarbons in bulk, whether importing or exporting fuels or oils, or bunkering vessels, pose a greater potential risk for spills. This risk is typically from the infrastructure ashore, where failures of valves, pipelines and bunded areas, may allow oil to enter State and Port waters.

Smaller vessel operations such as re-fuelling, slipping, groundings, collisions and bilge discharges are relatively common place, but normally involve smaller quantities of lighter oils.

Lesser risks (due to the smaller quantities involved) in port areas and waters, originate from stormwater run-off through drains; stevedoring operations involving land-based incidents and the loss of hydraulic type oils; and ship cargo equipment loss of hydraulic type oils.

4.4.3 Sensitivities at Risk

Ecological risks
Generally, in port areas, the environmental risks are associated with the exposed inter-tidal ecosystems on shorelines, and significant mangrove areas in some ports. These areas will support substantial numbers of marine, mammal and bird life, particularly in Marine parks, National parks and Conservation areas. The protection of both the fauna and their habitat in which they breed, roost and feed, is a key response priority. Mangrove areas are a key focus of all oil spill responses, and are considered near the top of the sensitivity list of protection priorities.

With some products, particularly diesel, a degree of dissolution into the water column can occur, and that potentially will affect sub-surface species like fish and mammals, along with sub-surface organisms like seagrass and coral.

Extensive seagrass beds occur around some of the ports.

There are extensive sanctuary zones and marine parks throughout South Australia. Locations can be accessed through National Parks South Australia website
http://www.environment.sa.gov.au/marineparks/find-a-park

Economic risks
Oil spills will potentially affect the operation of a port, by restricting vessel movements whilst clean-up operations are underway. Commercial vessel operators in the tourism and fisheries industries could also be affected. Aquaculture industries operating in or near port waters could be seriously affected by impacts into their areas of operation. Diesel dissolved into the water column could impact on caged aquaculture. Other economic activities that may be affected, include shore-based and on-water tourism ventures, restaurants and hotels, accommodation facilities, commercial fishing, and sea-water intakes. Local knowledge is essential in determining economic assets that may be impacted by a spill.

Socio-cultural risks

The effects on cultural, heritage and social amenity can take many forms, but the possibility of impacts on indigenous sensitive areas, marine protected areas, recreational shorelines, and community use areas, need to be considered as protection priorities. Local knowledge and State Environmental and Scientific Coordinator (ESC) advice should be sought, to inform decision making around ecological, economic and socio-cultural risk assessment.

Identified Sensitivities

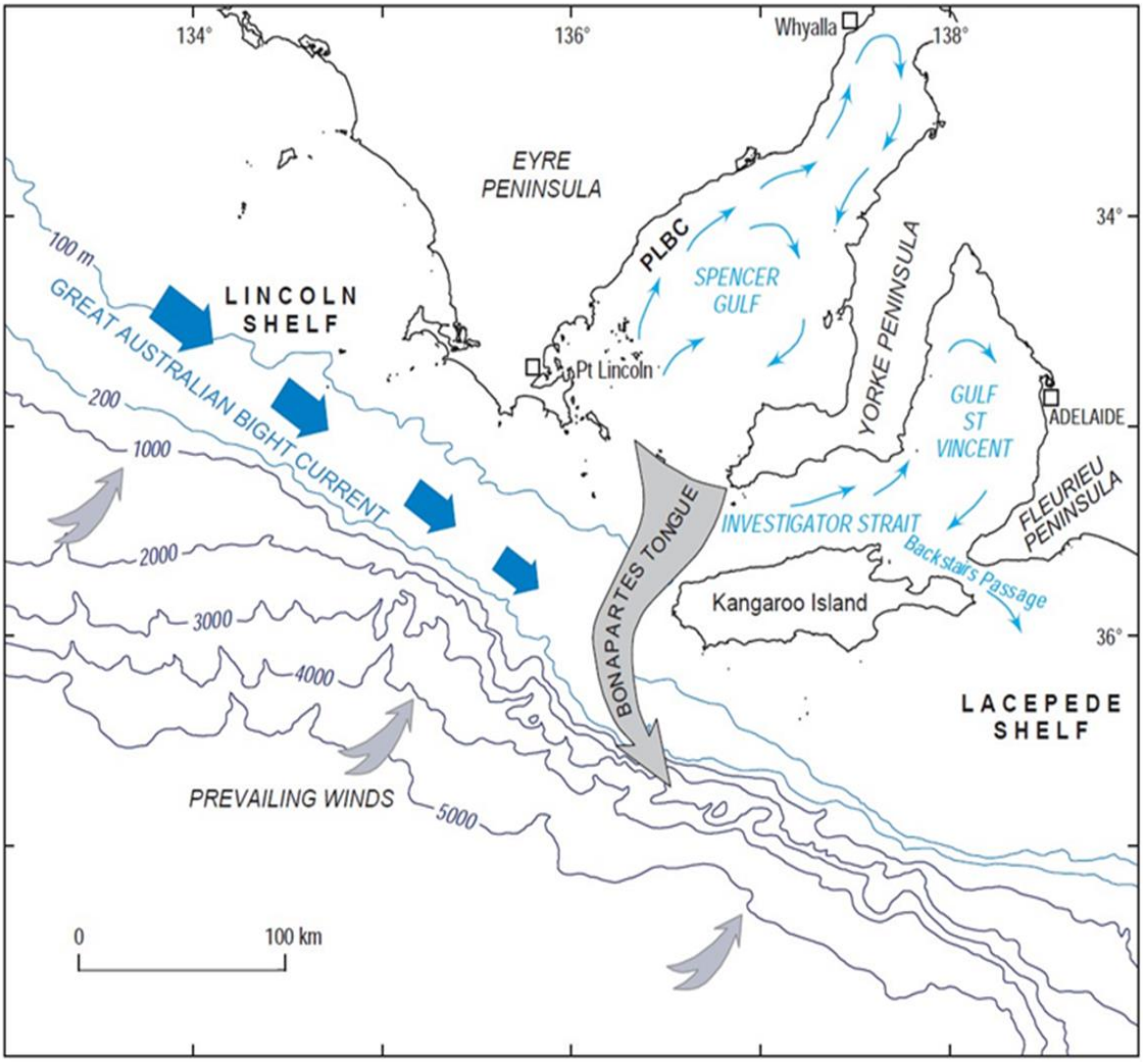
Specific sensitivities for each port area are contained at section 4.5, Appendix B and Appendix C, in the port specific **First Strike Plans (FSP).** The identified sensitivities at section 4.5 and Appendix C, are a general list, compiled from local knowledge, and may not include every sensitivity present. The State Agency DPTI manages a database of sensitivities that is commonly referred to as an Oil Spill Response Atlas (OSRA). A copy of each ports OSRA data is included at Appendix B of the FSP's.

4.4 Spilled Oil Behaviour

4.5.1 Factors affecting oil on water

Spilled oil will travel in a direction on water, that is driven by the full effect of the current (100% current speed) and about 3% of the wind speed. The final direction will be a combination of these effects. The use of vectorisation will assist in determining the probable movement of the oil.

For each of the seven ports of Flinders Ports, a general description of water movement, is provided as part of the First Strike plan at Section 5.5.



From Flinders Ports assessment for Oil Spill Exposure Assessment for New Berth Facilities by RPS APASA 2015

4.5.2 Spilled Products

The following products, are those that are deemed more probable to be spilled into waters managed by Flinders Ports. Safety Data Sheets (SDS) will provide more information on all products, thus the prior identification of the spilled product is paramount in any response.

SDS's are linked at Appendix G.

- **Heavy Fuel Oil (HFO)** – will generally float in all conditions, with emulsification occurring after about 1-2 days. Very little evaporation and/or dissolution will occur.
- **Intermediate Fuel Oil (IFO)** - will generally float in all conditions, with emulsification occurring after about 1 day. Some evaporation and/or dissolution will occur.
- **Diesel** – the majority will float, with a small percentage dissolving into the upper layers of the water column. Diesel will tend to completely evaporate in 24-72 hours depending on air and water temperatures, and the amount of sunlight and wind action that it is exposed to.
- **Premium Unleaded Petrol (PULP) and Unleaded Petrol (ULP)** – will rapidly evaporate with some dissolution. Normally it evaporates within 4-8 hours. It can produce flammable atmospheres in high concentrations in sheltered areas.
- **Avgas/JetA1** - will rapidly evaporate with very little dissolution. Normally evaporates within 1-2 hours. It can produce flammable atmospheres in high concentrations in sheltered areas.

All products, in concentrated amounts, particularly when freshly spilled, can produce flammable (flash point < 60^{o}C) and dangerous atmospheres, and should be approached with caution. *
* Australian Dangerous Goods Code 2015

Testing of atmospheres (Lower Explosive Limit) is recommended when the spilled product is concentrated in confined areas. Expert advice is to be sought from the Metropolitan or Country Fire Services. The effect of the wind will dissipate these atmospheres. Work from up-wind when these situations occur.

With all spilled products – HFO, IFO, most diesel and weathered lighter products, the likelihood of these flammable and dangerous atmospheres occurring, is significantly reduced, once the lighter ends have evaporated or dissipated.

It is highly unlikely that booming operations will ever be undertaken to contain freshly spilled PULP, ULP and Avgas.

Booms can be utilised to protect or deflect these products away from sensitive resources, well downstream of the spill, ensuring that there are NO flammable vapours anywhere near the area in which booming operations are being undertaken.

The Light Ends of these products tend to evaporate rapidly once spilt.

5. INCIDENT REPORTING

All marine pollution incidents are required to be reported under the requirements of SAMSCAP, and is as follows –

Reports of marine pollution events may come from industry, vessel operators or members of the public, and may be made to:

- *Flinders Ports VTS at Port Adelaide (08) 8248 3505 (24/7 number) or call on VHF radio channel 12 – monitored 24/7;*
- *EPA Pollution hotline ((08) 8204 2004 or 1800 623 445 (non-metropolitan callers)*
- *The AMSA Rescue Coordination Centre (1800 641 792 – 24 hours).*
- *SA Police on 000, local police station or Police Communications Call Centre on 131 444*

All reports, if not originally reported to VTS, must be forwarded to the VTS on (08) 8248 3505, as soon as possible. The VTS will record and forward all reports to the Flinders Ports Incident Controller, the relevant internal stakeholders including the relevant General Manager and Group HSE Manager, and to the DPTI Duty Officer.

When reporting a spill, as much detail as possible should be provided, with the following information required as a minimum –

- Determine what the product is
- Determine location of spill source
- Determine whether the product is still leaking
- Determine the direction of movement of the oil – from observation and/or from current and wind data modelling (OSTM)
- Determine the volume of the spill if possible.

The Originator of a spill may initiate a response, and must report the spill to the VTS within 2 hours of the spill becoming known.

Once reported to Flinders Ports, an investigation of the spill is to be undertaken to determine if it occurred in Flinders Ports designated waters. If the spill occurs in Flinders Ports designated waters, and the Originator's response is deemed inadequate, Flinders Ports will intervene in the response, taking control of the response with assistance from the spill Originator.

Where the spill is beyond the capability of the originator or first level / tier response agency to manage (including Flinders Ports), this is to be reported to the VTS who will pass the information onto the DPTI Duty Officer and the SMPC. The SMPC will decide whether or not to activate the SAMSCAP.

6. SPILL RESPONSE STRATEGIES

Prior to commencing any on-water response to a spill, the priority is to determine what the product is.

Commercial quantities of ULP, PULP and Avgas/JetA1 are shipped into some of the ports managed by Flinders Ports, and these are all flammable hydrocarbons with low flash points. In concentrated quantities, flammable atmospheres may be produced, and combustion may occur. Stay up-wind at all times.

Smaller spills from fishing vessels, commercial vessels, and marine re-fuelling locations, can also produce flammable atmospheres with a freshly spilled product.

These spills should only be approached once the Lower Explosive Limit is tested by qualified operators. (Diesel and HFO may produce flammable atmospheres when concentrated in sheltered areas, but it is less likely).

Flinders Ports also imports and exports vegetable oils from Port Adelaide currently. These products, although not containing hydrocarbons, still can severely impact the environment by smothering, and a response is required.

In addition, there could be exposure risks with some products. Safety Data Sheets (SDS) are to be consulted when the product is known.

If the product is unknown, the characteristics must be determined, prior to operating in the immediate area of the spill. This may require spill sampling and testing.

There is an immediate need to determine the movement of the oil. The direction and speed can be ascertained by observation, or by the use of an OSTM, or by manually plotting by utilising wind and current speeds.

Once the location and movement of the oil has been determined, there is a need to ascertain if there is sufficient time to contain the oil, at or near the source of the spill.

There are numerous response strategies available to responders, and these are listed and discussed further, as follows.

6.1 Available Response Strategies

- Monitor and Evaluate
- Contain & Recover – containment booming and sweeping operations
- Protect & Deflect – exclusion or deflection booming
- Vessel propeller wash flushing
- Shoreline Clean-up
- Waste Management
- Wildlife Response

6.1.1 Monitor & Evaluate

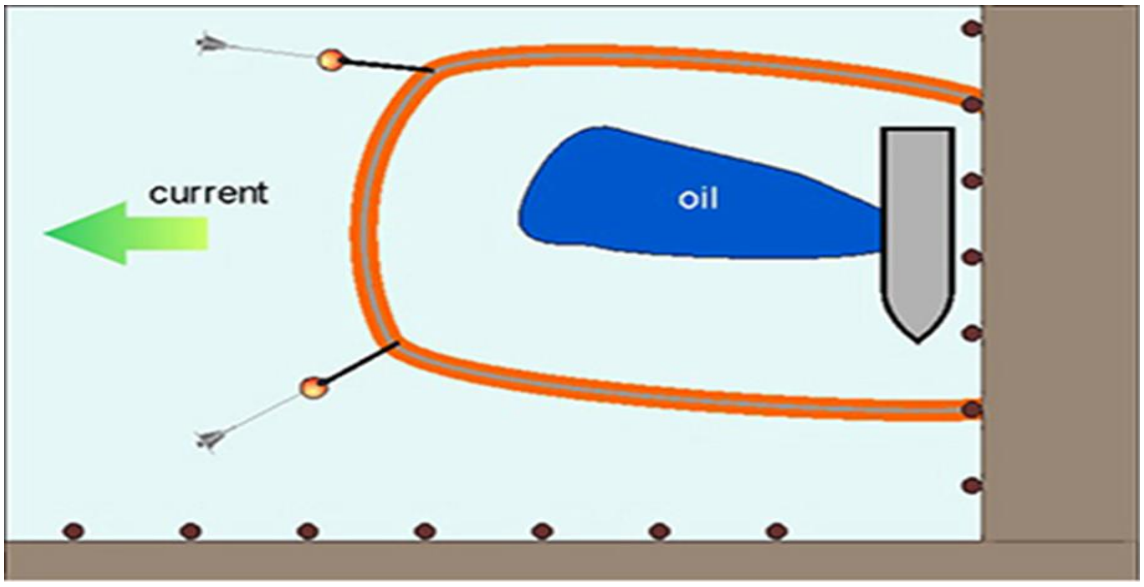
The task of determining the location of a spill and where it is going, in the confined waters of a port, is best served by visual observation. The use of vessels or rotary aircraft should be utilised where daylight permits. The use of local knowledge with tidal and current flows, and the known wind strength, will provide an indication of potential movement. Oil Spill Trajectory Modelling (OSTM) is available commercially to determine the trajectory of the spilled oil. This can take in excess of 2 hours to become available.

6.1.2 Containment & Recovery

The use of booms to contain the spill at the source, or to capture the free-floating oil by undertaking sweeping operations, is explained below. The priority is containment. Recovery of the oil is initially secondary. The most effective response is to contain the oil at the source when safe to do so.

The containment of ULP, PULP, and Avgas/JetA1 at the source of the spill, is not to be attempted on freshly spilled product, without atmospheric testing being undertaken by adequately trained and equipped personnel.

Utilisation of vessels, booms and anchors to encircle or capture the oil where spilt, prevents the spread of oil.



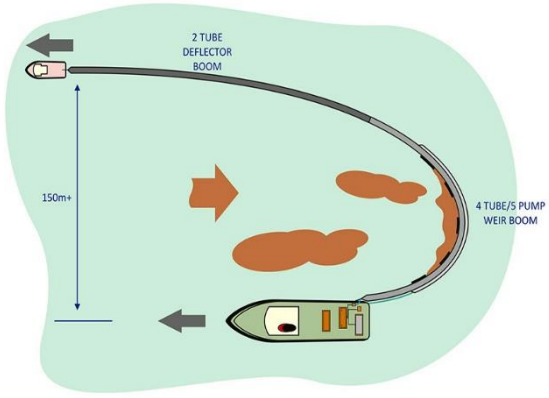
Picture from Massachusetts Government website

The intent is to start at the down-current/wind extremity of the slick, utilising two vessels with boom between them. The boom should be slowly pulled back toward the source, until such time as it can be joined in a circular arrangement around the source, or sealed against a shoreline.

If the source is from a larger vessel or ship, then the boom may be deployed from the bow & stern of the ship rather than encircling it (using the side of the vessel as a barrier to the oil), and anchored off. The same applies if the source is from a drain or pipe, then the boom should be deployed from the shore, either side of the outlet, encircling it, and anchored off.

Once in position, the boom will need to be anchored/secured so that the spill source is contained within the boomed area. The other opportunity with the same boom and two vessels is to run ahead of the spill, and utilise the boom to capture or slow down the rate of spread. This is called boom sweeping operations.

Picture from ITOPF



Picture from Vikoma

Caution should be used with vessel speeds when pulling boom with oil in the apex of the boom. Any speed greater than one (1) knot through the water will tend to release oil underneath the boom.

The generic resources required for this task is listed below. Reference should be made to the equipment list at section 5.3 in the First Strike Plans, to ascertain the specific equipment located in each port; and to determine its storage location; and to determine whether more suitable equipment is required and available.

Once the oil is captured within a boom, the oil is to be recovered by the use of skimmers. Where the thickness of the oil is thin, or the oil is of a lighter type, the use of sorbents may be useful in cleaning up smaller sized spills. Section 6.1.4.

The use of portable storage devices, like floating Towable Storage Bladders (TSB) or barges, are useful in temporarily storing oily/water waste on water. Other methods can utilise IBC's or portable storage tanks on the decks of vessels, as temporary storage.

Equipment Available

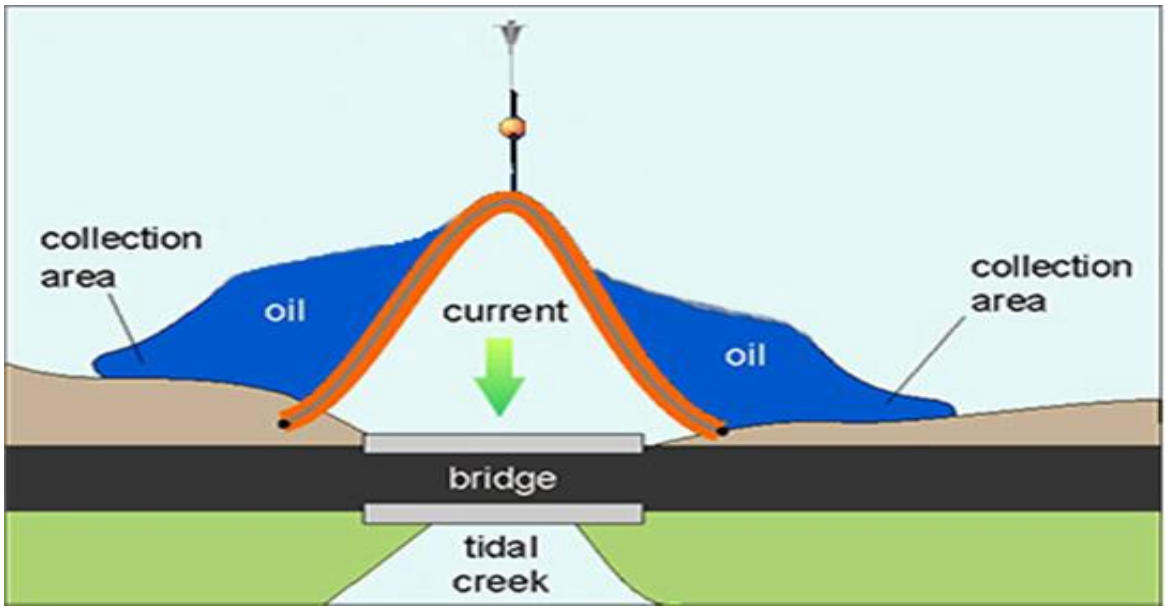
- Vessels of opportunity – adequate horsepower to pull booms through water
- Booms
  - Fence boom
  - Solid flotation boom
  - Self-inflating boom
  - Air inflated boom
- Anchors – size dependent on winds, currents, boom size, depth water
- Storage tanks – TSB's, barges, tanks, IBC's.
- Ancillaries – ropes, hull magnets, shackles, PFD's

The specific resources to undertake containment and recovery operations, is listed in the First Strike plans at section 5.3, for each port.

6.1.3 Protect & Deflect (Exclusion and Deflection Booming)

Where the opportunity does not exist for containment booming at the source of a spill, consider the use of booms to protect sensitivities. Use to deflect or direct oil away from sensitivities, to less sensitive locations, where recovery is easier.

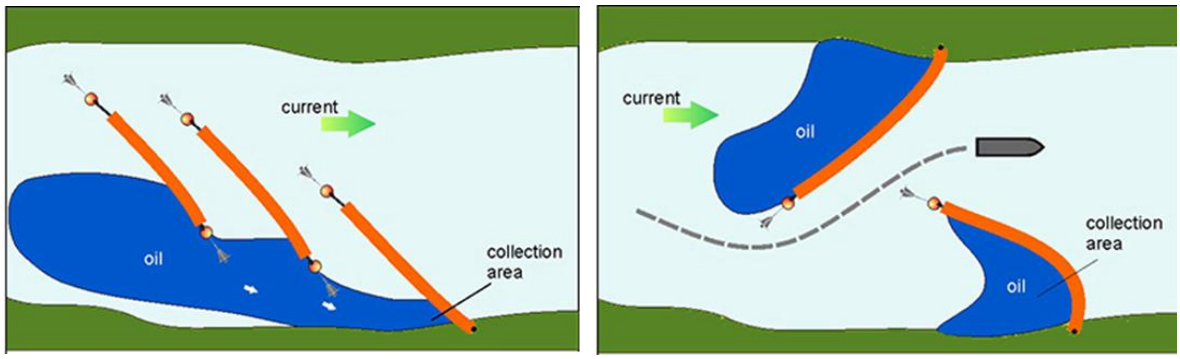
The use of booms in a chevron arrangement is a useful strategy to protect sensitivities that are surrounded by water, or are subject to stronger current influences. Use sufficient lengths of boom to protect the width of the sensitivity, with the mid-point anchored toward the direction the oil flow is coming from, and the two trailing ends anchored or moored either side of the sensitivity, the oil is then deflected to either side of the sensitivity.



Picture from Massachusetts Government

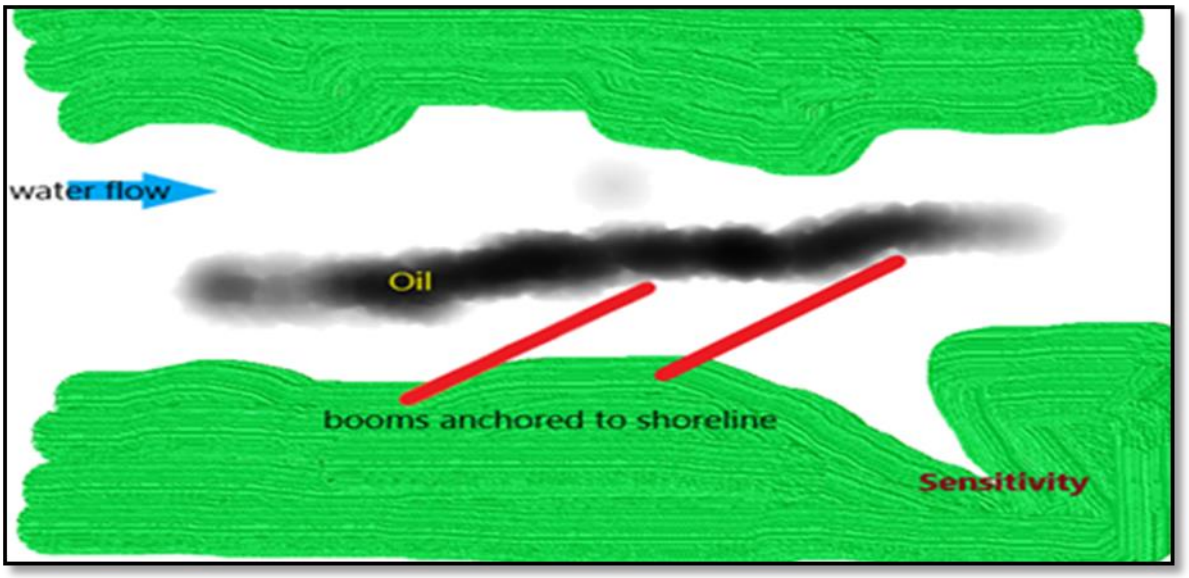
The protection of small individual sensitivities may be successful with the use of protection booms to exclude the oil from impacting the sensitivity. The use of shoreline and solid buoyancy/inflatable booms, anchors, lines and a vessel to deploy, to surround the sensitivity, can be effective strategy.

Another effective booming strategy is the use of the shoreline and solid buoyancy/ inflatable booms, running back against the water flow at angles of < 70o. This directs the oil onto the shoreline where it is more easily collected. This strategy is also used to direct oil onto areas that are less environmentally sensitive (e.g.; heavy oil on a hard-packed sandy beach).



Pictures from Massachusetts Government

Also, this booming strategy can be utilised to deflect the oil away from a shoreline. The boom is run at angles of >110^{o} (with the flow of the prevailing water movement) from a suitable shoreline, to deflect the oil away from the sensitivity.



These strategies can be used ahead of the spilled oil, to protect the potentially impacted sensitivity, and/or direct the oil to a more sheltered and/or accessible area, where product recovery is easier to achieve.

This strategy requires continuous review, as water/oil flow direction can change with tidal current and wind direction changes.

6.1.4 Product Removal

Once oil is contained, the next priority is to remove it from the surface of the water. The use of sorbent materials is a possibility for very small spills where the product spilt is of a lighter nature (e.g.; ULP, PULP, Avgas/JetA1, and Diesel). CAUTION to be exercised around the low flash point products in concentrated amounts. A skimming system is the preferred method of removing oil from the surface of the water.

Equipment suitable for this task includes –

- Weir skimmer
- Brush/disc/drum skimmer
- Oleophyllic skimmer (rope-mop)
- Vacuum skimmer (not to be used on lighter products)
- Vacuum trucks (not to be used on lighter products)

If the spilled oil is contained in a boom offshore, then the use of vessels to deliver and operate the skimming gear at the site of the contained oil is required. Additionally, portable tanks will be required to hold the recovered product.

6.1.5 Vessel propeller wash flushing

The propeller wash from a response vessel may be utilised to direct the surface flow of spilled products away from sensitive areas, and/or into boomed areas for collection, by the gentle use of the wash.

DO NOT UTILISE PROPELLER WASH TO AGITATE THE OIL SO THAT IT MIXES INTO THE WATER COLUMN.

6.1.6 Shoreline Clean-up Operations

When protection strategies do not prevent the oil from impacting shorelines, shore-line clean-up strategies will need to be implemented.

A number of methods can be used to clean shorelines impacted by oil. The selection of a preferred method must be made with regard to -

- Shoreline type (e.g. rock, sand, mud)
- Amount of oil present
- Degree of oil impact
- Properties of the oil (viscosity etc.)
- Distribution of oil on the shoreline, and in the sediments
- Wave energy present
- Accessibility to the shoreline
- Biological and other character of shoreline
- Available equipment and labour

It is important that oiled shorelines are assessed in order to determine:

- Degree of oiling
- Suitable clean-up method(s)
- Accessibility
- Oil remobilisation potential

Shore-line clean-up operations should commence as soon as practical following an impact. The longer the oil is on the shoreline, the greater the impact; the greater the potential for permeation into the substrate; and an increased risk of the oil remobilising on subsequent high tides and depositing on unaffected shorelines.

The shoreline types potentially impacted are:

- Rock Platform and Reefs
- Boulder and Cobble Beaches
- Sand Beaches
- Pebble/Gravel Beaches
- Intertidal Mudflats/Sandflats
- Mangroves
- Man-made structures (wharves, piles, boat ramps, etc)

General guidelines for clean-up are provided in the following table.

Shoreline Type	General preferred Clean-up Method	Optional Methods	Not normally used
Rocky Cliff	No clean-up, natural recovery	Low pressure / High volume flushing	Chemical Dispersants
Rock Platform	Manual clean-up Vacuum pooled oil Natural recovery	Low pressure / High volume flushing	Chemical Dispersants
Boulder	Manual clean-up Mechanical removal of oil and debris	Low pressure / High volume flushing.	Chemical Dispersants
Cobble	Low pressure flushing. Move oiled sediment into surf zone (high energy shorelines) Mechanical reworking of sediment to remobilise the oil	Manual clean-up / removal of oily waste	Chemical Dispersants Excessive removal of oiled sediment
Pebble/Gravel	Low pressure flushing, periodic reworking of sediment and natural cleaning	Mechanical removal of sediment, push sediment into surf zone, manual removal of debris	Chemical Dispersants Excessive removal of sediment
Sandy Beaches	Manual clean-up	Mechanical removal of oiled sediment. Low pressure washing of firm, compacted sediment	Chemical Dispersants Excessive removal of sediment
Mangrove Saltmarsh	No physical clean-up. Natural recovery	Low pressure flushing and containment	Chemical Dispersants. No sediment removal, no intrusion into these areas by clean-up teams
Intertidal Seagrass	No clean-up. Natural recovery. Remove oiled debris by boat at high tide.	Very low pressure flushing may be possible without disturbing sediments	Chemical Dispersants. No sediment removal, no intrusion into these areas by clean-up teams
Shallow Subtidal Seagrass or Kelp	No clean-up. Natural recovery	Oiled fronds may be manually removed when exposed at low tides	Chemical Dispersants Prevent vessels passing through surface oil in these areas
Other Shallow Subtidal areas	No clean-up. Natural recovery		Chemical Dispersants

Numerous shoreline types are found within the Flinders Ports OSCP areas. Each of these is amenable, in varying degrees, to a variety of clean-up methods.

6.1.7 Concurrent operations

The above listed response strategies (both on-water and on-shore) may be undertaken concurrently, to reduce the time the oil remains on the surface of the water and the shoreline, dependent on resources available.

6.1.8 Dispersant use

Dispersants must NOT be used in South Australian State Waters without the authorization of the State Marine Pollution Controller (SMPC). Flinders Ports will not be involved in the application of dispersants.

6.1.9 Wildlife management

The South Australian Response Plan for Oiled Wildlife has been developed and is administered by the Department of Environment, Water and Natural Resources (DEWNR). In the event of an impact of an oil or hazardous and noxious substances spill in State waters, DEWNR officers will be mobilised to manage this component of the response.

6.1.10 Waste management

Any oil recovery operation will generate waste liquid, and potentially solids, thus early consideration of waste storage and transport will need to be planned. Waste will include liquids recovered from skimming operations, as well as solids from impacted shore-lines. A waste management plan will be developed for most responses that will indicate storage capacity available, locations of temporary storage sites, transport arrangements, approvals for transport and disposal, and determination of the final destination of that waste.

6.1.11 Communications

Every response to an oil spill incident will require robust communication systems. Marine VHF radio is used to communicate with vessels and aircraft, and personnel on the ground. The use of mobile phones and UHF radio is also regarded as robust systems, although potentially with “blind spot” locations, in some port areas. South Australia utilises a State-wide digital radio system, which would be implemented in a response, where other forms of communication are insufficient.

7. RESPONSE OPERATIONS

The **first** priority for Flinders Ports, as the Control Agency in all pollution incident responses, is the health, safety and welfare of the community, response personnel and other marine users, and will be considered above all other priorities.

Once health and safety is managed, response activities will focus on the protection of the environment. Other protection priorities will be considered dependant on the location of the incident, prevailing conditions, reality of success and availability of resources.

The following list provides additional examples of protection priorities within State waters, as declared in Section 1.7 of SAMSCAP.

- *Marine, estuarine and shoreline habitat;*
- *Rare and endangered plant and animal species;*
- *Aboriginal and other heritage and cultural resources;*
- *Commercial and recreational fisheries resources;*
- *Private and public property;*
- *Visual and recreational amenity.*

7.1 Incident Control

For any incident where Flinders Ports is responsible to respond to an oil spill, an Incident Controller will be appointed. For a spill in Adelaide waters, the Incident Controller (IC) will be the General Manager Marine Operations or Chief Pilot. For a spill in a Regional Ports, the IC will be the Regional Manager in the first instance. The location of the Incident Control Centres is attached at Appendix C and listed in each ports First Strike Plan.

7.2 Initial Incident Assessment

In order to protect the environment, and minimise the damage to that environment, the management team needs to obtain situational awareness, as a priority. This is gained by the receipt of accurate information (intelligence), and the deployment of resources to undertake surveillance. The Incident Controller is to organise an initial assessment to determine the following, in order of priority -

- Determine what the product is
- Determine location of spill source
- Determine whether the product is still leaking
- Determine the direction of movement of the oil
- Determine the volume of the spill if possible
- Determine local tide times and thus predicted tidal flow direction/speed
- Determine local wind speed and direction
- Identify nearest sensitivities at risk
- Determine areas to be protected
- Undertake notifications as required.

7.3 First Strike response

The Incident Controller is to initiate Flinders Ports First Strike plans, in the event of an incident that occurs in Flinders Ports area of responsibility, and fulfils the requirements of Section 2.5 of this Plan.

The intent of the first strike response is to ensure that the spill effects are limited by stopping the flow of the oil spill, and to take action to prevent the spread of the spill, and to reduce its impact on sensitive resources, when safe to do so.

As indicated at Section 6, the initial identification of the spilled product, is paramount. The source of the spill is to be determined, and a material Safety Data Sheet, or other product assay sheet, is to be obtained as soon as possible.

A plan to identify the spilled product, determine a volume, ensure the flow has ceased, restrict the movement of the product, and/or protect sensitivities, as well as communicate this information to relevant stakeholders, is to be created based on the port specific First Strike Plans. This will require the identification of resources required to respond, the organisation of the transport of resources, and the deployment of those resources.

7.4 Response Implementation

Following the initial assessment, and the initiation of the first strike response, an IMT is to be formed, commensurate with the scale and complexity of the spill.

The appointed Incident Controller will assess the situation as reported, and will determine what level of response is required from an incident response perspective. This is to include what response strategies are to be implemented, the availability of resources, the IMT structure required, and an assessment of incident duration.

An Incident Action Plan (IAP) is a key initial requirement of a response, and is to be developed, commensurate with the size and complexity of the spill. An example IAP is included at Appendix H of this plan.

Notifications are to be undertaken as required under Section 5 of this Plan, and reiterated in the First Strike Plans for each Port.

7.5 Determining and Prioritising Sensitivities for Protection

The Incident Controller is to determine the sensitivities at risk, and determine, through a risk assessment process, the priorities for protection. A Net Environmental Benefit Analysis can be undertaken as a risk assessment process, to determine the protection priorities of sensitivities at risk of impact. The advice of the State Environmental Scientific Coordinator can be sought, with access arranged through the DPTI Duty Officer.

An example of a NEBA is attached at Appendix F of this Plan.

Section 4.5 of the First Strike Plans, lists identified sensitivities at risk, within each port's area, with their sensitivity rating recorded against each of them.

Responders need to be aware that there are potentially small inlets and waterways, as well as other unidentified sensitivities within the port area, that could include seasonal wildlife and mobile sensitivities that may also require protection.

If more than one sensitivity is under threat from a marine oil spill concurrently, then the sensitivity with the highest risk rating should normally be considered for the initial protection action. If there is more than one sensitivity with the same risk rating, then the first to be potentially impacted is to be normally protected initially.

Responders should be aware that there may be sensitivities at risk outside port waters. In the event of a spill potentially spreading from the ports' area, into other areas, then advice should be immediately provided to the DPTI Duty Officer.

In general terms, sensitivities occurring in the inter-tidal zone will be prioritised for protection. There may be a need to protect resources above the normal tidal zone, particularly social and economic infrastructure, by protecting the marine area surrounding these assets, through exclusion booming.

A sensitivity that is sub-surface, is normally not capable of being protected, once the oil is dissolved or physically dispersed into the water column. To protect sub-surface sensitivities, the removal of floating oil as early as possible, is paramount.

7.6 Protracted Incident Management

With an extended period incident, consideration must be given to the provision of relief personnel for all responders. Planning around relief and shift personnel, needs to be considered early in a response. Incident Action Plans will require daily reviews and re-issue. A SITREP will need to be delivered on a daily basis, as a minimum, and provided to relevant stakeholders.

7.7 Incident Progress Review

A continual reassessment of the response is to be undertaken, throughout the operational stage. This needs to include –

- success of clean-up strategies
- is the scale of the response still appropriate
- are logistics still suitable and adequate
- recovery rates of waste material

Feedback from field operatives will inform the basis of these reviews, as well as surveillance reports and public supplied intelligence.

7.8 Incident Reporting

All reports of marine oil pollution incidents are to be made to Flinders Ports VTS at Port Adelaide. All reports are to be processed via the Flinders Ports risk management reporting system which notifies the relevant internal and external stakeholders of the event. All reports are to be conveyed to the DPTI Duty Officer.

7.9 Spill Originator Engagement

In the event of a spill from a known source, the Incident Controller is to liaise directly with the spill originator, to determine the status of the spill. This information should contain detail on oil type, volume, whether it is an instantaneous or continuous release, and access to a material SDS. An understanding of what the spill originator has done from a response perspective is also important information.

7.10 Records Management

With all oil spills into Port waters, and with the polluter identified, all reasonable costs incurred in the clean-up response, are normally recoverable from the polluter. As a result, good records are to be kept with respect to the incident response, including services provided and the costs expended. Log books should be maintained by decision makers in the management team, and field operatives, particularly around key response decisions that could have an impact on cost recovery.

7.11 Response Termination

7.11.1 Responsibility

The Incident Controller is responsible for terminating a Level 1 response. This decision must be made in conjunction with the relevant Flinders Port Holdings General Manager. Verbal notification of the response termination, must be supported at a later time, by written confirmation, indicating time and date of that decision. A level 2 or 3 response must be terminated by the State Marine Pollution Controller in consultation with the Incident Controller.

7.11.2 Process

The response to an oil spill will be terminated when specific goals and end points are met or achieved. The goals will be identified in the development of the Incident Action Plan, in the Objectives, and the End Points will be determined, agreed and included as part of the IAP. Some examples of End Points are –

- the complete removal of free-floating oil
- the removal of all accessible oil on shore-lines
- on areas of oiled shore-line, there is no remobilisation or re-oiling occurring after each tide
- there is no environmental benefit in continuing the clean-up
- expert advice recommends no further action is required.

7.12 Incident Recovery

7.12.1 Debrief

As per the requirements of the SEMP and SAMSCAP, within 3 weeks of the completion of a marine spill response, a debrief will be convened by Flinders Ports, to capture any lessons learned. A summary of the debrief, including recommendations and/or actions required to be undertaken, will be supplied to the State Response Advisory Group through the DPTI. The debrief should address, but not be limited to:

- Key issues and risks, including work health and safety
- Spill causes (if known)
- Spill response and speed of response
- Operations
- Effectiveness
- Equipment accessibility, deployment and suitability
- Integration of plans and procedures with other response agencies;
- Communication/coordination effectiveness

(Annex E of the State Emergency Management Plan (SEMP) provides guidelines on conducting a debrief).

7.12.2 Recovery

Additional recovery activities, post an oil spill response, may include:

- Post spill monitoring studies of impacted sites
- Follow up with stakeholders to ensure satisfaction with the clean-up
- Ensuring financial and legal obligations are resolved
- Cost recovery
- Equipment repatriation, repair or replacement

8. CAPABILITY MAINTENANCE

8.1 Responsibility

The Port Operating Agreement, defined in the Harbors and Navigation Act 1993, requires Flinders Ports to undertake the following –

- *Must have appropriate resources (including appropriate contingency plans and trained staff and equipment to deal with emergencies (including marine oil spill response).*

8.2 Personnel

Flinders Ports must maintain sufficient numbers of trained personnel to provide an adequate response to spills in port waters.

8.3 Equipment

Flinders Ports must maintain access to suitable response equipment to provide an adequate response to Level 1 spills in port waters.

8.4 Training

Flinders Ports must provide training to ensure responders are sufficiently trained to effectively respond to oil spills in port waters.

8.5 Exercising

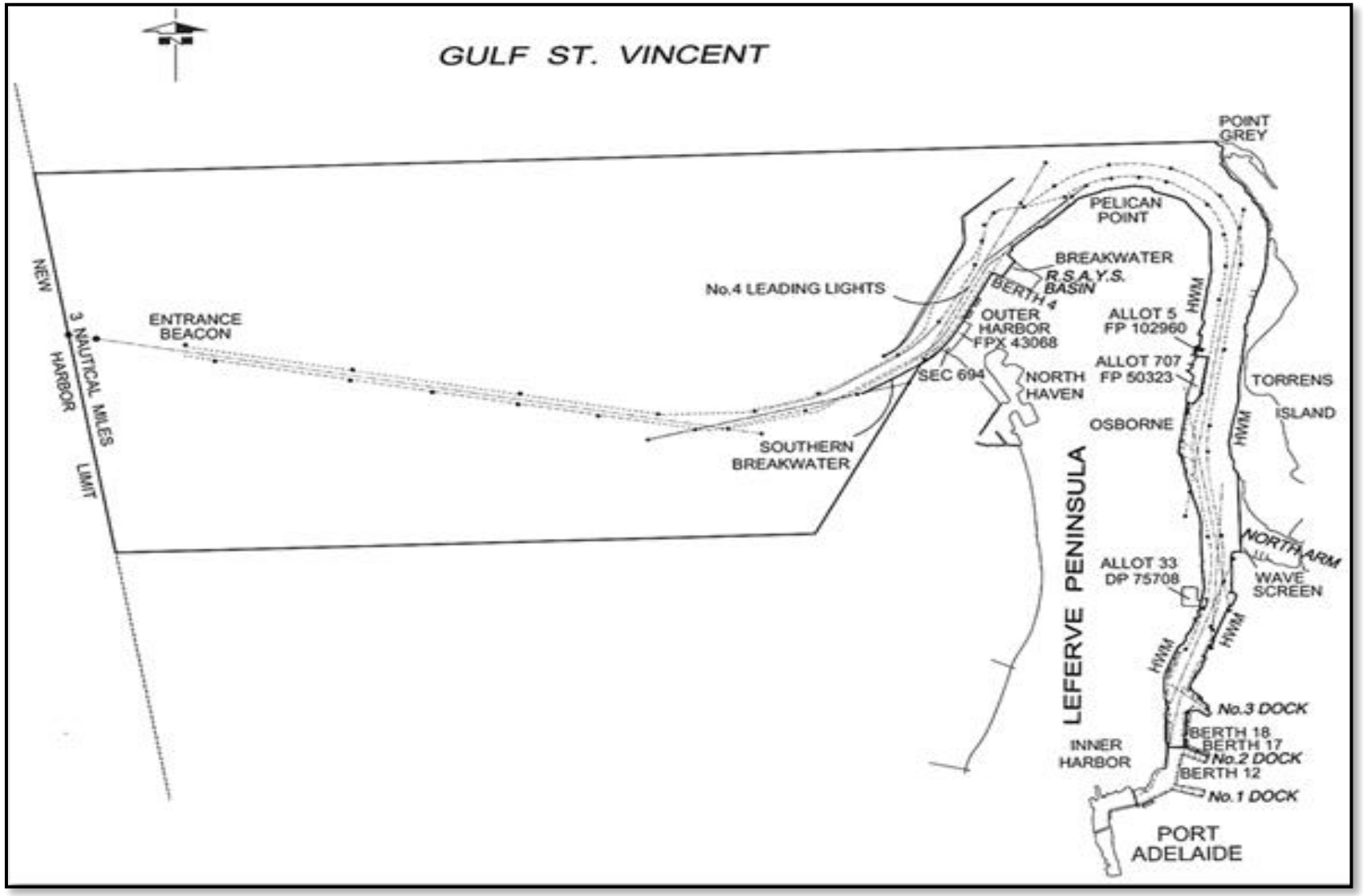
The Plan is to be tested annually as a minimum requirement.

8.6 Records

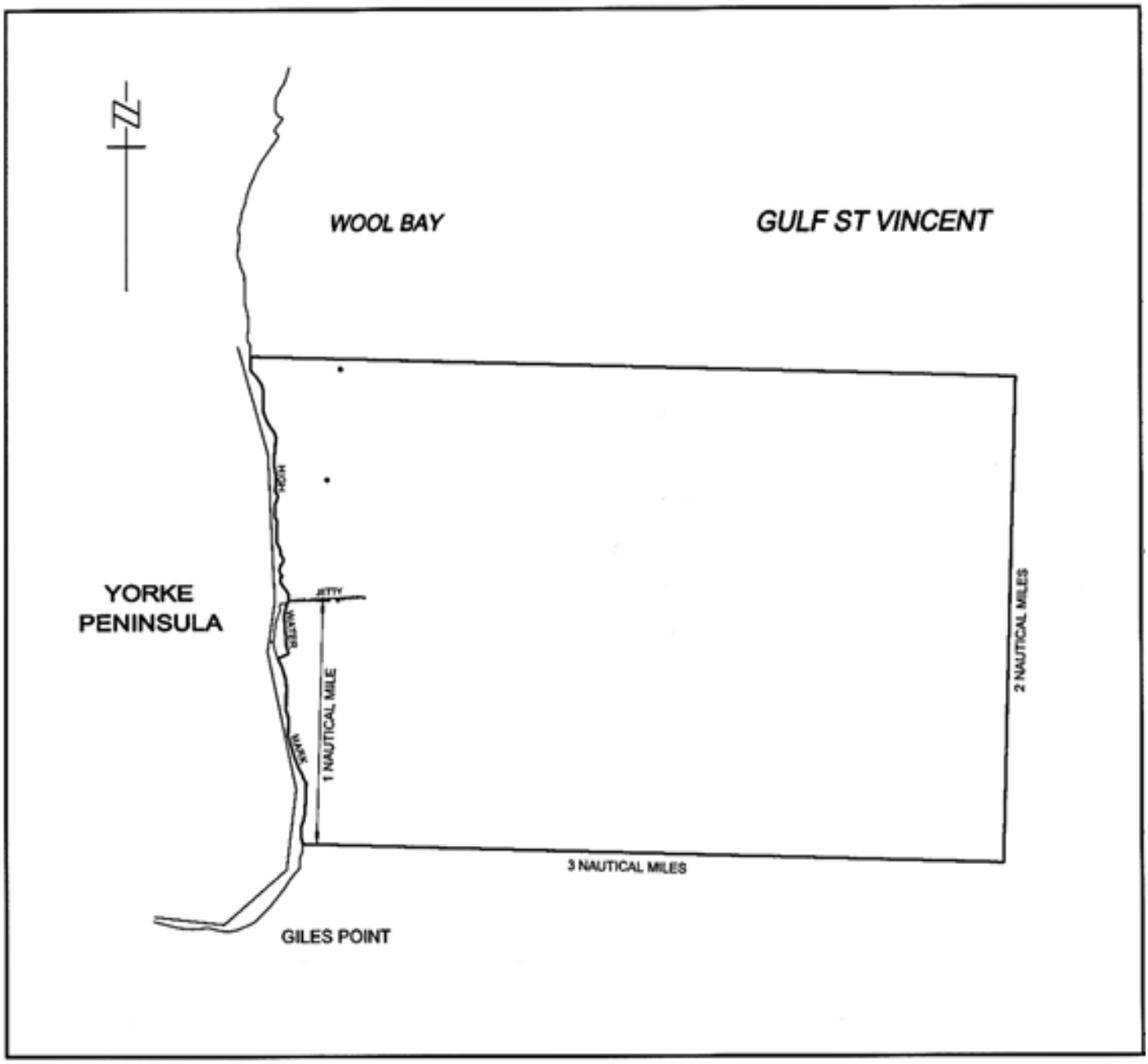
Flinders Ports are to maintain records that indicate that this Plan has been reviewed as per the requirements of Section 1.3 of this Plan, that the Plan has been exercised as per the requirements of Section 8.5, and that responders have undertaken training in response techniques as per the requirements of Section 8.4.

APPENDIX A PORT PLANS OF FLINDERS PORTS

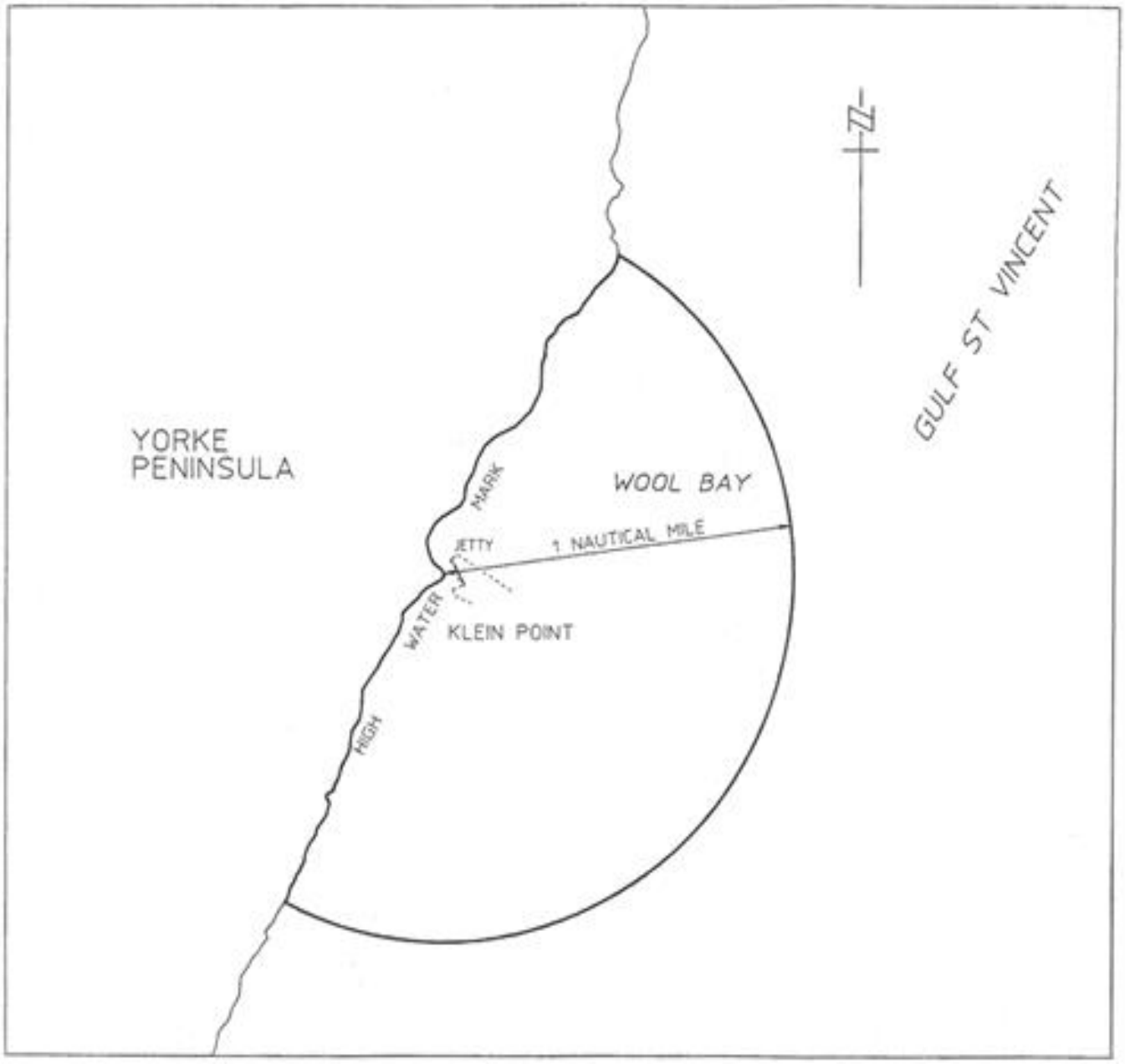
PORT ADELAIDE



PORT GILES


N
WOOL BAY
GULF ST VINCENT
YORKE
PENINSULA
JETTY
1 NAUTICAL MILE
2 NAUTICAL MILES
3 NAUTICAL MILES
GILES POINT

KLEIN POINT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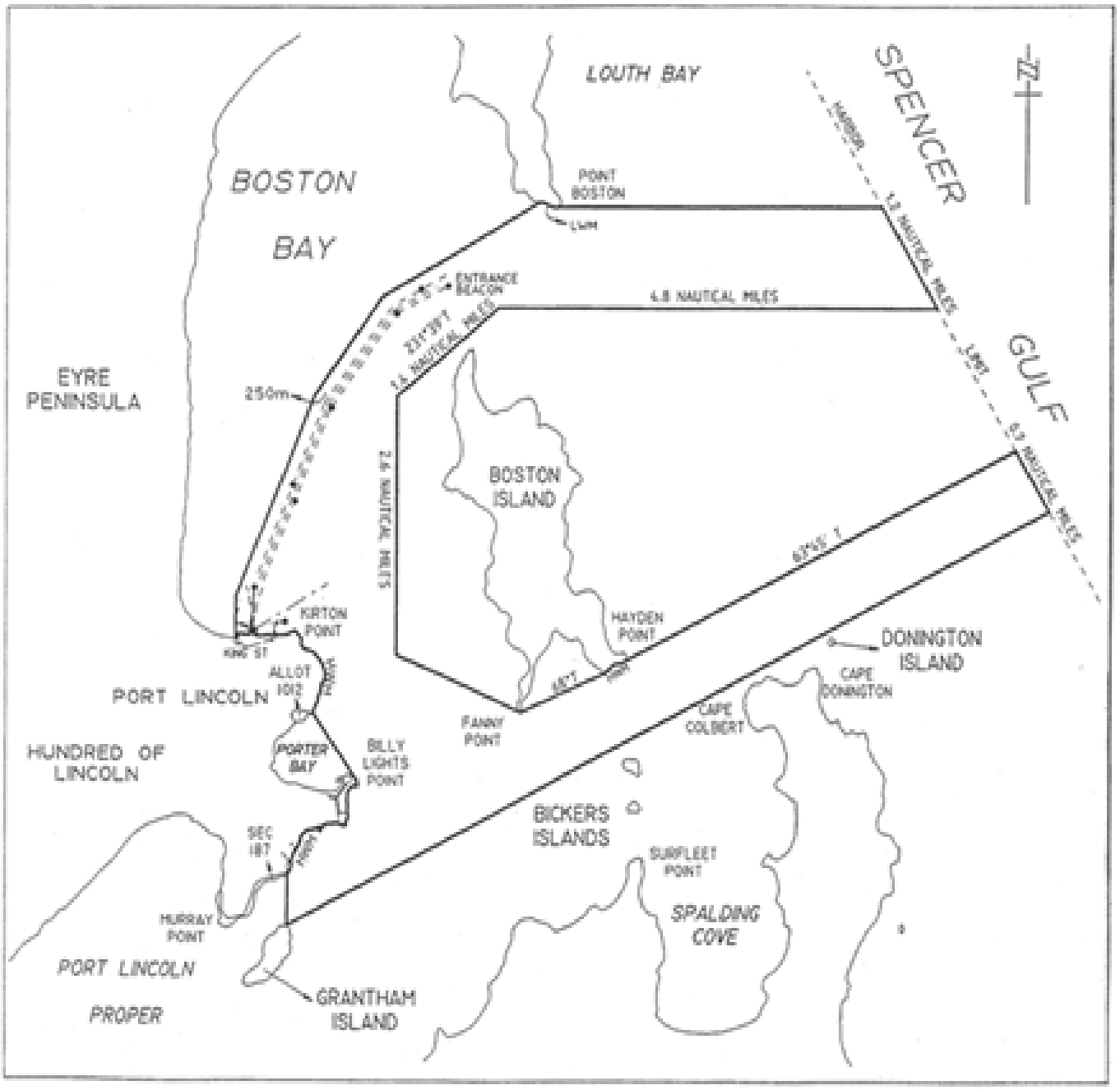
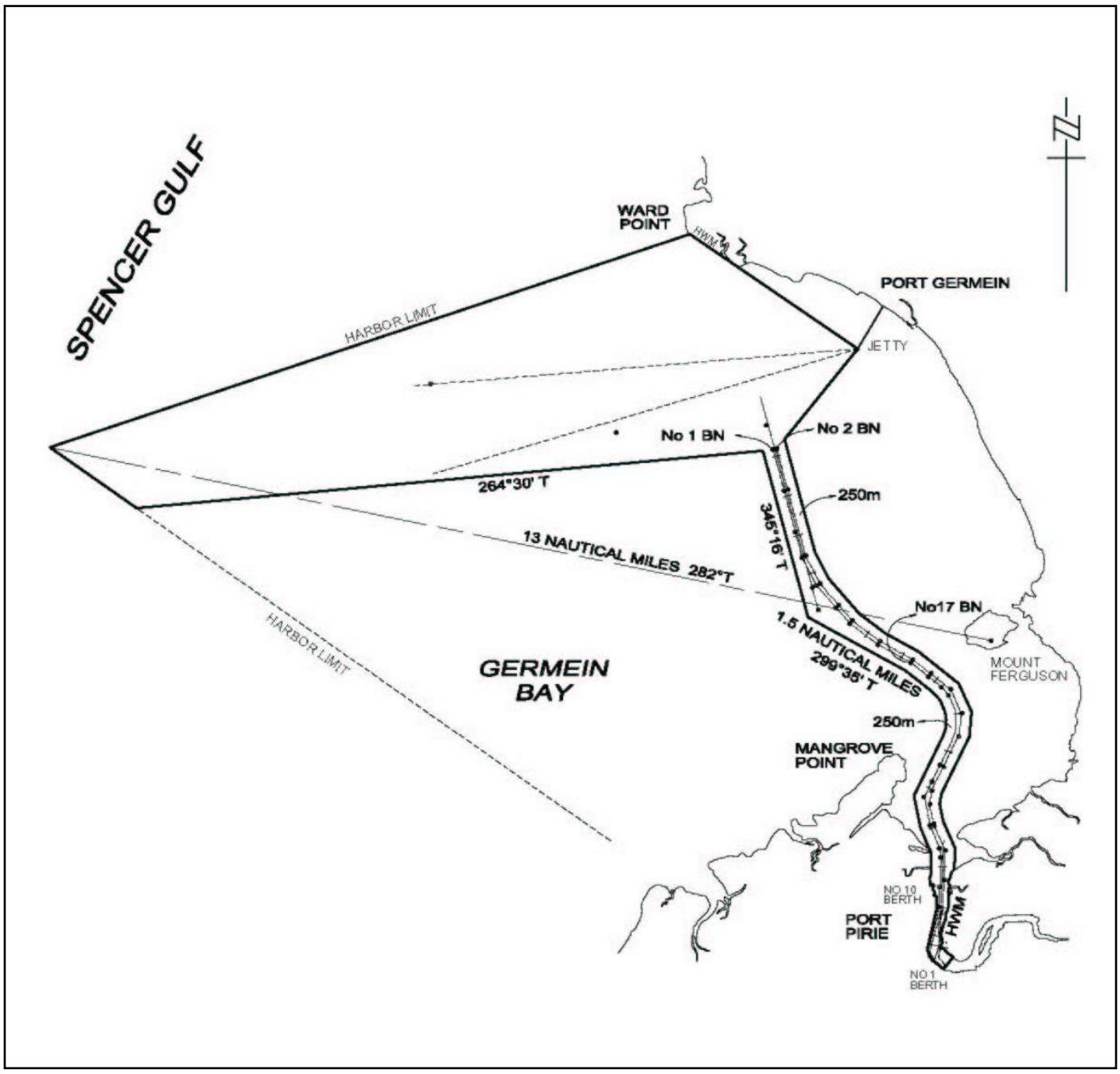
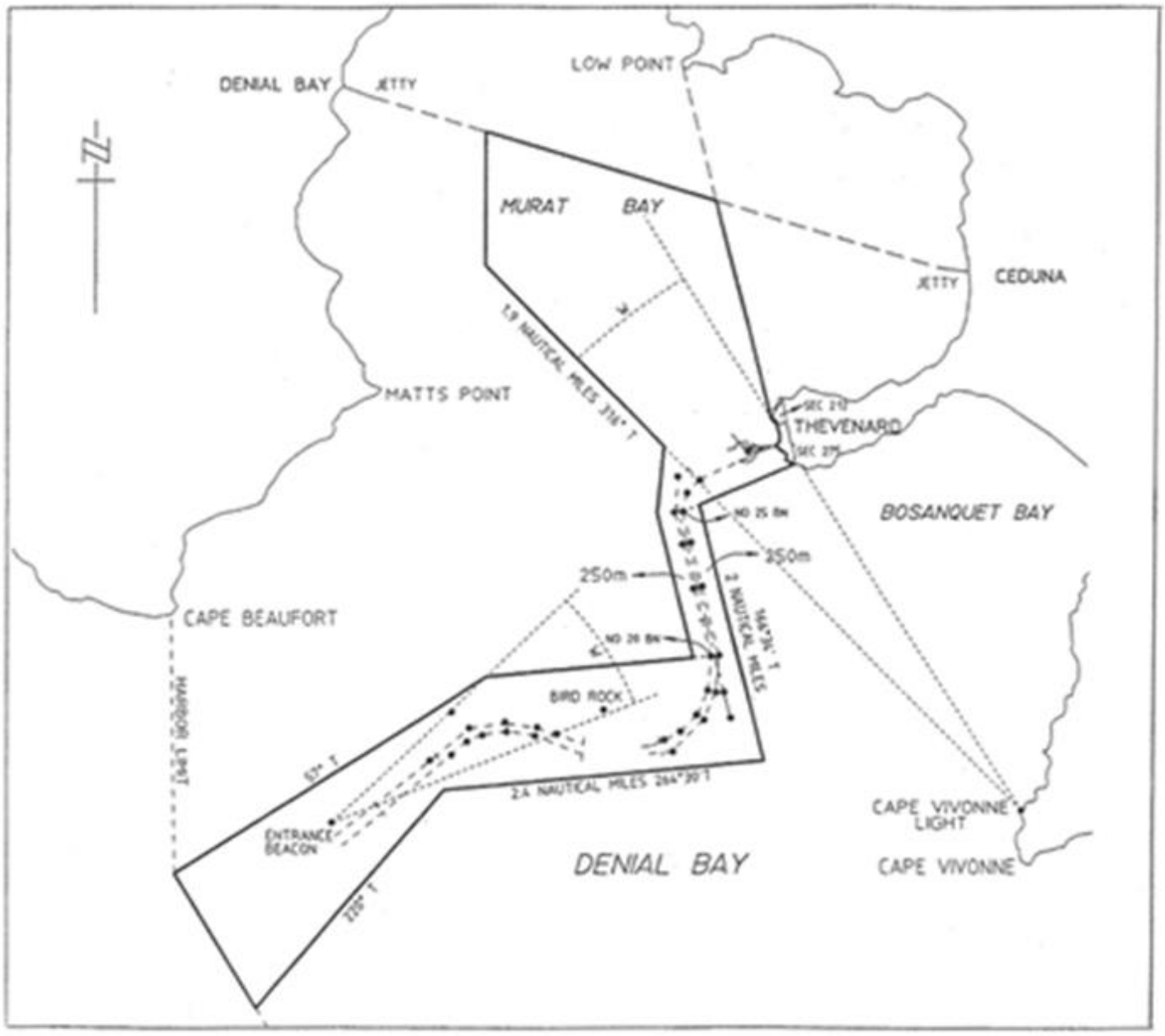
PORT LINCOLN



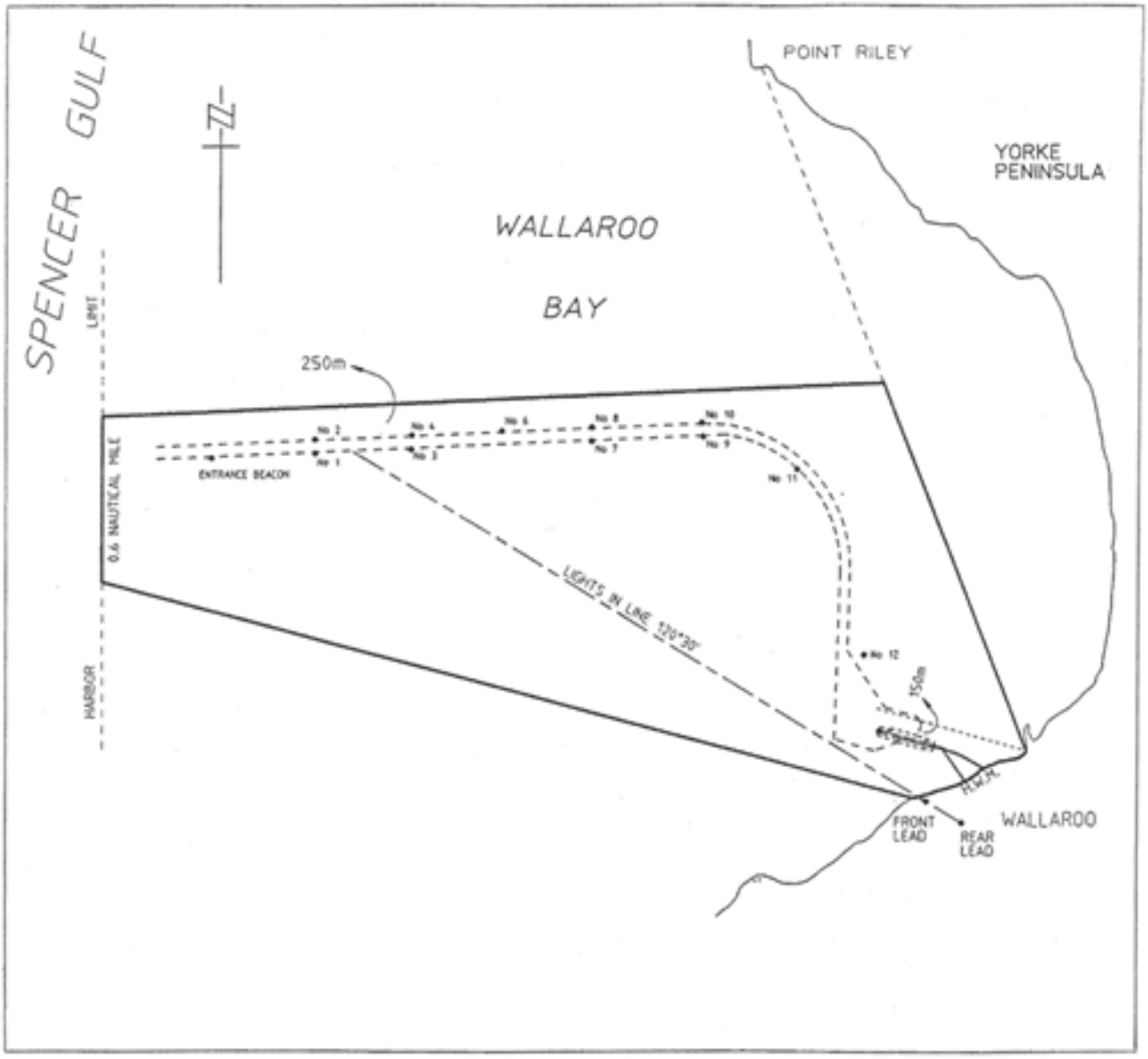
PORT PIRIE


SPENCER GULF
WARD POINT
HWM
PORT GERMEIN
HARBOR LIMIT
JETTY
No 1 BN
No 2 BN
264°30' T
250m
346°16' T
13 NAUTICAL MILES 282°T
No17 BN
1.5 NAUTICAL MILES
299°35' T
HARBOR LIMIT
GERMEIN BAY
MOUNT FERGUSON
250m
MANGROVE POINT
NO 10 BERTH
HWM
PORT PIRIE
NO 1 BERTH

THEVENARD


DENIAL BAY
JETTY
LOW POINT
MURAT BAY
JETTY
CEDUNA
1.9 NAUTICAL MILES 316° T
MATTS POINT
THEVENARD
BOSANQUET BAY
250m
250m
CAPE BEAUFORT
2 NAUTICAL MILES
BIRD ROCK
2.4 NAUTICAL MILES 284°30' T
ENTRANCE BEACON
DENIAL BAY
CAPE VIVONNE LIGHT
CAPE VIVONNE
225° T

WALLAROO


SPENCER GULF
POINT RILEY
YORKE PENINSULA
WALLAROO BAY
LIMIT
250m
ENTRANCE BEACON
0.6 NAUTICAL MILE
LIGHTS IN LINE 120°30'
HARBOR
150m
WALLAROO
FRONT LEAD
REAR LEAD

APPENDIX B FLINDERS PORTS RESPONSE PERSONNEL CONTACT LISTS

3.1 CONTACT DIRECTORY			
EMT Personnel	**BUSINESS**	**MOBILE / PAGER**	**EMAIL**
VTS/Marine Operations Centre	08 8440 9008 08 8248 3505		portops-adl@dflindersports.com.au
Security	08 8447 0600		
General Manager Flinders Ports	08 8447 0622	0407 396 618	
Manager Shipping Services	08 8447 0626	0407 390 940	
Marine Services Superintendent	08 8440 9001	0423 108 135	
Chief Marine Pilot		0417 834 910	
Flinders Ports Reception	08 8447 0611		
Regional Port Manager Port Lincoln	08 8682 3633	0409 025 442	
Regional Port Manager Thevenard	08 8625 2077	0419 868 113	
Regional Port Manager Port Pirie, Wallaroo, Port Giles	08 8632 1455	0428 946 473	
Operations Manager Whyalla	08 8644 1560	0400 317 740	
General Manager FACT David Sleath	08 8248 9325	0417 813 473	
Emergency – Fire/ Ambulance/Police	000		
EPA	08 8204 2004		
Dept. Planning Transport and Infrastructure (Oil Pollution) Duty Officer Director Maritime Services & SMPC: James Buder Manager Maritime Safety & Compliance: Gordon Panton Unit Manager Boating Safety: Simon Schwerdt	 08 8260 0202 08 7109 7209 08 8260 0027 08 8260 0021	 0434 365 379 0488 105 230 0481 908 749	
AMSA Aviation Search and rescue 24 Hour emergency helpline Maritime Search and Rescue Report Marine Pollution Incidents	1800 815 257 1800 641 792 1800 641 792		

APPENDIX C - ICC Locations

Adelaide and Regional Ports (when required)

Flinders Ports Marine Operations Centre, GATE C, Berth 2, Level 1 Passenger Terminal, Outer Harbor SA.

Regional Ports:

Port	Regional Port Manager
Port Lincoln 1/1 King Street Port Lincoln SA 5606	Darryl Montgomerie 0409 025 442
Port Pirie Port Pirie Harbour Port Pirie SA 5540	Patrick Browne 0428 946 473
Wallaroo Jetty Road Wallaroo SA 5556	Patrick Browne 0428 946 473
Whyalla 36 Roberts Terrace Whyalla SA 5600	Barry Wynands 0400 317 740
Thevenard 131 Thevenard Road Ceduna SA 5690	Andy Wilkins 0419 868 113
Port Giles and Klein Point On as-required basis	Patrick Browne 0428 946 473

APPENDIX D - FIRST STRIKE PLANS

Flinders Ports First Strike Plans and their links are as follows –

FSP 01	Port Adelaide	Flinders Ports Intranet
FSP 02	Port Giles	Flinders Ports Intranet
FSP 03	Klein Point	Flinders Ports Intranet
FSP 04	Port Lincoln	Flinders Ports Intranet
FSP 05	Port Pirie	Flinders Ports Intranet
FSP 06	Thevenard	Flinders Ports Intranet
FSP 07	Wallaroo	Flinders Ports Intranet

The Plans contain the following information specific to each port.

- Incident Control Centre locations
- Equipment storage locations
- Sensitivities at Risk
- Contractors and Suppliers – if pre-arranged

APPENDIX E - Forms - SITREP

4.1 INCIDENT REPORT FORM (SITREP)

INCIDENT LOCATION:

Reported By: Contact No: Date: Time

INCIDENT TYPE: (CIRCLE)

INJURY	FIRE	MEDICAL	ACCIDENT	VESSEL	BERTH	POLLUTION RELEASE
FATALITY	MARINE	COLLISION	ENVIRONMENT	DISTURBANCE	EXPLOSION	SECURITY

OTHER:

Provide Description:

INJURY DETAILS: (For Multiple Injuries Attach Separate Sheet)

Number of Fatalities: Number of Serious Injuries: Number of Minor Injuries:

Name of Injured: Position:

Injuries: Location: Date:

WEATHER CONDITIONS:

DRY	WIND DIRECTION	SEA CONDITIONS
WET	WIND SPEED	FORECAST

EXTERNAL ASSISTANCE:

MEDICAL	FIRE	POLICE	AMBULANCE	EPA	MUTUAL AID	REGULATORS / STATE GOV'T

OTHER:

IMPACT ON OPERATIONS:

SERVICES DAMAGED: **SERVICES SHUT DOWN:**

AREAS AFFECTED:

RESPONSE FORWARD PLAN:

NEXT 30 MINUTES

NEXT 6 HOURS

NEXT 12 HOURS

LAST EXTERNAL CONTACT:

AGENCY	CONTACT NAME	TIME	BY WHOM	AGENCY	CONTACT NAME	TIME	BY WHOM
EMT				EPA			
MEDICAL				POLICE			
FIRE				Gov't			

Nature of Assistance Required:

Further Remarks:

Prepared By: Time: Date:

Approved By: Time: Date:

MARK ANY SPECULATIVE INFORMATION WITH AN ASTERISK (*)

Completed SITREP to be faxed to EMT

APPENDIX F - Forms – NEBA

Incident:			RESPONSE STRATEGIES				TIME TO OIL IMPACT (as modelled)	RESPONSE STRATEGY PRIORITY
SENSITIVITY CATEGORY	INDIVIDUAL SENSITIVITY	SENSITIVITY RANKING	MONITOR & EVALUATE (ONLY)	CONTAIN & RECOVER	PROTECT & DEFLECT	SHORELINE CLEAN-UP		
ECOLOGICAL								
Mangroves	*North Arm Creek*	*High*	_		?		*90'*	*1*
ECONOMIC								
Wharves	*Commercial shipping Outer Harbour*	*Medium*	_	?	?	?	*240'*	*3*
NOTES:								

SENSITIVITY CATEGORY	INDIVIDUAL SENSITIVITY	SENSITIVITY RANKING	MONITOR & EVALUATE	CONTAIN & RECOVER	PROTECT & DEFLECT	SHORELINE CLEAN-UP	TIME TO OIL IMPACT (as modelled)	RESPONSE STRATEGY PRIORITY
SOCIAL								
Marinas	*Marina Adelaide Largs North*	*Low*	_				*120'*	*2*
HERITAGE								

Net Environmental Benefit Analysis

1. Identify the Individual Sensitivities at Risk in each category
2. Apply a Sensitivity Ranking against each sensitivity based on known data
3. Determine what Response Strategies can be used, based on availability of resources (highlight the box (Green Can use) – don't tick or cross it)
4. If a response strategy is unable to be implemented prior to spill impact, or through a lack of resources, block that out (Red – Cannot use)
5. Consider the listed response strategies - make an assessment as to whether the use of that response strategy, is likely to: ( ) Reduce; (-) have No Effect; or (x) Increase, the **impact or effects** of the oil spill, on that particular sensitivity.
6. List the time to impact of the oil on that sensitivity, as predicted through calculation or modelling
7. In the right column, assign a response priority ranking (# 1 – the first priority), against each known sensitivity, based on the combination of: * The sensitivity ranking; * The time available to respond; and * The available response strategies (using the strategy that delivers a - *reduction ( ) in effect* first, then followed by *No Effect (-)* strategy. If a strategy increases the impacts/effects – do not use.

Examples are given in red italics in the table.

APPENDIX G OIL PROPERTIES and SDS links

The following links are to Safety Data Sheets for all oils moved through Australia, by several Oil Companies.

Where the oil is known, the appropriate SDS can be accessed through the Oil Companies websites, as follows.

Where a SDS is not immediately available for the product spilled, but the product is known by a generic descriptor, the use of these SDS's will provide some guidance. They are NOT necessarily the same as the product spilled, but could have similar properties to other producer's oils of a similar type.

The links will provide SDS's for the more probable spilled products, including Heavy Fuel Oil, Intermediate Fuel Oil, Diesel (automotive and marine), Unleaded Petrol, Premium Unleaded Petrol, Avgas and Jet A1.

BP products

https://www.bp.com/en_au/australia/products-services/data-sheets.html

Caltex products

https://www.caltex.com.au/our-solutions

Generic Products

Access through ChemAlert

APPENDIX H - Forms – IAP

The Incident Action Plan is developed by the Incident Management Team, drafted & updated by Planning

Incident Name:	Ref No:
Date of Incident:	Time of Incident:
Plan for the period: From	To
Location:	Oil type:
Volume of oil:	Weather:

STATUS ☐ Draft

☐ Approved -

Incident Controller Signature:

ISSUED AT

TIME: DATE:

Incident Response Policy

(Overall Aim)	

	Objectives (What is planned to be done, in Priority order)	**Strategies** (Means of accomplishing objectives)
1		
2		
3		

	Objectives (What is planned to be done, in Priority order)	**Strategies** (Means of accomplishing objectives)
4		
5		
6		

When the Objectives, and their Strategies have been identified, construct Tactics to suit those Strategies, and allocate resources to those Tactics. Resources may be tasked to multiple Tactics concurrently.

Prepared By:

Name:	Unit/Unit:

Role:

Phone:	Fax:	Mobile:

STATUS: RESOURCES AT RISK

This Summary Document can be displayed as a Status Board

Incident Name:	Ref No:
Date:	Time:

Segment/Location	Sensitive Resources/Area	PRIORITY RANK	
		Protection	Clean-up

TACTICS – against an Objective & Strategy

For each identified Objective – there can be numerous Strategies. For each of those Strategies, there can be numerous Tactics. These Tactics are listed below for each Objective and Strategy.

Objective	No.	
Strategy	No.	

Tactic	

Objective	No.	
Strategy	No.	

Tactic	

Objective	No.	
Strategy	No.	

Tactic	

Objective	No.	
Strategy	No.	

Tactic	

Objective	No.	
Strategy	No.	

Tactic	

MARINE – Response Teams Assigned this Period

Team	Sector	Assignment	Supervisor	Contact No.

Accompanying Marine Resources Assigned This Period

Team	Sector	Equipment

AVIATION – Response Teams Assigned this Period

Team	Sector	Assignment	Supervisor	Contact No.

Accompanying Aviation Resources Assigned This Period

Team	Sector	Equipment

SHORELINE – Response Teams Assigned this Period

Team	Sector	Assignment	Supervisor	Contact No.

Accompanying Shoreline Resources Assigned This Period

Team	Sector	Equipment

WILDLIFE – Response Teams Assigned this Period

Team	Sector	Assignment	Supervisor	Contact No.

Accompanying Resources Assigned This Period

Team	Sector	Equipment

Prepared By:

Name:

Unit/Unit:

Role:

Phone:

Fax:

Mobile: