Marine Operations Manual – Section 12

Marine Pollution Response Plan

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Integration of Emergency Plans

The following plans interface with this Marine Pollution Response Plan:

- The Port of Dover Emergency Response Plan;
- The National Contingency Plan for Marine Pollution from Shipping and Offshore Installations;
- European Manche Plan for Co-operation for Maritime Pollution within the English Channel
- The Kent and Medway Oil Pollution, Chemical Spill and Cargo Recovery Emergency Plan;
- The Coastal/Riparian Oil Pollution, Chemical Spill and Cargo recovery Emergency Plan.
- Dover District Council Oil and Shoreline pollution response plan

Whilst the majority of incidents involve the release of oil and gas, some maritime incidents may release hazardous and noxious substances or inert material or a combination of these that have the potential to threaten public health as well as cause at sea and shoreline pollution. In such cases, the Port of Dover response plan will also interface with existing protocols and major incident plans normally invoked when there is an incident involving hazardous and noxious substances onshore.

Foreword

This document arises from a statutory requirement set out in the MCA's National Contingency Plan which specifically requires ports to produce an Oil Pollution Emergency Plan appropriate to their locality and circumstances.

The Maritime and Coastguard Agency (MCA) is the competent national authority designed to oversee all matters pertaining to the Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998 under the Merchant Shipping Act 1995, as amended by the Merchant Shipping and Maritime Security Act 1997, The Pollution Prevention Control Act 1999 and the Marine Safety Act 2003.

The Port of Dover Marine Pollution Response Plan is therefore meeting the above statutory obligations but most importantly contains guidance, information, advice and contact details to facilitate an efficient, effective and appropriate response from the Port of Dover, to any pollution incident.

Steven Masters
Harbour Master
16th May 2018

Plan Custodian

The responsibility of the upkeep, amendment and review of this contingency plan has been assigned to the Harbour Master, whose responsibility it is to ensure the plan is reviewed annually and up to date in accordance with legislative requirements.

Port of Dover Spill Response Plan Holders

Organisation
Port of Dover Harbour Master
Port of Dover Environmental Team
MCA Counter Pollution and Salvage Officer
Marine Management Organisation
Dover District Council
Kent Resilience Team
Natural England
Environment Agency
Adler and Allan

The purpose of this procedure is to ensure that all documentation and data which is relevant to the Port of Dover Oil Spill Response Pan is controlled effectively regarding review, authority, storage and distribution.

If you would like to contact Dover Harbour Board regarding the Port of Dover Marine Pollution Response Plan, please contact:

Environment Office:

Harbour House,

Marine Parade,

Dover,

Kent,

CT17 9BU.

Tel: 01304 240400 ext 4122

SHEQ@doverport.co.uk

Harbour Master:

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Marine Parade,

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Internal Contacts			
Contact	**Telephone**	**Fax**	**Out of Hours**
Port of Dover	01304 240400		01304 240400
Duty Harbour Master	*Ext. 5523 07836262713		*Ext. 5523 07836262713
Tug Haven	*Ext. 4537		
Environment Office	*Ext. 4122/5519		*Ext. 2338
Harbour Master	*Ext. 4141		01303 891672 07825430191
Harbour Patrol Launch	*Ext. 4544 07810871766		*Ext. 4544 07810871766
Port Operations	*Ext. 4521	01304 225144	07778610129

*Prefix 01304 240 400

External Agencies

Tier 2 Response Contractor			
Adler and Allan	0800 592 827	0208 5193090	0800 592 827

Dover Coastguard Operations Centre (CGOC)	01304 210008	01304 202137	01304 210008
Marine Management Organisation (MMO) - Headquarters/Hastings DEFRA duty room	0300 2002024 01424 424109 0345 0518486	020 7270 8125	07770 977825
Environment Agency	0800 807060		0800 807060
Dover District Council	01304 872420		07581411408
Dover Police	01622 690690		999
Natural England	0300 0601200	01233 812520	0300 0601200
RSPCA	01303 242869		
Kent Fire and Rescue Control Room	01622692121		
Kent Resilience Team	01622 212409		03000 414999
NHS England 24 hour pager service	07623 510084		

Waste Disposal
See the Port of Dover Waste Processes

Section 1

Strategy

Contents

1.1 Purpose

The plan is provided to assist the Port of Dover and other relevant organisations in dealing with an accidental discharge of oil into the waters within the Port's jurisdiction. Its primary purpose is to ensure that there is a timely, measured and effective response to stop or minimise the discharge and to mitigate its effects. Where a spillage is associated with a wider emergency, then additional factors involving the safety of personnel will take precedence over the pollution response. In this case, reference must also be made to the Ports other Emergency Response Plans.

1.2 National Contingency Plan Interface

National Contingency Plan

The purpose of the National Contingency Plan (NCP) is to ensure that there is a timely, measured and effective national and regional response to incidents and the marine pollution from shipping and offshore installations within UK waters. The Plan provides a Strategic and Operational overview intended to inform Central Government Departments, administrations, Local Authorities, Environmental Agencies, Port & Harbour Authorities, Health bodies and senior managers of response organisations with a view to achieve a harmonised response strategy. The MCA is the competent authority designated to oversee all maters to protecting and preserving the marine environment and therefore the custodian of the NCP.

In all cases involving a national response, whether from ship or offshore installations, there is a need to establish response cells to deal with the incident, these cells may include;

Marine Response Centre (MRC) - considers and implements the most appropriate means to contain, disperse, and remove potential pollutants from the scene based on all the information available to them.

Environmental Group (EG) - advisory to public health and environmental issues to all response groups in order to minimise the impact of the incident on the environment, taking account of risks to public health, the natural environmental and potential impacts from response operations, whether salvage or clean-up operations occur at sea and/or on the shoreline.

Salvage Control Unit (SCU) - During a shipping incident, the primary role of the SCU is to monitor salvage operations and actions that are being taken and/or proposed relating to salvage activity and to ensure that such actions do not have an adverse effect on safety and the environment. The SOSREP determines the requirement for a Salvage Control Unit taking into consideration the nature and scale of the incident.

Port of Refuge

The UK has obligations under the Safety of Life at Sea Convention (SOLAS) to provide shelter for maritime casualties which may require use of waters within a port as a place of refuge. This obligation is difficult to plan for, but in order to meet these requirements the MCA and SOSREP aim to have an assessment of potential risks in all areas of the UK territorial waters.

SOSREP

The role of Secretary of State's Representative (SOSREP) is to reduce the risk to safety, the environment and property arising from accidents involving ships, fixed or floating platforms or sub-sea infrastructure.

The intervention powers made available to the SOSREP extend to United Kingdom territorial waters (12 nautical miles) for safety related issues and in the Exclusive Economic Zone (200 nautical miles) for pollution from shipping related incidents. The SOSREP is empowered to make crucial and often time-critical decisions,

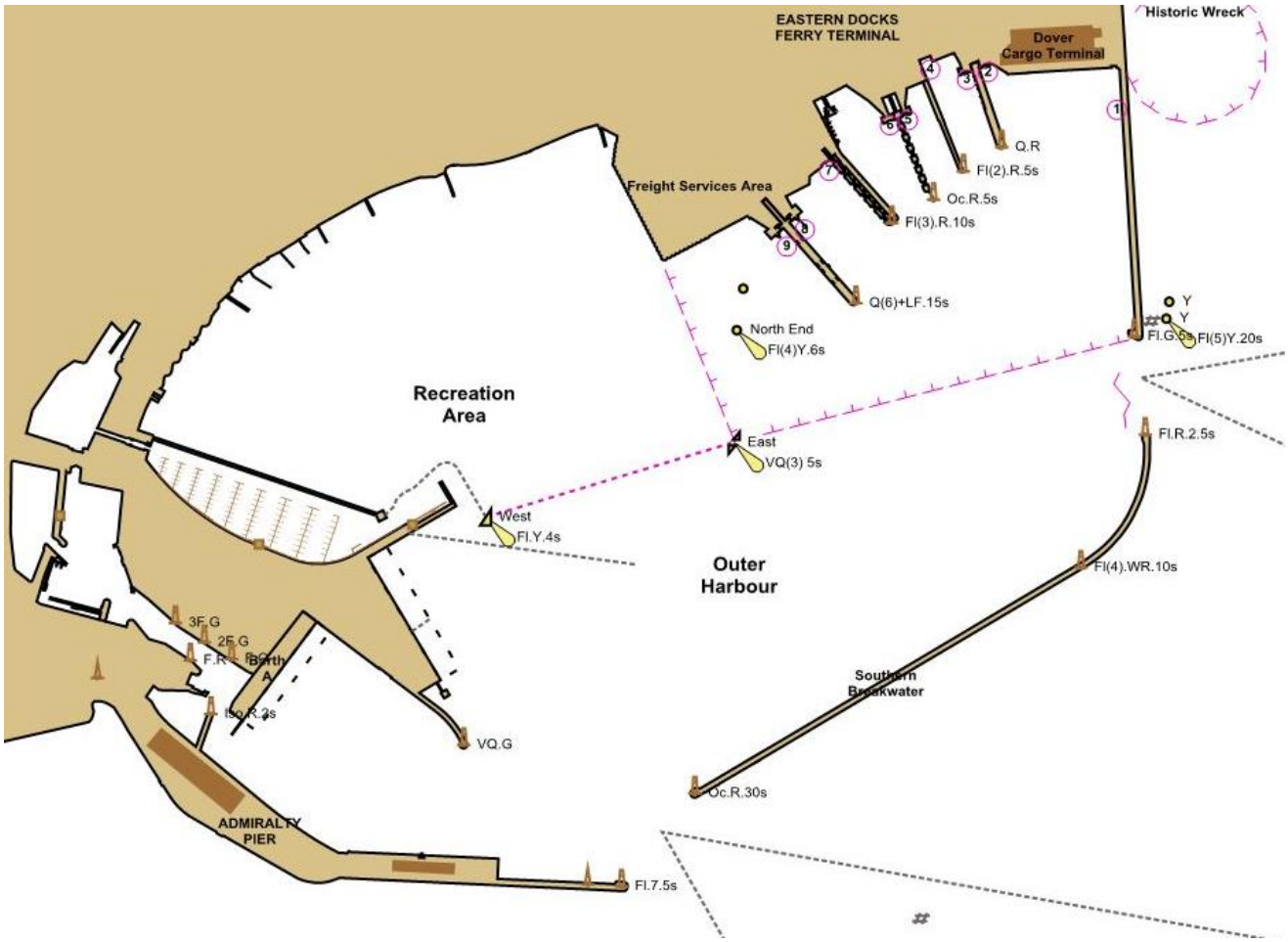
without delay and without recourse to a higher authority, where such decisions are in the overriding United Kingdom public interest. The SOSREP has the ultimate and decisive voice for maritime salvage, offshore containment and intervention decisions that can override any decisions made by the Harbour Master on behalf of a Harbour authority.

1.3 Dover Harbour Board Jurisdiction

Statistics show that over 80% of oil spill incidents occur within Ports and Harbours. A concentrated amount of commercial operational and industrial activity takes place in these busy environments. Dover Harbour Board (DHB) is the Harbour Authority for the Port of Dover.

Harbour authorities have overall responsibility for the safety of marine operations on waters within their jurisdiction. They also have responsibility for the clean-up of pollution on the water and on any structure or land owned by the Harbour Authority within its jurisdiction. Clean up of shoreline and other structures within the jurisdiction but not owned by the Harbour Authority is the responsibility of the private landowners or the local authority. The Port of Dover has a jurisdiction of one nautical mile from the harbour walls as shown above.

1.4 Harbour Information



The Port of Dover is 92 hectares of engineered coastline, located on the South East coast of England providing the shortest cross-channel route from the U.K to continental Europe. Dover is one of the busiest international ferry ports in the world and also one of the busiest UK cruise ports. The core business is the roll-on/roll-off ferry operation supported by other commercial activities, including cruise, cargo and 400+ berth marina. Trade at the port consists of freight and tourist vehicles, ferry and cruise passengers, conventional deep-sea cargoes and aggregate.

1.5 Harbour Facilities

- The maximum draught which could be considered within Dover Harbour is 10 metres. The substrate is predominately chalk with areas of silt, sand and mud.
- The maximum length of a vessel that can berth alongside Cruise Terminal 2 is exactly 320 metres and at Berth C is 300 metres. All the Cruise Terminal's quaysides along with the Eastern Arm are sufficiently equipped with appropriate mooring arrangements, bollards and fenders to facilitate a casualty.
- The local tide is semi-diurnal and has a spring range of 6.00 metres with a neap range of 3.20 metres.
- Harbour tugs and pilotage are available 24 hours a day; this also applies to the deployment of the harbour's counter pollution equipment.
- In order to maintain safety within the Port of Dover all ferry and commercial traffic must obey the General Directions and follow required notification periods for arrivals and departures.

1.6 Berth and Harbour Structures information

Eastern Docks

Pier	Berths	Quay Length (m)	Quay Height (m)	Nominal Dredged Depth (m)
Pier A	Berth 2 & 3	225 Including Dolphin	9.46	8.0
Pier B		150	9.46	8.0
Pier C	Berth 6	190 Including Dolphin	10.50	8.0
Pier D		220	9.46	8.0
Pier E	Berth 7	220 Including Dolphin	12.00	8.0
Pier F	Berth 8 & 9	220	12.00	8.0
Eastern Arm		475	9.46	8.0
DCT		220	9.46	8.0

Western Docks

Pier	Berth	Quay Length (m)	Quay Height (m)	Nominal Dredged Depth (m)
Admiralty Pier	Cruise Terminal 1	340	9.46	9.0
Admiralty Pier Extension	Cruise Terminal 2	340	9.47	10.0
Admiralty Pier Extension	Admiralty Pier Outer (Cruise Terminal 3)	240	9.47	8.0
	Western Docks 4	300 + Mooring dolphin	9.50	10.00
	Western Docks 5	225 + Wave wall	9.50	10.00
	Marina Curve Extension	100	9.50	8.0

Harbour Structures

Granville Docks Gates

Granville Dock with 133 berths are accessible up to (HW -3hrs/+4hrs.).

Wellington Dock Gates

The Wellington Dock offers 160 berths which are accessible up to (HW -1.5hrs/+1.5hrs approx.) via a swing bridge

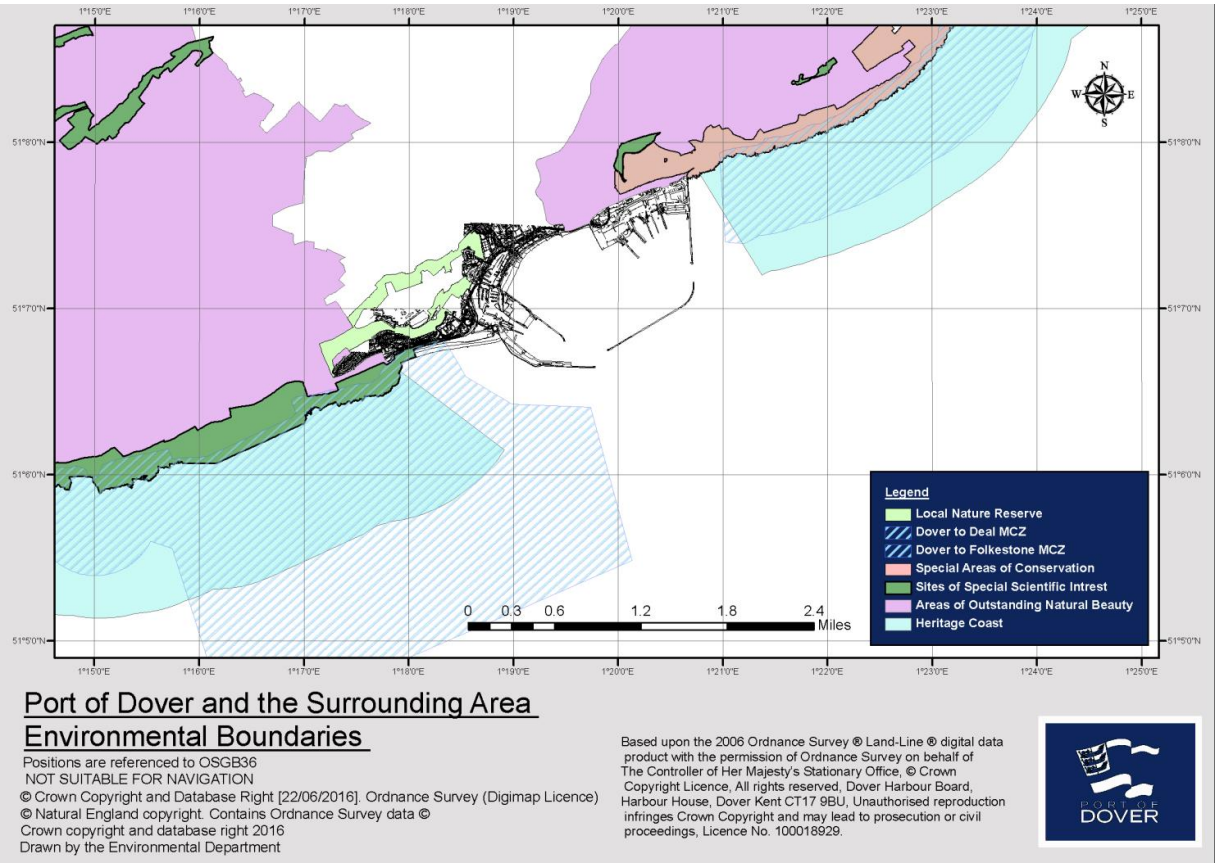
	**The Approach Channel to the Tidal Harbour (West facing)** Oil can get trapped between the small rock boulders with minimised access due to the large pylons.
	**Dunkirk Jetty** The remaining structure is vulnerable and open to the transfer of oil from the approach channel to the tidal harbour and the jet foil jetty.
	**Jet Foil Jetty (South Facing)** Accessibility off jet foil structure is difficult with the quayside, better for deployment of booms etc.
	**Jet Foil Terminal (South Facing)** A small terminal with restricted access to the quay edge due to safety railings and there is a disused slipway which is rendered redundant by large concrete blocks. Quay height = 9.47m above CD
	**Admiralty Pier; Cruise Terminal 2** This berth is reclaimed and sits on piles. Oil would be able to move below the quay with extremely restricted access for response craft. Preventing this must be a priority Quay height = 9.47m above CD

1.7 Environmental, Economic and Social Sensitivities

The MCA classify habitats based on their sensitivity to oil pollution as follows:

LEAST SENSITIVE TO OIL POLLUTION	
Exposed rocky headlands	Wave reflection can keep most of the oil offshore and intense wave action will often clean any oil that does contaminate the rocks off fairly quickly.
Eroding wave-cut platforms	Intense wave action will often remove stranded oil within a matter of weeks.
Man-made solid structures	Often of little ecological significance, being an artificial intrusion into the natural environment. Access for clean-up is often good and clean-up may be for aesthetic or economic reasons.
Fine-grained sand beaches	Oil does not penetrate into water saturated sand and can be removed from surface when tide falls.
Coarse-grained beaches	Oil may sink into beach making removal difficult or impossible. In moderate to high-energy wave conditions the oil will eventually be removed from much of the beach.
Exposed compacted tidal flats	These tidal flats are an important ecological habitat for organisms such as invertebrates that support feeding bird populations, but most oil will not adhere to or penetrate into the substrate and will be carried away on the rising tide.
Mixed sand and pebble beaches	Oil may rapidly penetrate into the beach and become buried. Oil may persist for years under moderate or low energy conditions or may be liberated by winter storms.
Pebble beaches	Oil may rapidly penetrate into the beach and become buried. Very difficult to get at the oil to remove it without disrupting the beach structure.
Sheltered rocky coasts	Areas of reduced wave action such as coves that are often difficult to access. May provide rich habitat for some species in rock pools. Oil may persist for years.
Sheltered tidal flats	Areas of great biological activity – a combination of high productivity and biomass, typically with invertebrates providing a valuable food source for wading birds - and low wave energy. Oil may persist for years. Any attempts at clean-up are likely to drive oil into the mud and so the main priority should be to prevent these areas from becoming contaminated with oil.
Salt marshes	Most productive of all aquatic environments. Many oil-sensitive species present and oil will persist for years. Main priority should be to prevent oil from contaminating salt marshes. If heavily contaminated with oil vegetation may need to be cut off or burnt to allow oil to be cleaned away.
MOST SENSITIVE TO OIL POLLUTION	

1.8 Environmental Designations Map



According to this classification, the most sensitive habitats found within DHB's jurisdiction are the pebble beaches of Shakespeare Beach and Dover Beach. Shakespeare Beach and the coastline to the west is designated as a Site of Special Scientific Interest (SSSI) and the vegetated shingle is a UK Biodiversity Action Plan priority habitat.

Located in the Port of Dover, between the Eastern and Western Dock, Dover Beach, is an important community resource. It is the most accessible seafront amenity from the town centre and is used throughout the year for open water swimming and leisure activities. Dover Water sports Centre is located on Dover Beach with facilities for sailing, rowing, kayaking and wind surfing. Although commercial fishing does not take place within the port's jurisdiction, recreational fishing off the Admiralty Pier takes place throughout the year.

To the West of the Port the coastline is predominantly rocky with a chalk platform and therefore less sensitive to oil pollution. This area is designated as a Special Area of Conservation and a SSSI down to the low water mark, however the habitats that this designation is protecting are based at the top of the cliff.

As a man-made structure, the harbour itself is of low conservation concern and has low sensitivity to oil pollution. However, the continued operation of the ferry berths is important to UK trade and any disruption to operations quickly has a negative local impact due to traffic congestion on local roads and the implementation of operation stack.

The marina is an important community leisure resource and the amount of vessels located here would make a clean-up operation difficult. The River Dour enters the harbour through the marina and as a chalk stream it is of ecological significance particularly during autumn which is an important migratory period.

1.9 Pollution Risk Analysis Summary

The Port of Dover handles around 40,000 commercial movements a year consisting of: -

- Roll- On/Roll -Off Ferries
- Cargo Vessels
- Cruise Ships
- Bunker Tankers

In addition the Port of Dover also handles 9,500 movements from leisure craft per year.

The Port of Dover Pollution Risk Analysis has been compiled to formally identify all the marine pollution hazards both commercial and leisure within the jurisdiction of the Port. Where appropriate risk reducing control measures through operational practices and equipment have been put in place to eliminate or reduce the risk to as low as reasonably practicable (ALARP), pollution risks are calculated using a scoring system in which the final score is calculated by assessing the severity that is linked to the most likely outcome. This means that the risk of pollution that is mostly likely to occur is relatively small scale with a low impact. Figure 1.8 provides information on the capacity and the type of fuel used by vessels and fixed installations regularly operating within the Port.

Vessel information

Vessel Type	Fuel Type(s)	Approx. capacity
Port vessels	Gas oil	2.4-21m3/tank
Cargo vessel– palletised fruit	Heavy Fuel Oil (HFO); Low Sulphur Fuel Oil (LSFO)	2248m/t
Pleasure craft - Med/large	Diesel	50 – 500L depending on size of vessel
Pleasure craft - Small	Petrol	20 – 150L depending on size
Cruise ship	LSFO and MGO	Up to 1200 tonnes
Ferries	MGO and ULSFO	42-530m3/tank

Fix installations

Location	Fuel Type(s)	Approx. capacity
Marina Fuel Pontoon	Diesel Petrol	50,000 litres 10,000 litres

Figure 1.8 Vessel and fixed installations within the Port

Risk Analysis Review

A systematic review process is in place to ensure the appropriate control measures implemented are effective and current through the ALARP principle. However due to the proximity of the Dover Straits and its associated traffic, the inherent risk to the port of an incident that has occurred outside of the ports jurisdiction remains high within the residual risk rating. This type of incident is difficult to plan as to the potential quantity, type and effect this will have on the port.

1.10 Consultation

In preparing this report the following authorities and agencies have been consulted through the Channel Oil Pollution Sub Group:

- Marine and Coastguard Agency (MCA);
- Marine Management Organisation (MMO);
- Natural England (NE);
- Environment Agency (EA);
- Kent County Council (KCC);
- Dover District Council (DDC);
- Adler & Allan Limited (A+A).

1.11 Incident Organisation and Control

In the event of an oil spill incident within the Dover Harbour Boards jurisdiction, it is the Duty Harbour Masters (DHM) responsibility to co-ordinate the spill response.

The DHM will classify the spill and if appropriate announce a critical incident activating the Port of Dover Emergency Response Plan; the associated relevant Bronze, Silver and Gold command; and if required the Emergency Command centre in 6th Floor Terminal Control or 1st Floor Harbour House.

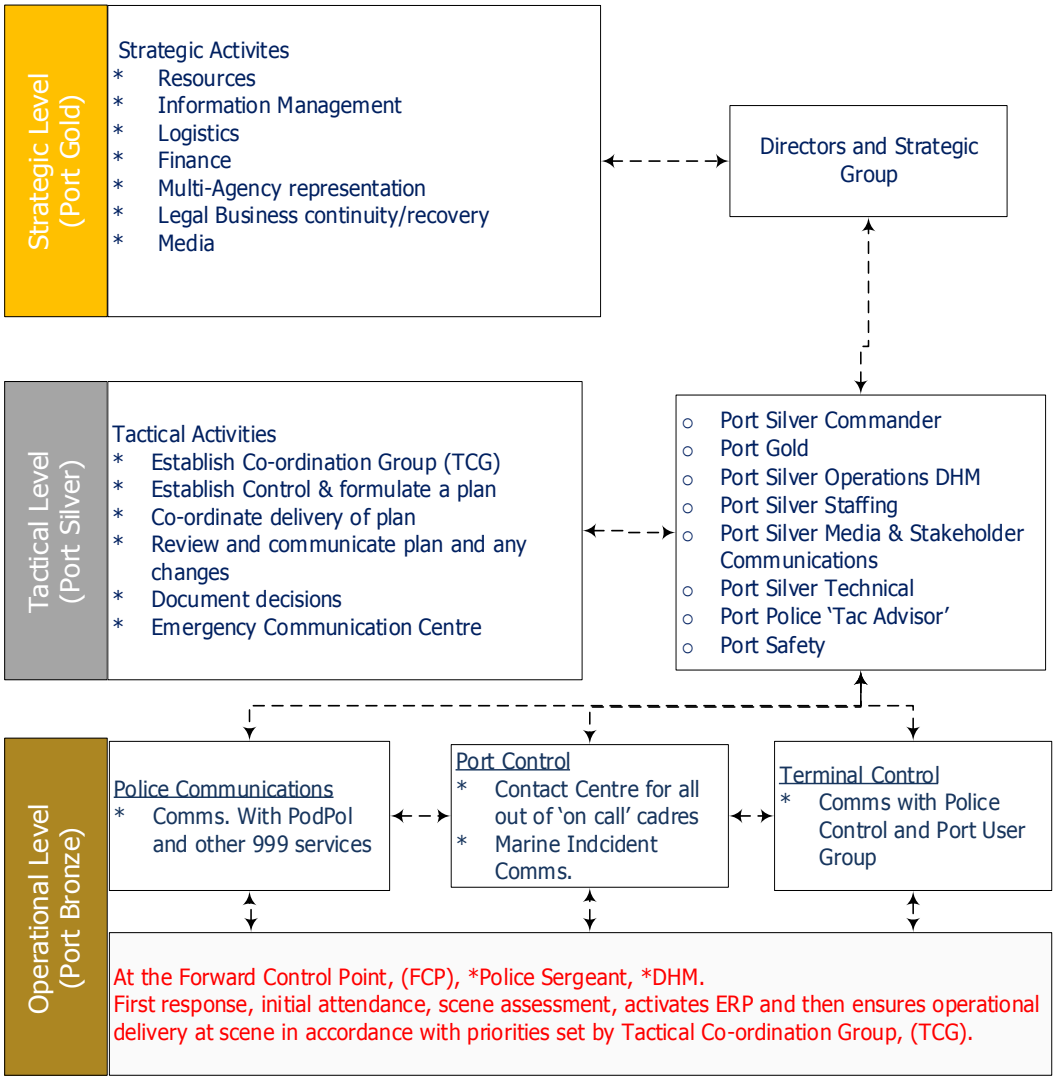


Figure 1.11 shows the generic structure of DHM's incident control arrangements as well as general responsibilities and lines of communication and reporting as detailed in the Emergency Response Plan.

1.12 Tiered Response

Tiered preparedness and response is recognized as the basis on which to establish a robust oil spill preparedness and response. The established three-tiered structure within this plan allows a measured and effective response to any oil spill will be provided; from small operational spillages to a worst-case release at sea or on land, these are;

Tier	Level of Response	Management of Response
1	**Local,** Small operational spills that may occur within a location as a result of daily activities. The level at which a response operation could be carried out successfully using individual resources and without assistance from others	• Response can be managed within the capability and resources of the Harbour Authority • Local response plans to be activated. • Response team to assess quantity and likely predication of any pollution spilled and report to Coastguard (CGOC). • MCA to create incident on MCA incident management system (Vision). • MCA to monitor response and support with technical and environmental protection advice as necessary.
2	**Regional**, Medium sized spills where immediate resources are insufficient to cope with the incident and further resources may be called in on a mutual aid basis. A Tier 2 incident may involve Local Government	• MCA, Harbour Authority, local / regional responder actions as per Tier 1. • If contained entirely within a Port's jurisdiction, response can be managed within the capability and resources of the authorities own or contracted responder Adler and Alan. • Tier 2 specific response plans, or relevant multi-agency regional plans and responder plans to be activated. • Responder to conduct initial risk assessment and activate resources as appropriate. Continual re-assessment of risk to be undertaken throughout any incident. • Where appropriate MCA to deploy aerial surveillance to assess extent of pollution. • Environmental impact assessments to be conducted and regularly reviewed. • MCA to conduct Places of Refuge risk assessments and analysis if appropriate • SOSREP to establish SCU or issue direction if appropriate • Local/Regional/National media handling with partner agencies, as appropriate. • MCA may consider deploying national pollution response resources to incident.
3	**National**, A large spill where substantial further resources are required and support from a national (Tier 3) or international co-operative stockpile may be necessary. A Tier 3 incident is beyond the capability of both local and regional resources. This is an incident that requires national assistance through the implementation of the National Contingency Plan and will be subject to Government controls.	• MCA and local / regional responder actions as per Tier 1 and Tier 2 above. • Escalation to Tier 3 to be determined by the MCA and promulgated to all appropriate Category 1 responders. • MCA to establish a MRC and assume the lead for at-sea pollution response • MCA to alert relevant coastal States, activating relevant bilateral and multi-national plans where necessary • Counter pollution resources deployed as required by national contractors, operators contractors, designated salvers • Lead Government Departments, SOSREP and response organisations to support Central Government and Administration briefing.

1.13 Tier 2 Responder

Dover Harbour Board has contracted Alder and Allan to provide marine pollution support and respond to Tier 2 incidents on a rapid mobilisation 24/7, 365 day per year basis. They will work alongside DHB to provide a response under the coordination of the DHM. Figure 1.13 shows the response resource provided by Adler and Allan. Members of their team will be involved at each level within the command structure as required. Specifically, at pollution response sites, a member of Adler and Allan staff will be appointed as a site supervisor. The site supervisor will be responsible for managing the site and will be a bronze commander within the command structure.

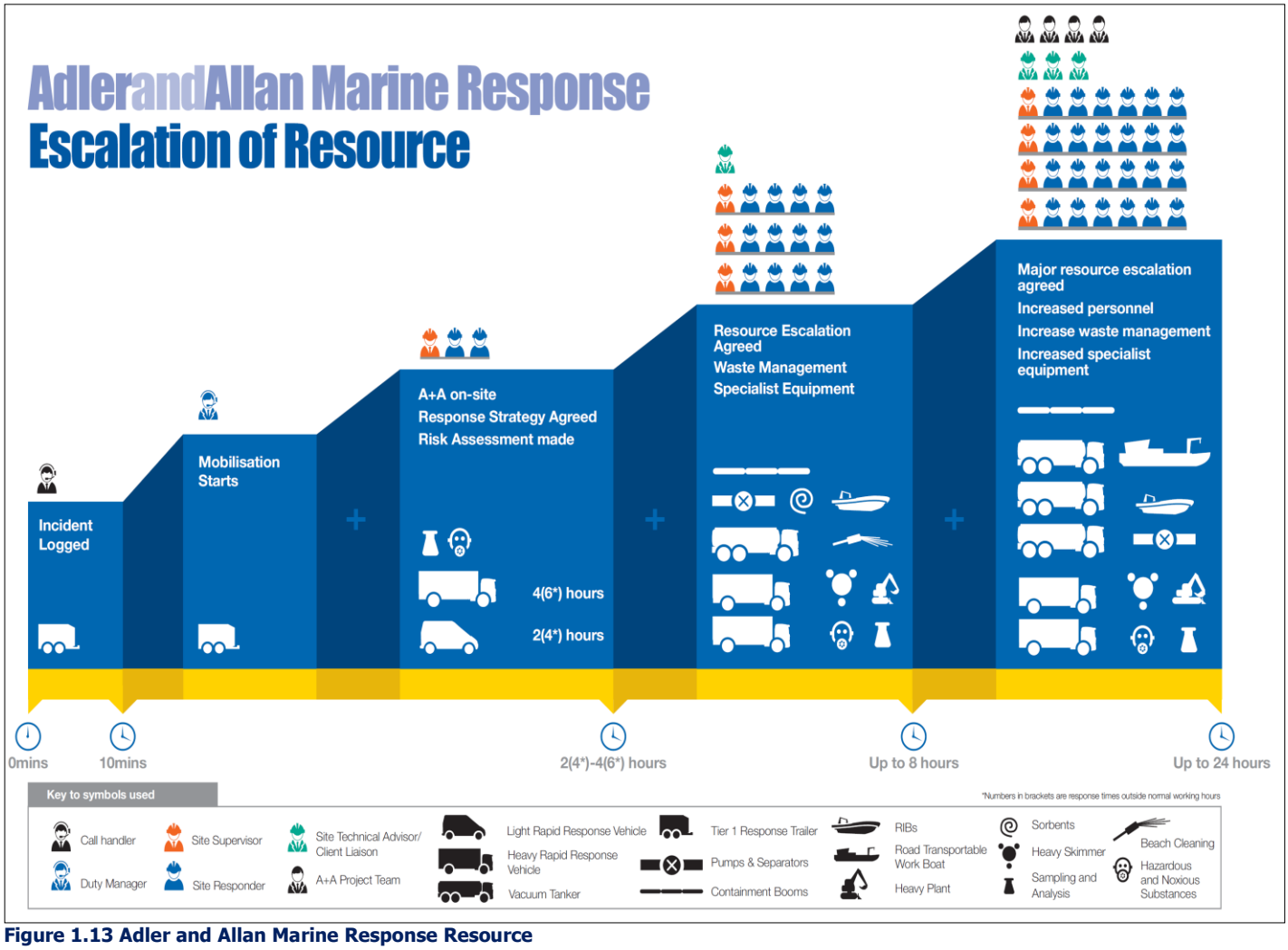


Figure 1.13 Adler and Allan Marine Response Resource

1.14 Incident Control Arrangements

Oil Spill Management Team

An Oil Spill Management Team (OSMT) will be established for an effective and efficient response. Depending on the location of the incident may determine the use of the designated Emergency Command Centre at Eastern Docks within the Terminal Control building. The OSMT will provide the command and control structure to co-ordinate and direct the incident response and will be headed by the DHM or delegated member. The OSMT will consist of Dover Harbour Board personnel and potentially external organisations when appropriate.

In the event of a Tier Three incident and the implementation of the National Contingency Plan, the OSMT will assist MCA, SOSREP, or his appointed deputy and provide support where necessary. Transfer of responsibility for managing the incident response is to be formally documented prior to relinquishing overall control to external agencies.

The Oil Spill Management Team

Internal Personnel	External Organisations
Police Manager (chair) Marine Support (Duty Harbour Master) Technical Support Environmental Support Strategic Support (Gold) Media Support Port Safety Tactical Support Administrative Assistance	TIER 2 Contractor (Adler & Allan) Kent County Council Dover District Council Marine Management Organisation Natural England MCA/SOSREP Environment Agency Vessels Agent Emergency services

1.15 Response Strategy

When managing the response to an incident the aims are:

1. **Prevent pollution occurring**
2. **Minimise the extent of any pollution that occurs**
3. **Mitigate the effects of any pollution**

The response often creates a lot of waste that has a high environmental impact; high cost and is often difficult to manage. The waste hierarchy classifies waste management strategies according to desirability as follows:

The response aims and the waste hierarchy should both be considered when making decisions about the course of any salvage operations as well deciding upon the pollution response methodology.

1.16 Financial Arrangements

Dover Harbour Board will endeavour to reclaim the costs incurred from a pollution event from the polluter or the appropriate compensation fund. Different claims processes are applicable depending on who caused the pollution but liability may not be determined until long after the pollution event.

Good record keeping and administration are essential during the incident in order to make a successful claim at a later date.

The process of reclaiming costs may take a number of years and therefore business continuity and cash flow must be considered as part of the response strategy.

Depending on the determined liability and the source of compensation, claims may be made for the following costs:

- Property damage;
- Clean-up operations and preventive measures;
- Losses in fishery, mariculture and tourism sectors; including consequential loss and pure economic loss;
- Environmental damage; limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken.

Each claim needs to be able to meet the following criteria for it to be successful:

- Loss or damage must be caused by contamination;
- Claimant must prove loss or damage;
- Loss must be economically quantifiable;
- Any expense or loss must actually have been incurred;
- Any expense must be for measures which are reasonable and justifiable.

A lot of evidence is therefore needed to support a claim. See **Section 4** for information on the associated administration.

Depending on the scale and type of incident a joint claim with the local authority or other appropriate local groups may be more cost effective to compile and submit than individual claims and could lead to greater success.

1.17 Media Response

Oil spill incidents are high profile events that, depending on the scale of the spill, are the subject of intense levels of media and public attention. Managing and responding to this level of attention poses the threat of hindering response operations therefore effective media management is essential. The Media response will be initiated through the activation of the Emergency Response Plan with media support being available at all levels within the command structure.

All media matters are to be handled by media support only in full consultation with the Chief Executive.

An initial holding statement will be issued based on confirmed fact and aiming to consistently reiterate the Board's environmental track record throughout the incident and into the business continuity and recovery phases. Dover Harbour Board's Twitter account will also be used to regularly update the public of what the Port is doing to deal with the incident, effect on operations, to re-state its environmental credentials and to counter any negative discussions gathering momentum in the social media space.

The press and public should be kept firmly away from the site of where the oil spill has occurred and the clean-up operation is taking place. However, if the scale of interest requires it, the Port of Dover will provide a defined location for the media to congregate and be provided with hot and cold refreshments whilst awaiting regular situation updates.

1.18 Health and Safety

Dover Harbour Board must take full account of the health and safety requirements for all the personnel involved in an oil spill response operation. In order to minimise the risks, affected sites should be closed and security posted to restrict access to all persons not directly involved in the response.

It is necessary for the Duty Harbour Master to complete a risk assessment (RA) for each activity associated with the pollution response; Marine Operations Risk assessment 07 highlights some of the potential risks and mitigations which have been considered for a generic incident. This RA must be modified to take into account any specific risks associated with the site, pollution or response equipment.

Where there is a risk of flammable atmosphere, the area should be tested and assessed using multi gas detectors from the Technical Services Department.

Dover Harbour Board's Health and Safety Procedures can be found within the IFS system.

1.19 Legal Background

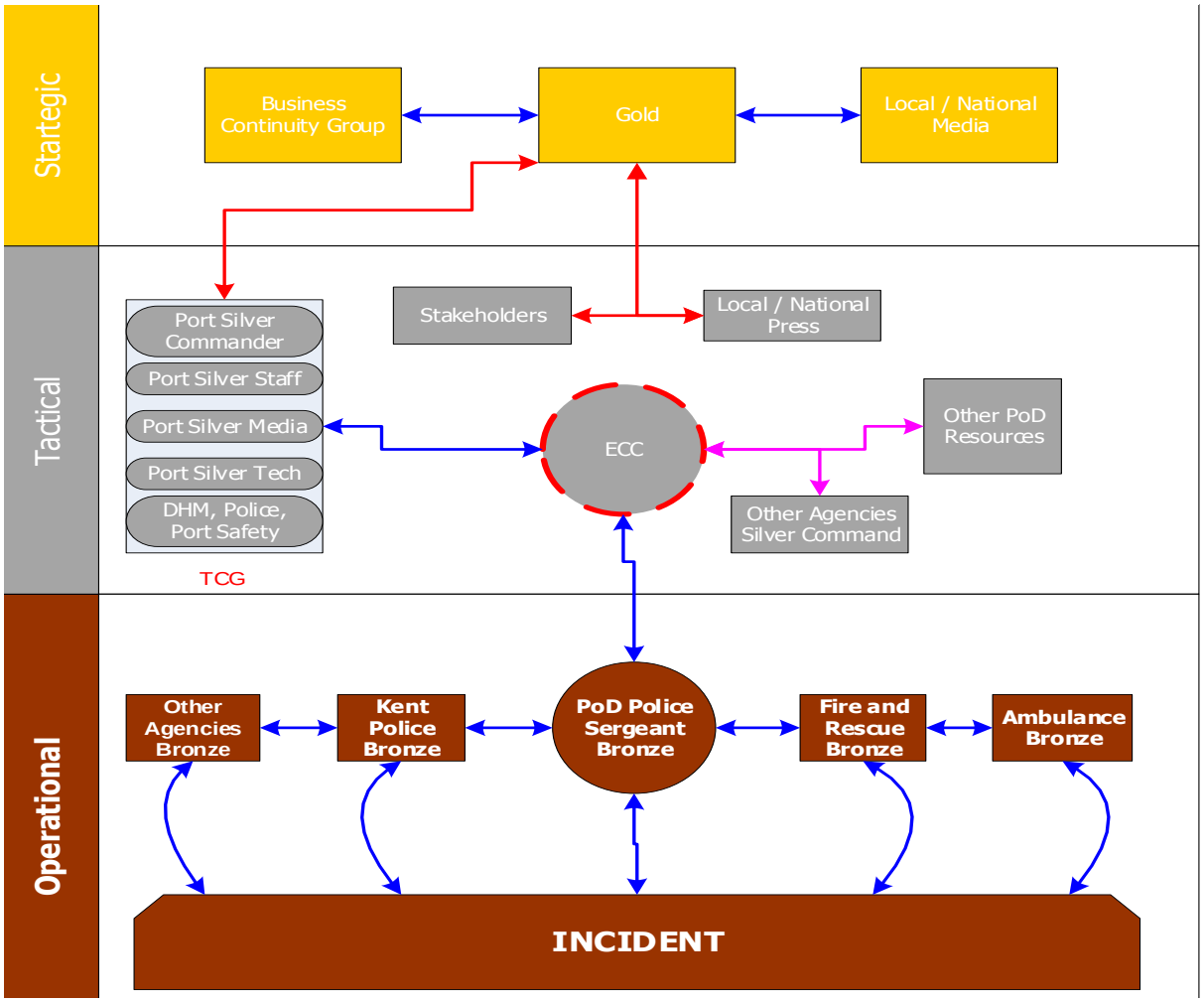
The Health and Safety at Work Act 1974 is the key legislation relating to health and safety matters in the UK. The act establishes a number of duties and responsibilities, which can be summarised as follows:

- Employers have a duty to establish and maintain a safe system of work.
- Employers must take all reasonable and practicable steps to protect the health, safety and welfare of their employees and others, including the public.
- Employers must prepare and maintain written safety policies.
- Employees have a duty to comply with all health and safety instructions and requirements and not to put their own or anyone else's health, safety and welfare at risk.

1.20 Lines of Communication

Communication chains will be set up in accordance with the Emergency Response Plan as shown below in Figure 1.20. At a bronze, silver and gold level communication will take place with outside agencies. During a large scale incident this will include communication with the regional or national response centres of the Salvage Control Unit, Shoreline Response Centre, Marine Response Centre and Environmental Group. For a smaller scale incident the external agencies may form part of the Emergency Coordination Centre (ECC) or Tactical Control Group (TCG).

Emergency Response Plan – Communications Chain



Section 2

Action

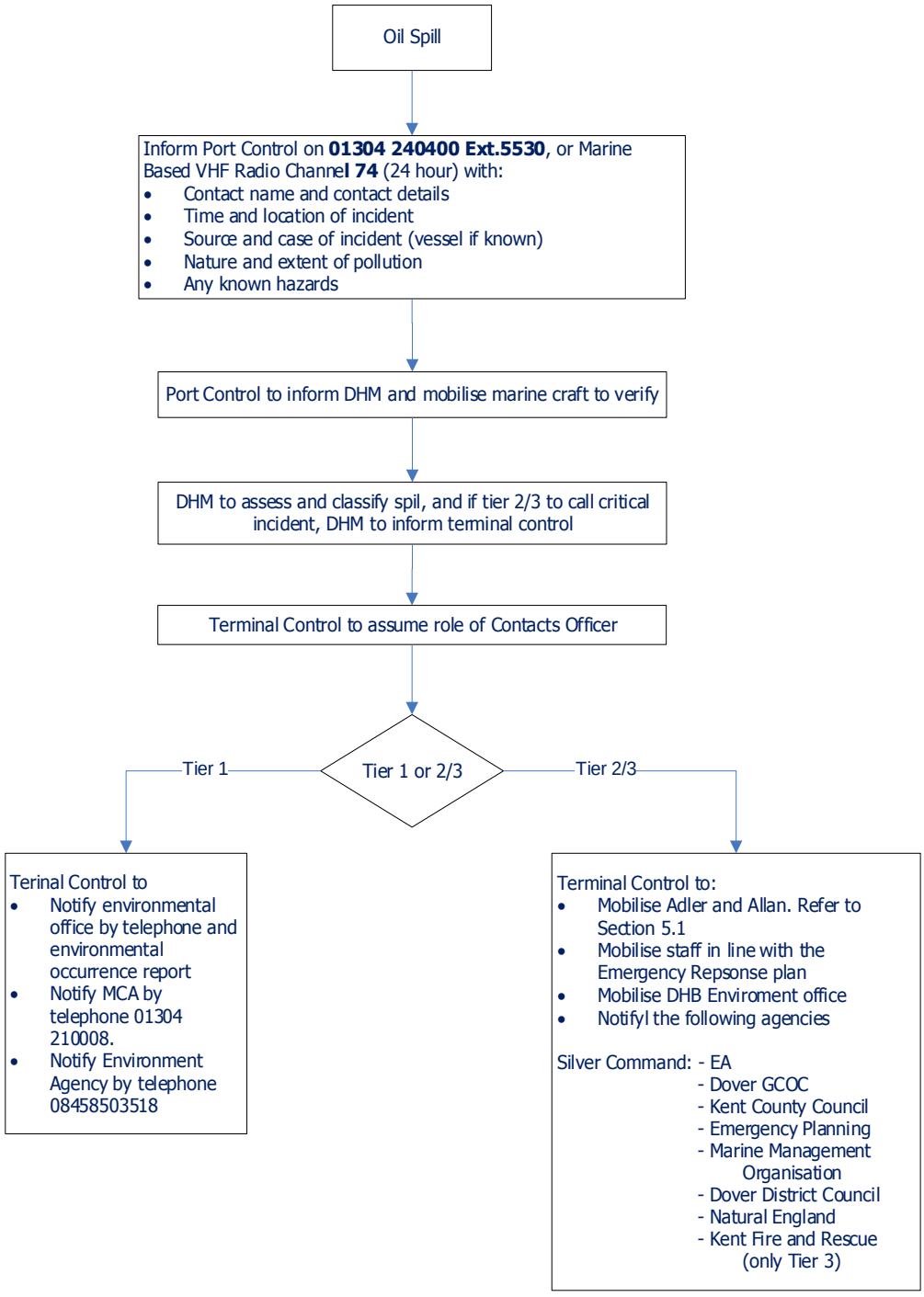
This section provides information on the response procedures to allow rapid mobilisation.

Contents

- **2.1 Mobilisation Decision Model**

- **2.2 Notification Procedures –** *Mobilisation Tier 1,2 and 3 , Initial Reporting and Notification*
- **2.3 Action Cards** - *responsibilities, initial and final actions of the personnel likely to be involved in a spill event.*
- **2.4 Response Guidelines**
- **2.5 Spill Equipment**
- **2.6 Sampling procedure**

2.1 Mobilisation Decision Model



Note: After initial notification has been made to MRCC, DHM to check Grp.DHMS mailbox to verify Dover CGOC POLREP has been issued.

2.2 Notification Tier 1

External Agencies

Contact	√	Time	Comments
Dover Coastguard Operations Centre (CGOC)			
Marine Management Organisation (MMO) - Headquarters/Hastings DEFRA duty room			
Environment Agency			

2.21 Notification Tier 2 or 3

Mobilisation of Adler & Allan Form

Adler & Allan are contracted to be onsite within 4 hours during office hours or 6 hours outside office hours.

These telephones will be manned on a 24-hour basis. The caller will be asked to provide:

1) Name and location of Caller
2) Name of Company
3) Telephone Number including prefixes
4) Brief details of the incident

THE ADLER AND ALLAN MOBILISATION FORM (SECTION 5) MUST BE FAXED/EMAILED TO ADLER & ALLAN BY THE DHM OR TERMINAL CONTROL UNDER THE DIRECTION OF THE DHM IN ORDER TO AUTHORISE THE RESPONSE

VHF Channel 69 will be used for internal communications and between DHB and Adler & Allan.

External Agencies

Contact	√	Time	Comments
Adler and Alan			

Contact	√	Time	Comments
Dover Coastguard Operations Centre (CGOC)			
Marine Management Organisation (MMO) - Headquarters/Hastings DEFRA duty room			
Environment Agency			
Dover District Council			
Dover Police			
Kent Fire and Rescue			
Kent Resilience Team			
Public Health England			
Natural England			
RSPCA			

2.3 Action Cards

The following action cards define the rolls, responsibilities, initial and final actions of the personnel likely to be involved in a spill event. Each person has their own personal action card.

Port Control Officer

Step	√	Actions
Alert		Harbour Patrol Launch
		Duty Harbour Master
Initial Actions		Obtain as much information as possible from observer
		Commence Personal Log (Refer Section 5)
		Mobilise Patrol Launch to investigate incident
		Issue General Warning to all Vessels in the vicinity
		Brief and then assist the DHM and await spill classification
Further Actions		Notify Dover CGOC Centre or complete form GS77 POLREP (section 5), ensure email notification sent to Grp.DHMS@doverport.co.uk.
		Assist the DHM/ Oil Spill Management Team as required
Final Actions		Submit Personal Log to Harbour Master
		Attend debrief

Port of Dover's Port Vessel Unit

Step	√	Actions
Initial Actions		Proceed to location
		Investigate Cause/Source of spillage/Assess the risks
		Provide DHM/Port Control with information
Further Actions		Initiate Personal Log
		Collect samples and take photographs
		Track the leading edge of the slick and provide co-ordination of at-sea response
		Deploy any absorbents/ deflector booms required
		Survey the shoreline
		Provide detailed situation reports to the DHM/OMT
Final Actions		Submit Personal Log to Harbour Master
		Attend debrief

Terminal Control Officer

Step	√	Actions
Initial Actions		Receive information from DHM
		Notify Dover CGOC by telephone
		Notify Environment Agency
Further Actions		Tier 2/3: Mobilisation of Adler & Allan by telephone then submit form
		Notification and mobilisation of other organisations (Inform all organisations of the requirements from the DHB) & request liaison officers at the scene
		Submit Personal Log to Harbour Master (Refer Section 5)
Final Actions		Attend debrief

Duty Harbour Master

Step	√	Actions
Initial Actions		Initiate Personal Log
		Classify the spill and activate the Emergency Response Plan if required
Further Actions		Inform Terminal Control who to notify/activate (see * below)
		Direct the Port of Dover initial Tier 1 response as Initial On Scene Commander
		Chair the Oil Spill Management Team
		Appoints a Bronze Commander (may be police officer/ tug master)
		Manage, approve and review all response activities within DHB jurisdiction
Final Actions		Terminate clean up
		Update POLREP Incident Report and attach to DICES investigation report once complete.
		Liaise with Environmental Agencies and Environmental Group if activated
		Collate Personal Logs of relevant Personnel
		Hold Debrief for all involved in response operation

Administration Support

Step	√	Actions
Initial Actions		Initiate Personal Log (Refer Section 5)
		Initiate a financial and expenditure log
		Assist in press release and public interest
		Assist ECC command structure
Further Actions		Co-ordinate welfare and supply of extra equipment as required
		Assist with advising insurance and loss adjusters
Final Actions		Submit Personal Log to Harbour Master
		Attend debrief

Environmental Support

Step	√	Actions
Initial Actions		Initiate Personal Log (Refer Section 5)
		Confirm spill classification
		Identify Sensitive Areas that might be affected
Further Actions		Advise on response strategy as part of the Oil Spill Management Team
		Assist DHM/OMT as required
		Co-ordinate samples/ photographs/ SCAT forms
		Monitor environmental impacts of spill
		Liaise with Environmental Agencies and Environmental Group if activated
Final Actions		Submit Personal Log to Harbour Master
		Assist with Incident Report (POLREP)
		Attend debrief

* The Environment Agency should be informed of 'all discharges, or potential discharges of polluting materials to the sea'. Contact should be made via the 24hr telephone number phone, 0800 807060.

2.4 Response Guidelines

The four principal aims of managing the response to any incident are:

- Protect public health
- Prevent pollution occurring,
- Minimise the extent of any pollution that does occur, and to mitigate the effects of any pollution

<table>
<tr><th colspan="4">Actions/ Activation</th></tr>
<tr><th>On Scene</th><th colspan="2">Response Level</th><th>Notification</th></tr>
<tr><td rowspan="3">☐ Classify the spill and activate the appropriate level of spill response
☐ Ensure all personnel within the Spill area are accounted for
☐ Prevent, minimise and mitigate source if accessible
☐ Secure site and start personal log, include photographs of source if possible</td><td>Tier 1</td><td>A small operational spill no outside intervention required.</td><td rowspan="3">☐ Port Control
☐ Terminal Control
☐ Duty Harbour Master</td></tr>
<tr><td>Tier 2</td><td>A medium sized spill within the port's jurisdiction but beyond the capability of Dover Harbour Board, this would require the assistance of Tier 2 contractors.</td></tr>
<tr><td>Tier 3</td><td>A large spill beyond the capability of local and regional resources, this would be dealt with using the assistance of Tier 2 contractors</td></tr>
<tr><th colspan="4">Strategy</th></tr>
<tr><td colspan="4">Incident Command - response strategy and setting clear objectives for the response effort. Ensuring overall implementation activities, effectiveness of actions and safety considerations are given the highest priority.</td></tr>
<tr><th>Location</th><th>Containment</th><th>Monitor</th><th>Clean up Response</th></tr>
<tr><td>• Type of product
• Trajectory Analysis (Currents, tides and Weather forecasts)
• Location and seasonal sensitivity of environmental and social/economical resources, priorities and protection</td><td>• Prevent
• Reduce
• Deflect</td><td>Evaluate information throughout the response to ensure the effectiveness of actions. Systematic monitoring should take place until termination of response</td><td>• Oil Type
• Shoreline type
• Amount of Oil
• Social, Cultural and Environmental Sensitivities
• Health and Safety Requirements
• Cost Benefit Analysis</td></tr>
<tr><th colspan="3">Safety</th><th>Environment</th></tr>
<tr><td colspan="3">Dover Harbour Board must take full account of the health and safety requirements for all the personnel involved in an oil spill response operation. In order to minimise the risks, affected sites should be closed and security posted to restrict access to all persons not directly involved in the response</td><td></td></tr>
<tr><th colspan="3">Site Set Up</th><th>Waste Streams</th></tr>
<tr><td colspan="3">Hot Zone – Clean-up operation

Decontamination zone - effectively render harmless or remove poisonous substances both on personnel and equipment

Cold Zone
☐ Welfare
☐ First Aid
☐ Communication site for forward control point</td><td>☐ Ensure transport/reception facilities are in place and approved for use
☐ Ensure an effective and controlled waste stream is identified before clean up response
☐ Consider segregation, rate of waste generation, minimisation of waste</td></tr>
</table>

2.5 Spill Equipment

Dover Harbour Board's spill equipment is located at the Pier B Eastern Docks, Tug Haven, further equipment is located at Berth 5 store in the Eastern Docks. Additional manpower can be obtained from Securitas, OSC and Dover Harbour Boards Cleaning contractor.

Pier B Oil Spill Container Equipment List

Item	Description	Notes
Inflatable Boom	700mm Inflatable booms: 20m Large towing bridles with green and white rope	8 Sections 1 Pair
Air Inflators	Blower PB4600	1 (Use 1:50 fuel: oil mix)
Fuel for the Inflators	2 Stroke engine oil 1lt (50:1 pre mixed fuel)	1x Small bottle 2x 3 Litre containers
Absorbents	3m length sections of absorbent boom Absorbent pads	10 Packs 6 Boxes (200 pads per box)
Fast Tank	Fast tank Plastic sheet for inside fast tank	Size: 2000 gallons = 9000ltrs = 9.1m^3
Towing bridles		1 pair
White rope	Rope coil	3 coils
Tool box:	Metal saw Spanners 8oz Hammer Screw drivers/wrench Jubilee clips D Cell battery WD40 Ratchet screwdriver and 10 piece bit set Duck tape Pliers/cutters Stanley knife Torch Mini Wrench set Mini Screwdrivers 3m Tape measures Spare black thumb screw for Sentinel booms	1 1x 11 piece set 1 2 Flat, 4 Philips, 1 Wrench 20 Assorted 1 Spare 1 Can 1 1 Roll 4 Pliers/1 Cutter 1 1 1x 10 piece set 1x 6 piece set 1 50
Personal Protective Equipment (PPE) :	Gauntlet gloves Latex gloves Tyrex suits Black bin liners	6 Pairs 1 Box 13 1 Box

Tug Haven Oil Spill Container Equipment List

Item	Description	Notes
Inflatable Boom	650mm Inflatable booms: 10m (S1-S3) 650mm Inflatable booms: 20m (L1-L5) 650mm Inflatable booms: 20m	2 sections: Right hand side 6 sections: Right hand side 2 sections: Right hand side
Air Inflators	Blower PB400 Blower PB24LN	1 1
Fuel for the Inflators	2 stroke engine oil 1lt 25:1 pre mixed fuel	1 small bottle 1x3 litre and 1x5 litre
Absorbents	3m length sections of absorbent boom 6m length sections of absorbent boom Roll of absorbent pads Box of absorbent pads	4 packs 2 packs 1 roll 2
Fast Tank	Fast tank Plastic sheet for inside fast tank	1 Size: 2000 gallons = 9000ltrs = 9.1m^3 1

Towing bridles	Towing bridles with wire Towing bridles with rope	1 pair: Hanging on Right hand side 1 pair: on back shelf
White rope	**Coil**	1
Auxiliary equipment	Duck tape Shackles Torch Empty waste oil drum Rope with monkey fist Traffic cones	1 roll 4 1 1 2 4
Skimmer		1
Anchors	Bruce anchor	1
Tool box	**Tool box** Hack saw Spanners Screw drivers/wrench Jubilee clips Pliers/cutters Stanley knife Spare white thumb screws for sentinel booms	 1 1 3 flat, 1 Phillips, 1 wrench 8 Assorted 2/1 1 30
Personal Protective Equipment (PPE) :	Latex gloves Tyrex suits Black bin liners	1 1 Box 9 1 Box

Eastern Dock Berth 5 Oil Spill Equipment

Item	Notes
Drain Blockers clean, wrapped in plastic and stored in the covers and hanging on the wall	3
Containment Pools, clean and stored in the cover	3
Pots of patching paste, full and sealed	3
Green Jerry cans – Empty	3
Box of absorbent socks/booms	1
Boxes of Absorbent Pads	8
Yellow hazardous waste bags to dispose of used absorbent pads and waste plus cable ties	3 packs
Funnels - 2 large orange and 2 sets small assorted	
Flexible nozzles for transferring oil between containers	3
Blue plastic drip trays for small petrol spills	5
Whale pump and black delivery tube, clean and in working order	1
Boxes of latex gloves	2
Pairs of sturdy red industrial rubber gloves	5
Face masks	6
Provec white protection suits	5
205lt drums - empty	2
Oily waste disposal wheelie bins.	2
Bag of keys for penstock valves (including laminated surface water drainage maps)	1
N.B **Keys for ED 5** are held by Terminal Control and the Environment Office	

2.8 Sampling Procedures

Samples should be taken as soon as possible before the oil becomes weathered; a minimum of three samples should be taken for each spill location using the form seen on page 34. These samples may be required as evidence in legal proceedings. Sampling kits are kept in the spill locker at the **Tug Haven**

General Procedures:

1. Identify oil spill location
2. Collect the sampling kit from the oil container and check that it has the required equipment (bottles, sealing labels, scraping tools etc) and reporting forms to record the sampling throughout the process.

3. Use the MCA stop notice 4/2001 as a guide to collection (page 36).
4. Ensure the samples have been bottled and sealed appropriately and all relevant forms filled in.
5. Finally, make sure all samples are ready to be transported and kept in a cool place below 5°C, the temperature should be recorded at all times.
6. The use of a cool-box with ice packs is recommended during transportation to available fridges which are located at the **Tug Haven**

SCIENTIFIC, TECHNICAL AND OPERATIONAL ADVICE NOTE - STOp 4/2001

IMPORTANT

This STOp notice replaces STOp 2/98, please destroy your copy of STOp 2/98

ADVICE TO LOCAL AUTHORITIES ON THE COLLECTION AND HANDLING OF OIL SAMPLES

Note: This document should be read in conjunction with:

- STOp 1/2001 - The Environment Group and Maritime pollution response in the UK.
- STOp 2/2001 - The Establishment, Management Structure, Roles and Responsibilities of a Shoreline Response Centre during a Maritime Pollution Incident in the United Kingdom.
- The National Contingency Plan for Marine Pollution from Shipping and Offshore Installations (NCP).

All extant MCA STOp notices may be found on the MCA web site: www.mcga.gov.uk **and**
all enquires regarding this and other MCA STOp notices should be directed to meor_meor@mcga.gov.uk

onshore spill - representative samples from the shoreline, following discussion with Counter Pollution Branch .

Following an incident, attempts may be made to infer that not all the oil pollution came from one vessel, and that some of it may have come from other sources. Where therefore an oiled beach is being sampled, a careful and detailed examination of the beach should be made to determine the uniformity of the oil deposit and the extent to which it is polluted by more than one type of oil. In particular, if there are any tarry, semi-solid lumps or wet tarry patches, their presence should be recorded and some idea of their quantity and extent obtained. In addition, samples of such pollution should be retained and an attempt should be made to estimate costs expended on the clean up of different oils.

In cases where samples have been taken at intervals along the beach, these should be clearly identified (see section 6 on labelling) as sequential samples of what might be an oil slick. Material is thus available for examination at a later stage, and the analytical laboratory does not get overburdened with an unnecessary number of analysis reports of the same material. It is desirable that samples of oil are taken in the area where the oil is first washed ashore. This is necessary as the fresher the oil the easier it is to identify by laboratory techniques.

3. SIZE OF SAMPLES

Modern analytical methods mean that very little original pollutant material is required to carry out most chemical analyses. However, a larger sample is likely to be more representative. Detailed analyses are often hampered by either contamination or the loss of the oil's lighter fractions. A larger undisturbed sample may consist of a weathered oil crust covering a less weathered (holding a greater percentage of lighter fractions) and therefore more valuable core. The recommended minimum quantities required for a detailed programme of analyses are:

Unweathered oils that are liquid and substantially free of water	10ml
Oil exposed to seas surface and forming water-in-oil emulsion "chocolate mousse"	10ml
Overside water discharge where contravention of 100ppm or 15ppm is suspected	1 litre of the discharge
Tarry lumps as found on beaches	10 grammes

A sample should not be withheld because the recommended quantity cannot be obtained, since much smaller samples can give useful results. In cases of pollution within UK territorial waters, when it is only necessary to prove that some oil has been discharged, a relatively small sample may be acceptable. Larger samples may be useful to carry out a range of tests to determine the most appropriate response/clean-up strategy. MCA can advise when and why such an approach is desirable

4. METHODS OF COLLECTING SAMPLES

When liquid samples are skimmed off the surface of the sea, care should be taken to ensure that the sample contains sufficient oil. Various techniques may be adopted to skim thin layers of oil from the waters' surface such as using a bucket with a hole.

Care should be taken to minimise contamination of liquid samples by solid matter. Oil deposited on rocks or other impervious materials should be scraped off and placed directly into the sample container. Lumps of tarry or waxy pollutant should be placed directly into sample containers; no attempt should be made to heat or melt these samples to enable them to flow into a container.

Oil adhering to seaweed, small pieces of wood, sand, plastic, material, cloth, vegetation or other debris should be dealt with by placing the complete specimen comprising oil and support material into the sample container.

5. BOTTLING, SEALING, PACKAGING AND BOXING OF SAMPLES

All samples should be securely packed and sealed, using screwtopped containers and UN approved fibreboard boxes to ensure safe carriage of the sample. These have been supplied to HM Coastguard Stations and MCA Marine Offices for use by MCA Staff. In consultation with CPB, MCA sampling bottles may be made available to local authorities.

As proof against unauthorised opening, the sample container should be sealed with wire and a lead or sealing wax seal. Alternatively, adhesive labels with a signature on the paper stuck on the bottle top in such a way that they have to be broken to open the bottle are acceptable.

The bottle should then be placed inside a plastic bag, which should be sealed with a further adhesive label in the same way as for the sample bottle to ensure that it is not tampered with.

If it is necessary to take an oil sample where one of the standard containers above is not available the receptacle should be of glass with a screw-cover and a seal which would not be affected by the oil. Small (100ml) and medium (500ml) glass bottles are readily obtainable from chemists or hardware shops.

The use of closed metal receptacles or plastic jars is strongly discouraged as contact with metal or plastic can, in some cases, interfere with the analysis. Avoid the use of any metal tool made of nickel or vanadium based alloys, as these metals occur naturally in crude oils and refined products and their levels may assist in the identification of the oil source.

When boxing the sealed samples for transport, the Peters and May (Dangerous Goods) Ltd. Packing instructions should be followed, to ensure the integrity of the package for transport under Dangerous Goods conditions. Vermiculite should be used to surround the sample(s) in the box for added protection and to absorb any possible seepage. Make sure that the dangerous goods documentation is completed.

Whenever possible, samples should be stored in refrigerators or cold rooms at less than 5 degrees C in the dark. These precautions are particularly important for samples containing water or sediment, but less so for bulk oil samples.

When ordering sample bottles it is important to consider the following:

1. Wide necked bottles make sampling easier.
2. Sample security can be achieved with locking cap seal.
3. Ensure that no components of the bottle can interfere with analysis, e.g. waxed cap inserts.

6. LABELLING AND ADDRESSING OF SAMPLES

Care should be taken to ensure that every sample bottle is not only suitably sealed but also clearly labelled before being submitted to the MCA contractor's laboratory. It is important that a sample is positively identified, particularly where more than one is taken during an incident. It is of vital importance to maintain continuity in the chain of evidence, MCA recommend that each sample is labelled *and* is accompanied by more detailed information set out on a standard proforma. The form accompanying each container should therefore provide the following details: -

a. An identifying number:

year	2 digits
month	2 digits
day	2 digits

and the initials of the official in charge of taking the samples.

For example 02/04/17/JS = Sample taken on 17th April 2002 by John Smith

b. Description of samples.

c. Position from which sample was taken, grid reference if possible.

d. Date and time of sampling.

e. Purpose for which sample was taken.

f. If known, suspected source, e.g. name of tanker or ship.

g. Whether or not dispersants have been used and, if known, their type and make.

h. Method of sampling (description of sampling device).

h. Name, address and telephone no. of person taking the samples and of anyone witnessing the taking of it.

If possible the following information would also be helpful:

j. Wind direction and velocity.

k. Air and water temperature.

l. Sample descriptions, i.e. viscosity, colour and contaminants.

m. Description of the oil spill, i.e. distribution and consistency.

An example of the recommended form and label are appended to this notice.

To assist with any subsequent investigations it is important that a letter is sent to MCA quite independently of the sample (but a copy should be sent with the samples), setting out details a. to m.

7. TRANSPORTATION OF SAMPLES

If a sample needs to be analysed the Counter Pollution Branch will contact their analysis contractor to arrange for the sample to be collected by courier and analysed.

Please ensure that the samples in question are labelled correctly and securely packed in UN approved boxes to avoid breakage. It is important that the standard proforma described in section 6 should also be included with the sample along with all carriage documentation. To facilitate sample transportation, clear information on the number of samples to be collected, the location they need to be collected from and a contact name and phone number need to be given to the Counter Pollution Branch.

8. HANDLING OF SAMPLES FOR BONN AGREEMENT STATES

In cases where samples are taken at the request of a contracting member of the Agreement for Co-operation in Dealing with Pollution of the North Sea by Oil, the BONN Agreement, the Counter Pollution Branch would be the focal point for processing the samples for either analysis or onward transmission to the requesting member state. The results of such tests would not be made public until the contracting party involved was informed.

OIL POLLUTION SAMPLE – STANDARD LABEL

ID No. Date/Time Location) (Grid Ref) Name and Address of person taking sample

.....

For continuity of evidence: Please complete clearly
Sample passed to:

Date Name Address Signature

.....

.....

.....

.....

OIL POLLUTION SAMPLE - STANDARD LABEL

ID No. Date/Time Location) (Grid Ref) Name and Address of person taking sample

.....

For continuity of evidence: Please complete clearly
Sample passed to:

Date Name Address Signature

.....

.....

.....

.....

OIL POLLUTION SAMPLE – STANDARD LABEL

ID No. Date/Time Location) (Grid Ref) Name and Address of person taking sample

.....

For continuity of evidence: Please complete clearly
Sample passed to:

Date Name Address Signature

.....

.....

.....

.....

OIL POLLUTION SAMPLE - STANDARD LABEL

ID No. Date/Time Location) (Grid Ref) Name and Address of person taking sample

.....

For continuity of evidence: Please complete clearly
Sample passed to:

Date Name Address Signature

.....

.....

.....

.....

Collection of oil samples - This form to be completed by person taking sample If in doubt please refer to MCA STOp Notice on sampling. Remember to complete sample jar label and sign		
A	ID Number - YY/MM/DD - with initials of person taking sample	
B	Sample description	
C	Location of sample – OS Grid Ref or Lat/Long if possible	
D	Date and time of sample collection	
E	Purpose for which sample was taken	
F	If known, suspected source	
G	Were dispersants used?	
H	Method of sampling (device?)	
I	Name, address, e-mail address & Tel No of person taking sample and any witnesses	
If possible the following information would also be helpful		
J	Wind speed and direction	
K	Air and Sea Temperature	
L	Sample description, viscosity, colour, any contaminants?	
M	Description of the oil spill, distribution and consistency	
Original form to be kept with sample - please send copy of the form to the Counter Pollution Branch of the MCA - Bay 1/11, Spring Place, 105 Commercial Road, Southampton, SO15 1EG Tel:023 8032 9485		

Section 3

Execution

This section provides information on the response techniques and types of boom available to deploy within Dover Harbour Board Tier 1 capability.

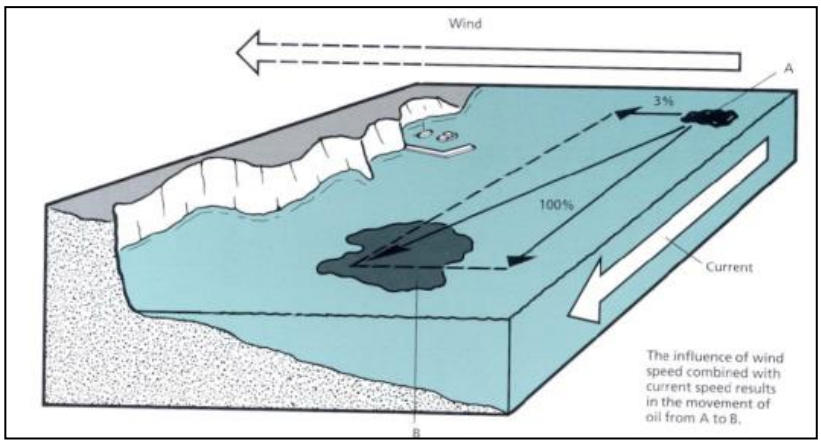
Contents

3.1 Boom Deployment

Dover Harbour Board's Tier 1 equipment is predominantly skirt booms which can be used to contain or deflect oil. These are deployed as a first response. Boom should first be deployed around the casualty or source of oil to contain as much as possible. Deflection boom can then be deployed to deflect oil away from environmentally, socially or economically sensitive resources (such as Dover Beach, Shakespeare Beach and the River Dour – see section 4.5) to areas where it can be more easily recovered.

When determining a suitable booming plan the forces resulting from the current and wind need to be considered as this will determine the direction the oil will move in. Figure 3.1 below illustrates the fate of an oil slick acted upon by the action of wind and current.

Figure 3.1: Oil slick trajectory



These forces also affect how efficiently the boom will contain the oil and they therefore must be taken into account when planning the booming strategy. Strong winds generate waves, which can splash over the boom. Strong winds can also generate additional tensile forces on the boom, causing it to drift. Although surface oil tends to dampen waves, eventually oil will splash over the boom. The trajectory of lost oil must be monitored throughout.

Currents and Tides will initially concentrate the oil in a wedge in the boom cusp. At current speeds of less than half a knot at right angles to the boom, this wedge can be several metres wide, and the boom will contain the majority of oil that accumulates. If the current speed increases then the leading wedge of the oil will push up against the boom and water can dive under the boom's skirt taking oil with it.

It is therefore not suitable to boom at right angles to the current unless the current is less than 0.5 knots.

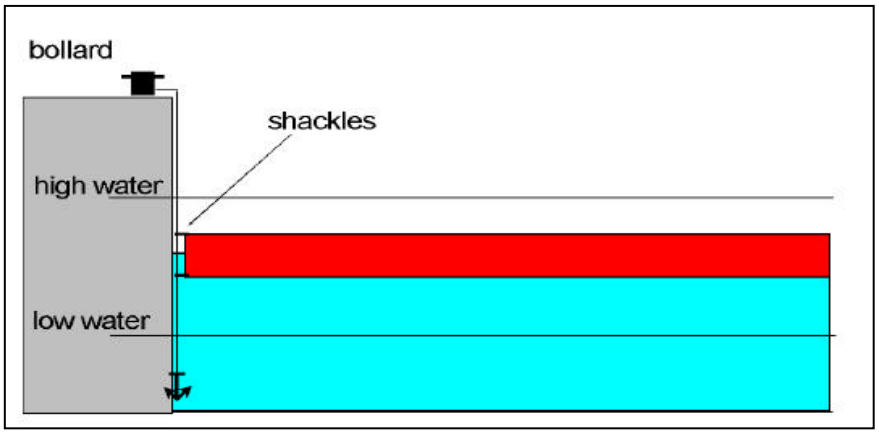
The problem caused by currents can be rectified by securing the boom at such an angle that oil can be diverted by the boom to calmer waters. Table below can be used to construct an efficient booming plan and Section 3.6 provides information on current flow. It is likely that the booming strategy will need to be updated and modified throughout the tidal cycle and as the incident progresses.

Table: Maximum angle of boom relationship with current strength

Current Strength		Maximum Angle
Knots	m/sec	Degrees
0.7	0.35	90
1.0	0.5	45
1.5	0.75	28
2.5	1.25	16
3.0	1.5	13

3.2 Jetty Booming

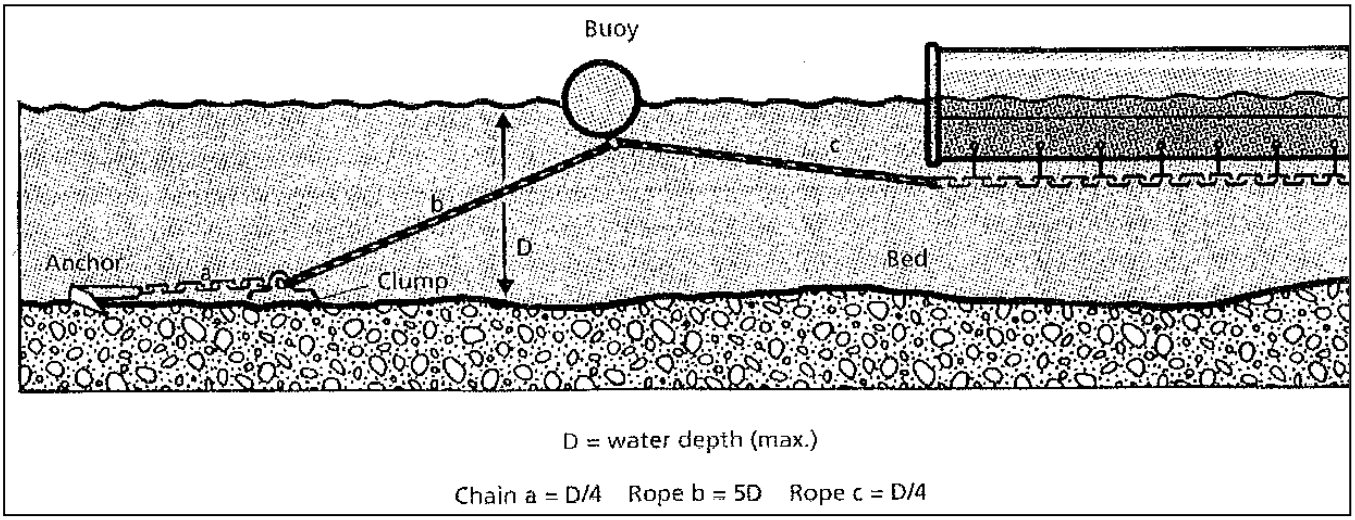
When connecting booms to fixed structures a running mooring should be installed to allow the boom to rise and fall with the tide; a running mooring is a rope attached at the top of the jetty to a bollard or other secure point and weighed down by an anchor. This technique will only be effective where forces on the rope and boom are minimal.



Please note that many of the piers in the Eastern Docks are not solid structures and therefore booming plans will need to take into account the movement of oil through the pier cavities.

3.3 Mooring length and anchoring deployed boom

As can be seen below, the length of mooring between boom and anchor should be 4-5 times the maximum water depth (note the tidal range of the area). If moorings are too short the boom may be dragged below the surface or the anchor 'tripped' out.



The holding power of an anchor will vary according to its type, weight and the composition of the sea bed. For example, anchors of the Bruce or Danforth type will be most effective on sand and mud substrates, but a fisherman's anchor (hook type) will be better on a rocky bottom.

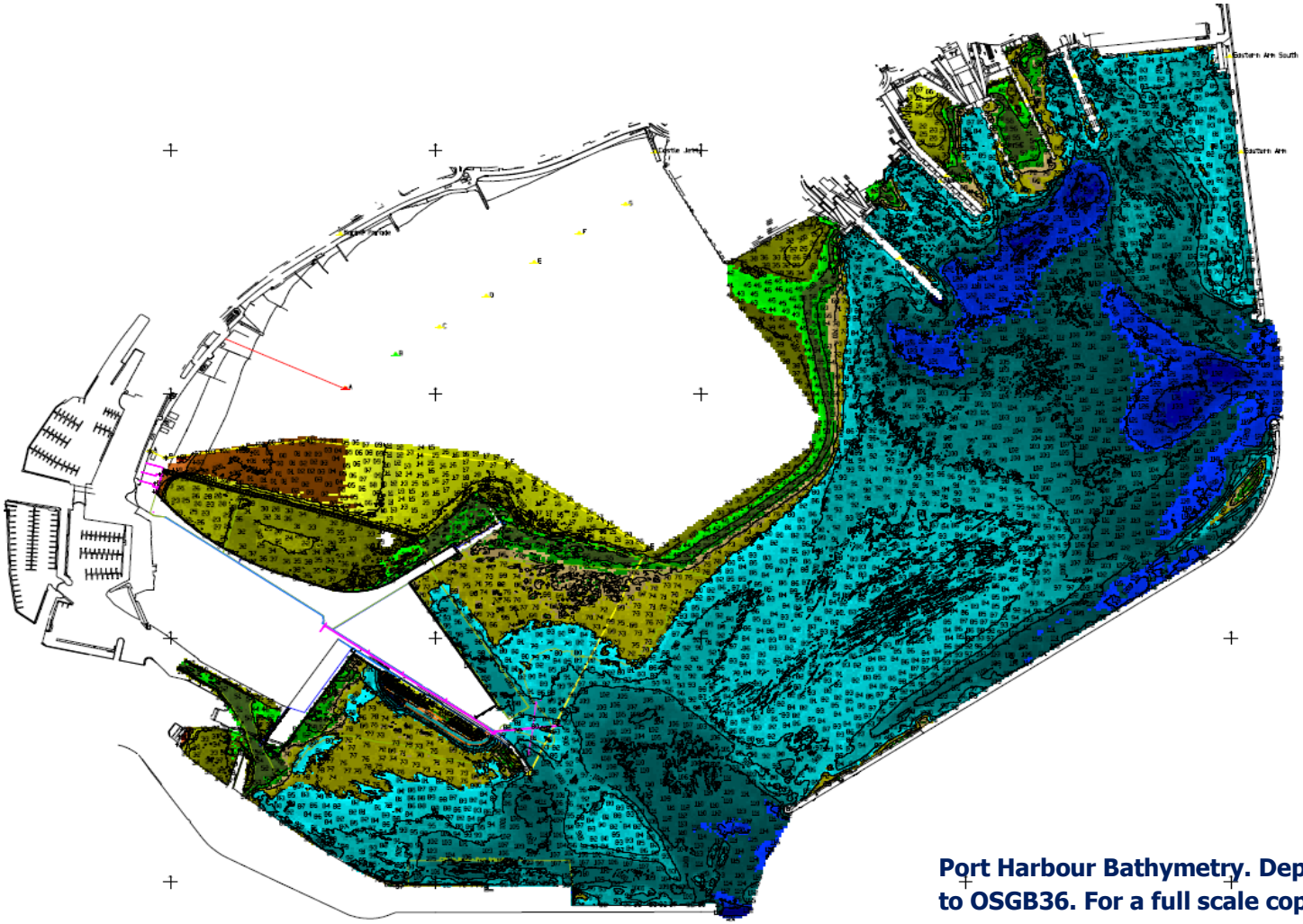
3.4 Shore Sealing Boom

When using boom to protect the coastline shore sealing boom is required. These are supplied by Adler & Allan. They have a clover-leaf shaped cross-section, with air or foam as buoyancy in the upper chamber, and water as ballast in the lower section. This arrangement allows it to float in deeper water, but settle and make a seal with the bottom in shallow water or on the beach itself. It is thus particularly useful for inter-tidal areas on a beach, perhaps as an end-piece connected to a conventional boom further out to sea.

Figure 3.4: Shore sealing boom

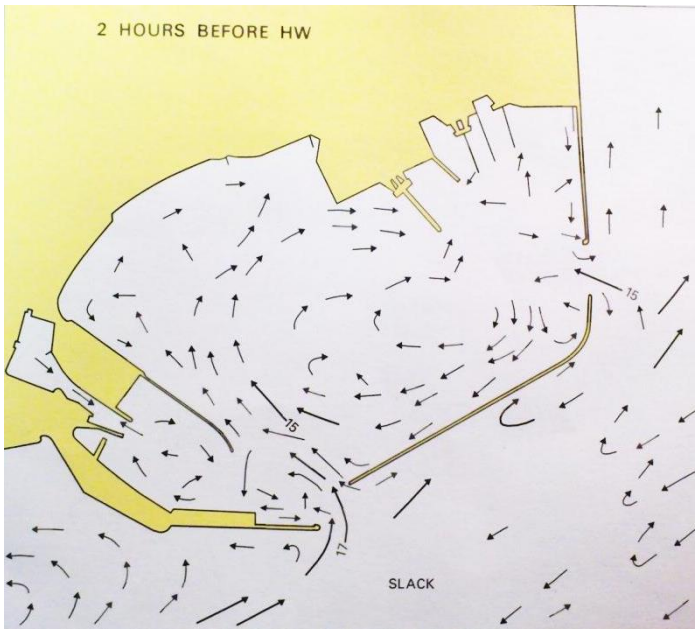
Although shoreline barriers may only be in the water part of the time, they still need to be held in place by adequately strong moorings as described for conventional floating booms.

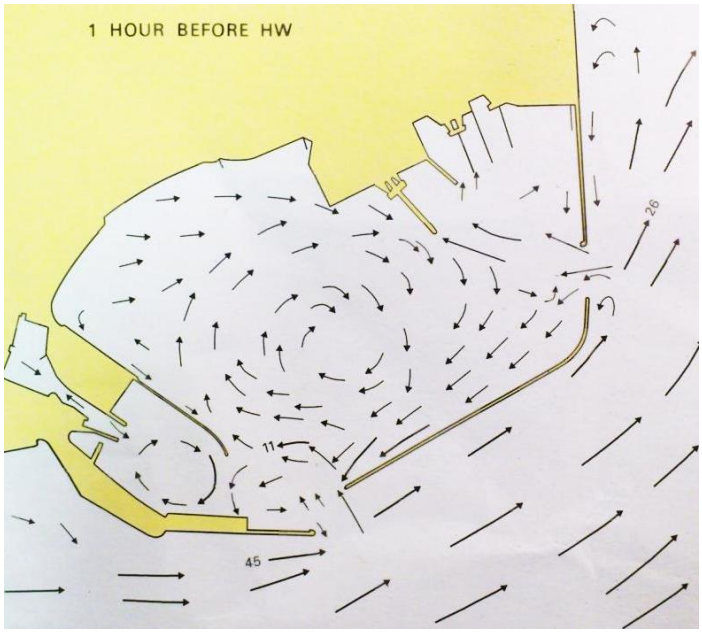
3.5 The Harbour Bathymetry

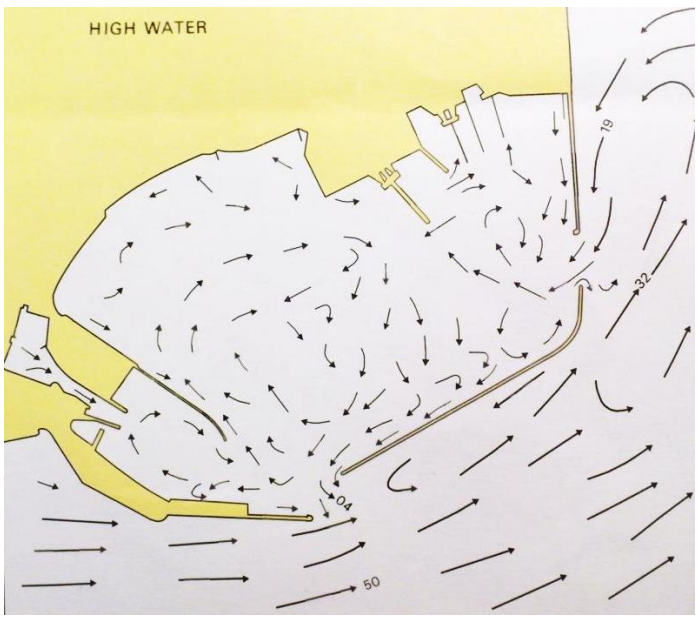


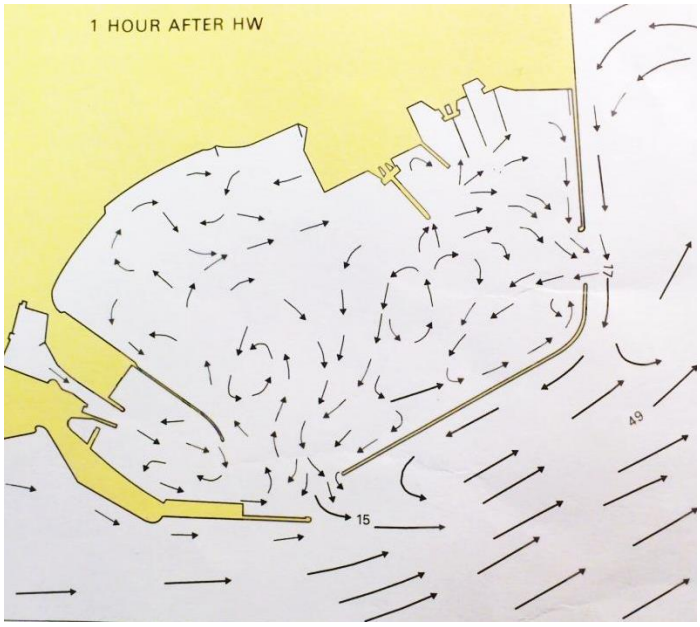
Port Harbour Bathymetry. Depths are reduced to CD and positions referenced to OSGB36. For a full scale copy please contact the Hydrographic Department or Hyperlink to the latest Survey Chart Information

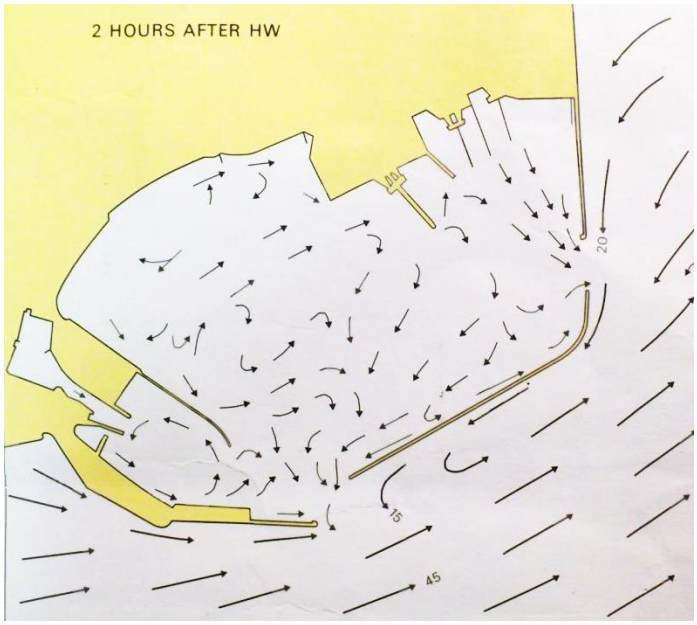
4. Tidal Stream Information

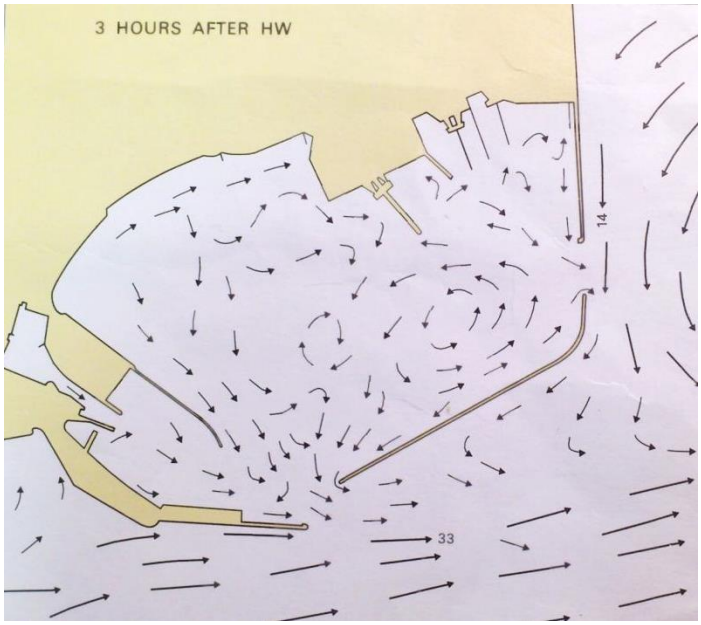









2 HOURS AFTER HW
20
15
45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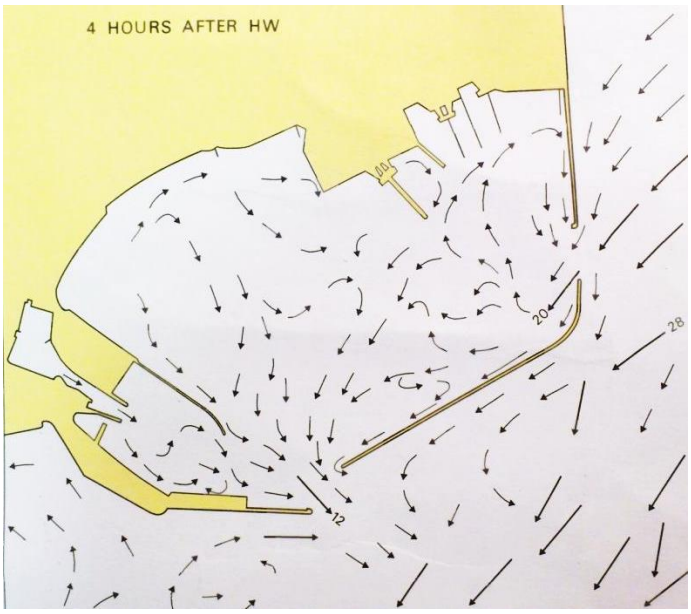
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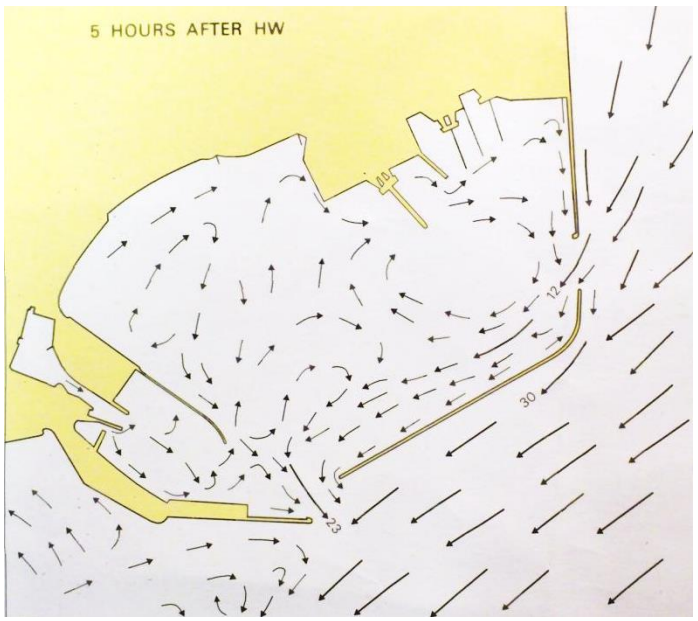
20
28
12


5 HOURS AFTER HW
12
30
23

Section 4

Recovery

The principle aims of a clean-up operation is to reduce the pollution to a tolerable level and to restore with least impact to the environment.

Contents

4.1 Oil Recovery strategy

The principle aims of a clean-up operation is to reduce the pollution to a tolerable level and to restore with least impact to the environment.

Three stages can usually be recognised in clean-up of contamination;

Stage 1: Removal of heavy contamination and floating oil;
Stage 2: Cleaning up of moderate contamination, stranded oil and oiled beach materials;
Stage 3: Clean-up of lightly contaminated material and removal of oily stains.

In many situations it will not be necessary to progress through all three stages and on occasions oil will be best left to weather and degrade as this will have a lower environmental impact than further cleaning.

Continuing recontamination following each tidal cycle is likely at the early stages of the oil spill response, thereby extending the clean-up period of a large incident over several weeks. Unless access is vital to pedestrian and vehicle traffic, the area should only be cleaned after each tide. The local tide is semi-diurnal and has a range of up to 6 metres; tidal currents shown in Section 3.

4.2 Clean Up Techniques

Quay Walls

Use skimmers, trucks and vacuums to recover oil from the water as shown in Figure 4.2. The latter illustration accommodates the tide which is important especially on an ebbing tide for the connecting pipelines. It is also worth remembering that hydraulic link spans at the berths are ideal locations for oil recovery operations as the height of the decks can be adjusted to suit the changes in the tide.

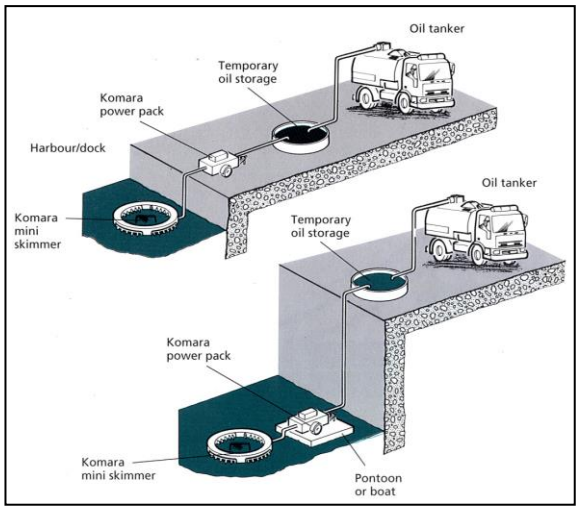


Figure 4.2: Oil recovery from jetty and pier structures

Oil can be washed off structures into a boom and recovery system at the water's edge. High pressure hoses should only be used on quay walls where there is little marine growth. It should not be used in areas such as the marina which has a large amount of marine life as recovery from high pressure hosing is likely to take longer than recovery from oil pollution. Environmental advice should be sought before undertaking high pressure washing.

Shingle Beach

Shakespeare Beach and Dover Beach are shingle beaches and are considered the most sensitive environments to oil pollution within DHB's jurisdiction due to the way that oil can easily penetrate the spaces between the stones. Further environmental information can be found in Section 4.10. If there is sufficient warning before these beaches are contaminated the amount of oily waste could be reduced by retrieving beach debris and moving it beyond the high water mark.

Figure 4.2.1 is an example of a possible oil recovery set-up from the shoreline which could be initiated on Shakespeare or Dover beach. This configuration considers the impacts upon the vegetated shingle and takes into account the inaccessible areas for a gully sucker or other heavy vehicles. Depending on the distance from the hard standing to the water there may be a need for two oil tanks. Care must be taken as the oil tanks are susceptible to piercing from the shingle, a temporary hard surface e.g. wood, should be placed underneath the tanks. The oil is removed from the water by the skimmer and then pumped by the power generator to the oil tank and temporary oil storage container until it is taken away by the gully sucker.

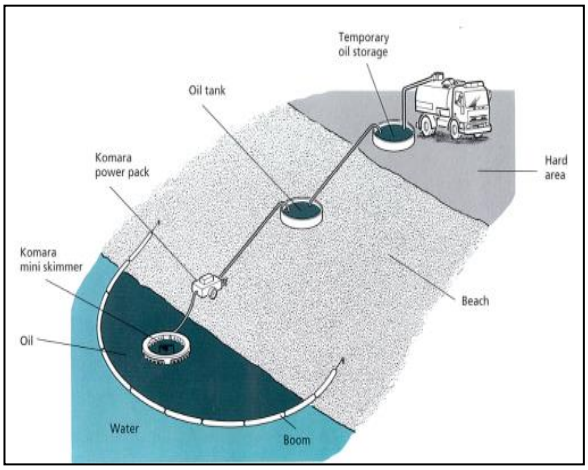


Figure 4.2.1: Oil recovery alongside inshore beach

It is desirable to remove as much of the pollution as possible off the surface of the shingle without disturbing the vegetation. Material can be removed by diggers and washed in a cement mixer. It could also be pushed in to the surf for surf washing in a boomed area with associated recovery system. When removing oil from beach substrates, care must be taken not to collect excess beach material and to return it to its original location as it may upset the hydrodynamics of the shore and will lead to unnecessary costs and potentially extra hazardous material to be disposed of. The scooping action of the digger should however undercut the oil slightly, cutting into clean pebbles to avoid spreading oil further into the beach.
Clean up procedures should consider:

1. Poor vehicle mobility over soft substrate.
2. Penetration of oil into the beach material.
3. Excessive amounts of beach material being removed whilst clearing the oil.
4. The ecologically important vegetated shingle species.

Oil will inevitably enter the body of the pebble beach and may take a few weeks to leach out as sheen and tar balls. If the sheen is predicted to be large then an inflatable boom should be placed along the beach to contain and recover the leaching oil.

Rocky Shores

Langdon Bay is a chalk boulder platform situated within the port's 1 mile jurisdiction limit to the east. It is of ecological importance. The steep chalk cliffs and rocky shoreline make this an extremely difficult environment to access for oil spill cleaning and present significant safety risks.

The safety risks and the risk of environmental damage from clean-up activities severely constrains the clean-up techniques that would be appropriate for this site and the preferred method of cleaning would be to monitor and evaluate and allow the wave action to break up the oil naturally. If a clean-up was deemed safe and environmentally beneficial this may be in the form of low pressure flushing from the shore into a boom and recovery system at the water's edge. No clean-up should be embarked upon without obtaining environmental and safety advice.

4.3 Use of Dispersants

As a strict policy, Dover Harbour Board will refrain from the use of artificial dispersants in response to an oil spill due to the local seabed topography the sensitivity of the surrounding coastline and the marine organisms. Should the use of artificial dispersants be necessary then approval should be obtained directly from the Marine Management Organisation.

4.4 Decontamination

Workers who have been wearing protective clothing are likely to become contaminated by oil during the clean-up operation. The clothing needs to be cleaned or removed to prevent further contamination outside the area, with facilities for such cleaning being made near but clear of the work site.

A decontamination area should be situated such that the drainage from the clean-down is drained into an appropriate storage tank. Care should be taken to make sure that contaminated waste does not enter the normal drainage or waste disposal system or leach into the soil or watercourses in the area.

Contaminated clothing will have to be disposed of as hazardous waste if they cannot be washed.

4.5 Catering

Volunteers and personnel returning from prolonged periods of time outside and on the water will need a supply of hot drinks, soup and food. Arrangements will need to be made as soon as possible with the DHM to ensure that appropriate welfare facilities are provided.

4.6 Clean-up considerations

The volume of waste produced should be a key consideration when deciding on the clean-up strategy. Table below gives broad information about the waste produced by each strategy. The amount and type of waste produced must be balanced against the environmental benefit and practicalities of each strategy.

Table: Waste from different response strategies

Response Strategy	Type and Relative Amount of Waste
Monitor and evaluate	None
Disperse	None
Protect / deflect	None
Contain and recover	Oil and oily water (medium)
Burning	Burnt residue (small)
Shoreline clean up	Oil and beach material (large)

Oil/water separators can be made available by Adler and Allan and deployed to reduce the volume of liquid waste.

During a shoreline clean up every effort should be made to reduce the amount of contaminated material by:

- Moving beach debris to beyond the high water mark before the beach is polluted if there is sufficient warning;
- Good site management and decontamination during the response;
- Minimising the amount of clean substrate collected along with the oiled waste during the clean-up operation by cleaning substrate on site and returning it to its natural location where possible.

Waste must be segregated in to different types in order to allow it to be treated in the most sustainable and cost effective way. This should be done as to physical state (liquid/solid, emulsified/non emulsified) and the type of material oiled (organic, plastic, textile, mineral etc). This means that where possible oiled sediment should be segregated from oiled beach debris in order to maximise the disposal options.

4.7 Waste Management

Any clean-up operation is likely to produce large amounts of oily waste materials and water, often far in excess of the original oil spillage. All oily waste such as absorbent materials, personal protective equipment, and oiled sand

and shingle must be handled and disposed of as hazardous waste. Good waste management practices considered from the start of a response that incorporate the waste management hierarchy (see section 4.8) are essential to minimising the cost and environmental impact of the response.

4.8 Storage and Disposal

It is inevitable that temporary storage will be needed near to the recovery site throughout the clean-up operation. Suitable sites must be identified taking into account, vehicle access, and ease of access to the spill, environmental sensitivities and the need to separate the wastes prior to disposal. All sites must be approved by the Environment Agency and care must be taken to prevent spreading the contamination further.

Note that Category 1 waste skips 12 cubic yard capacity are located at the Cruise Terminal; these are water tight and in good repair. Fast tanks, located in the oil spill containers, are also suitable for waste oil storage; these are quick and easy to assemble and are readily available for immediate response.

Pits and bunds can be excavated and lined with heavy duty plastic sheets (provided by A+A) and can be sited at the back of the beaches above high water springs where the beach material is reasonably firm.

Suitable vehicles for transporting different waste types also need to be considered and may influence the size and location of temporary storage sites

Types and capacities of waste disposal vehicles

Type of Vehicle	Area of Action	Capacity (m^3)
Tractor Hauled Slurry Tanker	Beach/ Road	<3
Dumper Truck	Beach	<7
Commercial Vacuum Truck	Beach/ Road	<7
Gully Sucker	Beach/ Road	2-10
Road Tanker	Road	<15
Rail Tanker	Rail	30-90
Conventional Lorry	Road	10-20
Barge	Water	Several Thousand

A+A are in possession of many vac tankers, ADR tankers (carriage of dangerous goods by road) and other vehicles which can remove oily washings for disposal.

In a regional or national incident temporary waste storage sites maybe set up on a regional level and the waste produced at Dover may feed into the temporary sites prior to final disposal.

Arrangements for disposing of small amounts of waste are made by the contractors Adler and Allan; larger quantities will require consultation with the Environment Agency, Kent County Council, Natural England and Dover District Council (contact details can be found in Section 1).

The main disposal options will be:

- Recycling of oily liquid waste
- Landfill of general non-hazardous waste
- Stabilisation
- Land Farming
- Combustion

The waste hierarchy should be applied when determining the most suitable option

All waste contractors must be appropriately licensed and the destination licensed to accept hazardous waste. A hazardous waste consignment note must be produced and retained for every movement of hazardous waste from the premises.

4.9 Administration

Good administration is key to collecting the evidence needed to support any compensation claim made by DHB. The Oil Spill Management Team would be responsible for ensuring that the information detailed is clearly recorded and retained in a logical order. Additional administration support is likely to be appointed and given the role of setting up systems to collect and collate the relevant information and monitor and check that it is working.

Information required to support a claim

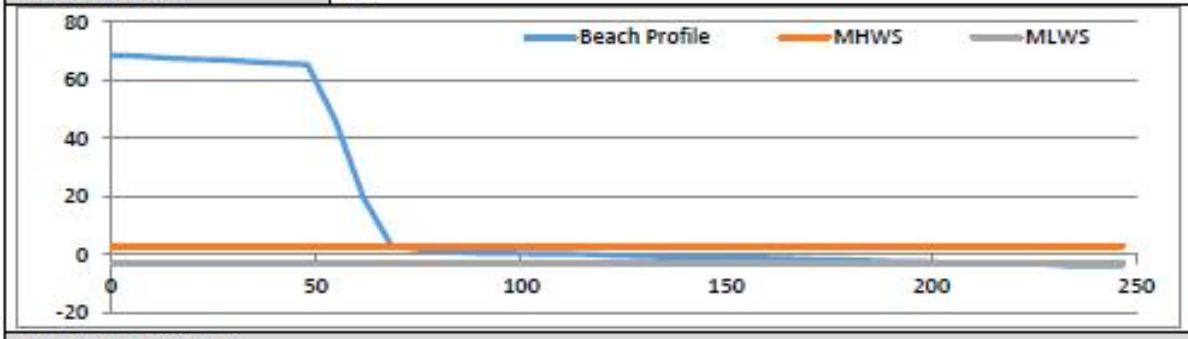
Claim Criteria	Information required (as applicable)
Loss or damage must be caused by contamination	Shoreline Clean-up Assessment Technique Form (Section 5.2.4) Daily photographs Samples (Section 4.5.2)
Claimant must prove loss or damage	Evidence of loss of business Changes to sailing schedules Copies of correspondence Logs of telephone conversations
Loss must be economically quantifiable	Invoices Forecasts Financial records
Any expense or loss must actually have been incurred	Invoices including 3rd party invoices Site logs for every site showing: dates on which work was carried out date and time stamped number and categories of response personnel regular/overtime Equipment logs for every site showing: Type of equipment Rate of hire Costs of purchase - remember residual values Quantity used of each piece of equipment Period of use - in use / standby Apply industry standard of 100% hire rate for in-use, 50% rate for stand-by Log of consumable equipment – responders to sign out consumables and state the site item will be used on Photographs of equipment at the start of the hire Photographs of damaged equipment Independent assessment of damaged equipment prior to replacement or repair Rates of pay and who is paying them Travel, accommodation, living costs records for response personnel Further photographic evidence
Any expense must be for measures which are reasonable and justifiable	A summary of events - together with **WHY** the working methods or courses of action were selected Personal logs Minutes of meetings Photographs of whiteboards Logs of telephone calls Evidence that rates for equipment have been investigated – i.e. 3 quotes.

4.10 Shoreline Pollution Response

South Foreland

Description	A cliff section of coastline between St Margaret's at Cliff and Dover Harbour.

	Back Beach	Beach	Foreshore
Beach Sediment	Chalk Cliff	Shingle/Sand	Rocky/Chalk Platform
MHWS	3.04mOD	**MLWS**	-2.88mOD
Intertidal Zone	170m	**Access Times**	Low Tide Only
Vegetation Coverage	None		
Environmental Designations	Dover to Kingsdown Cliffs SAC; Dover to Kingsdown Cliffs SSSI; North Downs NCA; Kent Downs AONB.		
Pedestrian Access	No		
Vehicular Access	No		



Site specific guidance

There is little beach material in front of South Foreland and access is poor. Any clean-up operation must be realistic and managed around the tides; beware of that it is possible to be cut off by the high tide.

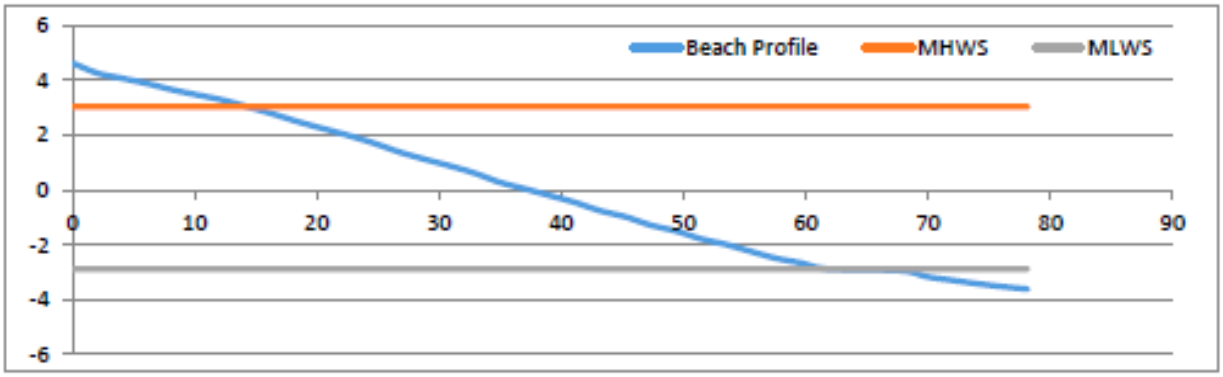
- Chalk cliffs are easiest to clean with warm seawater or high pressure jets.
- Avoid abrasion of rock surface
- Avoid disturbing nesting birds.
- If small numbers of birds or animals are discovered that are covered in oil, carefully place them in a suitable container and take them to the nearest RSPCA centre. If there are large numbers of affected birds/animals, or the wildlife resists capture, or is nesting, or nests are discovered that are affected, contact the RSPCA and Natural England and request their attendance on site.
- Chalk platform can only be cleaned with seawater so it does not harm the marine life.
- The preferred method of cleaning chalk is to wipe away the excess oil and then let nature and wave actions take its course to do the remaining cleaning.
- All activities that could have a detrimental effect on protected species and habitats should be kept to a minimum.

Extract from Dover District Council Oil & Shoreline Pollution Plan

Dover Harbour

Description	The beaches to the south and within Dover Harbour.

	Back Beach	Beach	Foreshore
Beach Sediment	Shingle	Shingle/Sand	Shingle/Sand
MHWS	3.04mOD	MLWS	-2.88mOD
Intertidal Zone	45m	Access Times	24/7
Vegetation Coverage	None		
Environmental Designations	Dover to Kingsdown Cliffs SAC; Dover to Kingsdown Cliffs SSSI; North Downs NCA; Kent Downs AONB.		
Pedestrian Access	Yes		
Vehicular Access			



Site specific guidance

Dover Harbour is split into two bays, one within the harbour and a bay to the west. Both beaches are characterised by coarse shingle and little to no foreshore is exposed at low tide.

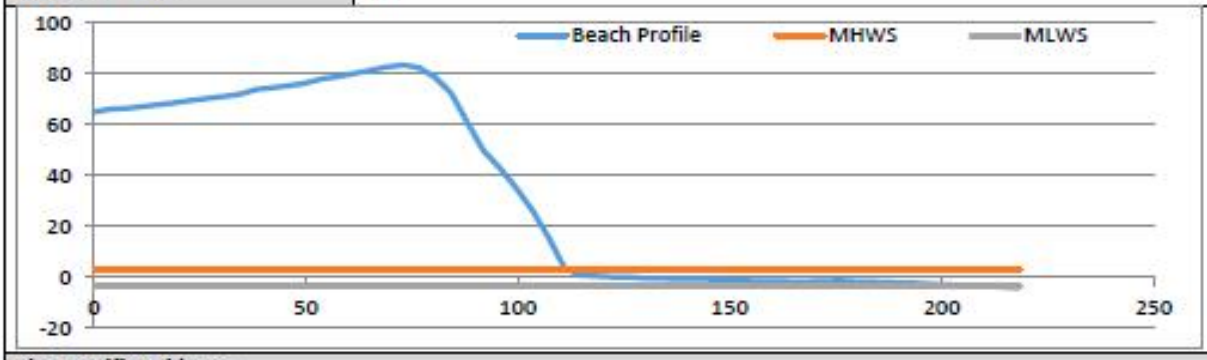
- Oil will inevitably enter the body of shingle beaches and may take a few weeks to leach out as sheen and tar balls.
- Shingle can be naturally cleaned if moved down the beach into the surf zone.
- If there is a light to moderate covering of oil then cold seawater at a very low pressure may be used to encourage oil off the beach.
- If small numbers of birds or animals are discovered that are covered in oil, carefully place them in a suitable container and take them to the nearest RSPCA centre. If there are large numbers of affected birds/animals, or the wildlife resists capture, or is nesting, or nests are discovered that are affected, contact the RSPCA and Natural England and request their attendance on site.
- Light to moderate oil coverage may be vacuumed if necessary.

Extract from Dover District Council Oil & Shoreline Pollution Plan

Shakespeare Cliff to Abbot's Cliff

Description	The chalk cliff coastline south of Dover Harbour to the Abbot's Cliff.

	Back Beach	Beach	Foreshore
Beach Sediment	Chalk cliff	Shingle/Sand	Rocky/Chalk platform
MHWS	3.04mOD	**MLWS**	-2.88mOD
Intertidal Zone	75m	**Access Times**	Low Tide Only
Vegetation Coverage	None		
Environmental Designations	Folkestone Warren SSSI; North Downs NCA; Kent Downs AONB.		
Pedestrian Access	Yes, from Dover. Beware of tidal windows		
Vehicular Access	No		



Site specific guidance

There is little beach material between Shakespeare Cliff and Abbot's Cliff and access is poor. The beach may be accessed on foot but there is a danger of being cut off by the tide. Any clean-up operation must be realistic and managed around the tides; beware of that it is possible to be cut off by the high tide.

- Chalk cliffs are easiest to clean with warm seawater or high pressure jets.
- Avoid abrasion of rock surface
- Avoid disturbing nesting birds.
- If small numbers of birds or animals are discovered that are covered in oil, carefully place them in a suitable container and take them to the nearest RSPCA centre. If there are large numbers of affected birds/animals, or the wildlife resists capture, or is nesting, or nests are discovered that are affected, contact the RSPCA and Natural England and request their attendance on site.
- Chalk platform can only be cleaned with seawater so it does not harm the marine life.
- The preferred method of cleaning chalk is to wipe away the excess oil and then let nature and wave actions take its course to do the remaining cleaning.
- All activities that could have a detrimental effect on protected species and habitats should be kept to a minimum.
- The shingle sand beach which covers most of the intertidal zone would be best cleaned manually where possible.
- For a light to moderate covering of oil, cold sea water at very low pressure or vacuuming may be used to remove oil from the beach.

Extract from Dover District Council Oil & Shoreline Pollution Plan

Figure 3.3: Shakespeare Beach

Figure 3.4: Access to Shakespeare Beach

Port Specific Response

Western Docks and River Dour
Shoreline section: Sub-Zonal Plan 2.3.2

General description of area:

This part of the Port is formed by the western arm of the Harbour, Admiralty Pier, and its associated port facilities.

The Western Docks Marina provides extensive facilities and specialist management for leisure craft users.
The Wellington Dock has 157 berths which are accessed by a lock/swing bridge; a further 107 berths are provided in the Tidal Harbour with 24 hour access and 133 berths are available in Granville Dock which is accessible for 60% of the tidal cycle. The Marina has many amenities including fuel and supplies, shopping facilities, internet access, toilet, shower and launderette facilities.

Dover Cruise Port, situated in the Western Dock, is now the UK's second busiest cruise port.
The River Dour enters the Harbour through a culvert at the northern end of the Wellington Dock. As a chalk stream it is an important habitat which supports a rich diversity of invertebrate life and important migratory species. The lower reaches of the Dour are tidal and there is therefore potential for oil pollution to travel up the River and the use of the marina as a migratory route (particularly in Autumn) is an important consideration when determining response strategies.

Dover Cargo Terminal is situated within the Western Docks and is ideally placed for fast shipments of perishable goods by both sea and road. Lying at the closest geographical point to the European continent and close to all of the Channel's main shipping lanes, the Terminal offers minimum deviation for ships and fast onward journeys to all other parts of Europe.

Seasonal sensitivity:

	Conservation	Amenity	Industrial
Spring	Moderate	High	High
Summer	Moderate	High	High
Autumn	High	High	High
Winter	Moderate	High	High

Clean-up recommendations:

High pressure hoses should only be used on quay walls where there is little marine growth. It should not be used in areas such as the marina which has a large amount of marine life as recovery from high pressure hosing is likely to take longer than recovery from oil pollution. Environmental advice should be sought before undertaking high pressure washing.

Recommended: Use skimmers, trucks and vacuums to recover oil from the water as shown in Figure 2.5. The latter illustration accommodates the tide which is important especially on an ebbing tide for the connecting pipelines. It is also worth remembering that hydraulic link spans at the berths are ideal locations for oil recovery operations as the height of the decks can be adjusted to suit the changes in the tide.

Oil can be washed off structures into a boom and recovery system at the water's edge.

Access route to area:

Dover is approximately 70 miles from South London. From the M2, follow the A2 direct into Dover, or from the M20, follow the A20 again into Dover. Both the Eastern & Western Docks Ferry Terminals are clearly signed. Docks. Dover Port can be easily reached by foot, bus or taxi from Dover Priory Station. Services operate from London Victoria or London Charing Cross to Dover Priory Station. Approximate journey time is 1 hour 45 minute

Eastern Docks

Shoreline section: Sub-Zonal Plan 2.3.4

General description of area:

Two ferry companies, P&O Ferries & DFDS currently operate from the Port of Dover to Calais and Dunkerque. There's a cross channel ferry departure on average every 30 minutes from Dover, when taken across all operator

schedules. The Docks include 6 berths.

Dover Cargo Terminal is situated within the Western Docks and is ideally placed for fast shipments of perishable goods by both sea and road. Lying at the closest geographical point to the European continent and close to all of the Channel's main shipping lanes, the Terminal offers minimum deviation for ships and fast onward journeys to all other parts of Europe.

Seasonal sensitivity (L=low, M=moderate, H=high):

	Conservation	Amenity	Industrial
Spring	Low	Moderate	High
Summer	Low	Moderate	High
Autumn	Low	Moderate	High
Winter	Low	Moderate	High

Clean-up recommendations:

High pressure hoses should only be used on quay walls where there is little marine growth. It should not be used in areas such as the marina which has a large amount of marine life as recovery from high pressure hosing is likely to take longer than recovery from oil pollution. Environmental advice should be sought before undertaking high pressure washing.

Recommended: Use skimmers, trucks and vacuums to recover oil from the water as shown in Figure 2.5. The latter illustration accommodates the tide which is important especially on an ebbing tide for the connecting pipelines. It is also worth remembering that hydraulic link spans at the berths are ideal locations for oil recovery operations as the height of the decks can be adjusted to suit the changes in the tide.

Oil can be washed off structures into a boom and recovery system at the water's edge.

Access route to area:

Dover is approximately 70 miles from South London. From the M2, follow the A2 direct into Dover, or from the M20, follow the A20 again into Dover. Both the Eastern & Western Docks Ferry Terminals are clearly signed. Docks. Dover Port can be easily reached by foot, bus or taxi from Dover Priory Station. Services operate from London Victoria or London Charing Cross to Dover Priory Station. Approximate journey time is 1 hour 45 minutes.

Section 5

Forms

Contents

5.1 Mobilisation of Adler and Allan Form

WARNING! Ensure telephone contact has been established with the Duty Manager before using e-mail and fax communications. **Telephone: +44 (0)800 592827**			
To:	Duty Manager	Name of Duty Manager:	
Email of Duty Manager	dutymanagers@adlerandallan.co.uk	Date:	
Adler & Allan Emergency Fax:	+44 (0)208 5193090		
From:		Position:	
Company:		Contact Number:	
Subject:		Incident Name:	

OBLIGATORY INFORMATION REQUIRED – PLEASE COMPLETE ALL DETAILS	
Name of person in charge	
Position	
Company	
Contact telephone number	
Contact fax number	
E-mail address	
Spill details	
Location of spill	
Description of slick (size, direction, appearance)	
Latitude / longitude	
Situation (cross box)	☐ Land ☐ River ☐ Estuary ☐ Coastal ☐ Offshore ☐ Port
Date & time of spill	☐ GMT ☐ Local
Source of spill	
Quantity (if known)	☐ Cross box if estimate
Spill status (cross box)	☐ On-going ☐ Controlled ☐ Unknown
Action taken so far	
Oil type characteristics	
Product name	
Viscosity	
API / SG	
Pour point	
Asphaltene	

Weather	
Wind speed & direction	
Sea state	
Sea temperature	
Tides	
Forecast	
ADDITIONAL INFORMATION REQUIRED – PLEASE COMPLETE DETAILS IF KNOWN	
Resources at risk	
Clean-up resources on-site / ordered	
Nearest airport (if known)	
Runway length	
Handling facilities	
Customs	
Handling agent	
Vessel availability	
Equipment deployed	
Recovered oil storage	
Equipment logistics	
Transport	
Secure storage	
Port of embarkation	
Location of command centre	
Other designated contacts	
Climate Information	
Other Information	

5.2 POLREP Form (See MF03)

CG77 POLREP Initial Pollution Report: email to zone14@hmcg.gov.uk				
Classification of report	Doubtful			
	Probable			
	Confirmed			
Date/Time of Report				
Date/ Time of Incident				
Original Report Source	Name		Role	
	Contact Details			
Location and extent of pollution				
Wind Speed/ Direction				
Weather Conditions				
Sea State				
Characteristics of Pollution (type of pollution e.g. crude oil/chemical/garbage; appearance e.g. liquid/solid/sludge/floating etc)				
Source and Cause of Pollution				
Details of Vessels in the Area				

<table>
<tr><td colspan="2">Photographs? Yes/No

Details:</td><td colspan="3">Samples taken? Yes/No

Details:</td></tr>
<tr><td colspan="5">Remedial Action (Taken/ Intended)</td></tr>
<tr><td colspan="5">Pollution forecast: (e.g. sites to be affected with predicted timings)</td></tr>
<tr><td colspan="5">Additional information: (e.g. names of witnesses/ other evidence)</td></tr>
<tr><td rowspan="4">POLREP prepared by:</td><td>Name</td><td colspan="3"></td></tr>
<tr><td>Role</td><td colspan="3"></td></tr>
<tr><td rowspan="2">Contact</td><td>Telephone</td><td></td></tr>
<tr><td>Mobile</td><td></td></tr>
</table>

NB. Results of sample analysis, photographic analysis and any supplementary enquiries (e.g. inspection by surveyors, statements of ships personnel etc) should be recorded and appended to the original Pollution Report Form as it becomes available.

5.3 Incident Log Sheet

Every member of staff involved in an incident should retain a personal log of events and decisions on the following form or similar unless working as part of a group which has information recorded at a group level.

Incident Log Sheet		
Incident Name:		**Date:**
Location:		**Page No.** **of**
Time:	**Comment / Action / Detail**	
Signature:		
Print name:	**Position:**	

5.4

Section 6 Training

Shoreline Clean-up Assessment Technique Survey Form

Page_____of_____

1 General Incident:_____ Local authority:_____ Date:_____

Segment:_____ Time:_____to_____ Low tide:_____m @_____

Surveyed from: Air / Boat / Viewpoint / ATV / Foot Sun / Cloud / Fog / Drizzle / Rain / Snow / Calm / Breeze / Wind

2 Surveyors _____ Org./Tel.:_____

_____ Org./Tel.:_____

_____ Org./Tel.:_____

3 Segment Total segment length:_____m Length surveyed:_____m Max intertidal width:_____m

Start: Easting:_____ Northing:_____ Notes:_____

End: Easting:_____ Northing:_____ _____

4 Shore substrata ✓✓ = most oiled ✓ = some oil X = unoiled Bedrock [R] ☐ vertical / slope / platform

Stable boulders [B] ☐ Mobile boulders/cobbles/pebbles [mB/C/P] ☐ Solid seawalls [W] ☐ Revetment [V] ☐

Clean gravel [G] ☐ Mixed sand/gravel [SG] ☐ Clean sand [S] ☐ Clay/Peat [Cl] ☐ Shingle/mud/sand [ShM] ☐

Firm muddy sand [MS] ☐ Soft mud [M] ☐ Saltmarsh [St] ☐ Reed swamp [Rd] ☐ Other:_____

Prominent oiled features: Pools ☐ Deep cracks/crevices ☐ Pockets of sediment between rocks ☐

Wave exposure: Very exposed ☐ Exposed ☐ Partially sheltered ☐ Very sheltered ☐ Extremely sheltered ☐

5 Operational features Debris ☐ Oiled ☐ _____bags / trucks Notes_____

Access: Direct backshore ☐ Alongshore from next segment ☐ _____

Backshore cliff ☐ Ht_____m Suitable shore substrata for trucks/JCB ☐ _____

Suitable laydown area ☐ Ongoing clean-up activity ☐:_____

6 Surface Oiling (mark location of area on map/sketch)

Loc.	Tidal zone (tick one)				Oil cover			Surface oil												Surface substratum types
					Length	Width	Distrib	Thickness (tick one)					Character (tick one)								
	LI	MI	UI	SU	m	m	%	PO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	NO	(o.f. codes in 4)
A																					
B																					
C																					
D																					

(Tidal zone: Lower, Middle & Upper Intertidal) (Distribution: Continuous = 100-91%; Broken = 90-51%; Patchy = 50-11%; Sporadic = 10-1%; Trace = <1%)
(Oil Thickness: PO = Pools; CV = Cover; CT = Coat; ST = Stain; FL = Film)
(Character: FR = Fresh; MS = Mousse; TB = Tar Balls; PT = Tar Patties; TC = Tar; SR = Surface Oil Residue; AP = Asphalt Pavement; NO = No Oil Observed)

7 Subsurface Oil (mark location of pits on map/sketch) Use Location letter from Section 6 plus number of Pit (e.g. A1)

Pit No.	Pit zone (tick one)				Pit depth	Oiled zone	Character (tick one)							Water table	Sheen colour	Clean below?	Sediment types
	LI	MI	UI	SU	cm	cm - cm	SAP	OP	PP	OR	OF	TR	NO	cm	B, R, S, N		(o.f. codes in 4)

(Character: SAP = Asphalt Pavement; OP = Oil-Filled Pores; PP = Partially Filled Pores; OR = Oil Residue as aCover; OF = Film or stain; TR = Trace; NO = No oil)
(Pit zone: Lower, Middle & Upper Intertidal) (Sheen Colour: B = Brown; R = Rainbow; S = Silver; N = None)

Other materials: Map ☐ Sketch ☐ Photos ☐ (No._____) Video Tape ☐ (tape #_____)

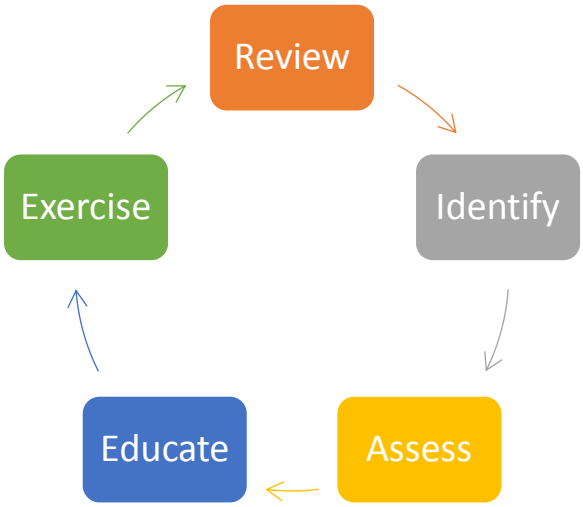
Contents

6.1 Exercise Matrix

An exercise is a simulation of an emergency situation and it has 3 main purposes:

- To validate plans (validation)
- To develop staff competencies and give them practice in carrying out their roles in the plans (training)
- To test well-established procedures (testing)

Exercises should be regarded as an integral part of the emergency planning process. After any exercise, the plan should be reviewed and amended from lessons learned before the process starts again.



Aim/Objectives

The aim and objectives of the exercise, including clear outcomes, need to be established at the outset and should ideally be the first item on the planning agenda In most exercises the objective will be to test arrangements and procedures of the Ports OPRC Plan.

Types of Exercise

The choice of exercise is important: it should provide the most appropriate and cost effective way of achieving its aim and objectives. There are four types of Spill Response Exercise to ensure a balanced program to test every aspect of the Plan, these are

Exercise	Duration and frequency	Core Aims/Objectives
Notification Exercise Test Communication details	1 Hour Twice a Year	• Communication Network • Validate contact and plan interface with external and internal agencies

Table Top Exercise simulated scenario among members of a response team with no mobilisation of equipment	1-2 Hours Once Per Year	• Exercise and develop the necessary skills required of key individuals with a Tier 1 and 2 oil spill • Use appropriate and available resources to make the response effective • Implement theoretical response strategies and consider logistical impacts on deployment • Consider arrangements for disposal of recovered oil and oily waste • Refresh deployment and strategy skills of Tier 1 responders • Confirm business continuity
Deployment Exercise Equipment mobilisation to test the capabilities of local team to a Tier 1 or 2 response	4 – 8 Hours Twice a Year	• Exercise and develop the necessary skills required of key individuals with a Tier 1/2 oil spill • Test the capability, response time, and deployment of physical resource and personnel • Use appropriate and available resources to make the response strategy effective • Refresh the deployment skills of Tier 1 responders • Consider arrangements for disposal of recovered oil and oily waste • Confirm business continuity and document control
Incident Management Exercise	4-8 Hours Once every 3 Years	• Validate the OSCP for DHB and record discrepancies or potential problems for future action • Exercise and develop the necessary skills required of key individuals with a Tier 2 oil spill • Set up the joint OMT in situ • Test the operational interface between DHB, Adler and Allan and other external agencies • Test the capability, response time, and deployment of physical resource and personnel • Use the most appropriate available resources to make the response effective • Exercise and refresh the deployment skills of Tier 1 responders • Consider arrangements for disposal of recovered oil and oily waste • Confirm the OSCP fully considers the environment and habitat regulation in controlling and cleaning up pollution in the Harbour area • Log all documents, information and actions to assist / prevent claims and costs • To test the operation of the Incident Command Centre (ICC) • Confirm business continuity and document control

6.2 Training and Exercise Records

The Harbour Master will ensure the upkeep of records relating to personnel training and ensure exercises are recorded are reported in line statutory obligations.