



Associated British Ports

Port of Barrow

Oil Spill Contingency Plan

Controlled Copy number:	
Issued to:	
Date of Issue:	

	Port of Barrow Oil Spill Contingency Plan	 ASSOCIATED BRITISH PORTS
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List of Plan Holders

Copy	Name	Organisation	Location
1	Master Copy (Controlled Document)	Associated British Ports Port of Barrow	Harbour Master
2	Marine Control Room	ABP	Barrow
3	Engineering Manager	ABP	Barrow
4	Engineering Supervisor	ABP	Barrow
5	Marine Advisor	ABP	
Maritime and Coastguard Agency			
6	MCA Counter Pollution & Response Officer	Maritime and Coastguard Agency	Bay 2/11, Spring Place, 105 Commercial Road, Southampton, SO15 1EG
7	The Marine Emergency Information Room (MEIR) at MCA HQ	Maritime and Coastguard Agency	Bay 2/11, Spring Place, 105 Commercial Road, Southampton, SO15 1EG
8	MRCC Holyhead	Maritime and Coastguard Agency	CGOC Holyhead, Maritime and Coastguard Agency, Prince of Wales Rd, Holyhead LL65 1ET
Statutory Consultees			
9	Senior Environmental Protection Officer	Barrow-in-Furness Borough Council	The Town Hall, Duke Street, Barrow-in-Furness, LA14 2LD
10	County Oil Pollution Officer	Cumbria County Council	Park House, King Moor Business Park, Carlisle, CA6 4ST.
11	Resilience Unit	Cumbria County Council	Fire Headquarters, The Green, Carleton Avenue, Penrith, CA10 2FA.
12	Marine Pollution Officer	Natural England	Pydar House, Pydar Street, Truro, TR1 1XU
13	South West Cumbria Environment Protection Officer	Environment Agency	Ghyll Mount, Gillan Way, Penrith 40 Business Park, Penrith, CA11 9BP
14	Pollution Response Manager	Marine Management Organisation	Lancaster House, Newcastle, NE4 7YH

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Tier Two Contractor			
15	Tier 2 Contractor Operations Manager	Adler and Allan LTD	Ports & Harbours Division, Dominion House, Copse Lane, Hamble-le-Rice, Southampton, SO31 4QB
Port users			
16	Environmental Advisor	BAE SYSTEMS	Barrow-in-Furness, LA14 1AF
17	SMITE Technical Manager	BAE SYSTEMS	Barrow-in-Furness, LA14 1AF
18	Production Services Manager	BAE SYSTEMS	Barrow-in-Furness, LA14 1AF
19	Gas Condensate Berth & Tank Farm	Centrica Hydrocarbon Resources Ltd.	Port of Barrow, LA14 2TB
20	The Terminal Manager	International Nuclear Services	Ramsden Dock Terminal, Cavendish Dock Road, Barrow- in-Furness, LA14 2XA
21	Marine Coordination Manager	Dong Energy O & M	Ramsey Way, LA14 2TB
22	Marine Manager	Siemens (WODS)	Ramsey Way, LA14 2TB
23	Operations Manager	Barrow Offshore Windfarm	Ramsey Way, LA14 2TB
24	Operations Manager	Walney Offshore Windfarms	Ramsey Way, LA14 2TB
25	Site Manager	Vattenfall (Ormond O & M)	Ramsey Way, LA14 2TB
26	Site Manager	WOD Offshore O & M	Ramsey Way, LA14 2TB
*	Copies will be made available on request		
Emergency Services			
27	Emergency Planning Department	Cumbria Constabulary	Headquarters, Carleton Hall, Carleton, Penrith, CA10 2AU

Updated February 2017

Revision Procedure

The Deputy Harbour Master is responsible for the maintenance and review of the Plan.

This plan will be revised annually; such revisions will take account of experience gained from exercises and/or actual spill incidents, changes in risk or port operations or legislation.

A formal review of the plan will be conducted at 5 year intervals and the plan re-submitted for approval.

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Updated February 2017

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1 Introduction

1.1 Statutory Requirement

This Oil Spill Contingency Plan has been developed to conform to the Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998, SI 1998 No.1056, which entered into effect on 15 May 1998. The plan is designed to meet the statutory responsibilities placed on the Port Authority for responding to oil pollution within the port area.

1.2 Purpose of the Plan

The plan is provided to assist the Port Authority and other organisations in dealing with an accidental discharge of oil. Its primary purpose is to set in motion the necessary actions to stop or minimise the discharge and to mitigate its effects. Effective planning ensures that the necessary actions are taken in a structured, logical and timely manner.

This plan guides the Harbour Master and the Marine department through the decisions that will be required in an incident response. The tables, figures and checklists provide a visible form of information, thus reducing the chance of oversight or error during the early stages of dealing with an emergency situation.

For the plan to be effective, it must be:

- familiar to those with key response functions in the Port;
- regularly exercised;
- reviewed and updated on a regular basis.

This plan uses a tiered response to oil pollution incidents. The plan is designed to deal with Tier One and Tier Two incidents, and to provide guidance for the initial response to a Tier Three incident. Where a spill 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 be made to the ABP Port of Barrow Port and Marine Emergency Plan. The salvage and casualty management of any vessel, which poses a threat of pollution, is the priority consideration.

During oil spill response activities account must be taken of the following:

- site hazard information
- adherence to permit procedures
- spill site pre-entry briefing
- boat safety
- COSHH Regulations and material safety data sheets
- personal protective equipment needs
- heat stress, cold stress and hypothermia
- decontamination
- environmental sensitivities
- record keeping
- public relations
- waste disposal

1.3 Scope of the Plan

The plan details the contingency arrangements for responding to actual or threatened oil pollution incidents within the Port of Barrow.

Barrow Docks consist of Devonshire Dock, Buccleuch Dock, the Anchor Line Basin, Ramsden Dock and Cavendish Dock that are separated from the Walney Channel by pitched slope embankments and entered through three sets of dock gates. (See Plan 1.3.1, Port Plan)

The Harbour of Barrow is geographically defined in the Furness Railway Act of 1848 as:

"A line to be drawn from the Northernmost Point of the Island of Walney in a Direction due East to the Coast of the County of Lancaster and a line to be drawn from Westfield Point on the said Coast of the County of Lancaster through the Centre of Sheep Island to the Coast of the Island of Walney aforesaid, wherever the same Harbour is covered with Water at a Fourteen Feet Tide, as shown on the Tide Gauge at Barrow and which limits are more particularly delineated and defined on a Plan of the said Harbour which has been deposited with the Clerk of the Peace for the County Palatine of Lancaster".

The Harbour was extended in the Furness Railway Act of 1855 as follows:

"At its Northern Entrance within a Line drawn from the North West Shore of Sandscale Haws Farm in the County of Lancaster at High-water Mark to High-water Mark on the North West End of Walney Island, such line forming a Tangent to both and marked S.W. on a Plan deposited at the Admiralty Office, Whitehall, and at the Southern Entrance within a Line drawn from Westfield Point on the said Coast of the County of Lancaster, through the Centre of Sheep Island, in a straight Line to the shore of the Island of Walney, as marked L.M. on the Plan aforesaid wherever the same Harbour is covered with Water at a Fourteen Feet Tide, as shown on the Tide Gauge at Barrow".

(The statutory port area is shown in Plan 1.3.2)

Agreed geographic responsibilities for pollution clean-up are represented according to the following table:

Place	Pollution to clean-up	Responsibility lies with
Outside Harbour Authority (within U.K. Pollution Zone)	On Water	DfT Maritime and Coastguard Agency
	Shoreline (including land exposed by falling tide)	Local authority (Barrow Borough Council)
Within Harbour Authority Limits	On Water	ABP Barrow
	Jetties, wharves and structures	ABP Barrow
	Beach and shoreline owned by Harbour Authority	ABP Barrow
	Shoreline (including land exposed by falling tide)	Local Authority (Barrow Borough Council)

Thus ABP Barrow has responsibilities under the OPRC Regulations within the following areas:

- *The enclosed dock system consisting of Devonshire Dock, Buccleuch Dock, Ramsden Dock and Anchor Line Basin.*
- *Ramsden Dock Basin and Lock.*
- *Cavendish Dock Reservoir.*
- *The seaward pitched slope embankments on the south eastern side of Cavendish Dock and Ramsden Dock.*
- *Roosecote Sands within the limits delineated within the red broken line on the Port Plan (see Plan 1.3.1).*
- *The water, shoreline, pitched slope embankments, berths, jetties and structures in the Walney Channel as delineated within the red broken line on the Port Plan (see Plan 1.3.1)*
- *The waters of the Walney and Scarth Channels wherever they are covered by 14 feet of tide within the port limits set out in the Furness Railway Acts (See Plan 1.3.2 Statutory Port Limits - Limits of Barrow Harbour and Docks).*

Regarding areas 4, 5, 6 and 7 above any oil pollution outside the enclosed dock system and Ramsden Dock Basin would rapidly spread in the Walney Channel and over the intertidal mud flats. In such an event a collaborative approach by ABP Barrow and Barrow Borough Council the pollution clean-up would be adopted in order that both the District Council and Harbour Authority met their respective obligations. If the pollution was of such an extent that it affected more than one District Council then Cumbria County Council would take on the District Councils' responsibilities.

The response strategy has been developed taking into account the spill risks and possible sources of spillage associated with the port operations, including those at the offshore windfarm vessel refuelling points located in the Walney Channel, Centrica Gas Terminal and BAE SYSTEMS' industrial and shipbuilding activities. The plan consists of three important elements:

Element 1: Strategy Plan- (Sections: 1 & 2)

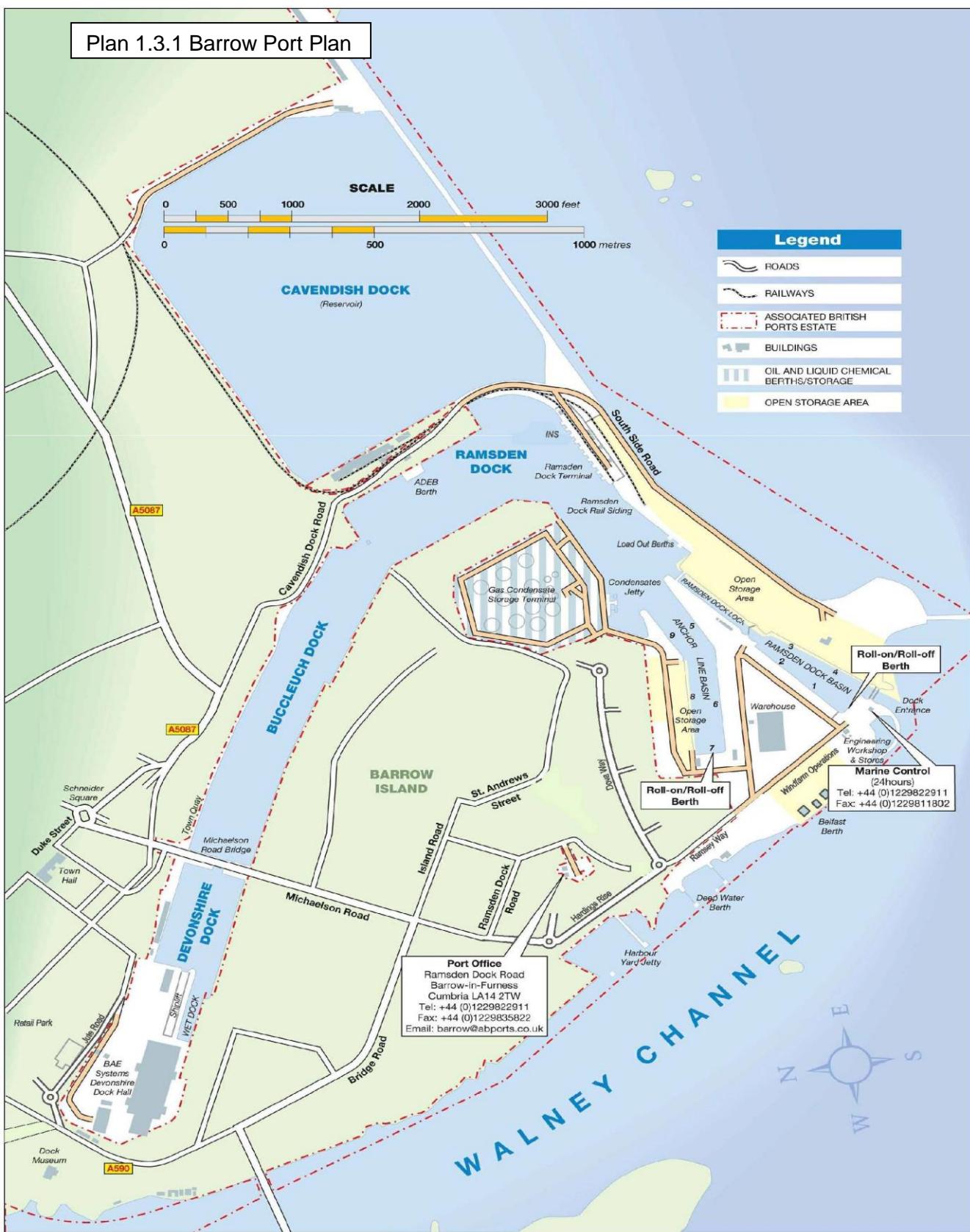
Describes statutory requirements, the purpose and scope of the plan, including the geographical coverage. It shows the relationship of the plan to the National Contingency Plan for Marine Pollution from Shipping (NCP) and plans of local organisations. Also included are perceived risks, the Incident Response Organisation and the responsibilities of individuals for defined categories of spill.

Element 2: Action Plan - (Sections 3, 4, 5, 6, 7 & 8)

Sets out the emergency procedures that will allow rapid mobilisation of resources and an early response to the situation.

Element 3: Data Directory - (Sections 9, 10, 11, 12, 13, 14 & 15)

Contains all supplementary information relevant to the performance of the plan such as; Contact Directory, Training and Exercise Policy, Risk Assessment, Sensitivity maps, Roles and Responsibilities of Government and Other Agencies, Resources Directory and Product Information Sheets.





1.4 Interfacing Oil Spill Contingency Plans

See figure 1.4.1

1.4.1 Local Industry Plans

BAE SYSTEMS whose operations pose a pollution risk and whose installations are located within the harbour area have individually published their own contingency plan. This plan details their response to Tier One incidents. BAE SYSTEMS maintains extensive pollution control and clean-up resources.

BAE SYSTEMS will initiate the appropriate first response actions in the event of oil spills at their installations. These will include immediately informing the Harbour Master via ABP Barrow Marine Control who will activate the appropriate notification procedure.

BAE SYSTEMS will either complete the clean-up to the satisfaction of the Harbour Master or, in the event of larger spills, will deploy their resources as directed by the Oil Spill Management Team (OMT) convened at the Marine Control.

The subsidiary tier one oil spill contingency plan is:

No.	Owner	Title
1.	BAE SYSTEMS	BAE SYSTEMS Barrow-in-Furness, Pollution Contingency Plan

1.4.2 Local Authority Plans

In the event of actual or threatened shoreline impact, the appropriate local or county authority plan(s) will be implemented. The level of activation will be dictated by the incident classification (refer Section 1.7).

The interfacing plans are:

No.	Owner	Title
1.	Cumbria County Council	Coastal Pollution Emergency Plan
2.	Barrow Borough Council	Uses Cumbria County Council's Plan

1.4.3 Adjacent Harbour Authority Oil Spill Plans

Barrow has no adjacent Harbour Authorities.

1.4.4 National Contingency Plan

In the event of an oil spill incident, which calls for a Tier Three response, the Maritime and Coastguard Agency may decide to implement the National Contingency Plan (NCP). In this event, MCA will take control of at-sea counter pollution measures from either the Marine Control Building at Barrow as a Incident Command Centre (ICC) or from their own MRC. Should there be a formal hand-over of responsibility to MCA for dealing with the incident, the Port's oil spill response resources and facilities will be made available to MCA.

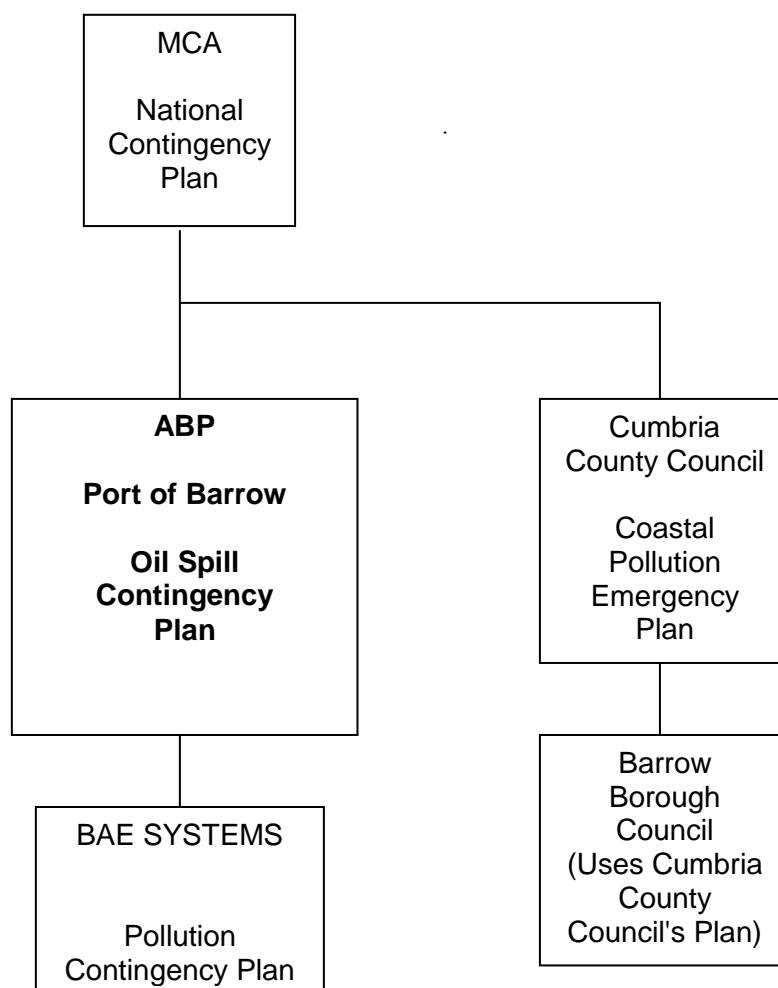
In the event that the NCP is called into operation then the Secretary of State's representative, SOSREP, will assume full command of the operation. He has the decisive voice in the decision making process in a marine salvage operation that involves the threat of significant pollution. The Director / Deputy Director of Operations will act as a stand-in in the event of SOSREP being unavailable. The Director of Operations is responsible for search and rescue, counter pollution, survey and inspection, enforcement action, and clean up operations at sea. They are also responsible for maintaining the Government and MCA's stockpiles of equipment.

The MCA establishes a Incident Command Centre at the most appropriate location. The 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. The purpose of an MRC is to provide an organisation through which the MCA can discharge its responsibilities for mitigating and resolving pollution at sea.

1.4.5 Places of Refuge

Places of refuge are places of safety to which a ship in need of assistance can be brought to stabilise it's condition e.g. to effect repairs or to transfer cargo, so that further damage to the ship, and consequential pollution damage to the seas and coasts, can be averted. SOSREP will determine whether a vessel requiring such assistance should be directed to proceed to a safe haven and where that place might be. He will take into account all the factors that relate to each specific incident such as the weather, the geographical location of the incident, and the type of threat posed by the vessel and it's cargo. He will, at all times, seek to minimise the adverse consequences of the incident. There is no definitive list of places of refuge around the coast of the UK, any suitable location can be used, and SOSREP, or his deputy, will decide at the time where the best location shall be.

Figure 1.4.1 Interfacing Oil Spill Contingency Plans



1.5 Consultation

The following authorities and organisations have been formally consulted during the preparation and reviewing of this plan:

- Natural England
- Environment Agency
- Marine Management Organisation (MMO)
- Cumbria County Council
- Barrow Borough Council

The requirements of these authorities and organisations have been taken into account and they have individually confirmed their general agreement to the plan details.

In addition consultations have taken place with Barrow Borough Council, and the port users of BAE SYSTEMS, Centrica Hydrocarbon Resources Limited, International Nuclear Services and a number of the Offshore Windfarm Operators

1.6 Risk Assessment Summary (for full risk assessment details refer to section 11)

Cause	Assessed Risk	Credible Spill Quantity (Tonnes)
Grounding in the Approach Channels	Low - Moderate	>2000 cargo, <100 bunkers
Grounding in the enclosed dock system	Low	<50 bunkers
Collision underway	Low	>2000 cargo, <100 bunkers
Berthing incident	Moderate	>2000 cargo, <100 bunkers
Tug impact	Low	>2000 cargo, <50 bunkers
Bunkering	Low / moderate	<5
Centrica Hydrocarbon Resources gas condensate export facility	Low	Product assessed as having negligible residual pollution risk
BAE Systems shipbuilding and industrial activities	Various risk levels	Various quantities from various activities
Shore to ship bunkering and waste oil discharge operations	Moderate	<2 bunkers / lube oil
Ship to ship transfers	Moderate	<5 bunkers
Effluent discharges	Low	<20 various
Miscellaneous spill sources	Moderate	<1 various

Note: the credible spill quantities for tankers have been estimated for conventional, single hull vessels. The risk of spillage, and the quantities involved, as a result of grounding, collision, berthing incident or tug impact will diminish as more double hulled vessels and tankers with protectively located ballast tanks enter service.

The cargo in question would be Marine Gas Oil or Gas Condensate.

1.7 Classification of Oil Spills

The three tier oil spill classification is adopted:

It is not the intention of ABP to specify the amount of oil spilled which would automatically lead to the response being at the next higher tier. Rather each incident will be assessed at the time and the officer on scene will instigate appropriate action. If in any doubt he will always call for assistance. Continuous reassessment may mean that a further response at a higher level is subsequently deemed necessary.

Tier 1
Small operational spills which can be dealt with using the resources immediately available.
Tier 2
Medium sized spills which require a substantial commitment of the Plan resources and which may involve regional assistance.
Tier 3
Large spills which may exceed the full resources of the Plan and which may require national assistance and / or the implementation of the NCP.

Irrespective of the spill classification, Form CG77 POLREP will be completed and submitted to MCA-HM Coastguard by the Harbour Master or delegate for doubtful, probable, and confirmed oil spills.

1.8 Tidal Movement of Oil in the Walney and Scarth Channels

The waters to seaward of the enclosed dock system are subject to very strong tidal transportation. Following in the "Annex - Tidal streams": are 6 maps showing the **Walney Channel** tide vectors for an 8.5 metre height at high water tide:

- at the time of maximum flood
- 1 hour before high water at Ramsden Dock Entrance
- at the time of Maximum ebb

Off Ramsden Dock Entrance the flood stream runs northwards for about 1 hour 30 minutes after high water. It has maximum velocity at about half flood, gradually losing its force until it turns and ebbs southwards.

At Elbow the tidal stream runs northwards until about 30 minutes after high water.

At Piel the tide turns at high water.

At the south end of Walney Island the tide starts ebbing to the North West about 20 - 30 minutes before high water.

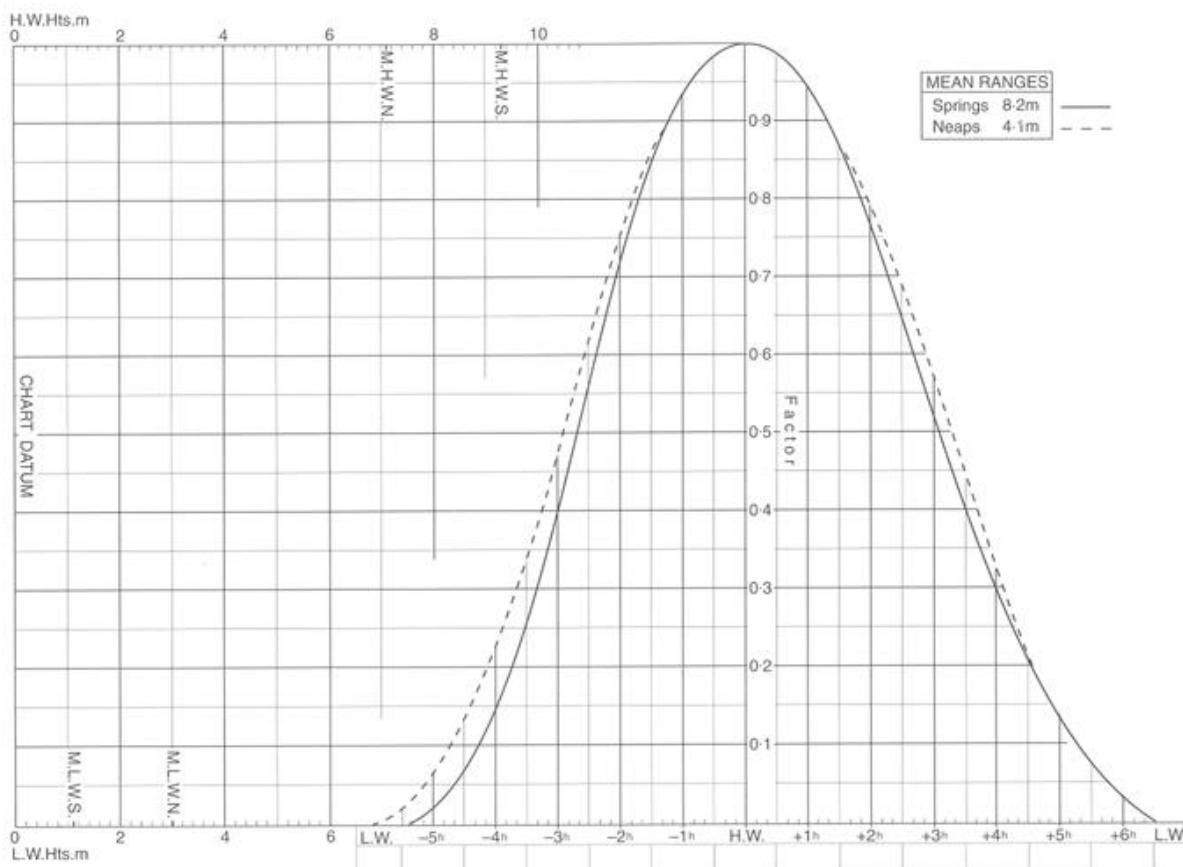
In the **Scarth Channel** to the North of Jubilee Bridge the tidal stream runs northwards for about 1 hour 50 minutes after high water. At about 45 minutes before high water there is a comparative slack in the tide which lasts about 30 minutes after which the tide again begins to run northwards with great force, reaching its highest velocity about 30 minutes after high water. The tide then gradually loses its force until it turns and runs Southwards as the Scarth Channel begins to dry on the falling tide.

Barrow's Marine Control can receive live tidal height information from tide gauges at 3 locations;

- Ramsden Dock Entrance
- Roa Island
- Halfway Shoal Beacon

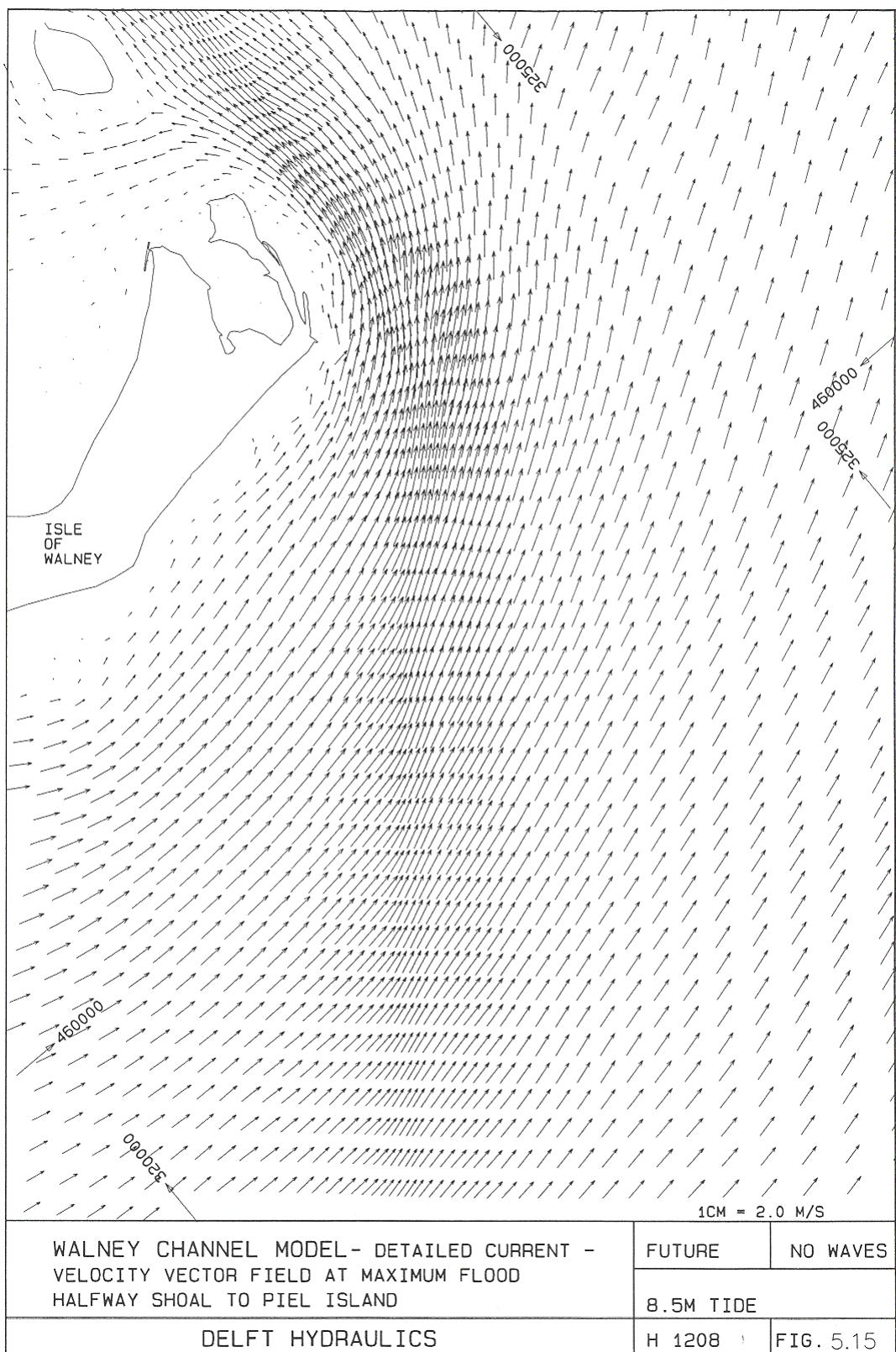
Tidal height prediction software (U.K. Hydrographic Office - "Totaltide") is available for these three locations also. Additionally, for assistance in the prediction of the tidal movement, an experienced pilot will be available.

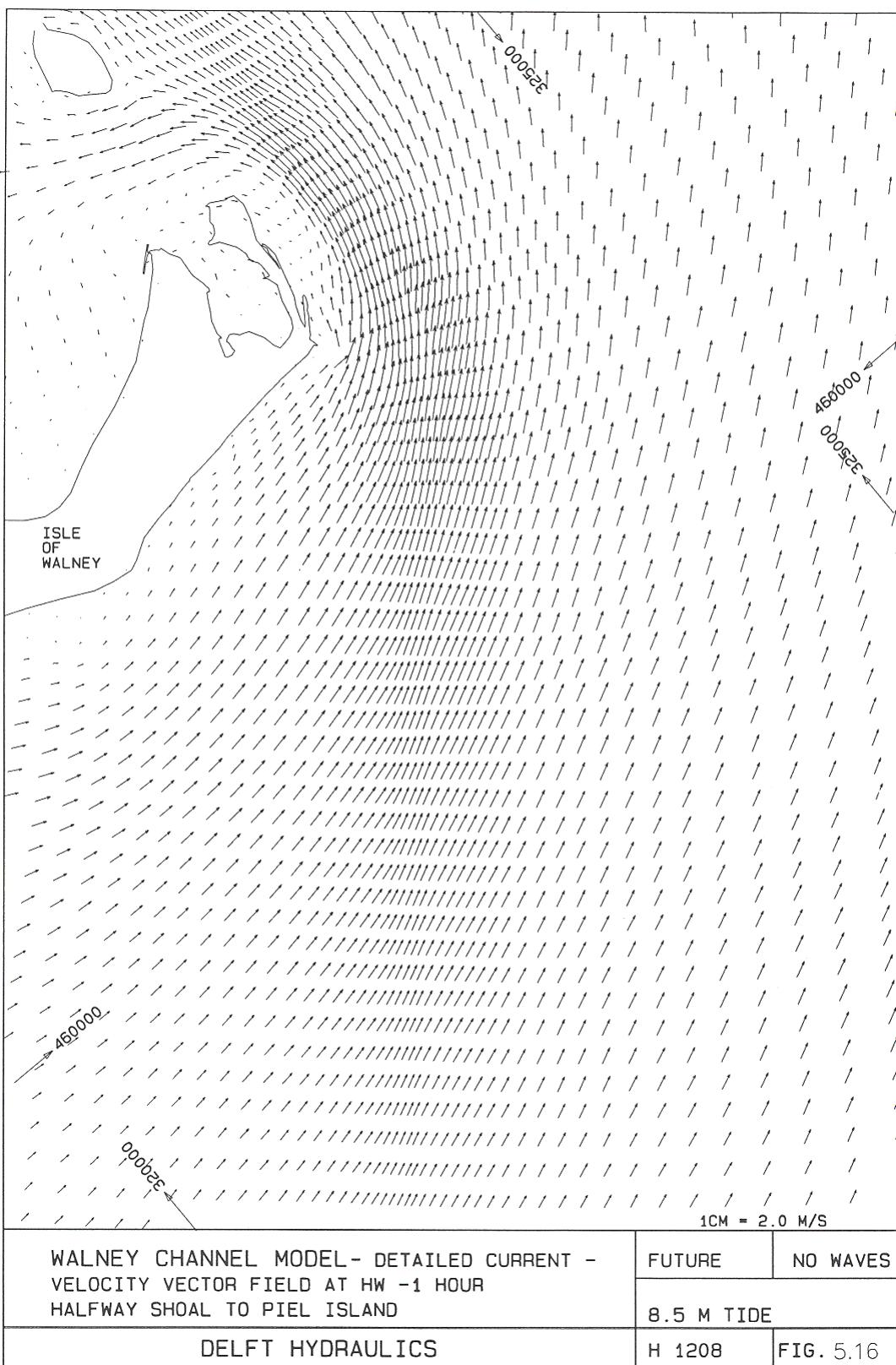
- Tidal curves for spring and neap tides at Ramsden Dock Entrance;

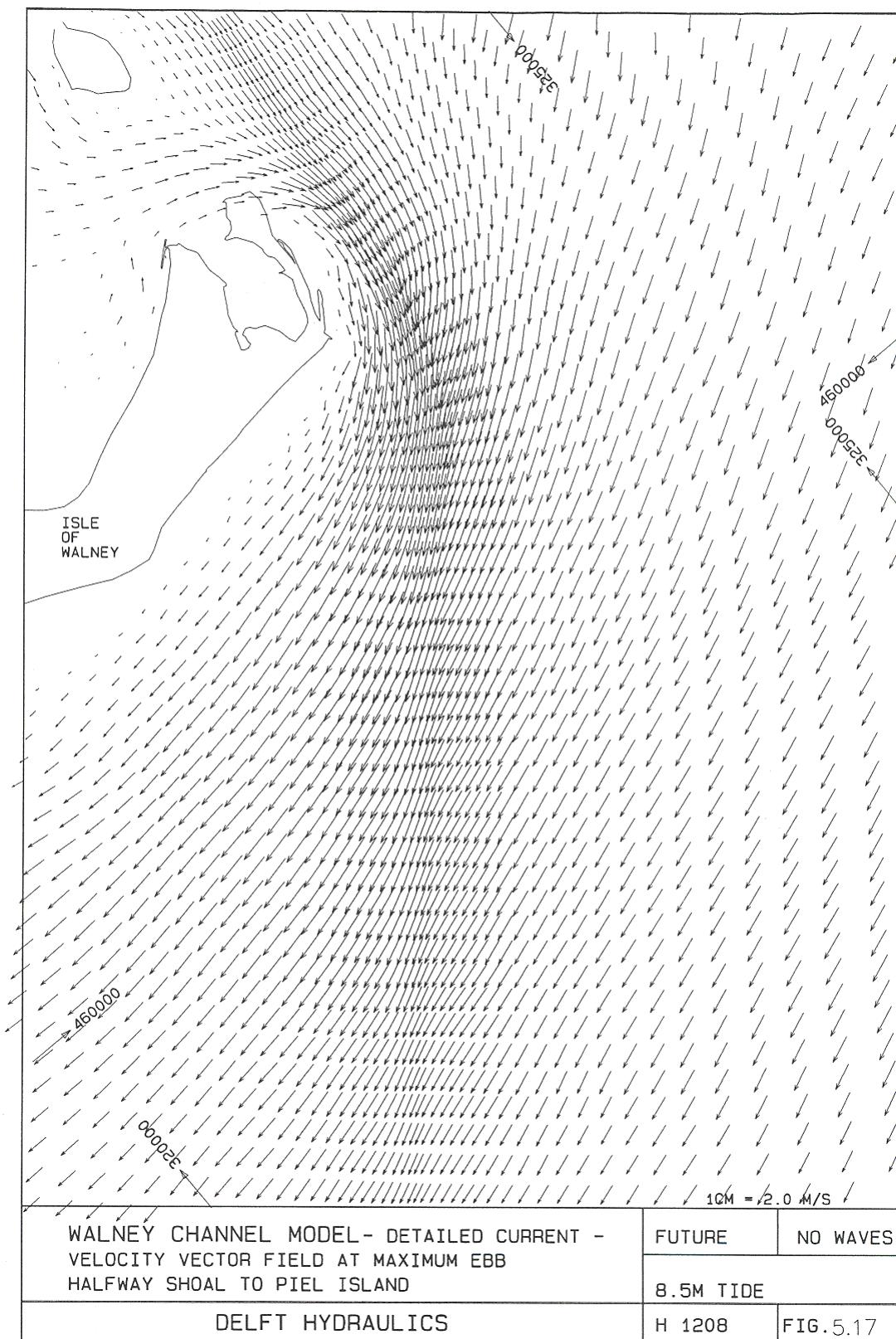


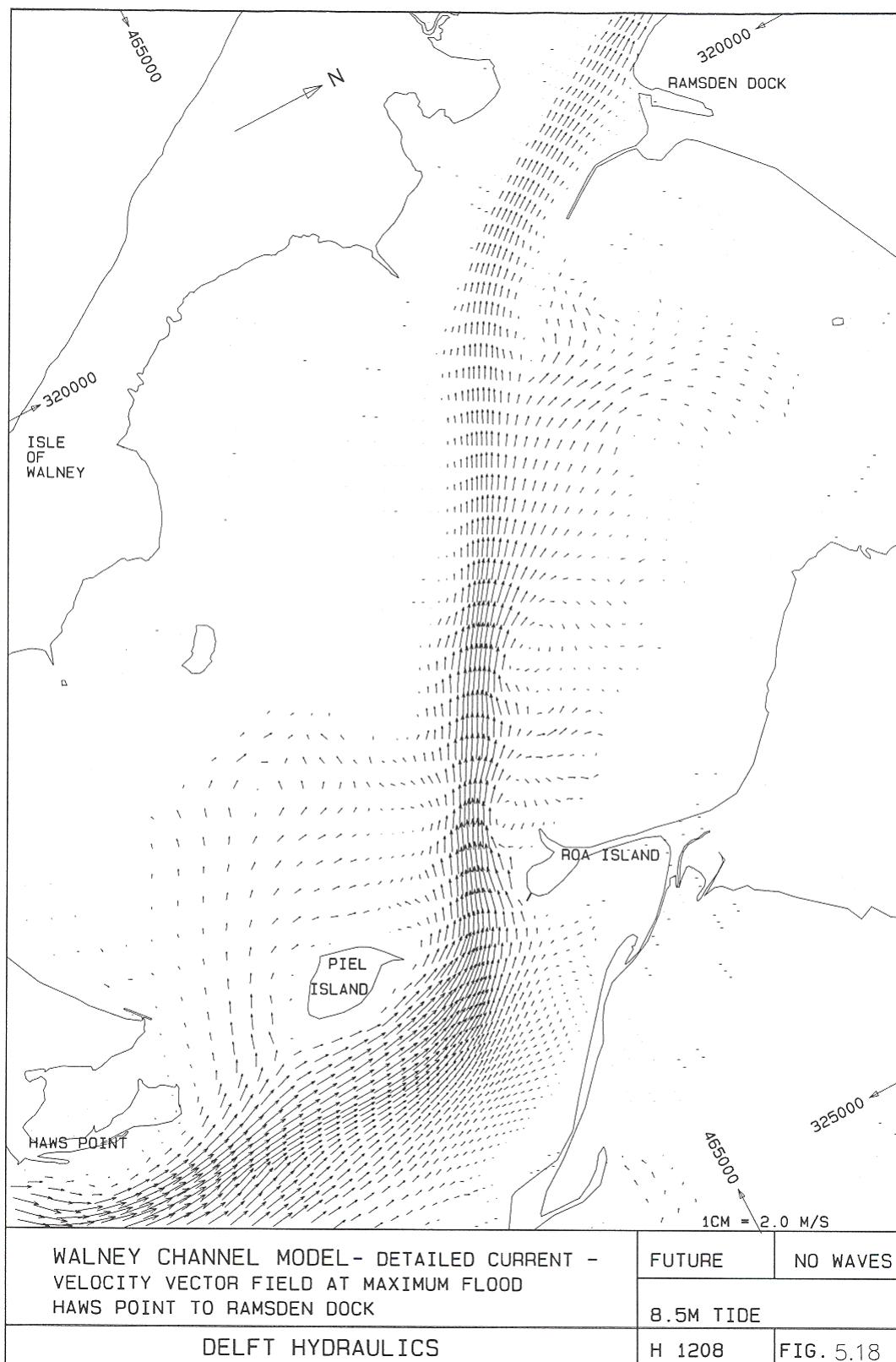
1.9 Drift of Oil on Water

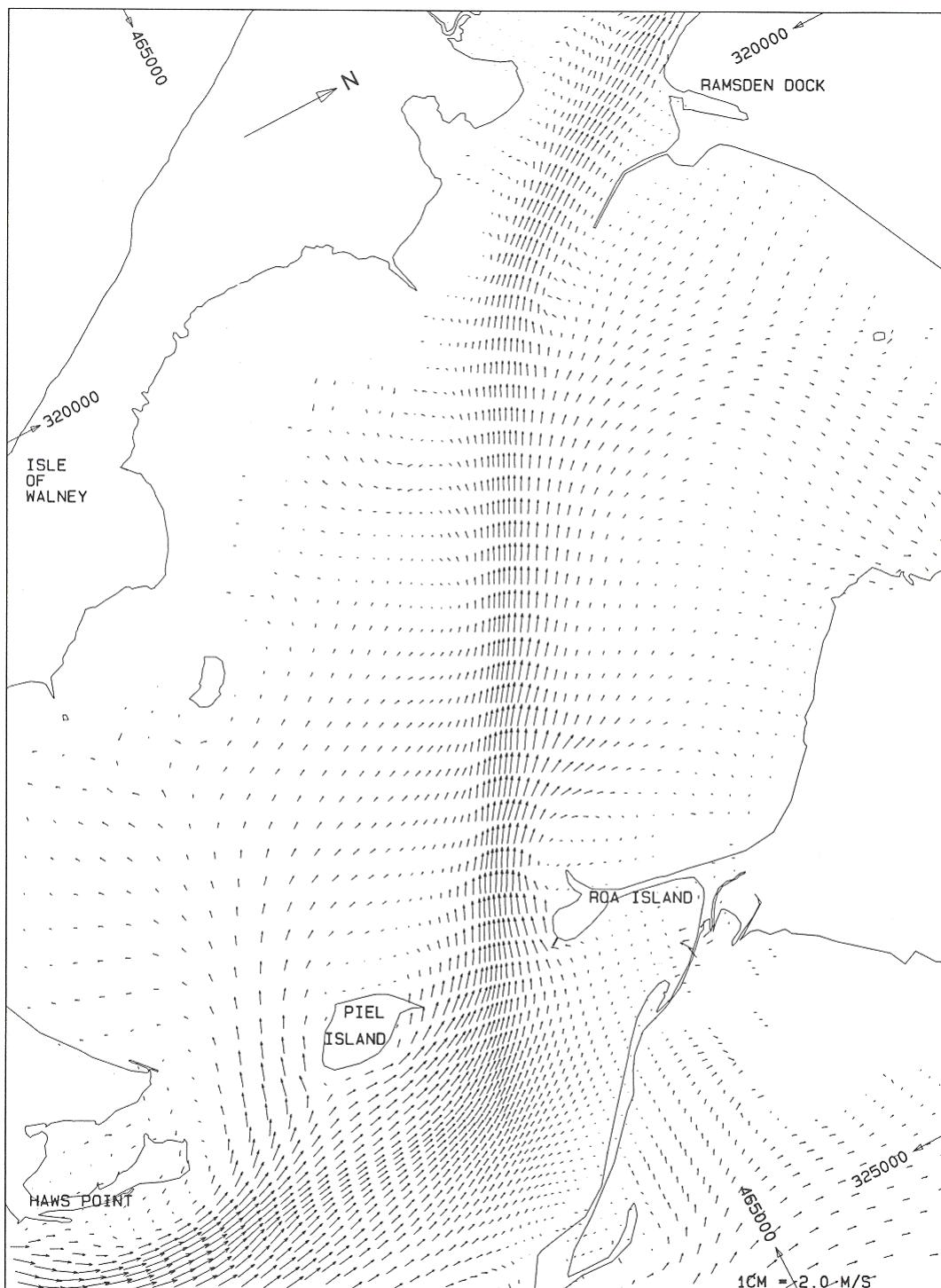
Oil spills on the water outside the enclosed dock system will move with the tidal stream (see Section 1.8 above) and at 3 per cent of the wind strength in the prevailing wind direction. Within the enclosed dock system all spill movement will be wind induced. Resultant movement of tidal transportation and wind drift can be predicted by the use of vector diagrams. The ABP Barrow Marine Control Room can continuously monitor and record the wind direction and force with a computerised weather station. Wind induced surface drift within the enclosed dock system can induce an oil spill to collect in a corner(s) of the enclosed dock, providing an opportunity for containment by booms and clean up by skimming and/or the use of absorbents.



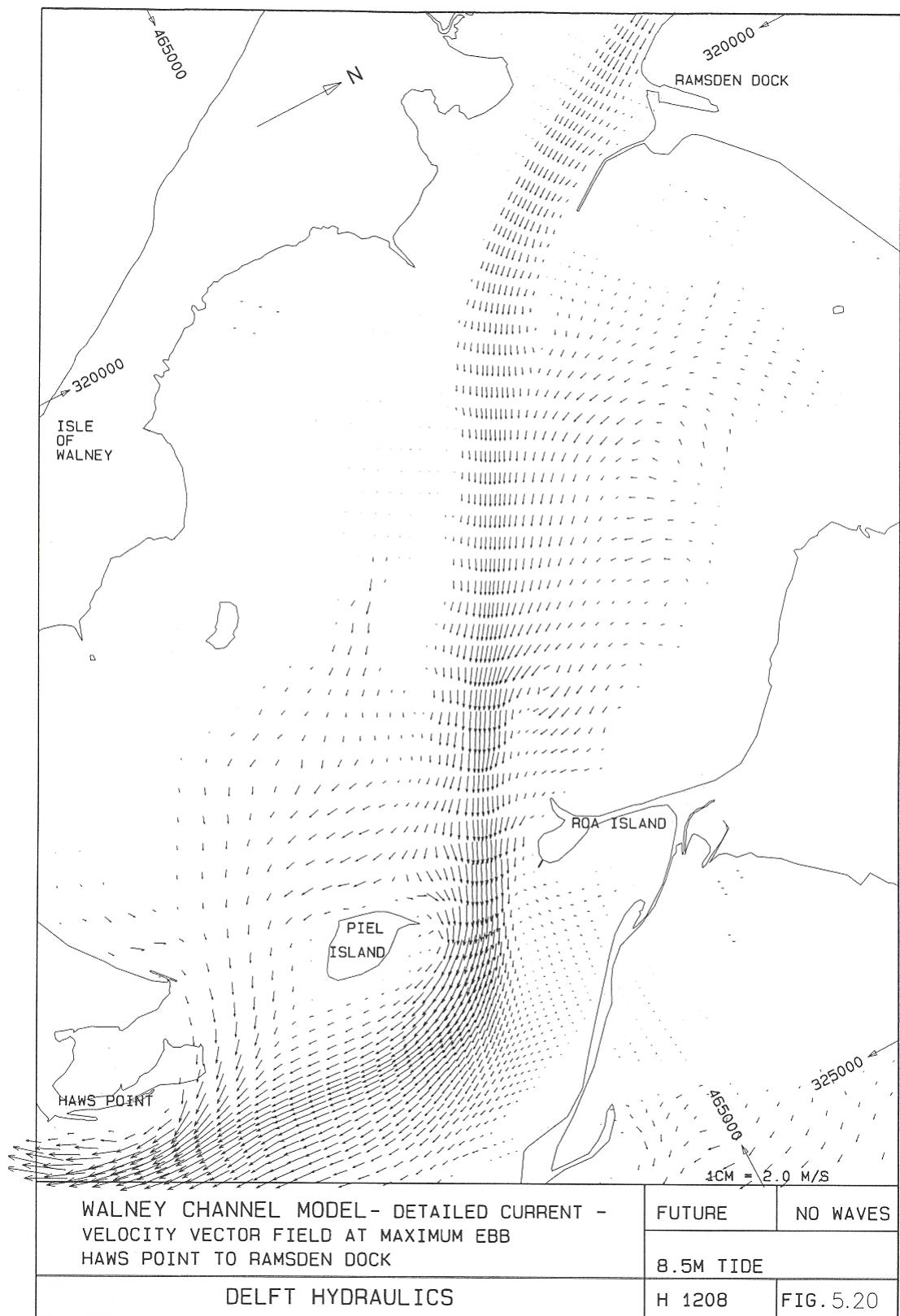








WALNEY CHANNEL MODEL - DETAILED CURRENT - VELOCITY VECTOR FIELD AT HW -1 HOUR HAWS POINT TO RAMSDEN DOCK	FUTURE	NO WAVES
	8.5 M TIDE	
DELFT HYDRAULICS	H 1208	FIG. 5.19



2. Incident Response Organisation

2.1 Harbour Master

The Harbour Master (or his nominated deputy) has overall responsibility for the conduct of spill response operations and for casualty / salvage management within the Port. He will be supported in his role by ABP marine personnel and by the Oil Spill Management Team.

2.2 Oil Spill Management Team (OMT)

ABP Barrow's Marine Control Building at the Pierhead is the Port's Incident Command Centre (ICC). An Oil Spill Management Team (OMT), under the chairmanship of the Harbour Master, will be established at Barrow MRC for Tier Two and Tier Three incidents. Depending on the circumstances of the incident, an OMT may be set up for a Tier One response. The OMT will convene at the Barrow Marine Control Building and will provide the command and control structure to co-ordinate and direct the incident response. The OMT will consist of representatives from some of the following organisations and authorities.

Management Team	Advisory and Support Team
Harbour Master BAE SYSTEMS (if appropriate) Vessel Owners P & I Club Salvor (if appropriate) MCA (if appropriate) Tier Two Contractor A&A	Cumbria County Council Barrow Borough Council Environment Agency Natural England Marine Management Organisation Associated British Ports: Administration Public Relations Finance and Accounts

In the event of a Tier Three incident and the implementation of the National Contingency Plan (NCP), overall control would pass to the Secretary of State's Representative, SOSREP, or his appointed deputy. The OMT will assist SOSREP and appropriate members of the OMT will re-deploy to the Strategic Co-ordinating Group (SCG).

Activation of the NCP will result in the formation of an Environment Group (EG) to provide environmental advice to response units. The Environment Agency would be a core member of this group together with other environmental and public health agencies. Conventionally this would be located with the Incident Command Centre

The Barrow MRC will remain active unless superseded by the MCA MRC. The Harbour Master will require the transfer of responsibility for managing the incident response to be formally documented prior to relinquishing overall control of at-sea counter pollution measures to MCA.

2.3 Minor Tier One Incident

2.3.1 Shore Installation – BAE SYSTEMS

The installation involved (notably BAE SYSTEMS) will immediately inform the Harbour Master via ABP Barrow's Marine Control. The ABP staff on duty will in turn activate ABP's internal notification procedure. BAE SYSTEMS will activate their own command centre and will initiate the appropriate response actions. (For guidance to their staff, BAE SYSTEMS have classified spills of 0 – 5 litres as a Grade C Very Minor Tier One Incident and 5 – 50 litres as a Grade B Minor Tier One Incident). The Harbour Master will send a representative to monitor the response being taken. The representative will advise the Harbour Master whether or not control of the response should be left with the installation concerned or transferred to the port using the Barrow Marine Control Building as the Incident Command Centre. This will occur in the event that the spill is extending or migrating beyond the immediate vicinity of the source of spill, or that the response being taken is considered inappropriate.

2.3.2 All Other Harbour Areas Including the Enclosed Dock System

The staff on duty will initiate the appropriate response actions and will immediately advise the duty Assistant Harbour Master or Harbour Master. The ABP internal notification procedure will be used. After the staff on duty has been relieved by the Assistant Harbour Master or Harbour Master, the management of the response will be in line with the established day to day management structure of the ABP Barrow (see Figure 2.1).

Note: There is an agreement between ABP and BAE SYSTEMS to co-operate on a 24 hour/7 day basis with the provision of manpower and equipment for all oil spills within the port's statutory area of responsibility.

2.4 Larger Tier One Incident

In addition to the actions described above the Harbour Master will decide whether or not to set up an Oil Spill Management Team and, in the event of involvement, whether the OMT will operate using Barrow Marine Control Building as an Incident Command Centre or from BAE SYSTEMS establishment. (For guidance to their staff, BAE SYSTEMS have classified spills of 50 – 500 litres as a Grade A Major Tier 1 incident). Depending upon the circumstances of the incident, the OMT may include representatives from the following organisations and authorities:

1.	ABP Barrow	<input type="checkbox"/>
2.	Cumbria County Council	<input type="checkbox"/>
3.	Environment Agency	<input type="checkbox"/>
4.	BAE SYSTEMS	<input type="checkbox"/>
5.	Natural England	<input type="checkbox"/>
6.	Barrow Borough Council	<input type="checkbox"/>

2.5 Tier Two Incident

An Oil Spill Management Team, under the chairmanship of the Harbour Master, will be established using the Barrow Marine Control Building as a Incident Command Centre and may include representatives from the following organisations and authorities:

1.	ABP Barrow (Harbour Authority)	<input type="checkbox"/>
2.	Adler and Allan (Tier 2 spill contractor)	<input type="checkbox"/>
3.	Environment Agency	<input type="checkbox"/>
4.	BAE SYSTEMS	<input type="checkbox"/>
5.	Cumbria County Council	<input type="checkbox"/>
6.	Natural England	<input type="checkbox"/>
7.	Marine Management Organisation (MMO)	<input type="checkbox"/>
8.	Barrow Borough Council	<input type="checkbox"/>
9.	Salvor	<input type="checkbox"/>
10.	P & I Club / ITOPF	<input type="checkbox"/>
11.	MCA	<input type="checkbox"/>
12.	Vessel Owners	<input type="checkbox"/>
13.	Other agency/ port user	<input type="checkbox"/>

2.6 Tier Three Incident

An Oil Spill Management Team, under the chairmanship of the Harbour Master, will be established at Barrow Marine Control Building ICC and may include representatives from the following organisations and authorities:

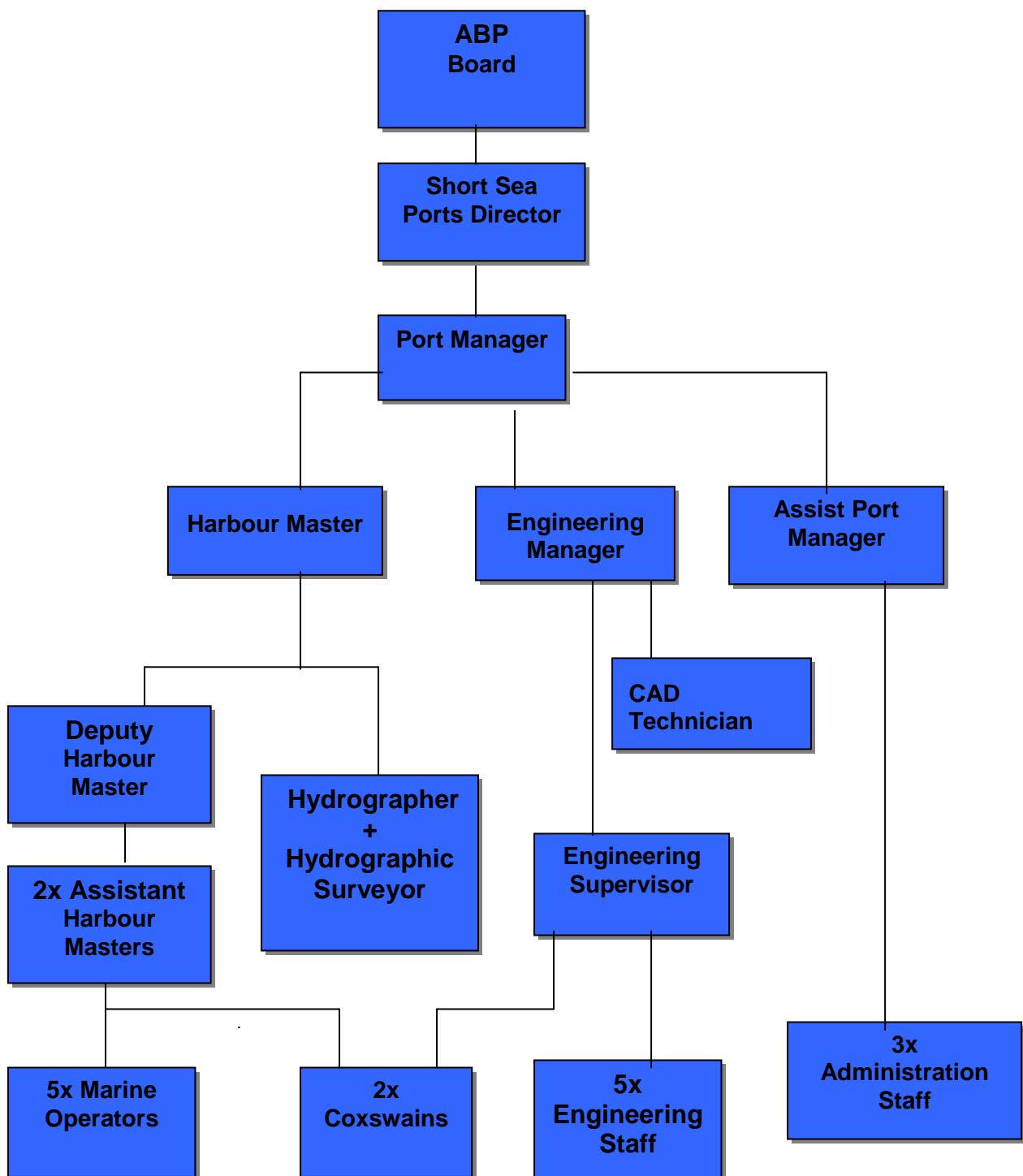
1.	ABP Barrow (Harbour Authority)	<input type="checkbox"/>
2.	Adler and Allan (Tier 2 contractor)	<input type="checkbox"/>
3.	Environment Agency	<input type="checkbox"/>
4.	BAE SYSTEMS	<input type="checkbox"/>
5.	Cumbria County Council	<input type="checkbox"/>
6.	Natural England	<input type="checkbox"/>
7.	Marine Management Organisation	<input type="checkbox"/>
8.	Barrow Borough Council	<input type="checkbox"/>
9.	ITOPF (International Tanker Owners Pollution Federation)	<input type="checkbox"/>
10.	P & I Club	<input type="checkbox"/>
11.	Salvor (if appointed)	<input type="checkbox"/>
12.	Police	<input type="checkbox"/>
13.	Cumbria Fire & Rescue Service	<input type="checkbox"/>
14.	MCA Principal Counter Pollution and Salvage Officer	<input type="checkbox"/>
15.	MCA HM Coastguard	<input type="checkbox"/>
16.	Vessel Owners	<input type="checkbox"/>
17.	Other agency/ port user	<input type="checkbox"/>

2.7 Strategic Co-ordinating Group (SCG)

The introduction of the Civil Contingencies Act 2004 enabled the formation of a wide area, multi-agency, policy and planning body named the Local Resilience Forum in England and Wales (Scotland follows a similar response structure without these forums). In emergency response these forums bring together strategic leadership from relevant organisations to form a Strategic Co-ordinating Group which takes overall responsibility for the multi-agency management of an emergency and establishes the policy and strategic framework for response and recovery. Where a SCG has been established, a Government Liaison Officer is normally dispatched immediately from Resilience and Emergencies Division (part of the Department for Communities and Local Government).

2.8 Simultaneous Oil Spills

In the event that a second simultaneous oil spill occurs within the harbour area then the Deputy Harbour Master or duty Assistant Harbour Master will make an initial assessment of the priority for response. He will assess both spills. Following reports from the scene of the spills the response priorities will be re-assessed.

Figure 2.1 Normal Organisational Structure (oil spill)

3. Reporting Procedures

3.1 Use of Section

This section sets out the reporting and notification procedures that should be followed in the event that an oil spill occurs within the harbour area.

The extent of notification of external organisations and authorities will be determined by the initial classification of the incident. **Responsibility for external notification and the completion of POLREP CG77 rests with the duty Assistant Harbour Master.**

The statutory requirement, placed on the Harbour Master under Statutory Instrument 1998 No. 1056, to report all actual or probable discharges of oil to the sea to MCA - HM Coastguard is noted in the appendices to this section; the appendices also include POLREP CG77 and an Oil Spill Progress Report.

3.2 Prevention of Oil Pollution Acts 1971 & 1986

These Acts place an obligation on persons to immediately report to the Harbour Master an oil spill that enters, or threatens to enter, the water. Persons include port users, vessel masters, oil companies and industrial firms with water frontage.

3.3 Notification Matrices

The duty Assistant Harbour Master will implement the following notification matrix in accordance with the category of oil spill incident declared.

Note: the matrices give the primary telephone contact numbers; alternative telephone and facsimile numbers are included in Section 9.

3.3.1 Tier One (Minor) Incident

Organisation	Telephone No.	
MCA - HM Coastguard MRCC Holyhead	01407 762051(H24)	<input type="checkbox"/>
Environment Agency (immediate call required)	0800 807060 (24 hours emergency hotline)	<input type="checkbox"/>
Cumbria County Council (who will advise Barrow Borough Council) (if appropriate and outside enclosed dock)	01768812500 (office hours) 0333 2407287 (H24) - request Resilience Unit	<input type="checkbox"/>
Barrow Borough Council Environmental Health (if appropriate and outside enclosed dock)	01229 876543 (Switch Board) 01229 833311 (out of hours) -request - Emergency Planning Officer	<input type="checkbox"/>
Natural England (if spill likely to impact upon an SSSI / outside enclosed dock)	0300 0601200	<input type="checkbox"/>

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3.3.2 Tier One (Larger) Incident

Organisation	Telephone No.	
MCA - HM Coastguard MRCC Holyhead	01407 762051 (H24)	<input type="checkbox"/>
Environment Agency (immediate call required)	0800 807060 (24 hours emergency hotline)	<input type="checkbox"/>
Cumbria County Council (who will advise Barrow Borough Council) (if appropriate and outside enclosed dock)	01768812500 (office hours) 0333 2407287 (H24) - request Resilience Unit	<input type="checkbox"/>
Barrow Borough Council Environmental Health (if appropriate and outside enclosed dock)	01229 876543 (Switch Board) 01229 833311 (out of hours) -request Emergency Planning Officer	<input type="checkbox"/>
Natural England (if spill is likely to impact upon a SSSI)	0300 0601200	<input type="checkbox"/>
Port Users: BAE SYSTEMS Fire Control Security	01229 873000 01229 875969	<input type="checkbox"/>
Centrica Hydrocarbon Resources	01229 838404	<input type="checkbox"/>
INS Terminal	01229 836988	<input type="checkbox"/>
Appropriate Port Users	Various	<input type="checkbox"/>
Marine Management Organisation MMO Duty Officer DEFRA (if unable to contact MMO)	0300 2002024 (office hours) 07770 977825 (out of hours) 0345 0518486	<input type="checkbox"/>

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3.3.3 Tier Two and Tier Three Incidents

Organisation	Telephone No.	
MCA -HM Coastguard MRCC Holyhead	01407 762051 (H24)	<input type="checkbox"/>
Environment Agency (immediate call required)	0800 807060 (24 hours emergency hotline)	<input type="checkbox"/>
Adler and Allan (Tier Two contractors)	0800 592 827	<input type="checkbox"/>
Cumbria County Council (who will advise Barrow Borough Council) (if appropriate and outside enclosed dock)	01768812500 (office hours) 0333 2407287 (H24) - request Resilience Unit	<input type="checkbox"/>
Barrow Borough Council Environmental Health (if appropriate and outside enclosed dock)	01229 876543 (Switch Board) 01229 833311 (out of hours) -Request Emergency Planning Officer	<input type="checkbox"/>
Natural England (if spill is likely to impact upon a SSSI)	0300 0601200	<input type="checkbox"/>
Port users: BAE SYSTEMS Fire Control Security	01229 873000 01229 875969	<input type="checkbox"/>
INS Terminal	01229 836988	<input type="checkbox"/>
Centrica Hydrocarbon Resources Ltd.	01229 838404	<input type="checkbox"/>
Appropriate Port Users	Various – see Section 9	<input type="checkbox"/>
Marine Management Organisation MMO Duty Officer DEFRA (if unable to contact MMO)	0300 2002024 (office hours) 07770 977825 (out of hours) 0345 0518486	<input type="checkbox"/>
North Western Inshore Fisheries & Conservation Authority (IFICA)	01524 727970 (office hours)	<input type="checkbox"/>
Police	101 / 999	<input type="checkbox"/>
Cumbria Fire Service	01925 460853 / 999	<input type="checkbox"/>

Cumbria Council's Resilience Unit will additionally alert as necessary the following for Tier Two and Three Incidents:

- British Telecom (Emergency Installation)
- County Departments as necessary
- Waste Disposal Contractors

He/she will also consider advising his/her counterpart officers in adjoining local authorities:

- Lancashire
- the Isle of Man
- Dumfries & Galloway

And the Cumbrian District Councils of:

- Copeland
- South Lakeland

All which border the Irish Sea coastline.

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Appendix 1

Extract from Statutory Instrument 1998 No.1056

Reporting of incidents: harbour authorities and oil handling facilities

6. - (1) A harbour master, or other individual having charge of a harbour, and any individual having charge of an oil handling facility (except those which are pipelines), who observes or is made aware of any event involving a discharge of or probable discharge of oil, or the presence of oil in the sea shall without delay report the event, or the presence of oil, as the case may be, to MCA - HM Coastguard.
- (2) A report under this regulation shall so far as appropriate as to form and content comply with the standard reporting requirements.

	Port of Barrow Oil Spill Contingency Plan	 ABP ASSOCIATED BRITISH PORTS
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Appendix 2: POLREP CG77 INITIAL INCIDENT REPORT

A. Classification: - Select – Doubtful, Probable, Confirmed

B. Date/Time/Observer: - Enter date/time of obs. – state UTC or local time / Enter name or title of observer

C. Position and Extent of Pollution: - by latitude and longitude if possible, state range and bearing from some prominent landmark and estimated amount of pollution, e.g. size of polluted area; number of tonnes of spilled oil; or number of containers, drums etc. lost. When appropriate, give position of observer relative to pollution

D. Tide: - Speed/Direction **Wind:** - Speed/Direction

E. Weather: - Conditions and Sea State

F. Characteristics of Pollution: - give type of pollution, e.g. oil crude or otherwise; packaged or bulk chemicals; garbage. For chemicals, give proper name or United Nations Number, if known. For all, give appearance e.g. liquid; floating solid; liquid oil; semi-liquid sludge; tarry lumps; weathered oil; discolouration of sea; visible vapour etc.

G. Source and Cause of Pollution: - from vessels or other undertaking. If from a vessel, say whether as a result of apparent deliberate discharge or a casualty. If the latter, give a brief description. Where possible, give name, type, size, nationality and Port of Registry of polluting vessel. If vessel is proceeding on its way, give course, speed and destination, if known.

H. Details of Vessels in area: - to be given if the polluter cannot be identified and the spill is considered to be of recent origin.

I. Not Used

J. Any Photographs or Samples: - Give details of any photographs or samples taken.

K. Remedial Action: - Give details of any actions taken, or intended, to deal with spillage.

L. Forecast: - Likely effects of pollution – e.g. arrival on shore and estimated timings.

M. Names: - of others informed apart from addressees to this message.

N. Other relevant information: - e.g. Names of other witnesses or references to other instances of pollution which may point to a source.

	Port of Barrow Oil Spill Contingency Plan	 ABP ASSOCIATED BRITISH PORTS
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PART II - SUPPLEMENTARY INFORMATION TO BE PROVIDED LATER

(This section may be disregarded when POLREPs are for UK internal distribution only)

O. RESULT of SAMPLE analysis

P. RESULTS of PHOTOGRAPHIC analysis

Q. RESULTS of SUPPLEMENTARY ENQUIRIES (e.g. inspections by Surveyors, statement of ship's personnel etc. if applicable)

R. RESULT OF MATHEMATICAL MODELS

NOTES

1. POLREPs should be used for oil, chemical or dangerous substance spillages and for illegal discharges of garbage.
2. All messages should be pre-fixed by the codeword POLREP followed by a serial number issued by the originator. Subsequent updating or amplifying reports should repeat this information and add a SITREP number, e.g. "POLREP 21/SITREP 1" would be followed by "POLREP 21/SITREP 2". The first report is assumed to be Sitrep 1 with subsequent reports being numbered sequentially.
3. Groundings, collisions or breakdowns of oil tankers or other vessels carrying pollutants, including bunkers, should be treated as potentially serious incidents with a classification of "PROBABLE" until proved otherwise. The use of link calls or inmarsat calls to Masters of ships is often the best method of obtaining information.
4. Local C/P alerting plans should establish the following responsibilities :
 - (a) Coastguard to inform the County Oil Pollution Officer (COPO) in England and Wales, the Local Oil Pollution Officer in Scotland, Department of Environment in Northern Ireland, or the appropriate authority in the Channel Islands or Isle of Man where there is an immediate or potential risk of oil coming ashore in their area.
 - (b) In England, Scotland and Wales, MCA-HM Coastguard to inform COPOs/LOPOs in the counties immediately adjacent to counties at risk , that they may be at risk.
5. Care should be taken to avoid undue escalation of UNCONFIRMED pollution incidents with consequent misleading publicity.

ABP Barrow Oil Pollution Incident log sheet

	Port of Barrow Oil Spill Contingency Plan	 ABP ASSOCIATED BRITISH PORTS
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Appendix 3 Oil Spill Progress Report

OIL SPILL PROGRESS REPORT		
Incident Name:		
Updated by:		
Date:	Time (local):	
Summary of Incident Response Operations:		
Summary of Incident Response Resource Utilisation:		
Number of Aircraft:	Number of Vessels:	
Dispersant Used	litres	Length of Booms in Use: m
Number of Recovery Devices:	Number of Storage Devices:	
Sorbent Used:	kg	Bioremediation Used kg
Number of Personnel:	Number of Vehicles:	
Specialist Equipment:		
Oil Spill Balance Sheet:		
Total amount of oil spilled:	tonnes	
Total amount of oil recovered:	tonnes	
Outstanding amount of spilled oil:	tonnes	
Mass balance:		
Estimated Natural Weathering:	tonnes	
Mechanically agitated:	tonnes	
Chemically dispersed	tonnes	
Skimmer recovered	tonnes	
Sorbent recovered:	tonnes	
Manually recovered:	tonnes	
Bioremediated	tonnes	
Other.....	tonnes	

Appendix 4

Guidelines to Information Required by Marine Management Organisation in Considering Request for Dispersant Spraying Approval

As much of the following information as possible should be provided when requesting approval.

- Name of authority or organisation requiring approval.
- Name of contact and telephone and fax number used.
- Locality of spill preferably in degrees (but could be grid reference or description such as "Devonshire Dock" or "Length of Channel between Walney Bridge and Dock Entrance").
- Oil type or description of appearance if not known. If crude – what type?
- Quantity of oil spilled – preferably in tonnes.
- Source of spill.
- Potential for further spill.
- Description of slick – including dimensions and colour.
- Volume and name of dispersant for which approval is requested.
- Other methods of response being applied or considered and assistance being sought (e.g. MCA, Environment Agency).
- Local fisheries considerations (such as seasonal fisheries, advice given to fishermen).
- Local wildlife considerations (e.g. whether migrant birds are present).
- Tide – type and speed, and time of HW/LW particularly.
- Wind and weather (such as "Moderate breeze NW" "Overcast drizzle").
- Sea state.

Appendix 5

Sample Report to the Marine Management Organisation - Use of an Oil Treatment Product

Port of Barrow

Incident No _____ Date _____

Volume and type of oil _____

Location _____

Remedial action taken _____

Name and type of oil treatment product _____

Date of manufacture _____ Efficacy last tested on _____
(if applicable)

Comments on effectiveness _____

Report made to the Marine Management Organisation by _____

Other remarks _____

Appendix 6 Tier 2 Contractor Briefing Report

Adler and Allan Briefing Report

FAX TO:**FAX NO:****FROM (Sender's name):****POSITION:****COMPANY:** ABP Barrow**CONTACT (e.g. phone / fax)**

1. Designated callout authority
2. Location of spill
3. Time of spill (GMT and local time)
4. Source of spillage
5. Quantity (if known)
6. Oil type and characteristics
7. Weather conditions and forecast
8. Resources at risk
9. Cleanup resources available on site or others ordered with estimated time of arrival
10. Nearest airport and facilities if known; availability of onward transportation
11. Port of embarkation for equipment; location of secure storage for equipment
12. Vessel availability for equipment deployment, storage of recovered oil
13. Location of Command Centre
14. Name of On Scene Commander and designated contact(s) and/or deputies
15. Security, medical advice, visa requirements, immunisations required

4 Action Sheets

The following section contains action sheets and checklists for various members of the Oil Spill Response and Management Teams.

The action sheets follow a methodical checklist style, in order to guide the post holders through the actions that they will be expected to take and the sheets also list the post holders' responsibilities.

Action sheets are included for the following positions:

- 4.1 Duty Marine Control Staff
- 4.2 Duty Assistant Harbour Master
- 4.3 Harbour Master / Deputy Harbour
- 4.4 Representative - BAE SYSTEMS (or other Port user's representative)

4.1	Duty Marine Control Staff	
Step		
Responsibilities	<ul style="list-style-type: none"> • Receive information / report of oil spill incident • Start and maintain incident log • Call-out duty Assistant Harbour Master (and other ABP Barrow staff as required) • Initiate first response measures (if spill is not originating from BAE SYSTEMS) • Notify relevant port users and vessels • Maintain communications with all vessels in vicinity 	
Actions		
Alert	<input type="checkbox"/> Duty Assistant Harbour Master (on-call) <input type="checkbox"/> Other ABP Barrow staff if required <input type="checkbox"/> Other port users and ships in port	<i>Else Harbour Master, Deputy Harbour Master or other Assistant Harbour Master</i> <i>Use own discretion on calling out other staff</i> <i>Any port user and ship likely to be affected.</i>
Initial Actions	<input type="checkbox"/> Verify incident details <input type="checkbox"/> Assess type and quantity of pollution <input type="checkbox"/> Issue general warning to all port users and vessels likely to be affected <input type="checkbox"/> Start and maintain incident log <input type="checkbox"/> Request POLREP CG77 information	<i>Refer Section 3, Appendix 2</i>
Further Actions	<input type="checkbox"/> Brief duty Assistant Harbour Master <input type="checkbox"/> Maintain liaison with port users and vessels	
Final Actions	<input type="checkbox"/> Submit log to the duty Assistant Harbour Master <input type="checkbox"/> Attend debrief	

Duty Assistant Harbour Master		
<p>4.2</p> <p>Responsibilities</p> <ul style="list-style-type: none"> • Initially assess incident and present situation • Classify incident • Obtain accurate situation reports • Collect evidence and / or statements • Liaise with company or industry representative • Liaise with incident vessel regarding status of oil spill (if applicable) 		
Step	Actions	Additional Information
Alert	<input type="checkbox"/> Additional ABP staff as required <input type="checkbox"/> Report incident according to classification <input type="checkbox"/> Send CG77(POLREP) to Coastguard	<i>(Port & Marine Emergency Plan)</i> Refer Section 3, (Matrices 3.3) Refer Section 3, Appendix 2
Initial Actions	<input type="checkbox"/> Proceed to incident location <input type="checkbox"/> Investigate cause / source of spill <input type="checkbox"/> Take samples of spilled oil <input type="checkbox"/> Initiate personal log <input type="checkbox"/> Take photographic evidence <input type="checkbox"/> Collect evidence and take statements	<i>Stopped or ongoing?</i> Refer Section 4.5.4 Oil Spill Sampling Checklist
Further Actions	<input type="checkbox"/> Track the leading edge of slick <input type="checkbox"/> Provide co-ordination of any on the water response <input type="checkbox"/> Provide detailed situation reports to Barrow Marine Control <input type="checkbox"/> Survey the shoreline <input type="checkbox"/> Liaise with company or industry representative	
Final Actions	<input type="checkbox"/> Submit personal log to the Harbour Master <input type="checkbox"/> Attend debrief	

4.3 Harbour Master / Deputy Harbour Master		
Responsibilities		<ul style="list-style-type: none"> • Confirm / amend initial classification • Manage the Port of Barrow response • Authorise expenditure • Brief ABP Management Board via Port Manager & Marine Advisor • Liaise with Government / company / industry representatives as appropriate • Prepare information for the press statement
Step	Actions	Additional Information
Alert	<input type="checkbox"/> Alert Port Manager & Marine Advisor (if a major spill) <input type="checkbox"/> Adler & Allen	<i>Situation report</i> <i>When Tier 2 response required</i>
Initial Actions	<input type="checkbox"/> Verify / amend spill classification <input type="checkbox"/> Confirm duty Assistant Harbour Master has alerted appropriate organisations <input type="checkbox"/> Appoint Port representative to attend local oil spill management team (BAE SYSTEMS installation spill) <input type="checkbox"/> Convene Oil Spill Management Team <input type="checkbox"/> Authorise mobilisation of Tier 2 contractor	<i>Refer Section 3</i> <i>Refer Section 3</i>
Further Actions	<input type="checkbox"/> Chair the Oil Spill Management Team meetings <input type="checkbox"/> Constantly review the strategy being employed and advise of changes where necessary <input type="checkbox"/> Approve all expenditure commitments <input type="checkbox"/> Attend all press conferences as required <input type="checkbox"/> Brief ABP Management Board	Liaison with Corporate Communications Dept. via Port Manager & Marine Advisor
Final Actions	<input type="checkbox"/> Terminate the clean-up <input type="checkbox"/> Collate personal logs. <input type="checkbox"/> Prepare the incident report. <input type="checkbox"/> Hold a full debrief involving all members. <input type="checkbox"/> Amend contingency plan(s) as required.	

4.4 BAE SYSTEMS Representative		
Responsibilities		<ul style="list-style-type: none"> • Safety • Reporting • Implementation of the BAE SYSTEMS oil spill contingency plan • Incident management of minor Tier 1 spills • Agree to co-operate with ABP in response to > minor Tier 1 spills
Step	Actions	Additional Information
Alert	<input type="checkbox"/> Company response teams	
Initial Actions	<input type="checkbox"/> Immediately report spill to Barrow Marine Control <input type="checkbox"/> Initiate own incident Log <input type="checkbox"/> Assess the situation <input type="checkbox"/> Mobilise Tier 1 resources <input type="checkbox"/> Establish Incident Control/Command Centre <input type="checkbox"/> Refer to the ABP Port of Barrow Oil Spill Contingency Plan <input type="checkbox"/> Complete a work plan to mitigate the effects <input type="checkbox"/> Co-operate with the Harbour Master's representative	<i>tel. 0122 822911 else "Barrow Port Radio" VHF Channel 12</i> Include a safety assessment
Further Actions	<input type="checkbox"/> Update Duty Assistant Harbour Master with outstanding information required for CG77 POLREP <input type="checkbox"/> Maintain liaison with the Harbour Master's representative <input type="checkbox"/> Source temporary storage <input type="checkbox"/> Activate waste disposal contractor(s) <input type="checkbox"/> Issue progress reports <input type="checkbox"/> Prepare for hand over to ABP if required <input type="checkbox"/> Record all resources used	
Final Actions	<input type="checkbox"/> Submit own incident log to the Harbour Master <input type="checkbox"/> Return all hired equipment <input type="checkbox"/> Attend the debrief <input type="checkbox"/> Implement recommendations from the incident report as agreed with Harbour Master <input type="checkbox"/> Revise own oil spill contingency plan	

4.5 Oil Spill Incident Checklists.

The following checklists are intended to promote consistency of approach by all personnel involved in the incident response.

- **Oil Spill Assessment Checklist (C1).**

This checklist ensures that the initial assessment of the oil spill is accurate and all aspects likely to affect the classification such as quantity, oil type and likely fate of the spilled oil, are investigated thoroughly.

- **Incident Briefing Checklist (C2).**

This checklist ensures that all personnel involved in the management of the incident are given a thorough briefing, and are then able to give a consistent and effective briefing to personnel under their control during the incident.

- **Personal Log Checklist (C3).**

This checklist ensures that all personnel involved in the incident response record correct and relevant information throughout the operation; consistent logs and records can then be submitted to the Harbour Master for his use in subsequent reports and actions.

- **Oil Spill Sampling Checklist (C4).**

This checklist outlines the sampling procedure to be followed by ABP Marine Officers attending an oil spill. It also summarises the guidance given in [MCA STOp Notice 4/09](#), "Collection and Handling of Oil Samples". Following the guidance ensures that samples of sufficient quantity will be taken, sealed, labelled and handled correctly.

4.5.1 Oil Spill Assessment Checklist.

C1	Oil Spill Assessment Checklist
STEP	GUIDANCE
<input type="checkbox"/> Assess safety hazards	<p>Until otherwise established, assume oil spill is giving off potentially dangerous hydrocarbon vapours.</p> <p>ELIMINATE IGNITION SOURCES!</p> <p>Approach Oil Spill from upwind to reduce effects of vapours.</p> <p>APPROACH ONLY IF CONSIDERED SAFE TO DO SO!</p>
<input type="checkbox"/> Determine oil spill source	If source unknown, investigate with care. Instigate actions to stop spillage at source IF SAFE TO DO SO!
<input type="checkbox"/> Estimate quantity of oil released if exact amount is unknown	Determine <ul style="list-style-type: none"> • Can oil be contained?
<input type="checkbox"/> Assess prevailing weather conditions.	Determine: <ul style="list-style-type: none"> • Wind speed and direction • State of tide and current speed • Sea state
<input type="checkbox"/> Assess adjacent areas of environmental importance	Determine: <ul style="list-style-type: none"> • Environmental sensitivities and priorities
<input type="checkbox"/> Predict oil fate; determine direction and speed of oil movement in addition to weathering characteristics	Take forecast weather into account

4.5.2 Incident Briefing Checklist.

C2	Incident Briefing Checklist
STEP	NOTES
<input type="checkbox"/> Specify Safety Hazards	
<input type="checkbox"/> Extent of Problem <i>Size of spillage, type of oil, source</i>	
<input type="checkbox"/> Slick trajectory <i>Tide and Wind conditions</i>	
<input type="checkbox"/> Environmental sensitivities <i>Priorities for protection</i>	
<input type="checkbox"/> Response actions <i>Strategies to utilise</i>	
<input type="checkbox"/> Resource mobilisation <i>Equipment and personnel</i>	
<input type="checkbox"/> Planning Cycle <i>Meetings schedule</i>	
<input type="checkbox"/> Additional Information <i>Communications, Waste Disposal, Weather Forecast</i>	

4.5.3 Personal Log Checklist.

C3	Personal Log Checklist
ITEM	GUIDANCE
<input type="checkbox"/> Safety Hazards	Note potentially unsafe response activities and measures taken to mitigate the hazard. Record all accidents / near miss incidents regardless of how minor they may be.
<input type="checkbox"/> Initial Notification	Record time of notification of oil spill incident and the name of the person informing you.
<input type="checkbox"/> Daily Activities	Keep a daily record of all response activities undertaken, including time and location. Also include: <ul style="list-style-type: none">• Meetings attended• Instructions received / given• Site visits and movements• Contacts with outside agencies
<input type="checkbox"/> Personal Contacts	Generate a list of relevant contacts made, including contact details.
<input type="checkbox"/> Photographic / Video Records	Note time and location of any photographs / video taken.
<input type="checkbox"/> Oil Distribution	Make sketches of oiled areas with notes.
<input type="checkbox"/> Site Supervision	Keep a record of all staff under supervision, including hours of work etc. List all equipment utilised.
<input type="checkbox"/> Expenditure Incurred	Record all expenditure and keep receipts.

4.5.4 Oil Spill Sampling Checklist

C4	Oil Spill Sampling Checklist
ITEM	GUIDANCE
<input type="checkbox"/> Number of samples required	The duty Assistant Harbour Master will normally obtain and record 6 numbered samples. 3 will be obtained from the water and 3 where possible will be obtained from the source of the spilled oil, e.g. The ship's fuel/cargo tank, scupper, save-all, deck, bilge etc. The ship's Master will be asked to select and retain one of the numbered samples from the water and one from the suspected source. This will be recorded.
<input type="checkbox"/> Sampling Frequency	Where an incident is ongoing, at least one sample of oil pollution on water should be taken per day. Where shoreline impact has occurred, one sample per every 1km of polluted shoreline should be taken per day.
<input type="checkbox"/> Sample Size	A minimum of 500ml of liquid is required or, in the case of polluted shorelines, at least 50 grammes of pollutant.
<input type="checkbox"/> Method of Sampling	Where the oil is free floating, it is essential that the oil is skimmed from the water surface using the appropriate ladle and that any free water drawn with the sample is minimised. Where the oil has impacted the shoreline, oil should be scraped from rocks, boulders etc & placed in a sample container.
<input type="checkbox"/> Sealing of Sample Containers	Samples should be placed in screw top bottles with the bottle top being sealed to ensure that the sample cannot be tampered with. Lead or wire seals or adhesive labels can be used.
<input type="checkbox"/> Labelling of Samples	Sample bottles should be labelled with the initials of the sampler, the sample number and in accordance with the MCA STOp Notice instructions.
<input type="checkbox"/> Storage	In a locked fridge or cabinet to await sampling
<input type="checkbox"/> Information	Samples should be forwarded, as appropriate, to the address given in the STOp Notice and, additionally, MCA should be informed of the fact.

5 Response Guidelines

This section provides strategy guidelines for oil spills.

There are 3 recognised oil types:

No.	Oil Type	Strategy Figure	Specific Gravity	Genre	Characteristics	Examples
1	Light oils	5.1	< 0.8	White oils	Non-persistent, Volatile	Diesel, Gas oil, Gas condensate, Aviation fuel, Kerosene, Motor spirit.
2	Medium oils	5.2	0.8–0.95	Black oils	Persistent, Fluid	Crude oils.
3	Heavy oils	5.3	> 0.95	Black oils	Persistent, Viscous, Emulsion	Fuel oils, Bunker oils, Bitumen.

The guidelines refer to the environmental information given in Section 12.

Copy of the publication DfT publication "Oil spill clean-up of the coastline - A technical manual" is held in the ABP Barrow Marine Control Building and can be consulted for advice. The International Maritime Dangerous Goods (IMDG) Code is also held here.

Table 5.1 - SSSI and SPA within the Statutory Harbour Authority.

No.	Name
1	Morecambe Bay SSSI
2	Duddon Estuary SSSI
3	South Walney and Piel Channel Flats SSSI
4	The Duddon Estuary SPA
5	Morecambe Bay SPA

Note: Refer to Sensitivity Maps in Section 12 for locations of Sites of Special Scientific Interest (SSSI), Special Protected Areas (SPA) and Special Area's of Conservation (SAC)

USE OF DISPERSANT

ABP Barrow no longer maintains a stock of chemical dispersant and ABP Barrow no longer holds a Standing Approval for the application of dispersant. If dispersant usage is to be considered referral to the Marine Management Organisation MUST be made (see Section 3, appendix 4). The Marine Management Organisation would expect to be able to issue such an approval (if it were deemed appropriate by them) within one hour of the request for approval being received regardless of the time of day or night and inclusive of consulting with Natural England.

No port user (ship, craft or berth operator) should be permitted to use any dispersant under any circumstances.

The Environment Agency would also wish to be consulted whenever using dispersant. The Environment Agency stance in Barrow is that they would only agree to dispersant use if all else fails.

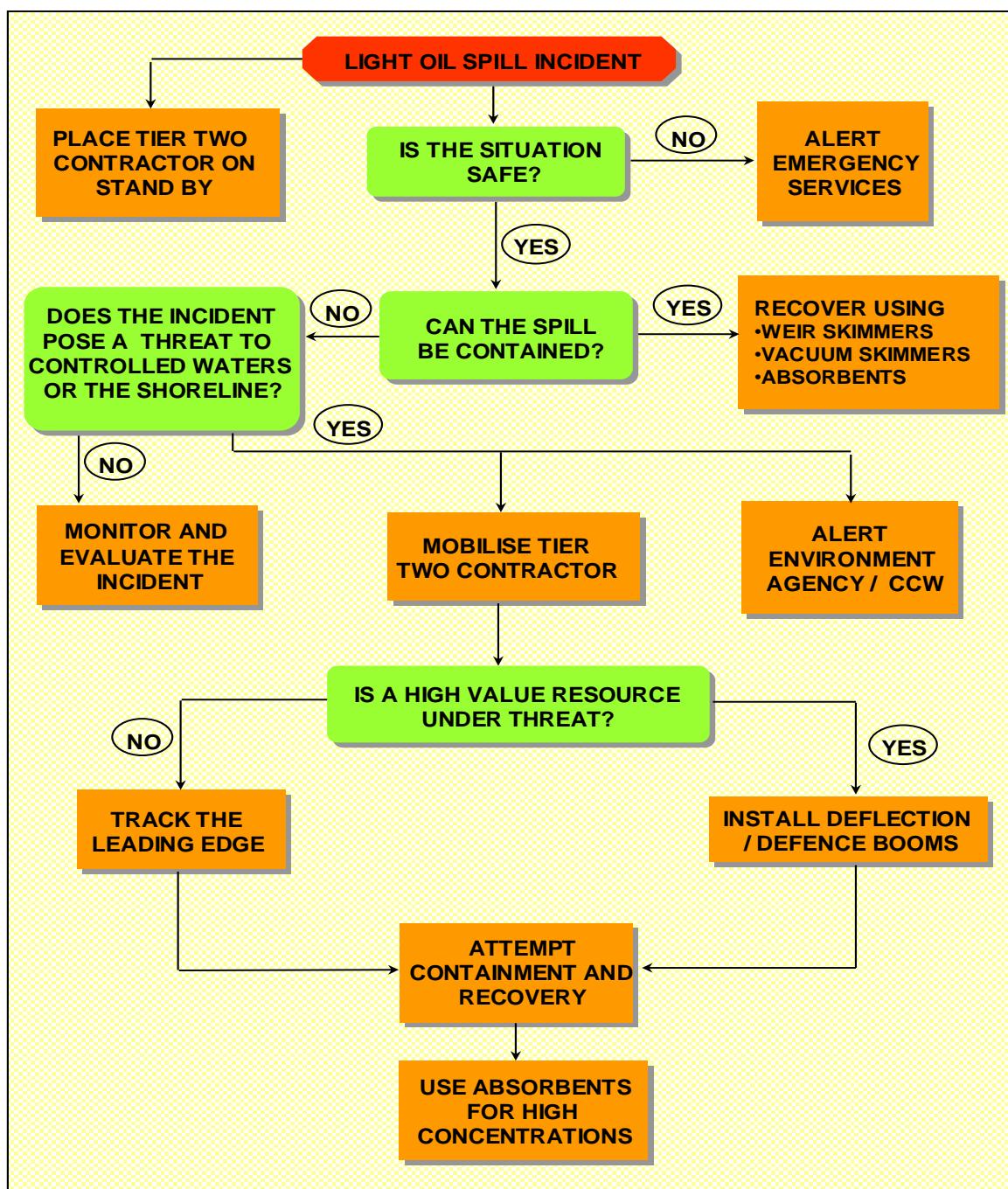
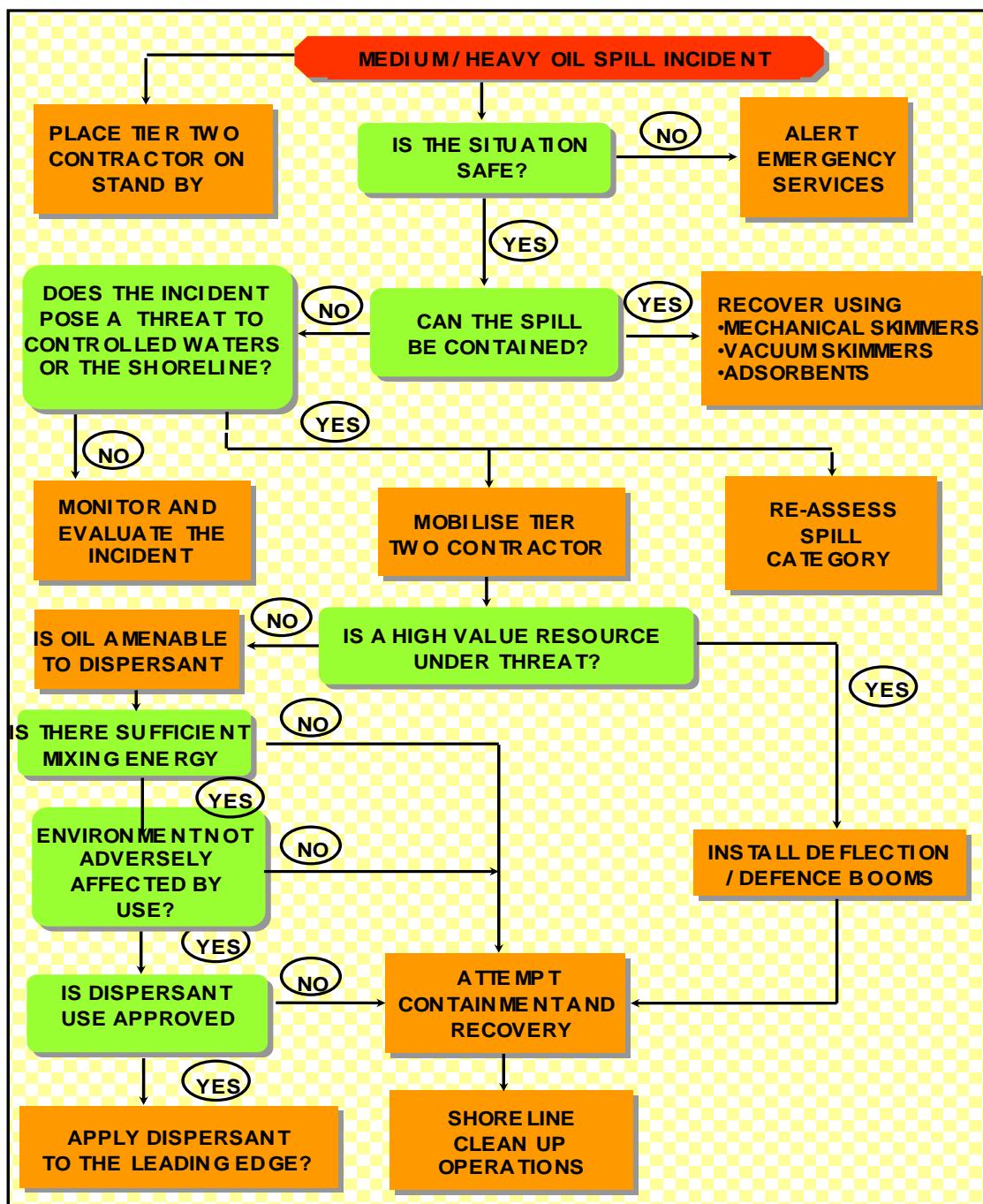
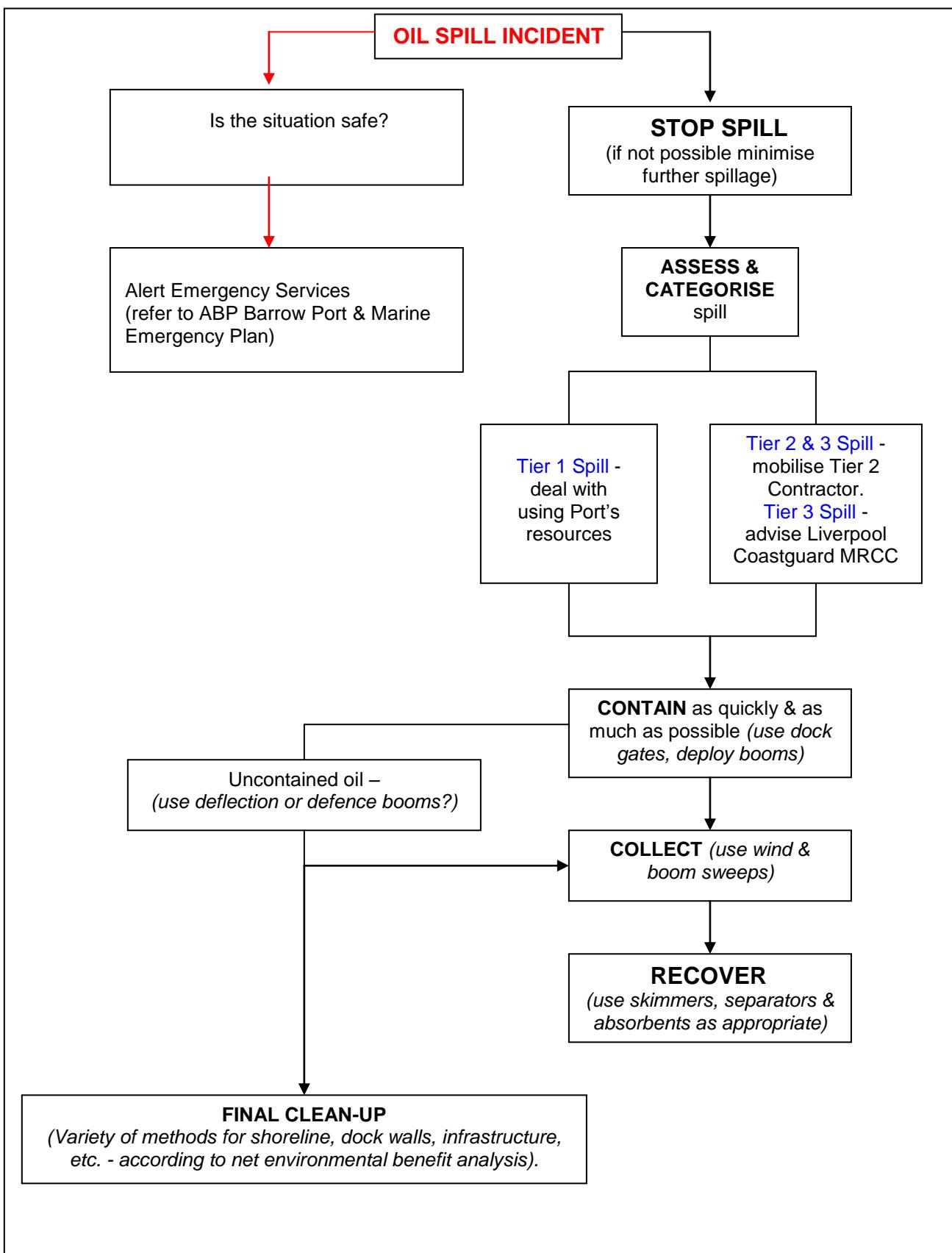
Figure 5.1 Light Oil Response Guidelines

Figure 5.2 Medium / Heavy Oil Response Guidelines



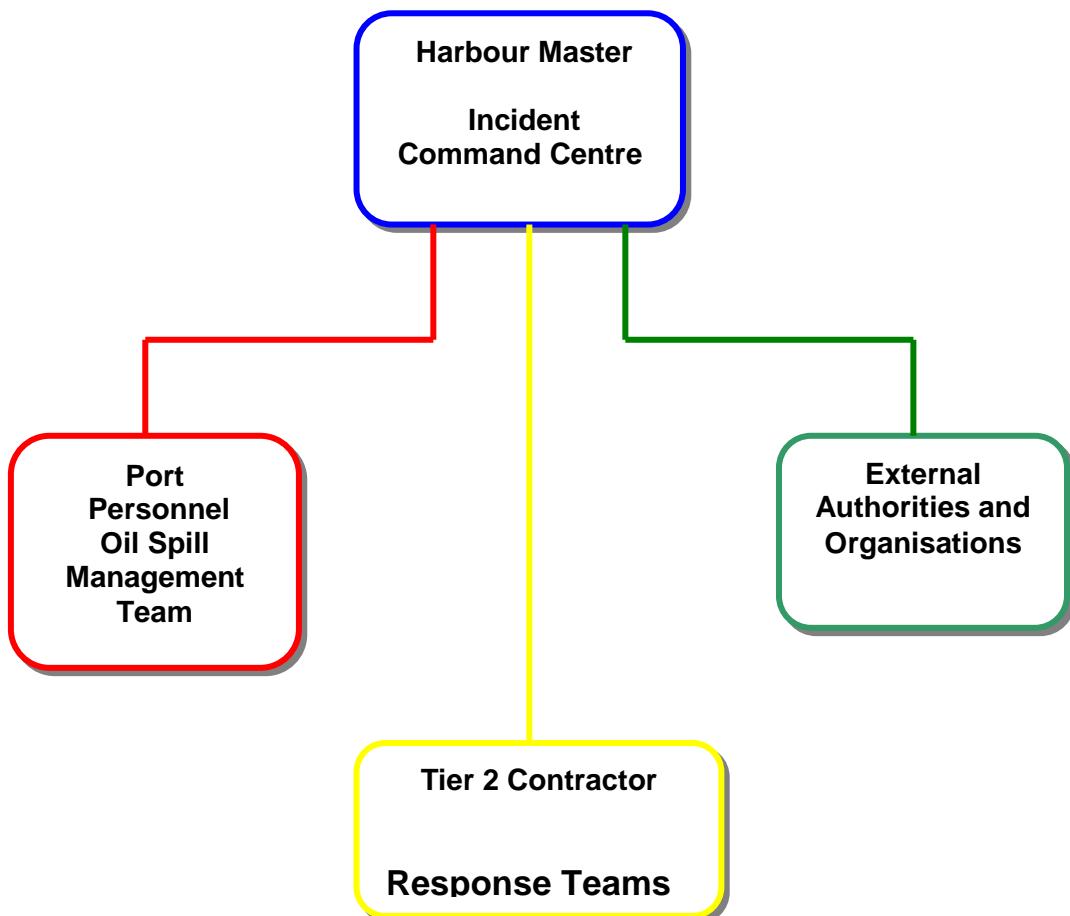
6. Communications and Public Relations Plans

6.1 Communications Plan

Communications between the Harbour Master, the Barrow Marine Control Building's Incident Command Centre (if activated) and harbour craft and personnel engaged in the response to a Tier 1 incident will be primarily by marine VHF radio, channels 12, 14, 11, 10 or 31 (BAE SYSTEMS' private channel). These channels will be supported by the use of more secure digital mobile phones.

In Tier 2 incidents, additional private channel UHF and VHF communications facilities will be provided by the Tier 2 Contractor.

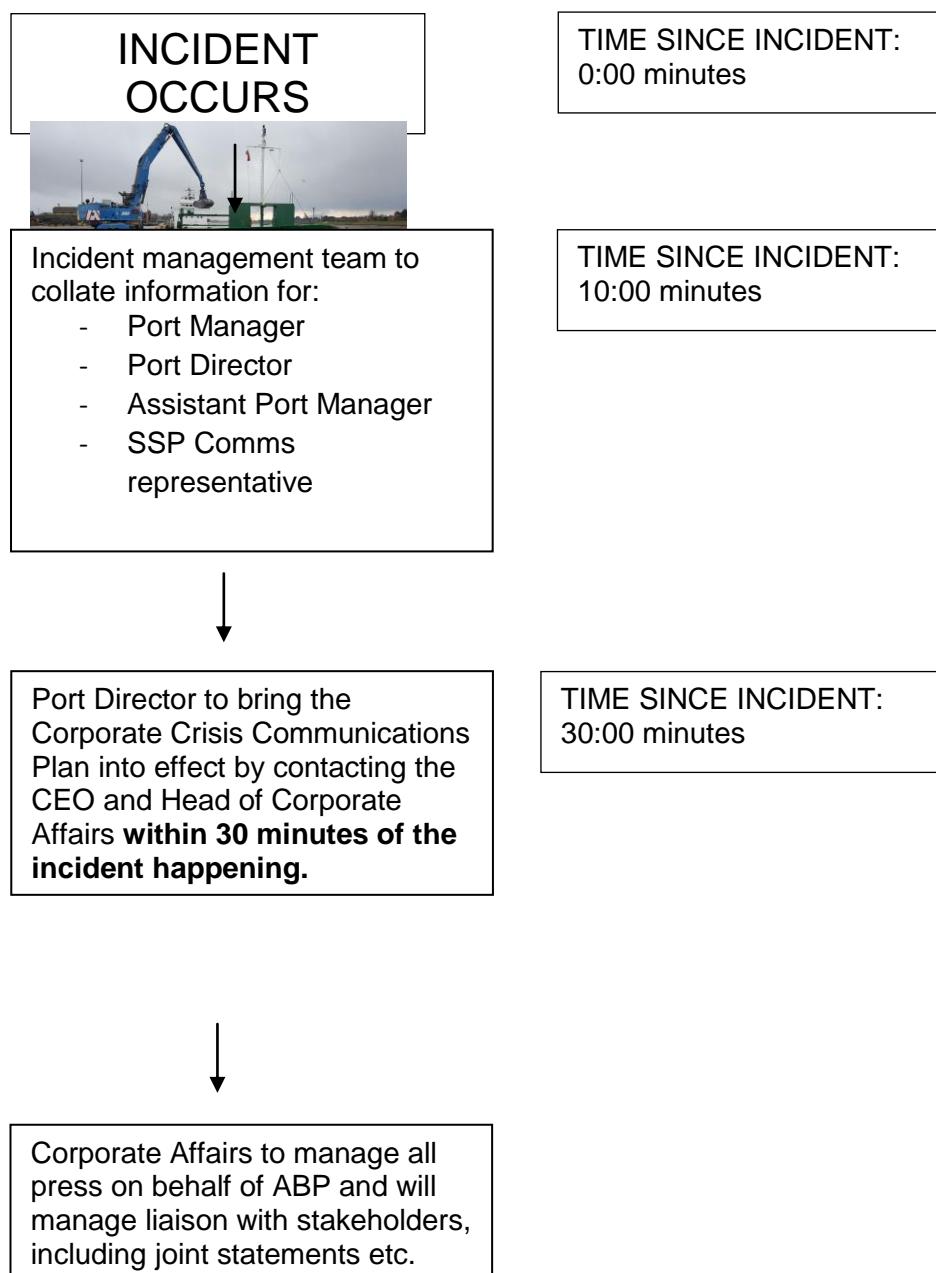
Communications between the Harbour Master, the Incident Command Centre and external authorities and organisations will be undertaken by telephone, facsimile and e-mail.



Key: Private & marine VHF Radio Telephone/Facsimile/e mail Private Channel

6.2 Public Relations Plan

6.2.1 Media Release Procedure



7. Health and Safety Plan

7.1 Introduction

Full account must be taken of the health and safety requirements for all personnel involved in oil spill response activities. The Site Specific Health and Safety Plan Assessment Form (Section 7.2) lists site characteristics, site hazards and personal protective equipment and site facility needs. This plan is intended to act as an aide-mémoire to ensure that all applicable health and safety requirements are considered and appropriate actions are taken.

Sections 7.3 and 7.4 summarise legislative requirements and give guidance on specific oil spill clean-up tasks and hazards. In Tier 2 and Tier 3 incidents, an ABP Safety Officer/ Manager will support the Harbour Master in the control and management of the health and safety function.

7.2 Site Specific Health and Safety Plan - Assessment Form

Site Specific Health and Safety Plan Assessment Form					
1. APPLIES TO SITE :					
2. DATE :		3. TIME :		4. INCIDENT :	
5. PRODUCT(S) :				(Attach MSDS)	
6. Site Characterisation					
6a. Area	<input type="checkbox"/> Open water	<input type="checkbox"/> Inshore water	<input type="checkbox"/> River	<input type="checkbox"/> Saltmarsh	<input type="checkbox"/> Mudflats
	<input type="checkbox"/> Shoreline	<input type="checkbox"/> Sand	<input type="checkbox"/> Shingle	<input type="checkbox"/> Docks	
6b. Use	<input type="checkbox"/> Commercial	<input type="checkbox"/> Industrial	<input type="checkbox"/> Public	<input type="checkbox"/> Government	<input type="checkbox"/> Recreational
	<input type="checkbox"/> Residential	<input type="checkbox"/> Other			
7. Site Hazards					
<input type="checkbox"/> Boat safety	<input type="checkbox"/> Fire, explosion, in-situ burn		<input type="checkbox"/> Slips, trips and falls		
<input type="checkbox"/> Chemical hazards	<input type="checkbox"/> Heat stress		<input type="checkbox"/> Steam and hot water		
<input type="checkbox"/> Cold stress	<input type="checkbox"/> Helicopter operations		<input type="checkbox"/> Tides		
<input type="checkbox"/> Drum handling	<input type="checkbox"/> Lifting		<input type="checkbox"/> Trenches, excavations		
<input type="checkbox"/> Equipment operations	<input type="checkbox"/> Motor vehicles		<input type="checkbox"/> Visibility		
<input type="checkbox"/> Electrical hazards	<input type="checkbox"/> Noise		<input type="checkbox"/> Weather		
<input type="checkbox"/> Fatigue	<input type="checkbox"/> Overhead/buried utilities		<input type="checkbox"/> Work near water		
<input type="checkbox"/> Others	<input type="checkbox"/> Pumps and hoses		Confined spaces		
8. Air Monitoring					
<input type="checkbox"/> O ₂	<input type="checkbox"/> LEL	<input type="checkbox"/> Benzene	<input type="checkbox"/> H ₂ S	<input type="checkbox"/> Other	
9. Personal Protective Equipment					
<input type="checkbox"/> Foot Protection			<input type="checkbox"/> Coveralls		
<input type="checkbox"/> Head Protection			<input type="checkbox"/> Impervious suits		
<input type="checkbox"/> Eye Protection			<input type="checkbox"/> Personal Floatation		
<input type="checkbox"/> Ear Protection			<input type="checkbox"/> Respirators		
<input type="checkbox"/> Hand Protection			<input type="checkbox"/> Other		
10. Site Facilities					
<input type="checkbox"/> Sanitation		<input type="checkbox"/> First Aid		<input type="checkbox"/> Decontamination	
11. Contact details :					
<input type="checkbox"/> Doctor			Phone		
<input type="checkbox"/> Hospital			Phone		
<input type="checkbox"/> Fire			Phone		
<input type="checkbox"/> Police			Phone		
<input type="checkbox"/> Other			Phone		
12. Date Plan Completed					
13. Plan Completed by					

7.3 Legislative Requirements

7.3.1 Employers' Duties

The principal duty of an employer is that imposed by the Health and Safety at Work Act 1974. The Act states the employer is to ensure, as far as is reasonably practicable, the health, safety and welfare of their employees and anyone else who may be affected by their business activities whilst at work.

The Management of Health and Safety at Work Regulations 1992 impose specific duties on employers to:

- carry out risk assessments of their work activities in order to identify protective and preventative measures - significant findings must be recorded if there are five or more employees;
- make arrangements for the planning, organisation, control, monitoring and review of the preventive and protective measures. When there are five or more employees these arrangements must be recorded;
- provide employees with appropriate health surveillance, where this is shown to be necessary by risk assessment;
- appoint a competent person(s) to help ensure compliance with health and safety law;
- set up emergency procedures;
- only allow persons with sufficient health and safety instructions and training to have access to restricted areas;
- provide employees with comprehensive health and safety information relating to the details above;
- full co-operation with other employers sharing the workplace;
- provide the relevant health and safety information to any outside employer working within their premises, including relevant instruction and information;
- provide the relevant health and safety training to employees; and
- provide all temporary workers with relevant information on health and safety requirements appropriate to their position within the company.

7.3.2 Employees Duties

All employees have a duty under the Health and Safety at Work Act 1974, to take reasonable care for the health and safety of themselves and their colleagues at work who may be affected by their acts or omissions.

Under the Health and Safety at Work Act 1974 employees have a duty to co-operate with their employer and colleagues enabling them to comply with statutory duties and requirements.

Additionally, the Health and Safety at Work Act 1974 states that employees must not intentionally or recklessly misuse any equipment and the like provided for them in the interests of health, safety or welfare.

The Management of Health and Safety at Work Regulations 1992, further oblige employees to:

- use any of the equipment etc, provided in the interests of safety;
- follow health and safety instructions;
- report any problem they consider to be a danger; and
- report any shortcomings in the protection arrangements for health and safety.

7.4 Site Hazards

7.4.1 Bird Handling

Handling of birds must be undertaken by properly trained personnel to ensure the protection of both bird and handler; wild birds have no way of understanding human intentions. Even a greatly weakened bird can inflict serious injury to handlers, especially to their eyes. Open wounds on hands and arms from such injuries can present opportunities for oily contaminants and disease to enter the handler's blood stream.

Handling of oiled birds is usually best left to experts, or to volunteers who have received some training. Chasing and man handling birds puts them under additional stress. If you see an oiled bird notify the Beach Master who will seek advice on what action to take. If a decision is made to catch an oiled bird take the following actions:

Equipment:

- Thick gloves (able to withstand pecks)
- Overalls
- Safety footwear
- Cardboard Box with lid of a suitable size to give the bird some room for movement
- Goggles to protect eyes
- Optional long-handled net to help catch bird.

Procedures:

- Do not let the bird get close to your head, as it may try to peck your eyes.
- Catch the bird by hand or with the aid of a long-handled net. Do not put the birds under any more stress than necessary. Only attempt to capture if it can be done quickly and efficiently.
- Hold the bird with both hands to hold the wings in.
- Put the bird in a cardboard box lined with absorbent material (e.g. newspaper), with a lid.
- Do not wrap the bird up in anything - it may get too hot and too stressed.
- Take the bird to a cleaning station as soon as possible. Let them know where and when the bird was caught.
- Keep a note of all birds caught and sent to cleaning station. Make a note of species if possible.

7.4.2 Boat Safety

- Boat operators must familiarise themselves and passengers with safety features and equipment on their boats.
- Boats must be operated by qualified individuals.
- Lifejackets must be worn by personnel on boats.
- Use of cold water immersion suits is particularly critical under conditions of cold stress.
- Boats should generally not be used after sunset for oil recovery. If this is required or poses minimal risk, areas of operation should be carefully prescribed, and individual boat operators should maintain a communication schedule with a shore base. Each boat should be fully equipped with appropriate navigation lights.
- Distress signals should be carried on all vessels.
- Boat operators must keep their supervisors informed of their area of operation, especially when they change their work area (if plans call for a boat to move to another location during a shift, the operator should advise the supervisor of his actual time of departure).
- Portable fuel tanks should be filled outside of the boat. All sources of ignition in the area of refuelling should be isolated.
- Personnel working in or operating boats should wear appropriate non-slip footwear.
- Fixed ladders or other substantial access/egress should be provided at boat transfer locations from low water line to platform.
- Workers should be cautioned about using their arms or legs to fend off during berthing, or getting their hands, arms, or legs between vessels and docks or fixed structures.

7.4.3 Chemical Hazards

Attach appropriate Material/Product Safety Data and COSHH Sheets for all hazardous substances likely to be used at a spill site.

7.4.4 Cold Stress

Cold stress can occur among responders as a result of prolonged exposure to low environmental air temperatures or from immersion in low temperature water. It can lead to a number of adverse effects including frostbite, chilblain and hypothermia. The single most important aspect of life-threatening hypothermia is the fall in the deep core temperature of the body.

Workers shall be provided with warm clothing, rest opportunities, exposure protection, and warm and / or sweet fluids. Boat crew personnel will wear immersion suits the water temperature is below 15° Celsius, or the combined water and air temperature is less than 48° Celsius.

Figure 7.1

<u>WIND CHILL CHART</u>												
Strength	Speed	Temperature Celsius										
Calm	0km	10	4	-1	-7	-12	-18	-23	-29	-34	-40	-45
Breeze	16km	4	-2	-9	-15	-23	-31	-44	-51	-51	-57	-64
Moderate	32km	0	-8	-15	-23	-32	-40	-48	-55	-64	-72	-80
Near Gale	48km	-2	-10	-19	-28	-36	-45	-53	-62	-71	-79	-88
Gale	64km	-4	-12	-21	-31	-38	-48	-57	-66	-74	-83	-92
Little danger to properly dressed personnel												
Danger of freezing exposed flesh												
Greatest Danger												

7.4.5 Drum Handling / Manual Handling

Drum handling at a spill site will primarily involve drums of waste and contaminated clothing. Several types of drums and containers may be used ranging from 25 to 200 litres in size. All drums and containers must be properly labelled. If in doubt as to the contents of a drum - seek advice.

Manual lifting and moving of drums should be kept to a minimum. A guide to manual handling is as follows:

- Wear gloves.
- Assess the weight of the load and get help if it is beyond your capability. Where appropriate, use mechanical aids provided.
- Size up the job - remove any obstructions; note any snags and make sure there is a clear space where the load has to be set down. Ensure that you can see over the load when carrying it.
- Look out for any splinters, projecting nails or sharp edges or wire.
- Stand close to the object and with your feet 20 to 30 cm apart, place one foot in advance of the other, pointing in the direction you intend to move.
- Put your chin in - avoid moving your head backwards or forwards.
- Bend your knees to a crouch position, keeping your back straight.
- Get a firm grip at opposite corners of the load with the palm of the hand and the roots of the fingers, arms as close to the body as possible.
- Lift with your thigh muscles by looking up and straightening your legs.
- Apply the above principles, to any movement such as pushing, pulling, digging, shovelling etc.
- Use the reverse procedure when setting down the load.

7.4.6 Equipment Operations

Heavy Equipment

Operators of heavy equipment, such as front end loaders, graders, bulldozers, must be trained and qualified in their safe operation. The operator and banksman must be familiar with agreed signalling techniques. Where appropriate the banksman should use protective headgear.

Buckets must not be used for personnel transport.

Forklifts

Only trained and authorised operators shall be allowed to operate forklifts. Only stable or safely arranged loads that do not exceed the capacity of the truck shall be handled. Operators are expected to carry out daily checks of the forklift trucks in use. All inspection defects are to be corrected prior to its operation. If it cannot be rectified immediately, the truck should be taken out of service.

7.4.7 Electrical Hazards

Electrical hazards shall be identified and marked with suitable placards, barricades, or warning tape as necessary.

7.4.8 Fatigue

Working long hours without rest may be required, especially during the early phase of response. This, coupled with the stress of the situation and wearing required PPE, can contribute to fatigue. Symptoms include loss of concentration, errors in judgement, irritability, sleepiness, soreness and stiffness in joints and muscles. Rest and sleep are the primary treatments for fatigue. Stress can be addressed by relaxation techniques, such as deep breathing, stretching and taking breaks.

7.4.9 Fire, Explosion and Burning Wastes

Flammable and combustible materials may be encountered at the spill site. These may be fuels for vehicles and equipment or the spilled material itself. However other chemicals may be used during the response. Refer to the container label and MSDS for more information on these materials.

Precautions should be taken when working with either flammables or combustibles:

- No smoking
- Store in approved, labelled containers
- Provide fire extinguishers in areas where these materials are used.

Burning spilled oil presents health and safety hazards not only to the workers engaged at the scene, but also to individuals downwind of the burn site. Health and safety hazards include:

- Physical hazards: explosions, heat, loss of control of burning oil.
- Inhalation of airborne burn products: These may include toxic and irritating substances such as smoke particles, carbon monoxide, carbon dioxide, sulphur oxides, nitrogen dioxide, polycyclic aromatic hydrocarbons, acid aerosols, aldehydes, acrolein, polynucleic aromatic hydrocarbons, volatile organic hydrocarbons.

Safety factors include the status of the spill; weather and sea conditions; distance of burning location to the spill source; type and condition of oil; proximity of ignitable vegetation, docks and other facilities; and control measures.

A detailed plan should be prepared. This should include a summary of safety and control measures. Care must be taken to protect all personnel from any harmful exposure to heat and or combustion products.

7.4.10 Heat Stress

Heat stress can result as responders perform heavy labour work in protective and/or impermeable clothing that does not breathe or allow for the normal dissipation of body heat. Heat build up can lead to a number of adverse health effects including heat rash, heat cramps, dehydration, heat exhaustion or heat stroke.

The incidence of heat stress is dependent on a number of factors such as temperature, humidity, a person's fitness, age, weight and clothing worn. Therefore supervisors should continually monitor their employees when workloads are heavy and temperatures and/or humidity are high (see figure below for guidance).

Fluids shall be available at all times and personnel will be encouraged to drink these during rest periods. Shaded rest areas will be made available where feasible.

Figure 7.2

		HEAT INDEX									
		AIR TEMPERATURE CELSIUS									
Relative Humidity		21°	24°	26°	30°	32°	35°	38°	40°	44°	46°
		20%	19°	22°	25°	28°	31°	34°	37°	41°	45°
40%		20°	24°	26°	30°	34°	39°	44°	51°	58°	66°
60%		21°	25°	28°	32°	38°	46°	56°	65°		
80%		22°	26°	30°	36°	45°	58°				

Heat cramps or exhaustion likely. Heat-stroke possible.

Heat-stroke highly likely.

7.4.11 Helicopter Operations

Helicopters may be used at the spill site for aerial surveillance; site characterisation; personnel/equipment transport; and rescue/medical transport. Safe working practices for passengers and other personnel include:

- Passengers must receive a safety briefing from the pilot prior to takeoff. The briefing should include: safety features and equipment location on the aircraft; helicopter underwater escape procedures when appropriate; and emergency information.
- Passengers and ground crew should approach/depart from the **FRONT** of the helicopter only when signalled by the pilot and shall never walk under or around the tail rotor or exhaust.
- Loose fitting clothing, hats or other gear which might be caught in the rotor down draught, must be secured or removed within 100 feet of operating helicopters.
- Passengers shall wear seat belts at all times and personal flotation devices when flying over water.
- Passengers and ground crew shall wear hearing protection (which may include communication headsets) at all times around operating helicopters.
- During emergency landing on water :
 - Do not exit until instructed to do so by the pilot after rotor blades stop turning or pilot signals all clear.
 - Do not inflate personal flotation devices until outside of the helicopter.

7.4.12 Lifting

Cranes must be operated in accordance with the manufacturers' instructions. Only trained and authorised operators shall be allowed to operate cranes. Outriggers must be fully extended to assure maximum stability of the equipment. Cranes must only be operated where the ground provides adequate support.

Rigging components must be inspected daily. Only certified wire rope slings or web strops shall be used. Each sling or strop must be clearly marked or tagged with its rated capacity and must not be used in excess of this rating. Personnel should not be allowed under the jib or load except for the minimum time necessary to hook or unhook the load.

7.4.13 Motor Vehicles

Drivers shall maintain a safe speed at all times, and shall not be allowed to operate vehicles in a reckless manner.

7.4.14 Noise

Appropriate hearing protection shall be used in designated high noise areas where personnel noise exposure exceed 85dBA time weighted average over an 8 hour workshift/ period.

7.4.15 Overhead and Buried Utilities

If work has to be carried out near overhead lines, consultation with the organisation that operates the supply system should be undertaken. A safe working distance from these overhead lines should be determined and the area cordoned off.

The estimated location of buried utilities such as sewer, telephone, fuel, electric or water should be predetermined before work begins. Utility companies or owners must be contacted, advised of the proposed work and informed of the urgency of the situation.

7.4.16 Pumps and Hoses

Pumps and hoses may be used at the spill site to apply water, steam or chemical for clean up and/or decontamination. They may also be used for transfer of liquid waste. Caution should be used when working in these areas where hoses are being used as they represent a tripping hazard. Additionally when using pumps and hoses, determine their last contents to avoid unnecessary contamination.

7.4.17 Slips, Trips and Falls

Slips, trips and falls on oily surfaces are the major cause of injuries at an oil spill site. Many of these injuries occur in the first few minutes of work before workers realise the conditions and begin to take precautionary measures. When entering a spill site, walk slowly and carefully in oil coated areas. Be especially careful when walking on oil covered rocks. Oil resistant safety footwear with non-slip soles should be worn.

It is better to clear an access/egress route than to walk through oiled areas.

7.4.18 Time

In the initial stage of an incident it is not always apparent how long a clean up operation will take. It is therefore prudent to expect the worst and plan for it. A few factors to take into account;

- Manpower – fatigue, roster system, support staff, possible 24hr operations
- Accommodation & food
- Equipment, stores, PPE
- Road and water transport

Once it has been determined that the port is dealing with a major incident additional support can be obtained from other ABP ports and agencies.

8 Waste Management Plan

Note: certain oiled waste is classed as Hazardous Waste and the transfer and disposal of such material is governed by The Hazardous Waste (England & Wales) Regulations 2005 as amended.

8.1 General

8.1.1 Waste Management Strategy

Waste minimisation, recycling, recovery and treatment to reduce the hazardous nature of the waste will be the principles that inform the development of the strategy. It is paramount that the disposal strategy is integrated with the response overall, from the outset, and is not developed in isolation. The strategy should include bulk waste removal and decontamination.

Guidance for contingency planning and operation of a waste management sub-group in a major incident may be found at Scientific, Technical and Operational Advice Note [STOP 3/16](#).

8.1.2 Duty of Care

Wherever possible, spilled oil should be recovered for recycling and re-use. However any shoreline clean-up operation is likely to result in amounts of oily waste far in excess of the original oil on the shoreline.

The responsibility for the arrangements to dispose of oil recovered from the Dock or Harbour waters rests with the Statutory Harbour Authority and its Tier 2 Response Contractor (Adler and Allan).

Additionally, the arrangements for disposal of shoreline pollution wastes will be agreed between the Statutory Harbour Authority, Barrow Borough Council, Cumbria County Council and the Environment Agency.

When dealing with an incident, The Environment Agency recognises that even where there is likelihood of serious environmental damage the situation should be controlled first. However, this action does not preclude any subsequent enforcement response. Whether any acts that would normally require permits, carried out in an emergency, would result in enforcement action would be considered in light of their enforcement policy. There is a defence for actions taken in an emergency under Regulation of the Environmental Permitting Regulations 2010. The Environment Agency would not normally take enforcement action in case of such emergency. An emergency only applies if it is proven that the acts were carried out in order to avoid danger to public health and:

- Steps were taken to minimise pollution, and
- The Environment Agency is notified of the acts as soon as reasonably practicable.

8.1.3 Duty of Care – Hazardous Waste

All movements of hazardous waste will be required to comply with the Control of Pollution (Amendment) Act 1989 and the Statutory Harbour Authority and waste carrier (Local Licensed Waste Disposal Contractors) have a duty of care under the Environmental Protection Act 1990 and the Environmental Protection (Duty of Care) Regulations 1991.

In terms of the Hazardous Waste (England and Wales) Regulations 2005 as amended, there is a defence for actions taken in an emergency or where there is a risk of grave danger, as defined in the Regulations:

“...a present or threatened situation arising from a substance or object which is, or which there are reasonable grounds to believe is, hazardous waste and the situation constitutes a threat to the population or the environment in any place...”.

The Environment Agency will not normally take enforcement action in these circumstances but it must be recognised that under Section 62 of the Hazardous Waste Regulations 2005, holders of hazardous waste must take steps to avert an emergency or danger.

8.1.4 Waste arising

By no means an exclusive list, the types of waste described below are amongst those that may arise from any spillage.

- recovered oil (not heavily contaminated)
- water in oil emulsion - untreated
- water in oil emulsion - treated with dispersant
- thick weathered oil - lumps
- semi-solid bunker oil
- oil and sand mixtures
- dry waste
- oiled shingle
- heavily oiled seaweed and other debris

In Tier One and Tier Two incidents any oil recovered from the dock or harbour waters will be transferred to one of the waste oil disposal and recycling contractors listed in Section 8.5.

8.1.5 Records

Movements of all hazardous waste should be carried out by a Licence Hazardous Waste Contractor, appropriately recorded and Consignment Notes completed, signed and retained for future audit.

8.2 Temporary Storage

8.2.1 Oiled Waste

Clean-up activities may produce quantities of oil and oily debris at a faster rate than can be properly disposed of and temporary storage will frequently be necessary. ABP Barrow may be able to make area's available for temporary storage purposes; such areas may be required to be temporarily bunded or provided with portable tanks and will require the agreement of The Environment Agency on an incident by incident basis. Natural England should also be consulted to ensure that local nature conservation sites are not affected.

Areas which could possibly be made available, on an incident by incident basis, are:

- No.8 Berth Open Storage Areas
- Nos.3 Berth Open Storage Areas

The following table summarises the temporary storage methods that can be used:

Type of Oil Waste	Storage Facility	Comments
Liquid	Barges	Suitable for initial storage
	Road Tankers	Ideal for routing to final disposal site
	Pits	Must be lined with sand to protect essential heavy duty plastic liner
	Tanks	Portable such as 'fastank' or similar
	Bunds	Cheaper than pits. Liners required
Liquid-solid mixture	Pits	As above
	Bunds	As above
	Skips	Versatile, robust and cheap
	Oil Drums	Difficult to handle when full
	Plastic Containers	Quick deployment. Useful for inaccessible areas
	Heavy Duty Plastic Bags	Ideal for manual clean-up. Cheap and easy to deploy. Can create disposal problems.
Solids	Hard standing	Preferably sloping site with drainage
	Lorries	Restricted to solid debris. Access problems.

8.3 Waste Oil Recovery and Disposal

8.3.1 Minimising Waste

The arrangements for disposal of pollution wastes, whether removed from Dock or Harbour waters or from the shoreline, will be agreed between the Statutory Harbour Authority, Barrow Borough Council, Cumbria County Council and The Environment Agency. Minimisation techniques should be employed to reduce the amount of waste for final disposal and also limit environmental and economic impact. Efficient methods should be employed for oil spill clean up to ensure that the minimum material is used and/or contaminated during the process. A number of methods that can be used:

- recovery equipment should be cleaned and reused rather than discarded.
- reusable personal protective equipment (PPE) should be utilised where appropriate, for example, products such as rubber boots that can be cleaned and reused.
- sorbents should be used sparingly and effectively.
- production of a marketable product from waste e.g. taking waste oil to a power generating station for use as a fuel.

Adding to the waste stream is the least desirable option. If none of the above methods can be carried out, for whatever reason, the waste must be disposed of effectively following guidance from The Environment Agency.

8.3.2 Licensed Waste Disposal Contractors

The Waste Contractors listed below are approved to operate in the Port of Barrow by virtue of their Waste Management Licence/Environmental Permit issued in accordance with Section 35 of the Environmental Protection Act 1990 (as amended) or Disposal Licence issued under Section 5 of the Control of Pollution (Amendment) Act 1989. By law, a Waste Transfer Note or Consignment Note must be generated by the Waste Contractor when waste is collected from the port and a copy left with the organisation employing the contractor (i.e. Harbour Master, Tier 2 Contractor, Local Authority etc). The details in the Note will constitute part of the record of the quantity of waste transferred from the port during the incident.

- **FCC Environment**
- **Castle Environmental**
- **Cumbria Waste Management**
- **Veolia Environment Services**
- **Adler and Allan**

(Full contact details are listed on the following page, paragraph 8.3.3)

Note: apart from small amounts of oily waste, contact with the above Contractors for the disposal of oiled waste materials should be made through, or with the knowledge of, Cumbria County Council's Waste Regulation Officer and the Environment Agency.

8.4 Recovery and Disposal Methods

8.4.1 Minimisation and Pre-treatment

As previously stated, waste minimisation is a key principle within the Port's waste management strategy.

8.4.2 Recovery to Oil Processing Installations

Recycling is the preferred option. In general only pure oil and possibly oil/water mixtures will be acceptable. A number of Local Licensed Waste Disposal Contractors (listed at Section 8.3.2) can accept recovered oil for recycling.

8.4.3 Stabilisation

This is an expensive method but is likely to be used increasingly as landfill becomes more restricted.

8.4.4 Land Farming

This can make only a very limited contribution to oil disposal and is becoming less acceptable. However, it may be suitable for small quantities of oily waste, such as contaminated soil or sand.

8.4.5 Combustion

Uncontrolled combustion is unsatisfactory because of the air pollution it causes. Commercial waste incinerators can dispose of only limited quantities of oily waste.

8.4.6 Disposal to Landfill

This is no longer the principle disposal method and can only be used in limited circumstances. The Landfill Regulations require waste to be pre-treated prior to disposal at landfill. Waste is considered to have been pre-treated if it has undergone a physical, thermal or biological process, including sorting, that:

- changes the characteristics of the waste; and
- does so in order to reduce its mass, or reduce its hazardous nature or facilitate its handling or enhance its recovery.

In practice, this requirement will be implemented by ABP Barrow Tier 2 Contractor and appointed waste contractors. Some of the pre-treatment may be undertaken at an offsite facility.

Wastes banned from landfill include:

- any liquid waste
- any waste that does not meet the waste acceptance criteria for that class of landfill.

8.5 Waste Management Checklist

- Make initial contact with Local Licensed Waste Disposal Contractors to make arrangements for the ultimate disposal of waste materials.
- Obtain data on likely quantities of liquid oily wastes that are being collected by any recovery operations.
- Estimate quantities of non-liquid oiled wastes created primarily on shorelines. Initiate appropriate Duty of Care and Hazardous Waste documentation to cover all waste transportation used and ensure drivers are clearly briefed on their destination.
- Ensure that transport of oily waste is of a frequency sufficient to prevent the temporary storage from being overwhelmed.
- Confirm with all waste disposal facilities used that they have received all documentation required.
- Plans for handling and temporary storage of wastes arising during the oil spill response must be discussed with The Environment Agency at the earliest opportunity.
- The disposal site for the waste must have a licence to receive that type of waste.
- The Harbour Authority and Tier 2 Contractor must ensure that all relevant regulations have been complied with.

10. Training and Exercise Policy

10.1 Training

The importance of training for harbour personnel who may become involved in the response to oil spill incidents is recognised and acknowledged. Members of the ABP Barrow Team will undergo periodic training in line with the following Training Policy matrix.

The training courses are accredited by the Nautical Institute for the Maritime and Coastguard Agency; the syllabus of the courses matches the requirements of UK oil spill training standards. Harbour Master and Deputies are trained to MCA Level 4/5p.

10.2 Exercises

Exercises will take place within the Port according to the following Exercise Policy Matrix. ABP Barrow will seek to involve participation by BAE SYSTEMS and other port customers, in these exercises.

Other organisations from outside the port will be invited to participate in these exercises as appropriate. Lessons learnt will be shared.

10.1 Training Policy

Course	Duration	Harbour Master & Deputy Harbour Master	Assistant Harbour Masters	Marine Operators	Engineering Supervisor & Engineering staff	Frequency
Oil Spill Response (Ports) Induction 1P	1-2 days					Once every 3 years.
Oil Spill Operator 2P	2 days			•	•	Refresher every 3 years*.
Oil Spill Operations Supervisor (Ports) 4P	4-5 days	•	•			Refresher every 3 years.*
Oil Spill Response Executive Commander 5	1-2 days	(Desirable)				Refresher every 3 years.*

* The refresher course is one day, however if 39month has elapsed then the full course would have to be undertaken.

10.2 Exercise Policy

Exercise Type	Frequency	Content
Notification exercise	Twice per year	Test communication systems, check availability of personnel, evaluate travel options and speed at which travel arrangements can be made.
Mobilisation exercise	Twice per year	Test the capability of a local team to respond to a Tier 1 or 2 spill. May be incorporated with another exercise.
Table-top exercise	Annually (may incorporate mobilisation & deployment of local response equipment)	Interactive discussions of simulated scenario. Demonstrating spill response management capabilities, the integration of roles of the different parties, focusing on overall incident management aspects.
Incident Management	Every 3 years	Prove the capability of Tier 2 contractor, Adler and Allan, to respond to Tier 2 incident and to deploy equipment.

Any real incident that occurs, will if appropriate count towards the annual exercise requirement.

10.3 Post Exercise / Incident Report

Port / Harbour: Enter Name of port.

Report for: Select Tier Select Inc or Ex on: Select date

Scenario:

[Click here to enter scenario – to include position \(Lat/Long\) and weather/tidal information.](#)

Actions taken:

[Click here to enter actions.](#)

On-scene co-ordinator: [Click here to enter name.](#)

Names of participants:

[Click here to enter names.](#)

Equipment used:

[Click here to enter list of equipment.](#)

Other organisations participating:

[Click here to enter list of participants.](#)

Details of amendments to be made to the OPRC plan as a result of this incident / exercise –

[Click here to enter text.](#)

I can confirm that the details on this form are a true account of the exercise/incident.

Any action points arising have been actioned as necessary and associated bodies informed. An update to the pollution plan will issued to holders as soon as possible.

Name: [Click here to enter name.](#)

Title: [Click here to enter title.](#)

Signature:

Date: [Click here to enter a date.](#)

11 Risk Assessment

11.1 Introduction

The Port of Barrow is an enclosed dock system consisting of Devonshire Dock, Buccleuch Dock, Ramsden Dock and Anchor Line Basin separated from the Walney Channel by pitched slope embankments. The enclosed dock system is accessed from the Walney Channel via the half-tide Ramsden Dock Basin (accessible at tide height greater than 5.8 metres above Chart datum) and Ramsden Dock lock. Vessels of up to 230 metres in length, 35 metres beam and up to 10 metres draught can be accommodated in Ramsden Dock Basin. In the main Dock system the size of vessels is restricted to the limitations of the Lock which is 200m in length and 30meters wide. In addition there are a number of floating pontoons used for berthing wind-farm work boats in the Walney Channel. Cavendish Dock is only connected to the main enclosed dock system by a sluice that is normally closed, thus it is effectively isolated. Cavendish Dock is unused other than as a reservoir for the enclosed dock system.

The eight nautical mile narrow approach channels to the docks entrance consist of the Outer Channel, Inner Channel, Piel Channel and Walney Channel. These channels require dredging to maintain navigation depths. On average, approximately 0.5 million m³ dredged annually. The enclosed dock system is normally accessible from 2 hours 30 minutes before high water to 1 hour after high water.

Regular shipping traffic is approximately 120 - 150 ships per annum excluding vessels engaged in dredging campaigns, Offshore Windfarm Support vessels, tugs and auxiliaries. Project traffic can considerably increase traffic above regular levels. Common cargoes include rock scour / aggregate, paper pulp, nuclear fuel, gas condensate, steel fabrications and machinery. Occasional traffic includes cruise ships, naval vessels and submarines (both new builds and visiting), off-shore support vessels and marine gas oil tankers. Demand for the port service at Barrow is variable.

Fuelling operations for the wind-farm vessels are undertaken at a number of fuelling points along the berthing pontoons from designated shore-side fuel tanks. Ship's bunkering is by barge or by road tankers.

Within the port BAE SYSTEMS operates extensive vessel construction and industrial facilities with the capacity to build nuclear powered submarines. The facilities are predominantly defence orientated and include:

- Two slipways, capable of being used to launch vessels into the Walney Channel
- the enclosed shipbuilding facility of Devonshire Dock Hall that has a shiplift for the direct undocking/docking of vessels to Devonshire Dock
- berths within Devonshire Dock and on the south side of Buccleuch Dock, suitable for fitting-out.

In Ramsden Dock, International Nuclear Services (INS) maintains a terminal dedicated to the rail to ship transportation of nuclear fuel cargoes.

Centrica Hydrocarbon Resources Ltd. maintains a condensate storage site in Ramsden Dock through which the liquid hydrocarbon by-product of gas production at the Morecambe Bay gas fields is exported.

Recreational use of the harbour waters occurs: Boat clubs are established at Roa Island and in the upper Walney Channel. Piel Harbour is a visiting yacht anchorage. Roa Island is a popular location for wind surfing and kite surfing.

The Sea Cadets and Duddon Canoe Club both have training centres in the enclosed dock system based near the conjunction of Ramsden and Buccleuch Dock.

The RNLI has a station at Roa Island. The lifeboat is kept in a boathouse and is launched from a slipway.

Recreational beaches are found on the west side of Walney Island, on Piel Island, on Roa Island, on the mainland shore from Roa Island towards Ulverston and at the North end of the Scarth Channel into the Duddon Estuary. Littoral to the Walney Channel north of Jubilee Bridge are the Dock Museum and the Channel Side Haven parks, Barrow's prime tourist attractions.

The Walney Channel and Cavendish Dock form part of the Morecambe Bay SPA, SAC and European Marine Site. They also form part of the South Walney and Piel Channel flats SSSI. The Scarth Channel forms part of the Duddon Estuary SAC and SPA. The coastal habitat outside the enclosed dock system consists largely of intertidal mudflats, with areas of grazed and ungrazed saltmarsh and sea grass (*Zostera*) beds. This habitat is particularly vulnerable to oiling. These areas are difficult to protect from oil pollution due to their exposure and large expanse, the large tidal range and strong tidal flows.

The Walney Channel is fished both commercially and recreationally and has extensive commercially fished mussel beds adjacent to it. Morecambe Bay is a cockle fishery and there is an oyster farm in the lagoons at the south end of Walney Island. A few small fishing boats operate out of the Walney Channel, mainly trawling and gill netting mostly for sea bass. Crustacean potting occurs to seaward of Walney Island.

An overview would be that the port has a low risk of oil pollution and any large scale spill would most likely be confined to light oils such as marine gas oil or gas condensate. However in the event of significant oil pollution, especially outside the enclosed dock system, the sensitivity of the port and the adjacent environment to oil pollution is high.

11.2 Place of Refuge

Barrow, whilst a commercial port does not present itself as a good place of refuge. This is due to the large tidal range and the narrow channel approach to the harbour. Vessels with limitations in their manoeuvrability are not recommended to make for Barrow. However should such an occasion arise, the case will be risk assessed on each individual occurrence by the Harbour Authority.

11.3 Port Operations

11.3.1 Pilotage

Pilotage is compulsory for all vessels over 50 metres in length and for all vessels carrying more than 12 passengers or carrying dangerous goods. Pilotage exemption certificates can be applied for in Barrow with the majority of applications being received from the Masters and First Mates engaged in dredging of the approach channels.

11.3.2 Vessel Traffic Services Management (VTS)

The Port does not operate a radar based Vessel Traffic Services control centre, however the Marine Control is continuously manned, is able to provide a Local Port Service (LPS) and a continuous VHF listening watch is maintained (on marine VHF channel 12). A pilot is available for navigational advice and can be available for pilotage work from 2 ½ hours before to one hour after high water.

11.3.3 Grounding in the Approach Channels

Given the narrow channels and close proximity of shallow waters, the strong tidal streams and large tidal range the risk of grounding in Barrow is acknowledged. The following control measures minimise that risk:

- Compulsory pilotage for vessels in excess of 50 metres in length or carrying more than 12 passengers or dangerous cargoes.
- Extensive provision of aids to navigational.
- Transits of the approach channels are normally made on a rising tide and careful consideration is made before any transit is made on a falling tide.
- Extensive provision of tidal data at Ramsden Dock entrance, Roa Island and Halfway Shoal Beacon.
- Regular and comprehensive hydrographic survey of the approach channels.
- Requirements for minimum of 10% of draft or 0.5m UKC (whichever is greater)

The following environmental factors reduce the risk of grounding or consequent damage:

- Climatically fog is unusual at Barrow. (Channel transits are not attempted in the unusual event of seriously reduced visibility).
- The seabed adjacent to the approach channels is predominantly, mud, silt and boulder clay. The areas of rock outcrop (scars) are small.

The risk of grounding cannot be wholly eliminated. The most probable cause is steering or propulsion system failure where resultant damage to the mid body plating of ships is unlikely but the possibility of damage to any bunker tanks which might be located in the fore part of the vessel could lead to small releases of fuel oil. If it was not possible to refloat the ship on the same tide, further and more widespread structural damage is likely. In the past there have been a small number of minor grounding incidents with rapid refloat and no known structural damage, therefore the consequent risks of grounding is considered to be low - moderate.

11.3.4 Grounding in the Enclosed Dock System

The risk of grounding within the enclosed dock system is recognised to exist because some vessel movements are conducted with minimal under keel clearances. However in-dock manoeuvres are almost invariably conducted at very low speeds and in a non-tidal environment. In the past there have been no grounding incidents within Barrow's enclosed dock system that have resulted in any known structural damage to a vessel. The risk of grounding within the enclosed docks that might cause a pollution incident is assessed as low.

11.3.5 Collision between Vessels Underway

Vessels do not regularly pass in the channel and given the normal traffic levels at Barrow the risk of collision must be considered to be low. However collision impact could result in serious hull damage in way of bunker/cargo tanks with a consequential risk of spillage. In the past there have been no collisions between vessels in the port of Barrow. The risk of a collision that might cause a pollution incident is considered as low.

11.3.6 Berthing Incident

Oil spills can occur as a result of heavy hull contact with dock walls or berthed vessels during ship berthing or unberthing manoeuvres. Such incidents are generally due to failure of a vessel's main propulsion or steering systems, loss of control onboard an attendant tug or master's/pilot's misjudgement. The potential spill quantities involved depend on the vessel type and the location and extent of the impact damage. Over the past one such incident has occurred. This resulted in a minor loss of windlass hydraulic oil (< 5 litres) into the dock waters. This incident was caused by failure of the vessel's main propulsion control system. The risk of berthing incidents is inherent in ship handling but given that most manoeuvring occurs at low speed and the fact that large vessels (with high inertia at low speed) are unusual at Barrow the risk of a berthing incident causing pollution is considered to be low to moderate.

11.3.7 Tug Impact

There are documented incidents where cargo or bunker oil has been released as a result of hull impact damage by tugs. This can occur when tugs are approaching a vessel underway prior to berthing, or when coming alongside a moored vessel prior to unberthing. The potential spill quantities again depend on the location and extent of the impact damage. This has not occurred at Barrow in the past.

Spills from this cause are acknowledged but the risk is considered to be low.

11.4 Centrica Hydrocarbon Resources Ltd.

Centrica Hydrocarbon Resources Ltd. operate three terminals at Barrow. The terminals receive and process gas produced from the Morecambe Bay and Rivers gas fields via three 36" natural gas pipelines buried under the Walney Channel for distribution into the national gas network. Lighted beacons mark the pipelines and a prohibited anchoring area has been established in the Walney Channel in the area where the pipelines cross the channel. These are clearly indicated on navigational charts as a Prohibited Anchoring area. Gas escape from the pipeline does present a major safety hazard (Cumbria County Council has produced the "Off Site Emergency Plan Centrica HRL Terminals/Sea Gas Pipelines - Barrow-in-Furness") but only a minor oil pollution risk. At low rates of throughput liquid slugs of unstabilised gas condensate are present. At higher throughputs the liquid condensate is entrained as a mist. The unstabilised condensate contains very little heavy hydrocarbon compounds therefore in the event of leakage no significant oil residue would be expected. Any leakage would occur simultaneously with a large gas release, which would aid evaporation of the volatile liquid content.

After processing the natural gas at the terminals stabilised gas condensate is pumped via a buried 8" pipeline to the Centrica HRL Condensate Storage tank farm. The pipeline runs along Cavendish Dock embankment and crosses under the dock at the juncture of Buccleuch and Ramsden Docks to the tank farm. The gas pipeline dock crossing is clearly marked by warning signs. The stabilised condensate is exported from the Condensate Jetty by tankers (usual load = c.6000 Tonnes).

The likelihood of third party impact damage to the pipeline must be considered remote but is, nonetheless, acknowledged as a risk. Fracture of the pipeline would result in maximum leakage in the order of 125 m³, of stabilised gas condensate - the volume of the pipeline. The stabilised condensate has a low boiling point and at ambient conditions would quickly vaporise.

Risk of spills during tanker loading is minimised by constant surveillance and use of a bubble boom surrounding the berth and vessel. Likely spill size would be 10 - 20 m³ and again the spill would quickly vaporise. The tankers used are of modern double hull design. The potential spill from a condensate tanker is 2000 m³ per ruptured tank in the event of rupture induced by a collision.

11.5 BAE SYSTEMS Shipbuilding and Industrial Activities

The BAE SYSTEMS shipbuilding and industrial activities are on a major scale, involving multiple risks of pollution on various scales from various sites. The nature of the predominantly defence orientated products make security and access to large parts of the BAE SYSTEMS site an issue. BAE Systems maintain a Health, Safety and Environment team in Barrow that has produced through risk assessment a comprehensive pollution contingency plan for the site's activities which follow MCA guidelines.(BAE SYSTEMS - Barrow-in-Furness Pollution Contingency Plan).

11.6 Offshore Windfarm Operations

The Port of Barrow has in recent years become a hub for offshore windfarm operation and maintenance. All of the operators have pontoon facilities on the Walney Channel adjacent to their bases, each with its own fuelling facilities for their windfarm support vessels.

Risk of spills during bunkering operations is minimised by the use of strict operating/reporting procedure, the use of an approved check list and constant surveillance. The likely risk of a spill is considered as low because of the procedures in place and the amount that might leak is considered as minimal due to the low rate of bunkering and safety systems in place.

11.7 Bunkering Operations

11.7.1 Shore-Ship Bunkering (Refuelling) by Road Tanker and Waste Oil Discharge Operations

Some vessel bunkering is conducted by road tanker delivery (marine gas oil, fuel oil and lubricating oil) from the quayside. Any discharge of waste oil is to road tankers.

ABP regulations require the completion of a Bunkering Notification Form, Bunkering Checklist in order to help mitigate any risk of pollution. Bunkering should take place within the dock system where possible, reducing the risk of pollution in the Channel and providing more control over the spill clean-up operation

Cause	Assessed Risk	Potential Spill Quantity (Tonnes)
Hose failure	Low	<0.5
Tank overflow	Moderate	<0.5

11.8 Shore-Ship Bunkering (Refuelling MGO) at Pontoons

A large amount of bunkering is carried out at a number of pontoons in the port. The pump rate is relatively low and strict procedures are followed.

Cause	Assessed Risk	Potential Spill Quantity (litres)
Hose failure	Low	< 7
Tank overflow	Moderate	<15

11.9 Shore Side Bunkering to Tank

Fuelling of shores side tanks are carried out at different locations in the port.

Cause	Assessed Risk	Potential Spill Quantity (Tonnes)
Hose failure	Low	< 0.5
Tank overflow	Moderate	< 0.5

11.10 Vessel to Vessel Transfers

Ship to ship oil transfer operations are occasionally undertaken at Barrow. In the event of such a request being received the operation would be subject to a unique risk assessment to determine the level of risk and control measures which would be subject to constant monitoring. Spill risks are related to a failure of the transfer hose(s) or a fuel tank overflow on board the receiving vessel. The product involved is usually Marine gas oil but could possibly be lube oil or mixtures of waste oil. Transfer rates could be up to a rate of 250 tph.

Cause	Assessed Risk	Potential Spill Quantity (Tonnes)
Transfer hose failure	Low	<5
Tank overflow	Moderate	<2

11.11 Effluent Discharges to Harbour Water

Treated effluent and surface water from a number of industrial sites (including 73 from BAE SYSTEMS) are discharged into harbour waters. Some (11 from BAE SYSTEMS) have discharge consent levels which are set and monitored by the Environment Agency. The site operators regularly test for effluent quality.

Instrumentation malfunction, failure of in-line samplers or operator error can result in the entrainment of oil in the final discharge to harbour waters. Most spills of this nature are not substantial and, based on port records and industry experience elsewhere, are unlikely to exceed 25m³ in volume. The following discharges within the statutory limits of Barrow Harbour and Docks are consented by the Environment Agency.

Please see attached High Risk Outfall Areas PDF on P125

No.	Location	Type of discharge
1	Kimberly-Clark (East bank of Scarth Channel)	Trade effluent
2	United Utilities - Palace Nook SPS Tank overflow (East bank of Scarth Channel)	Combined sewer overflow from Walney/West Barrow sewage scheme

3	United Utilities - Graving Dock (North East side of Jubilee Bridge)	As above
4	United Utilities - Ferry (North West side of Jubilee Bridge)	As above
5	BAE SYSTEMS: 5x Walney Channel outfalls 5x Devonshire Dock outfalls	Both cooling water and trade effluents
6	United Utilities - Harbour Yard	Combined sewer overflow from Walney/West Barrow sewerage scheme
7	United Utilities - Roosecote Sands (2 outfalls)	Barrow Waste Water Treatment Works, emergency & screened storm + final & storm
8	Centrica - N.& S Onshore Terminals - Roosecote Sands (2 outfalls)	Sea Water outfalls.
9	Centrica Hydrocarbon Resources Ltd. Condensate Tank Farm site	Drainage to Ramsden Dock
10	Centrica Energy - Cavendish Dock Reservoir	Roosecote Power Station cooling water (Discontinued)
11	United Utilities – Outfall at East Pile	Barrow Waste Water Treatment Works, emergency & screened storm + final & storm

11.10 Miscellaneous Spill Sources

Given the light industrial, cargo handling and recreational activities within the port, there are a number of potential sources of miscellaneous oil spills. Examples are refuelling of leisure craft, fishing vessels and harbour auxiliaries, leakage from dockside storage tanks, fractures of hydraulic machinery pipes and discharges of engine compartment bilge water.

Known spill quantities over the past twenty two (1991-2013) from such miscellaneous sources has been < 50 litres in every incidence. The risk of minor spills of this nature is assessed as moderate. The risk of larger spills (> 50 litres) is assessed as low.

Cause	Assessed Risk	Potential Spill Quantity (litres)
Refuelling of smaller craft	Moderate	< 100
Dockside tank overflow	Moderate	< 100
Hydraulics failure	Moderate	< 50
Pumping of oily bilges in smaller craft	Moderate	< 10

12 Sensitivity Maps and Environmental Information

12.1 Use of Section

This section contains Environmental Sensitivity Maps depicting the Sites of Special Scientific Interest (SSSI), Special Protection Areas (SPA) and Special Areas of Conservation (SAC) which lie within and immediately adjacent to, the Statutory Harbour area. These are priority protection areas. It is recognised that not all the sensitive areas will be capable of protection in a large oil spill incident. The coastal information is taken from Cumbria County Council's Coastal Pollution Emergency Plan, the Coastal Sensitivity and Access Data Sheets were originally prepared by Esso and Shell jointly. All information given in this section should be used in conjunction with Response Guidelines included in Section 5.

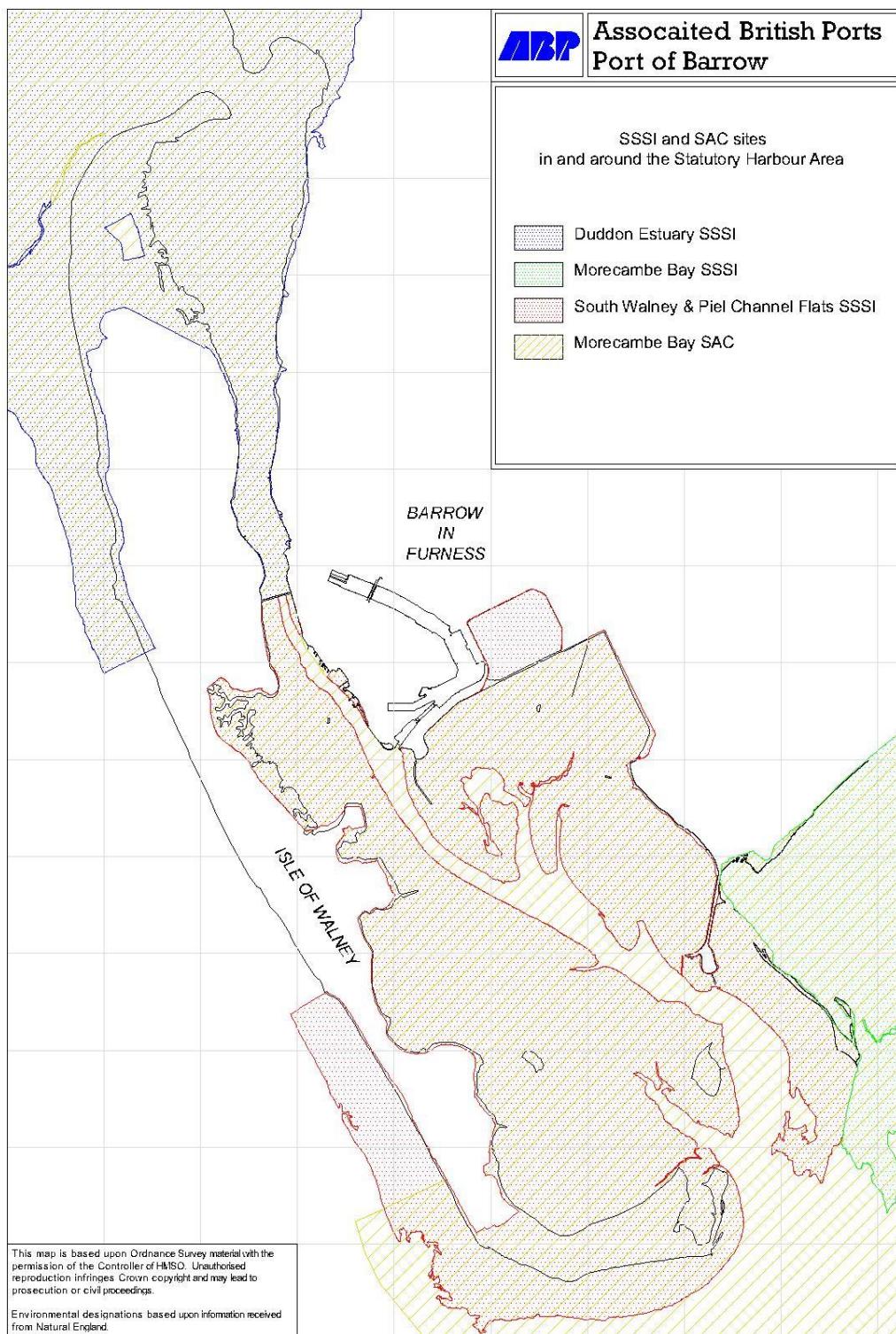
12.2 Priority Sensitive Areas

12.2.1 Definition

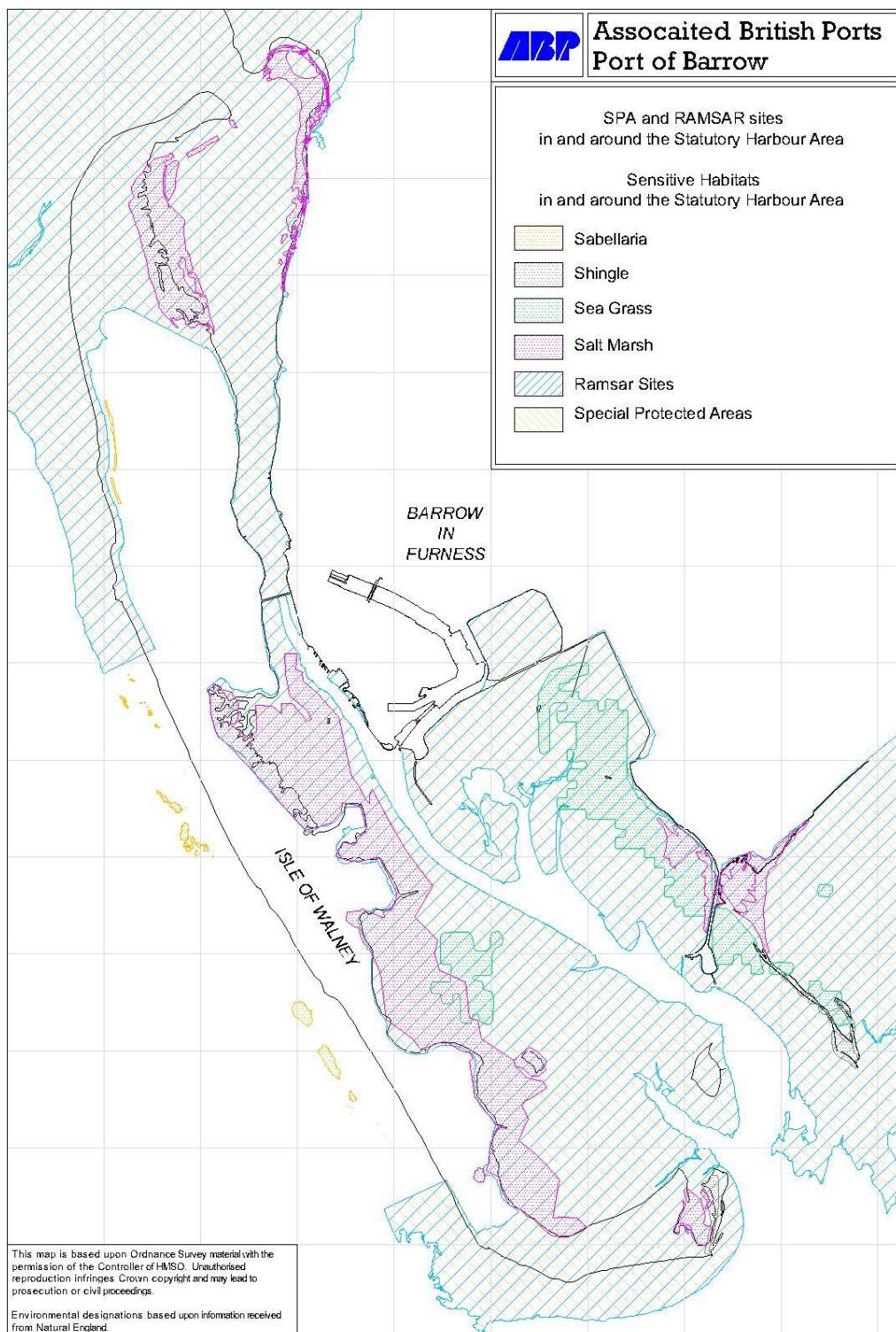
The priority sensitive areas for the Port of Barrow are Cavendish Dock, the Walney Channel and the Scarth Channel by virtue of their designation as SSSI's, SPA's and SAC's. Cavendish Dock was never completed and is unused except as a reservoir for the enclosed dock system and as a source of cooling water for Centrica's Roosecote gas fired power station. The Scarth Channel is no longer used by commercial shipping and has long reverted to a natural state. The Walney Channel is dredged to maintain a navigable channel that all shipping to the port of Barrow transits. Outside the navigable channel the coastal habitat is predominantly consists of ungrazed salt marsh, eelgrass (*Zostera*) beds, intertidal mud flats, intertidal and subtidal boulder/cobble skear supporting mussel communities. There are large brittlestar bed communities along the navigable channel. Off Roa Island are important skears with sponges and sea squirts and honeycomb worm reefs.

On the following two pages there follows two maps illustrating the extent of designated sites in and adjacent to the Statutory Harbour area and also showing some sensitive habitats.

The following map shows the extent of the three SSSIs and Morecambe Bay SAC in and adjacent to the Statutory Harbour area:



The following map shows the extent of the SPA and Ramsar sites in and adjacent to the Statutory Harbour area. It also shows some sensitive habitats.



12.3 Priority Protection Areas

Natural England has not presently established detailed priorities for protection within the areas of designated sites in and adjacent to the Statutory Harbour area but will work with ABP Barrow to take this forward.

The MCA [STOP 4/09](#) gives guidelines for the preparation of coastal and estuarine booming plans. No booming plans for the waters beyond the enclosed dock system have been developed by Natural England, the Environment Agency, Cumbria County Council, Barrow-in-Furness Borough Council and ABP Barrow. ABP Barrow would be willing to explore the preparation of priority protection areas and booming plans with these other bodies. However, given the following environmental factors:

- The large tidal range and strong tidal flows, which would subject any spilled oil to extensive and rapid transportation,
- Exposure of the Scarth and Walney Channels to the wind,
- The vast expanses of the coastal habitat

ABP Barrow considers that booming is likely to be of limited viability, protecting the most sensitive areas only.

It is the strategy of ABP Barrow to confine, in so far as it is possible, any oil spill that might occur within the enclosed dock system for subsequent collection and recovery. With 3 dock gates there are effective barriers to an oil spill within the enclosed dock system migrating, even in part, into the Walney Channel. Cavendish Dock can also be effectively sealed from both the enclosed dock system and the sea by sluice closure. Any oil spilled directly into the Walney Channel cannot be so contained. The only oils regularly shipped in bulk through the port are the light oils of gas oil and gas condensate. Most ships using the port use marine gas oil as bunkers. The risk of a medium or heavy oil spill contaminating these priority areas is considered to be remote.

12.4 Shoreline: Habitats their Vulnerability, General Physical Characteristics, Biological Characteristics, Protection and Clean-up Methods

The length of recovery time from pollution effects and susceptibility to adverse impact from clean-up operations are bound up with two key variables: the energy level of the shoreline (essentially degree of exposure to wave energy) and the substratum type.

On exposed rocky shores effects on shore life tend to minimal and recovery rates rapid because oil does not stick easily to such shores and if it does it tends to be quickly cleaned off by vigorous wave action. With increasing shelter the likelihood of persistence increases as does the biomass to trap the oil. The most sheltered shores tend to be the sedimentary mud flats and salt marshes. Such areas have a high biological productivity, but are also the worst oil traps and are amongst the most susceptible to damage by beach clean-up methods. In estuarine areas, oil pollution damage will thus be most pronounced in the sheltered estuarine bays, inlets and creeks.

Combining energy levels, substratum types and sensitivity it is possible to derive generic shoreline protection and clean-up methods ordered according to sensitivity and requirement for protection as a priority over clean-up.

Hard Cliffs

Hard cliffs are characterised by high biodiversity they are generally high energy sites as they are exposed to wind and wave action. These sites are also generally difficult to access and not a priority for protection.

Cleanup actions:

- Collect excess from sea where possible to minimise impacted areas
- Leave to natural processes

Bedrock platforms / boulder & cobble / shingle

Bedrock platforms / boulder & cobble / shingle sites are also generally higher energy sites in which case the above actions may be appropriate. However, not all rocky shore lines are high energy and oil may accumulate in crevices and penetrate cobble / shingle sediments. Therefore, where possible recommended cleanup actions are:

- Remove excess or loose material to minimise impacted areas
- Do not attempt to remove fixed oiled algal mats unless they are heavily oiled and are acting as an oil reservoir.
- Mechanical collection using skimmers, vacuums
- Manual collection using buckets / rock wiping
- Use of Sorbent materials
- High volume / Low pressure flushing which must be done with collection mechanisms already in place

Sand Flats and Beaches

Sand Flats and Beaches are generally lower energy sites and also ones of lower biodiversity. Mechanical collection from hard packed sand can be very effective although care must be taken to avoid entraining oil into the sand. Care must also be taken to avoid spreading contamination into surrounding habitats especially any associated sand dune systems which may be highly sensitive to oil pollution and far harder to clean.

Mudflats and Saltmarsh

Mudflats and Saltmarsh are amongst the most sensitive habitats to oil pollution and are a priority for protection. Clean up of these sites is difficult and care should be taken to ensure that any cleanup operation avoids doing further damage.

Cleanup actions are:

- Prevent oil from reaching these sites
- Remove excess or loose material to minimise impacted areas
- Where possible only attempt access from the sea
- Collection at the margins may be possible
- Use changes in tidal levels to wait for oil to be remobilised before collection is attempted
- High volume / Low pressure flushing which must be done with collection mechanisms already in place
- Removal of vegetation should be avoided unless it is heavily oiled and acting as a reservoir

This advice is not intended as an action plan in response to any specific event and that incident specific advice should always be sought from the local Environment Group before any groundwork's commence.

12.5 Port of Barrow - Adjacent Coastline Details

The coastal information (originally prepared by Esso and Shell jointly) following is taken from Cumbria County Council's Coastal Pollution Emergency Plan. Included are:

- 3 Coastal Sensitivity and Access Maps: 19, 20 and 21. (It should be noted that on Map 21 "HG09" is incorrectly labelled "HG10" alongside Haws Bed)
- 6 Coastal Sensitivity Sheets for Sectors HG05 to HG10:
 - HG05 the lower Duddon Estuary (from Roanhead Farm to Lowsy Point)
 - HG06 the Scarth Channel (South of a line drawn between North End Haws and Lowsy Point to Jubilee Bridge)
 - HG07 the North end of Walney Island (from North End Haws to Earnse Point)
 - HG08 the West shore and South end of Walney Island (from Earnse Point to North East Point, South Walney)
 - HG09 the intertidal mud flats and salt marsh of Biggar and Snab Sands and the upper Walney Channel (from North East Point, South Walney to Jubilee Bridge) including Piel Island and Sheep Island. (The SW side of the Walney Channel)
 - HG10 the intertidal mudflats of; Roosecote Sands, Concle Bank and Rampsde Sands (from Jubilee Bridge to Lane House) including Roa Island and Foulney Island (The NE side of the Walney Channel)
- 3 Access Sheets for Access Point AP08, Access Point AP13 and Access Point AP15 (ABP Barrow staff have detailed local knowledge and could advise additional and supplementary access points to the shore on a needs basis)

*Coastal Sensitivity & Access Vol.2**Rev 1.0 February 1996***SUMMARY**
Sectors HG08 to HG10**Coastal Sensitivity**

- | | | |
|------|---|---|
| HG08 | - | Earnse point - NE Point (SD 170 700 - SD 234 627) |
| | - | An upper shore of mixed shingle, cobble and small boulders with discrete sand patches lower on the shore. Open coast. Vul Index 6. LCA. SSSI and Nature Reserve within the Lake district National Park. |
| HG09 | - | NE Point - Jubilee Bridge (SD 234 627 - SD 186 686) |
| | - | Large expanses of saltmarsh leading to sand or mud substrata. Includes Piel Island. Sheltered. Vul Index 10. SSSI and Nature Reserve, within the Lake District National Park. |
| HG10 | - | Jubilee bridge - Lane House (SD 189 687 - SD 249 671) |
| | - | Variable sand and mudflats with extensive areas of mixed shingle and cobble. Sheltered. Vul Index 9. SSSI within the Lake District National Park. |

Access Points

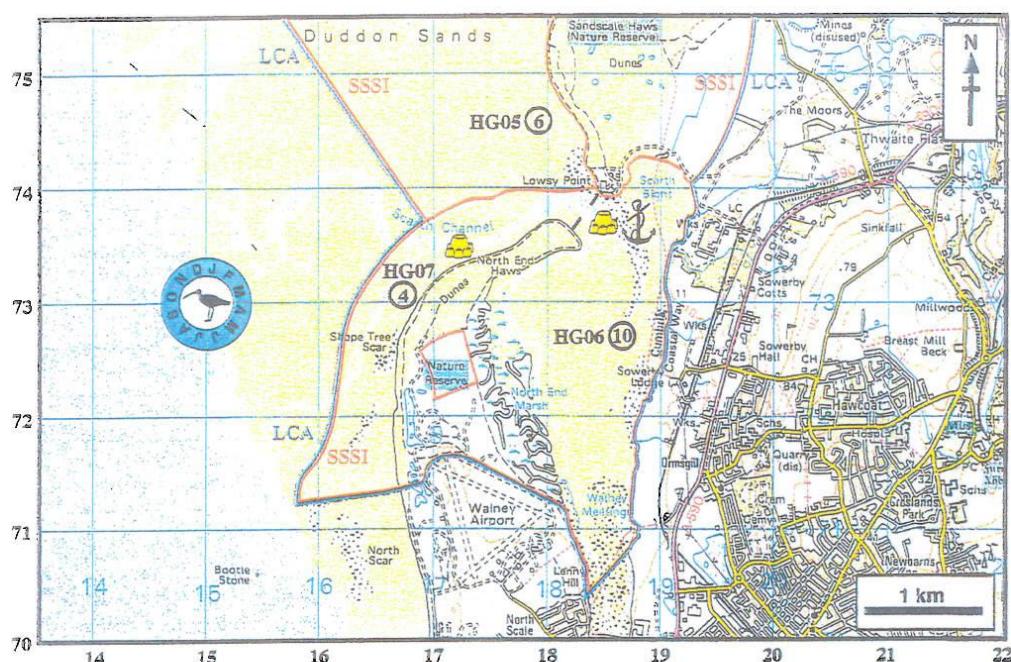
- | | | |
|---------|---|--|
| HG/AP13 | - | Low Bank (SD 200 673) |
| | - | A short (250m) pot-holed track leads to a large car park adjacent to the shore. Public. |
| HG/AP14 | - | NE Point - Jubilee bridge (SD 234 627 - SD 186 686) |
| | - | Most of this shoreline is backed by a minor road with several access points. Public. |
| HG/AP15 | - | Roa Island (SD 233 648) |
| | - | Several points of access to the shore from this small peninsula. Slipways. Public and private. |

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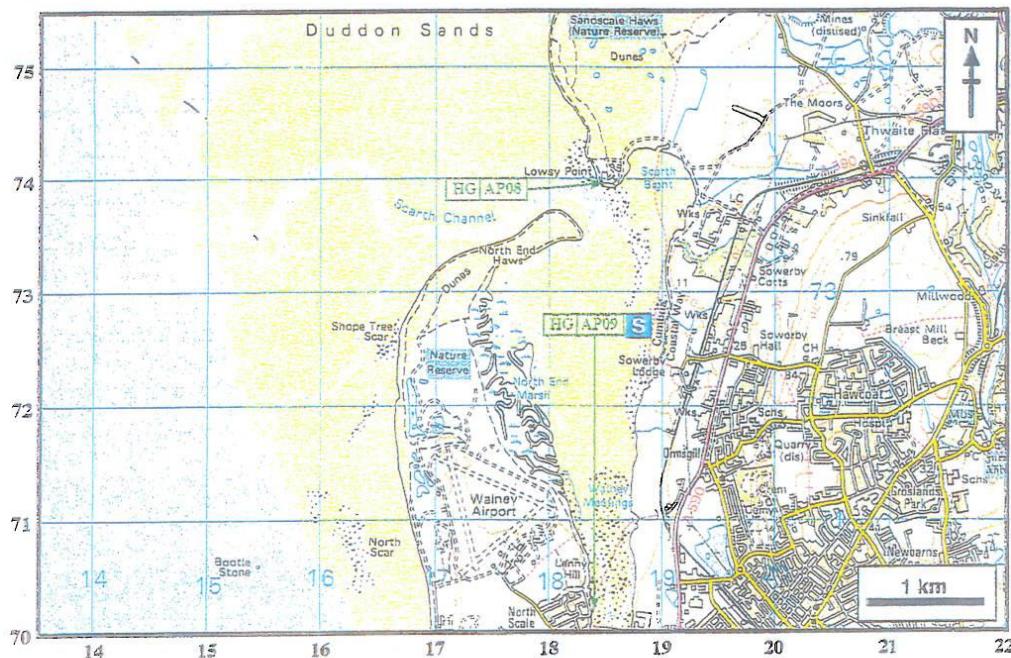
MAP 10: SECTORS HG06 to HG07

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a) Coastal Sensitivity



b) Access



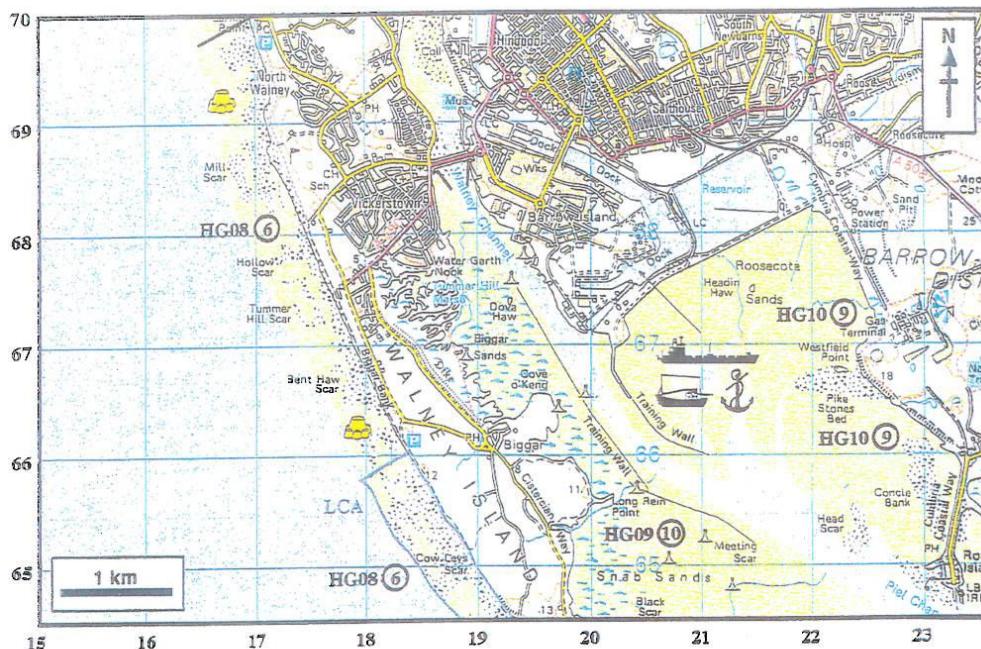
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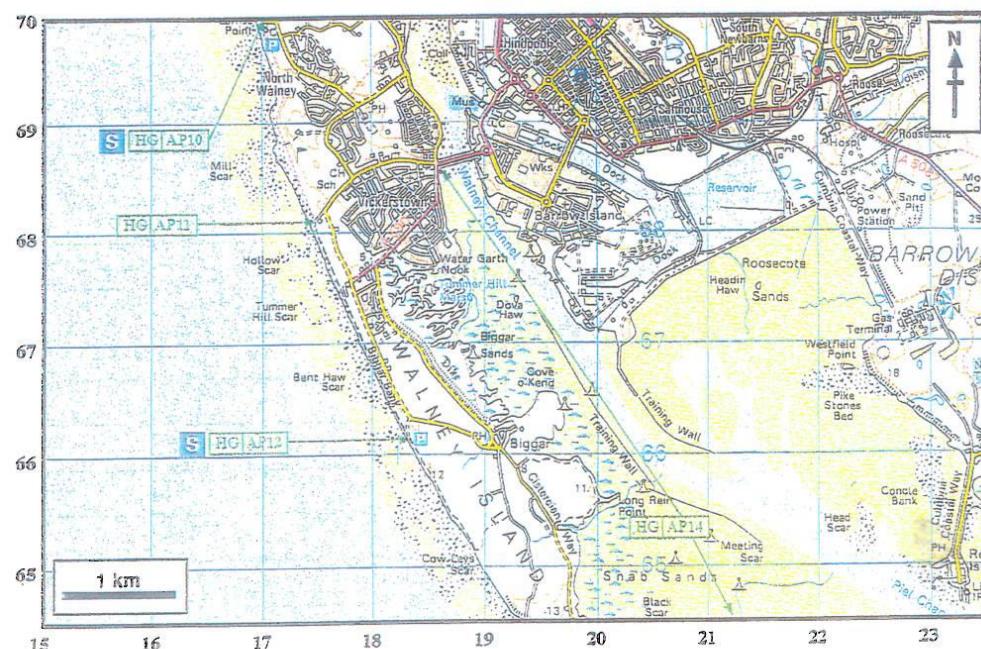
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MAP 20: SECTORS HG08 TO HG10

a) Coastal Sensitivity



b) Access



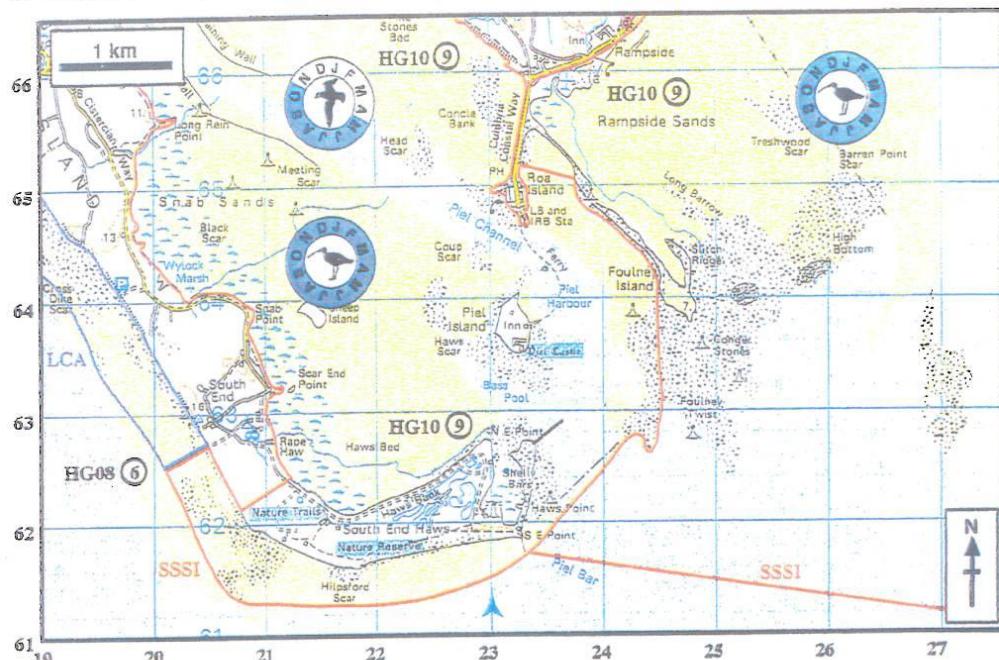
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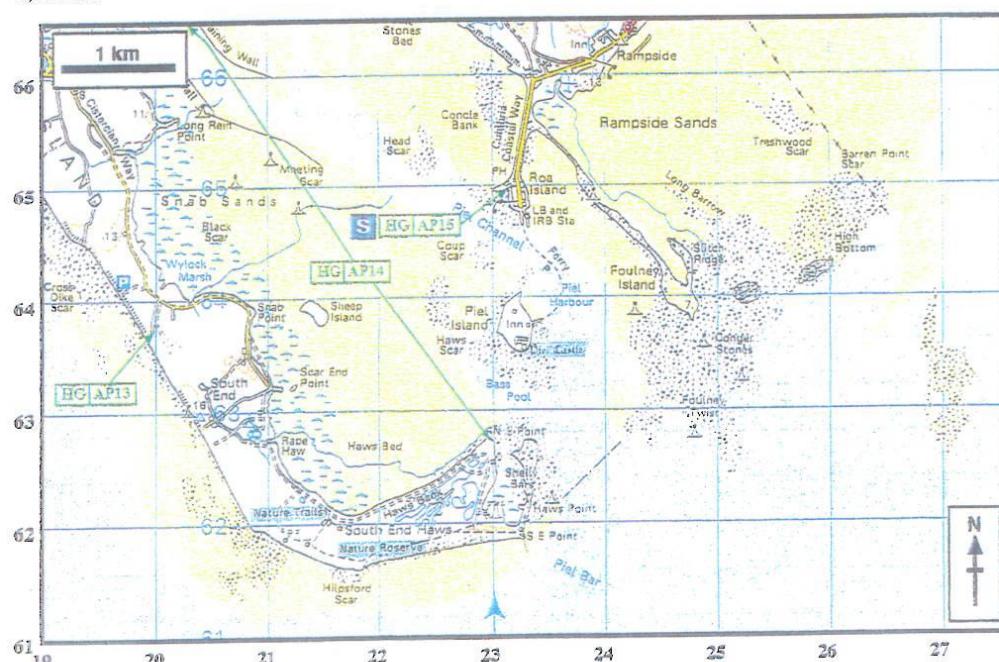
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MAP 21: SECTORS HG08 TO HG10

a) Coastal Sensitivity



b) Access



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COASTAL SENSITIVITY

SECTOR HG05	Roanhead Farm to Lowsy Point
From: SD 202 758	To: SD 185 740
SHORE DESCRIPTION	
Type: Outer estuarine sand flats backed by extensive dune slacks. Patches of mixed substratum also occur.	
Exposure: Moderately sheltered	Slope: Gentle
	LBC: Semi-soft - Soft
ECOLOGICAL FEATURES	
Vulnerability Index: 6 - Mixed sand and gravel beaches	
Characterising Species:	
Flora	No permanent macrofauna observed. Patches of beach grass occur in the upper intertidal area. The dune system has a rich flora dominated by marram grass (<i>Ammophila</i>).
Fauna	Evidence of a rich fauna of <i>Cerastoderma</i> , <i>Macoma</i> and also shells of <i>Mytilus</i> and large quantities of <i>Flustra foliacea</i> (Horn wrack). The dune slacks are important for breeding Natterjack toad. The fauna of the mixed substratum was not seen.
Conservation Status:	
<ul style="list-style-type: none"> - Part of the Duddon Estuary SSSI. This site is designated for its biological and geomorphological interest and has particular importance for overwintering waders and wildfowl. Also a NCR site. - This sector is within the Lake District National Park. - Sandscale Haws is a NCR Site and a Nature Reserve. 	
SOCIO-ECONOMIC FEATURES	
Recreational/Amenity	This area is of high amenity value. There are facilities provided for observing wildlife and walking, for example, nature trails through the dune system and onto the beaches.



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COASTAL SENSITIVITY

SECTOR HG06		Lowsy Point to North End Haws				
		From: SD 185 740	To: SD 183 736			
SHORE DESCRIPTION						
Type: Large areas of mixed gravel, shingle and cobble substratum leading down to sand flats. An extensive area of saltmarsh occurs on Walney. Mud substrata occurs to the south end of the sector.						
Exposure: Sheltered Slope: Gentle to steep LBC: Semi-soft - soft						
ECOLOGICAL FEATURES						
Vulnerability Index: 10 - Salt marshes						
Characterising Species:						
Flora	No superficial macroalgae was observed in this sector. Typical saltmarsh flora was observed, including <i>Spartina</i> .					
Fauna	The upper shingle/cobbles are devoid of fauna. The lower shore is consolidated by barnacles, but also supports high densities of <i>L. littorea</i> and <i>M. edulis</i> . There is also evidence of large numbers of <i>Arenicola</i> and <i>Cerastoderma</i> in the sediment and the occasional <i>Lanice conchilega</i> . Extensive <i>M. edulis</i> beds occur at the south of the sector.					
Conservation Status:						
<ul style="list-style-type: none"> - Part of the Duddon Estuary SSSI. This site is designated for its biological and geomorphological interest and has particular importance for overwintering waders and wildfowl. Also a NCR site. - This sector is within the Lake District National Park. - North Walney is also part of a National Nature Reserve (and GCR) which is managed by CWT. The area provides a roosting area for waders and wildfowl overwintering on the estuary. 						
SOCIO-ECONOMIC FEATURES						
Residential Area	The mainland shores are backed by residential and industrial properties.					
Recreational/Amenity	Lowsy Point is an important recreational area with weekend cottages and boats. Parts of this sector are also important for bait digging.					



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COASTAL SENSITIVITY

SECTOR HG07	North End Haws to Carnse Point			
	From: SD 183 738	To: SD 170 700		
SHORE DESCRIPTION				
Type: Sand flats with occasional patches of mixed shingle and cobble substratum. The beach is backed by a relatively steep berm of mixed substratum consisting of shingle and cobbles leading to a grass backshore.				
Exposure: Open Coast	Slope: Moderate to flat	LBC: Semi-soft to soft		
ECOLOGICAL FEATURES				
Vulnerability Index: 4 - Coarse grained beached				
Characterising Species:				
Flora	<i>Enteromorpha</i> occurs on some of the cobbled areas. Otherwise no permanent macroalgae was observed.			
Fauna	No obvious superficial fauna. Evidence of juvenile <i>Arenicola</i> in the sand. Oystercatchers were observed on the shore.			
Conservation Status:				
<ul style="list-style-type: none"> - Part of the Duddon Estuary SSSI. This site is designated for its biological and geomorphological interest and has particular importance for overwintering waders and wildfowl. Also a NCR site. - This sector is within the Lake District National Park. - North Walney is also part of a National Nature Reserve (and GCR) which is managed by CWT. The area provides a roosting area for waders and wildfowl overwintering on the estuary. 				
SOCIO-ECONOMIC FEATURES				
Residential Area	Much of this sector is backed by residential properties, including holiday accommodation.			
Recreational/Amenity	Most of the beach in this area is of high recreational value.			



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ACCESS**HG/AP08****Lowsy Point****Grid Ref. SD 185 740****SITE DESCRIPTION**

Access off the A590 at Sandscale Business Park is via a pot-holed track. This crosses an unmanned railing crossing, through a gate and then 1 km along a dirt track which skirts round the top of Scarth Bay. Access is ideally by 4WD because of the soft beach sand.

Lavdown Area	Extensive firm area at Lowsy Point.
Parking	Yes, extensive - restricted by nature of access road.
Turning	Yes.
Slipway	No.
Boat Launching	Yes, good access is available down a moderate slope to the shore.

SHORE DESCRIPTION

Distance to nearest road	Approx. 1.5 km to the A590.
Backshore	Grassland backing onto Nature Reserve, with holiday homes.
	Load Bearing Capacity: Firm - semi-soft.
Intertidal	Shingle and cobble bank over sand.

Load Bearing Capacity: Firm - semi-soft.

COMMENTS/RESTRICTIONS**HG/AP09****North Scale****Grid Ref. SD 183 697****SITE DESCRIPTION**

This is located in the North Walney Channel, approx. 1 km north of Walney Bridge, on the island side of the Channel. Access is within the village via a boat slip directly off the main road.

Lavdown Area	Large area on the opposite side of the road to the slip.
Parking	Yes, as above.
Turning	Yes.
Slipway	Yes, a good 4 m wide slip. Tarmac upper leading to shingle and then soft mud.
Boat Launching	Yes, as above.

SHORE DESCRIPTION

Distance to nearest road	< 5 metres.
Backshore	Road into North Scale, backed by an open area for car parking area of packed earth and a Training Centre.
	Load Bearing Capacity: Firm.
Intertidal	Shingle upper shore, soft mud below.

Load Bearing Capacity: Soft.

COMMENTS/RESTRICTIONS

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COASTAL SENSITIVITY

SECTOR HG08	Earsise Point to N E Point	
	From: SD 170 700	To: SD 234 627
SHORE DESCRIPTION		
Type: A sector of varying shore substrata, but dominated by mixed shingle, cobble and small boulders. The sand flats on the lower shore form discrete areas between the harder materials. The bank at the top of the shore is of variable composition, mostly this is a steep shingle/cobble berm headed by a grassy slope.		
Exposure: Open Coast	Slope: Steep to flat	LBC: Semi-soft - soft
ECOLOGICAL FEATURES		
Vulnerability Index 6 - Mixed sand and gravel beaches		
Characterising Species: Flora No macroalgae seen (due to the state of the tides, at time of survey). Patches of <i>Enteromorpha</i> occurred on larger cobbles and rocks. Fauna No fauna seen (due to the state of the tides, at time of survey).		
Conservation Status: - South Walney and Piel Channel Flats SSSI. Parts of this are managed by the CWT. This area also forms part of the Morecambe Bay proposed SPA and RAMSAR site and SAC. The variety of habitats in the area provide feeding and roosting areas for wildfowl as well as nesting sites for sea birds and ducks. - A CWT Reserve is located at South End Haws. - This sector is within the Lake District National Park.		
SOCIO-ECONOMIC FEATURES		
Residential Area	Much of this sector is backed by residential properties, including holiday accommodation.	
Industrial Area	Some semi-industrial areas, such as a landfill site towards the south end of the sector.	
Recreational/Armenity	This area is popular with walkers and bird watchers.	



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COASTAL SENSITIVITY

SECTOR HG09	North East Point to Jubilee Bridge			
	From: SD 234 627	To: SD 186 686		
SHORE DESCRIPTION				
Type: This very sheltered stretch of coastline is dominated by expanses of salt marsh leading down to sand or mud substrata. The sector includes Piel Island (not surveyed) which is surrounded by an expanse of mixed shingle and cobble.				
Exposure: Sheltered	Slope: Flat - gentle	LBC: Semi-soft to soft		
ECOLOGICAL FEATURES				
Vulnerability Index 10 - Salt marshes				
Characterising Species:				
Flora	No superficial intertidal algae seen. The extensive areas of saltmarsh are dominated in most areas by <i>Spartina</i> with <i>Phragmites</i> beds at the top.			
Fauna	Benthic fauna not seen, due to the state of the tide. Numerous ducks and waders observed including shelduck, mallard, long-tailed duck, wigeon, oystercatcher, redshank and curlew.			
Conservation Status:				
<ul style="list-style-type: none"> - South Walney and Piel Channel Flats SSSI. Parts of this are managed by the CWT. This area also forms part of the Morecambe Bay proposed SPA and RAMSAR site and SAC. The variety of habitats in the area provide feeding and roosting areas for wildfowl as well as nesting sites for sea birds and ducks. - This sector is within the Lake District National Park. 				
SOCIO-ECONOMIC FEATURES				
Residential Area	A substantial part of the shore in the northern part of the sector is backed by residential property, the remainder is farmland.			
Recreational/Amenity	Important area for bird watching and walking.			



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*Coastal Sensitivity & Access Vol 2**Rev 1.0 February 1996***COASTAL SENSITIVITY**

SECTOR HG10	Jubilee Bridge to Lane House
	From: SD 189 687 To: SD 249 671
SHORE DESCRIPTION	
Type: A variable shore of mud flats, sand flats and extensive areas of mixed shingle and cobbles.	
Exposure: Sheltered	Slope: Gentle
	LBC: Semi-soft - soft
ECOLOGICAL FEATURES	
Vulnerability Index 9 - Sheltered tidal flats	
Characterising Species:	
Flora	None seen, spring high tides.
Fauna	None seen, spring high tides.
Conservation Status:	
<ul style="list-style-type: none"> - South Walney and Piel Channel Flats SSSI. Parts of this are managed by the CWT. This area also forms part of the Morecambe Bay proposed SPA and RAMSAR site and SAC. The variety of habitats in the area provide feeding and roosting areas for wildfowl as well as nesting sites for sea birds and ducks. - Morecambe Bay SSSI is a proposed SPA and RAMSAR site and SAC. Along with the Lune estuary this area supports the largest wintering and passage population of wading birds in Britain. Considerable numbers of wildfowl area also present. - Fouiney Island is a CWT Reserve. - This sector is within the Lake District National Park. 	
SOCIO-ECONOMIC FEATURES	
Residential Area	Much of this sector, particularly to the north, is backed by residential or industrial developments.
Industrial Area	Barrow-in-Furness Docks is situated to the north of this sector.
Recreational/Amenity	Parts of this sector, are of high recreational value, for example, Roa Island Yacht Club.



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ACCESS

HG/AP10**Earnse Point, North Walney****Grid Ref. SD 170 700****SITE DESCRIPTION**

West facing sandy beach in North Walney backed by a tarmacked road, holiday homes and a car park. Road access to the shore continues north for approx. 1.25 km as far as the airfield. Dirt track is packed firm enough for large vehicles as far as SD 168 713.

Lavdown Area	Yes, use car park or wide grass area at the top of the shore.
Parking	Car park approx. 20 m to the south.
Turning	Yes.
Slipway	Yes, approx. 3 m wide.
Boat Launching	Yes, as above.

SHORE DESCRIPTION

Distance to nearest road	Direct access.
Backshore	Grass area backed by small tarmac road and holiday homes.
	Load Bearing Capacity: Firm.
Intertidal	Fine sand beach, approx 200 m wide, with mixed upper fringe.
	Load Bearing Capacity: Soft (sand).

COMMENTS/RESTRICTIONS

Access to the grass lay down area is blocked by logs and boulders.

HG/AP11**Hollow Scar****Grid Ref. SD 175 681****SITE DESCRIPTION**

The access point is located on the west coast of Walney Island opposite Jubilee Bridge to Barrow-in-Furness. There is a hard standing of firm packed shingle on the top of the shore. There is no slip to the beach but a narrow concrete path runs down the shore.

Lavdown Area	Small carpark with a flat grassy area adjacent.
Parking	Yes, as above.
Turning	Yes.
Slipway	No.
Boat Launching	Yes, possibly at high tide.

SHORE DESCRIPTION

Distance to nearest road	< 5 metres.
Backshore	Road from Vickers town with small carpark and a grassy area.
	Load Bearing Capacity: Firm.
Intertidal	Fairly steep berm of shingle leads to a shore of mixed substratum.
	Load Bearing Capacity: Firm but unstable.

COMMENTS/RESTRICTIONS**HG/AP12****Bent Haw Scar****Grid Ref. SD 183 663****SITE DESCRIPTION**

Car park with shingle ramp onto the beach, off of Biggar Bank Road. Large car parking area with concrete hard standing.

Lavdown Area	Large car park area.
Parking	Yes, for approx. 50 cars.
Turning	Yes.
Slipway	Yes, shingle ramp to cobble/shingle beach.
Boat Launching	Yes, but difficult because of exposed wind-blown shore.

SHORE DESCRIPTION

Distance to nearest road	Approx. 50 m from Biggar Bank Head.
Backshore	Grazing/car parking on hard standing.
	Load Bearing Capacity: Firm.
Intertidal	Upper shore of shingle/cobble with large lumps of concrete. Sand below.
	Load Bearing Capacity: Unstable.

COMMENTS/RESTRICTIONS

*Coastal Sensitivity & Access Vol 2**Rev 1.0 February 1996***ACCESS****HG/AP13****Low Bank****Grid Ref.** SD 200 637**SITE DESCRIPTION**

Short (approx. 250 m) pot-holed track leading from the Biggar to South End road. This opens to a large car park over-looking a west facing beach. Access to the beach is difficult due to a steep 5 m slope with a boulder line along the bottom.

Lavdown Area	Large, open area at the end of the access road.
Parking	Yes, as above.
Turning	Yes.
Slipway	No.
Boat Launching	No.

SHORE DESCRIPTION

Distance to nearest road	Approx. 250 metres to main road.
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Backshore	Grass fields and car park.
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Intertidal	Load Bearing Capacity: Firm car park.
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Intertidal	Shingle/cobble exposed beach.
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Load Bearing Capacity:	Semi-soft.
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COMMENTS/RESTRICTIONS**HG/AP14****N E Point to Jubilee Bridge****Grid Ref.** SD 234 627 - SD 196 654**SITE DESCRIPTION**

The whole of the upper shore from NE Point towards Jubilee Bridge in Vickerstown is backed by a minor road/track. This provides easy access to the shore between SD 234 627 and SD 196 654. The road leaves the shore at Biggar village and runs behind a dyke which also has access to the shore.

Lavdown Area	Several areas along or adjacent to this site, for example IM/AP12 and IM/AP13.
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Parking	Yes, as above.
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Turning	Yes, use parking areas.
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Slipway	No.
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Boat Launching	No.
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SHORE DESCRIPTION

Distance to nearest road	Various, mainly < 5 metres.
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Backshore	Minor road/track.
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Intertidal	Load Bearing Capacity: Firm.
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Intertidal	Salt marsh, several hundred metres wide in places.
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Load Bearing Capacity:	Soft.
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COMMENTS/RESTRICTIONS

*Coastal Sensitivity & Access Vol 2**Rev 1.0 February 1996***ACCESS****HG/AP15****Roa Island****Grid Ref. SD 233 648****SITE DESCRIPTION**

This island has various access points to the shore. There are two privately owned slips, both owned by the Roa Island Yacht Club. One is located just northeast of the Lifeboat Station. This is only 2 metres wide. The other is much wider at 4 - 5 metres and has winching facilities at the top. There is also a slip (of packed shingle) on the west side of the island, this is approx. 3 - 4 m wide and runs through an archway of a castellated building.

<u>Laydown Area</u>	Limited to road side. Potentially there is space in an adjacent yard.
<u>Parking</u>	Yes, though limited to 10 - 15 cars.
<u>Turning</u>	Yes.
<u>Slipway</u>	Yes, as above.
<u>Boat Launching</u>	Yes, as above.

SHORE DESCRIPTION

Distance to nearest road	< 5 metres.
<u>Backshore</u>	Residential and man-made sea defences.
	<u>Load Bearing Capacity:</u> Firm.
<u>Intertidal</u>	Intertidal sands and mixed substrata.

Load Bearing Capacity: Firm - Semi-soft.

COMMENTS/RESTRICTIONS

During the summer this area will be very busy with recreational sailors. Conversely in the winter, the laydown area is greatly reduced by the number of boats brought ashore for over wintering.

12.6 Natural England Citations

ABP Port of Barrow, Marine Control keeps copy of the following other Natural England information;

- Morecambe Bay - European marine site - Regulation 35 advice document
- Morecambe Bay European Marine Site Scheme of Management
- Good Practice Guidelines for Ports and Harbours operating within or near UK European Marine Sites
- South Walney and Piel Channel Flats - Citation for the SSSI
- Duddon Estuary - Citation for the SSSI
- Morecambe Bay - Citation for the SSSI
- Duddon Estuary - Site Map and Citation for the RAMSAR site and SPA
- Morecambe Bay - Site Map and Citation for SAC
- Morecambe Bay - Site Map and Citation for the RAMSAR site and SPA

A summary of the interest features prepared by Natural England (in 2006) follows:

Morecambe Bay SAC

Annex I habitats that are a primary reason for selection of this site

Estuaries

Mudflats and sandflats not covered by seawater at low tide

Large shallow inlets and bays

Perennial vegetation of stony banks

Salicornia and other annuals colonising mud and sand

Atlantic salt meadows (*Glauco-Puccinellietalia maritima*)

Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes')

Fixed dunes with herbaceous vegetation ('grey dunes') * Priority feature

Humid dune slacks

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

Sandbanks which are slightly covered by sea water all the time

Coastal lagoons * Priority feature

Reefs

Embryonic shifting dunes

Atlantic decalcified fixed dunes (*Calluno-Ulicetea*) * Priority feature

Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)

Annex II species that are a primary reason for selection of this site

Great crested newt *Triturus cristatus*

Morecambe Bay Ramsar

Overview:

Morecambe Bay lies between the coasts of South Cumbria and Lancashire, and represents the largest continuous intertidal area in Britain. Morecambe Bay comprises the estuaries of five rivers and the accretion of mudflats behind Walney Island. The area is of intertidal mud and sandflats, with associated saltmarshes, shingle beaches and other coastal habitats. It is a component in the chain of west coast estuaries of outstanding importance for passage and overwintering waterfowl (supporting the third-largest number of wintering waterfowl in Britain), and breeding waterfowl, gulls and terns.

Ramsar criterion 4

The site is a staging area for migratory waterfowl including internationally important numbers of passage ringed plover *Charadrius hiaticula*.

Ramsar criterion 5**Assemblages of international importance:****Species with peak counts in winter:**

223709 waterfowl (5 year peak mean 1998/99-2002/2003)

Ramsar criterion 6**– species/populations occurring at levels of international importance.****Qualifying Species/populations (as identified at designation):****Species regularly supported during the breeding season:**

Lesser black-backed gull , *Larus fuscus graellsii*,

Herring gull , *Larus argentatus argentatus*,

Sandwich tern , *Sterna (Thalasseus) sandvicensis sandvicensis*

Species with peak counts in spring/autumn:

Great cormorant , *Phalacrocorax carbo carbo*,

Common shelduck , *Tadorna tadorna*,

Northern pintail , *Anas acuta*,

Common eider , *Somateria mollissima mollissima*,

Eurasian oystercatcher , *Haematopus ostralegus ostralegus*,

Ringed plover , *Charadrius hiaticula*,

Grey plover , *Pluvialis squatarola*,

Sanderling , *Calidris alba*,

Eurasian curlew , *Numenius arquata arquata*, (breeding)

Common redshank , *Tringa totanus totanus*,

Ruddy turnstone , *Arenaria interpres interpres*,

Lesser black-backed gull , *Larus fuscus graellsii*,

Species with peak counts in winter:

Great crested grebe ,

Pink-footed goose , *Anser brachyrhynchus*,

Eurasian wigeon , *Anas penelope*,

Common goldeneye , *Bucephala clangula clangula*,

Red-breasted merganser , *Mergus serrator*,

European golden plover , *Pluvialis apricaria apricaria*, P. a. altifrons

Northern lapwing , *Vanellus vanellus*,

Red knot , *Calidris canutus islandica*,

Dunlin , *Calidris alpina alpina*,

Bar-tailed godwit , *Limosa lapponica lapponica*,

Wetland types

Marine beds (e.g. sea grass beds)

Sand / shingle shores (including dune systems)

Estuarine waters

Tidal flats

Salt marshes

Reservoirs / barrages / dams

General ecological features:

The main habitat types of the Morecambe Bay Ramsar site are: Intertidal mudflats and sandflats, saltmarsh, shingle, rocky scars, sand dunes. A large shallow estuary, with extensive intertidal mudflats, saltmarshes, subtidal sediments and rocky shorelines. There are small areas of eelgrass *Zostera* beds and vegetated shingle. There is also the presence of the honeycomb worm *Sabellaria alveolata*. The saltmarshes are traditionally heavily grazed and provide important wildfowl habitat.

20. Noteworthy fauna:**Birds****Species currently occurring at levels of national importance:****Species regularly supported during the breeding season:**

Black-headed gull , *Larus ridibundus*,

Species with peak counts in spring/autumn:

Ruff , *Philomachus pugnax*,

Whimbrel , *Numenius phaeopus*,

Spotted redshank , *Tringa erythropus*,

Common greenshank , *Tringa nebularia*,

Black-headed gull , *Larus ridibundus*,

Species with peak counts in winter:

Eurasian teal , *Anas crecca*,

Black-tailed godwit , *Limosa limosa islandica*,

Morecambe Bay SPA**Annex I birds and regularly occurring migratory birds not listed on Annex I**

Pintail *Anas acuta*

Pink footed goose *Anser brachyrhynchus*

Ruddy turnstone *Arenaria interpres*

Dunlin *Calidris alpina alpina*

Knot *Calidris canutus*

Ringed plover *Charadrius hiaticula*

Eurasian oystercatcher *Haematopus ostralegus*

Curlew *Limosa lapponica*

Whimbrel *Numenius arquata*

European golden plover *Pluvialis squatarola*

Sandwich tern *Sterna sandvicensis*

Common shelduck *Tadorna tadorna*

Redshank *Tringa totanus*

Habitat classes

Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)

Salt marshes. Salt pastures. Salt steppes

Coastal sand dunes. Sand beaches

Shingle. Sea cliffs. Islets

Geomorphology & landscape:

Coastal, Enclosed coast (including embayment), Estuary, Floodplain, Intertidal rock, Intertidal sediments (including sandflat/mudflat), Island, Lagoon, Lowland, Open coast (including bay), Pools, Shingle bar, Subtidal rock (including rocky reefs), Subtidal sediments (including sandbank/mudbank)

13 Roles and Responsibilities

13.1 Harbour Authority

The Harbour Authority is responsible for the conservancy of its area together with the safety of navigation, pilotage and movement of all vessels. Its powers are derived from principal and local Harbour Acts and are exercised through Byelaws and Harbour Master's Directions.

It has a responsibility for responding to oil pollution within its area under the Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998, which came into force on 15 May 1998 (SI 1998 No. 1056).

3. - (1) of the Regulations states, "In their application to harbours and oil handling facilities - these Regulations apply to:

- (a) any harbour for which there is a statutory harbour authority having an annual turnover, as defined in the schedule in the regulations, of more than £1 million.

4. - (1) states, " Every -

- (a) harbour authority of a harbour to which these regulations apply : shall have an oil pollution emergency plan in accordance with the regulations. "

There may be joint plans between the harbour authority and the operators of oil handling facilities within an area.

A Harbour Authority must submit an oil pollution emergency plan for its harbour(s), within 15 months of the regulation coming into force, to the Maritime & Coastguard Agency for approval. In preparing an oil pollution emergency plan a harbour authority or shall take into account any guidance issued by the Maritime & Coastguard Agency.

The Statutory Harbour Authority has a responsibility under Section 133 of the Merchant Shipping Act 1995 for bringing prosecutions for the offences of discharge of oil, or a mixture containing oil, into the waters of the harbour.

13.2 Local Authorities

13.2.1 District Councils

The local District Councils, which is Barrow-in-Furness Borough Council in this plan's area, have accepted a non-statutory responsibility for dealing with oil on the shoreline and beaches down to the low water line, within the limit of their resources.

13.2.2 County Council and Local Authorities

Barrow-in-Furness Borough Council as a local authority will be responsible for dealing with oiled shorelines in the Borough area. Cumbria County Council assumes responsibility for co-ordinating the local authority action in the event of widespread pollution affecting more than one District. The County Council is also available to assist with oil on beaches in terms of providing Districts with additional resources for clean-up activities. District Councils remain responsible for physical clearance in their respective areas of jurisdiction.

13.3 Maritime and Coastguard Agency

The Maritime and Coastguard Agency (MCA), an executive agency of the Department for Transport (DfT) discharges the DfT's responsibility for both the co-ordination of civil maritime search and rescue and counter-pollution operations in UK waters.

In the event of an oil spill incident at Barrow which calls for a Tier 3 response the National Contingency Plan (NCP) may be implemented. In this event, and after the formal transfer of responsibility, the MCA will take control of at-sea counter pollution measures exercising this from either the Barrow Incident Command Centre at Barrow Marine Control or as determined by Cumbria County Council's Coastal Pollution Emergency Plan as appropriate. The Port's oil spill response resources and facilities will be made available to the MCA.

13.4 The Marine Management Organisation

The Marine Management Organisation (MMO) plays a major role in the protection of the marine environment, particularly in respect of fisheries and in ensuring the safety of the aquatic food chain, including the safety of consumers of fish and shellfish. The MMO is the statutory authority for approving deposits in the sea.

Under the terms of the Marine and Coastal Access Act 2009 and The Marine Licensing (Exempted Activities) Order 2011, it is a legal requirement that oil treatment products may only be used in English or Welsh waters if they have been formally approved for this purpose by The MMO. In addition, specific permission from The MMO must be obtained before any such products are used in shallow waters – these are defined as any area of the sea which is less than 20 metres deep, or within 1 nautical mile of such an area. This includes any use in tidal docks and locks and on beaches, shorelines or structures such as piers or breakwaters.

No standing approval has been agreed between The MMO and Associated British Ports Barrow to permit the use of dispersants. The MMO will therefore need to be consulted about any intended use of dispersants and agree to their use before any dispersants can be used within the statutory harbour areas.

13.5 Natural England

Natural England is the government's advisor on the natural environment. It provides practical advice, grounded in science, on how best to safeguard England's natural wealth for the benefit of everyone. In an incident, Natural England's role is to provide advice, through the Environment Group, to those organisations that have a responsibility to provide a direct response to a marine incident; MCA, EA, Local Authorities.

Natural England will provide advice on:

- Location and features of designated sites
- Sensitivity of those features to marine pollution
- Priorities for protection from any pollutants
- Suitability of various clean up techniques

13.6 Environment Agency

The Environment Agency (EA) is a non-departmental public body with statutory duties and powers in relation to water resources, pollution control, flood defence, fisheries, recreation, conservation and navigation in England and Wales. Under the Water Resources Act, 1991 the EA is responsible for the control of pollution and water quality in all controlled waters which include groundwaters, fresh waters, estuaries and coastal waters to 3nm offshore.

The EA has powers to both control and remedy pollution. It has powers to prosecute for pollution offences under Section 85 of the Water Resources Act, 1991 and under section 161 may take action to prevent polluting matter entering controlled waters. Under section 161 the EA may also remove and dispose of polluting matter that has entered controlled waters, remedy or mitigate its presence, restore the water to its previous condition and recover costs incurred in clean up.

13.7 BAE SYSTEMS

BAE SYSTEMS will initiate first response actions in the event of oil spills at their installations. The company involved will either complete the clean up or, in the case of larger spills; will deploy their resources as agreed by the ABP Barrow Oil Spill Management Team (OMT).

Where the incident response requires additional resources, the company can access equipment from ABP Barrow and, if necessary, its Tier 2 contractor, Adler and Allan. In the event of actual or potential releases of oil as a result of marine incidents in which the company has an interest, technical and expert assistance will be made available by BAE SYSTEMS so that they can work in close co-operation with the Port, local and national authorities.

Response equipment held locally by BAE SYSTEMS may be made available, on request by the Harbour Master, for spill incidents occurring elsewhere in the Port subject to the BAE SYSTEMS operational needs.

13.8 Oil Spill Management Team

Oil Spill Management Team (OMT) is the nomenclature used to describe the command and control team established for a spill incident within the Port of Barrow, with representatives of organisations attending in accordance with the category of oil spill response established, as described in section 2.2.

The OMT will convene at the Marine Control Building, under the chairmanship of the Harbour Master, and will consist of a Core Management Team and a Support Team providing environmental and local authority advice as noted in section 2.2.

13.9 Incident Command Centre

The Incident Command Centre (ICC) for the Port of Barrow is the Marine Control building at the Pierhead. This is where the Oil Spill Management Team (OMT) will convene.

14 Resource Directory

14.1 ABP Port of Barrow

- Up to 10 Staff trained to approved standards (See Section 10.1) + back-up administrative staff
- A pilot vessel and a small tug (available for oil recovery, boom deployment etc.)
- 4 wheel drive pick-up vehicle
- Open back Ford Transit pick-up
- 1x 40 Tonne SWL mobile crane
- Marine staff on duty 24 hours a day
- Continuously manned Marine Control Building equipped with communications, CCTV, weather monitors and tidal monitors
- 225 metres of 450mm fixed buoyancy boom in various lengths and 2 towing bridles
- Supply of sampling kit including bottles
- Small stock of absorbents

14.2 Adler & Allan (Tier Two Contractor)

These resources will be available from Adler & Allan Limited, on a call out basis. During working hours the reaction time to scene is <4.0hours, out of working hours the reaction time to scene is <6.0hours. All areas needing to be cleaned will be undertaken by Adler and Allan.

No.	Description	
	Vehicle	8.5 tonnes
	Inshore skimmer	Portable weir skimmer and hoses (minimax)
	Pumps	Spat pump 3"
	Oil storage	Fastank – 2000gallons
8	Shore sealing boom	Inflatable Silverbeach 10m 550
8	Inshore fence boom	Rigid fence boom 10m (50P boom)
8	Inflatable sea boom	Silverboom 20m 75i
4	Inflatable sea boom	Silverboom 10m 75i
	Inflatable boom	Air fan – echo PB6000
	Inflatable boom	Air fan – echo PB2400
	Shore sealing boom	Water pump – Honda WP20X
8	Inshore boom	Bruce anchors
	Inshore boom	Tripping buoys
	Inshore boom	Connectors and lines

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	Inshore boom	Anchor chains
	Decontamination equipment	n/a
	Sorbents	Booms and pads, various
	Inflatable vessels	Yamaha 2.65S
	Outboard motors	Mariner 4S
	Generator	Belle Minigen 2000 – Honda EC4000B
	Portable lighting	Twin floodlight 500w 110v
	Medical equipment	First aid kit
	Ancillary equipment	Toolkit
2	Fire fighting equipment	Powder 2kg
	Spare PPE container	Basic consumables
3	Grab bag	Personal safety and communications

14.3 BAE SYSTEMS (Barrow)

Agreement between ABP and BAE SYSTEMS to co-operate in manpower and equipment for all oil spills within port's statutory area of responsibility.

BAE SYSTEMS equipment available 24/7 by first contact with BAE SYSTEMS Security.

Location: FIRE DEPARTMENT

- 1 x Mobile Oil Water Separator Unit (4 Wheel Trailer) with hand start diesel pump (x2), aluminium couplings and hoses, filter set for oil separator tank, 2x "Dragonfly" skimmer heads
- 4 x 30L Absorbent Granules
- Drain Protection Kit
- 200kg of Sodium Carbonate (not oil)

Location: MAIN SITE

- 2 small harbour tugs (available for oil recovery, boom deployment etc.)
- 1 x 50m Fence Boom (located under Michaelson Bridge)
- 16 tidal connectors (3 metre) for boom sited around Devonshire and Buccleuch Docks
- 120L Spill kits at Gatehouses

Location: SMITE

- 5 packs "Super Soppers" absorbent boom (5x 40 foot lengths)
- 300 absorbent pads (18"x18"x3/8")
- 4" chemical drain plug in one of the chemical response kits
- 1 x Oil kit to the rear of SMITE by the Daily Storage Tanks.
- 1 x Oil kit to the front of SMITE by Foyer Door.
- 1 x Oil kit at the Tank Farm.
- 1 x Chemical kit at the RO Plant
- 1 x Chemical kit at the Dump Steam Annexe

Extra and other resources beyond these dedicated oil spill resources may be available from BAE SYSTEMS' large industrial site.

14.4 Bay Towage and Salvage Co. (Barrow)

- Small harbour tug(s) and/or workboat(s) are usually available (oil recovery, boom deployment etc.)

14.5 International Nuclear Services, INS Marine Terminal (Barrow)

- 50x 1 m² absorbent pads
- Absorbent granules (for onshore use)

14.6 Ships in port

Ships may carry equipment to assist in pollution response. The type and quantity of this equipment will vary widely. Shipboard oil pollution plans should indicate an inventory of such equipment.

14.7 Offshore Windfarm Operators

There are a number of Offshore Windfarm Operators with a moderate amount of pollution response equipment which may be available to use.

14.8 Other Local Resources

(See also Cumbria County Council's General Emergency Plan - Section 11, Coastal Pollution Emergency Plan - Section 13). Cumbria County Council (Carlisle), Emergency Planning Unit - Holds a computerised "Emergency Resources Register" containing a large number of industrial and commercial site operators in the County. Access to the register should be obtained via Cumbria County Council Emergency Planning.

See section 20 of Cumbria County Council's Coastal Pollution Emergency Plan for contact telephone and facsimile numbers.

15. Product Information Sheets

Material Safety Data Sheets for Marine Gas oil and Gas condensate are held in the Master Copies held by the DHM Barrow

11.11 High Risk Outfall Areas (P90)

