



Broads Authority

The Broads - a member of the
National Park family

Oil Spill Contingency Plan

Broads Navigation Area

November 2011

Administration Record

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Section 1: Introduction and Policy

1.1 Purpose of the Plan

This Oil Spill Contingency Plan is intended to guide Broads Authority personnel and those of other responsible organisations through the processes required to manage an oil spill into waters within the navigable parts of the Norfolk and Suffolk Broads rivers system (see Section 1.3).

This Oil Spill Contingency Plan does not refer to the possibility of spillage of Heavy Fuel Oil from seagoing commercial vessels trading to Cantley Sugar Refinery on the River Yare: oil spills emanating from that source are dealt with in a separate Oil spill Contingency Plan, prepared by the Broads Authority jointly with British Sugar PLC, which has been approved by the Maritime and Coastguard Agency (MCA).

Neither does this Oil Spill Contingency Plan apply to spillages occurring within waters which are under the navigational jurisdiction of the Great Yarmouth Port Authority. Spillages into those waters are dealt with under Great Yarmouth Port Authority's statutory Oil Spill Contingency Plan. The waters in question include the commercial harbour of Great Yarmouth ("the Haven"), Breydon Water, the lower reaches of the River Waveney and the lower reaches of the River Bure.

The statutory navigational jurisdiction of the Broads Authority extends to its 'Navigation Area' as defined by Norfolk and Suffolk Broads Act 1988. This includes the great majority of the main rivers and broads, but there are many side dykes, basins and some substantial areas of open water (e.g. Wroxham Broad) which are regarded as 'private water' outside the Authority's formal jurisdiction. Included in these 'private waters' are many boatyard and marina basins where boats are moored in large numbers and in which refuelling and repairing operations take place and which are therefore at comparatively high risk of oil spillage. In such waters whilst the Authority is the registration authority the navigational byelaws do not extend to these waters. However it is considered impractical to distinguish between these waters and the formal Navigation Area for the purposes of Oil Spill Contingency Planning. This Contingency Plan is intended to cover the formal public navigation and the adjoining 'private' dykes, basins and navigable waters.

1.2 Consultation

This Oil Spill Contingency Plan has been compiled in consultation with the following statutory bodies and authorities:

Environment Agency (EA)
Natural England (NE)
Marine Management Organisation (MMO)
Norfolk County Council (NCC)
Great Yarmouth Port Company Ltd (GYPC)

In addition, in view of the very high conservation value and importance of the Broads wetland ecosystem and the fact that much of the rivers system is contained within sites designated for their nature conservation importance

(including designations as SSSI, SPA, SAC, Ramsar etc) additional consultation has taken place with:

Royal Society for the Protection of Birds (RSPB)
Norfolk Wildlife Trust (NWT)
Suffolk Wildlife Trust (SWT)
National Trust (NT)
Water Management Alliance (WMA)
Essex and Suffolk Water (ESW)

The Broad are also an internationally important resource for boating recreation. Consultation has therefore taken place with:

Broads Hire Boat Federation (BHBFB)
Norfolk and Suffolk Yachting Association (NSYA)
British Marine Federation (BMF)

1.3 Appropriate Assessment

The Oil Spill Contingency Plan has been assessed in accordance to the EU Habitats Directive. The requirement to assess plans or projects is outlined in Article 6(3) and (4) of the European Communities (1992) Council Directive 92/43/EEC of the Conservation of Natural Habitats and of Wild Fauna and Flora (known as the 'Habitats Directive'). The Habitats Directive was implemented in the UK through the Conservation (Natural Habitats &c) Regulations 1994, updated by the Habitat Regulations 2010. The Regulations are responsible for safeguarding designated European Sites and therefore protecting the habitats and species listed in the Annexes of the Directive.

The Screening with Natural England has concluded that the Plan and respective actions contained would have no likely significant effect on the European sites within the Broads. Thus an Appropriate Assessment is not required.

1.4 Area of Application

This plan applies to the navigable sections of the Broads rivers and their navigable branches from their respective heads of navigation (listed below) to the boundary of the Broads Authority's jurisdiction with that of Great Yarmouth Port Authority:

River Bure: Horstead Lock to upriver end of Bure Loop Marina, Gt. Yarmouth.
River Ant: Dilham Staithe and Smallburgh Junction to Ant Mouth.
River Thurne: Hickling Staithe, Horsey Staithe, Waxham Bridge and West Somerton Staithe to Thurne Mouth.
River Yare: Trowse Mill to Turntide Jetty (confluence with Breydon Water).
River Wensum: New Mills Yard to Trowse Eye.
River Chet: Loddon Basin to Chet Mouth.
River Waveney: Geldeston Lock to a point approx 260 metre upriver of Burgh Castle Marina entrance and including Oulton Dyke and Oulton Broad.

The above waters comprise approximately 130 miles of tidal rivers.

1.5 Responsible Authority

The Broads Authority is pursuant to Norfolk and Suffolk Broads Act 1988 the statutory harbour and navigation authority for the waters to which this plan applies and is the authority responsible for compliance with the Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998.

1.6 Identification of the Roles and Responsibilities

Within the UK there is an adopted structure and procedure for response to marine oil spills, which clearly defines the roles and responsibilities of industry, UK Government (including environmental agencies) and local maritime authorities. Each statutory body has a designated area of jurisdiction within zones extending from the High Water mark to 200 nm or the UK Territorial Limit.

The competent national authority designated to oversee all matters pertaining to the OPRC convention under the Merchant Shipping Act 1995 and the Merchant Shipping and Maritime Security Act 1997 is the Maritime and Coastguard Agency (MCA).

1.6.1 Statutory Jurisdiction

| | HWS | LWS | 1NM | 3NM | 6NM | 12NM |
|------------------------------|---|-----|-----|-----|--------|------|
| AUTHORITY | | | | | | |
| Broads Authority | (all operations within Broads limits) | | | | | |
| Local Authority ¹ | (Oil Spill Response out of Broads/Ports Limits) | | | | | |
| MCA | (Oil Spill Response - Monitoring, advise) | | | | | |
| MCA (HMCG) | (Search and Rescue) | | | | | |
| NE/JNCC ² | (Conservation of the natural heritage) | | | | (JNCC) | |
| MMO ³ | (Marine Management Organisation) | | | | | |
| EA ⁴ | (Water Quality) | | | | | |
| HMC & E | (Import Duty) | | | | | |

¹Local Authority *under a duty of care the Local Authority undertakes the obligation to prepare and/or implement an oil spill contingency plan for response to a spill from HWS to LWS*

²NE/JNCC *NE requires to be notified up to 12nm. JNCC's remit extends from 12nm up to 200nm*

³MMO *approves dispersants and their use in shallow water and advises on their use in deeper waters - e.g. at least 1nm beyond the 20 metres contour.*

⁴EA *Requires to be notified on water quality issues up to 3nm.*

1.7 Document Control and Plan Revision

This plan is a controlled document, control being by means of numbered copies.

The distribution of numbered copies is as shown at Appendix I. All document holders are assigned a specific numbered copy.

Any changes in the situation, changes to the plan or other updates will be issued as amendments to all holders of the plan within three months of such change.

The plan will be revised on an annual basis so as to incorporate changes occurring during the year and lessons learned from exercising of the plan.

This document has an approved life span of five years from the date of approval by MCA and it will be submitted in its entirety for re-approval after that time.

1.8 Memorandum of Understanding with Environment Agency

There is a potential overlap of responsibility for dealing with oil spilled into inland rivers and waterways between the harbour or navigation authority and the Environment Agency. The Broads Authority cooperates with and works closely with the Environment Agency in the event of any reported pollution incident. Based on past experience in such circumstances the Broads Authority and Environment Agency have evolved a joint understanding as to which organisation will be principally responsible for:

- Investigating reported oil spills.
- Putting in hand containment and clean-up operations.
- Enforcing oil pollution legislation by prosecution.

The Broads Authority accepts principal responsibility if the source of the spillage is 'marine' in nature including:

- Pollution/spillage coming from a vessel under way.
- Pollution from a vessel by discharge of oily bilge or other oily discharge whether moored or underway.
- Pollution/spillage from a vessel sinking, damaged or on fire.
- Spillage from a vessel during refuelling operations.

The Environment Agency will be principally responsible for dealing with incidents emanating from an 'on-shore' source including:

- Pollution/spillage from vehicles, plant or machinery on land.
- Pollution/spillage from boats on land (e.g. in boatyards)
- Pollution/spillage from on-shore oil storage tanks/oil storage facilities.

1.9 Description of the Broads Navigation and Navigational Activity

The Norfolk and Suffolk Broads system comprises six principal rivers: Bure, Ant, Thurne, Yare, Chet and Waveney. These are all tidal rivers, which drain to the sea through the Port of Great Yarmouth.

There are no barriers, locks or other structures to prevent inward surges from the sea or to retain or control fluvial waters. (There is a sea lock at Mutford Lock, Oulton Broad, but this is a branch of the River Waveney. The main river discharges to sea unimpeded through Breydon Water and Great Yarmouth harbour).

The total length of navigable tidal rivers is approximately 130 miles (200 km). The tidal regime is semi-diurnal although rainfall, wind and barometric conditions exert strong influence so that at times the tidal pattern can be heavily disguised or distorted. The fluvial regime is mainly ebb-dominated: the ebb stream runs in most places an hour or more longer than the flood and usually more strongly. Time of high and low water is later the further up river so that for example HW at Reedham is 2½ hours after Gt. Yarmouth, Acle about 3½ hours after, Norwich and Wroxham 4½ hours after and Coltishall and Stalham 5 hours after.

Tidal range is greatest at and near Great Yarmouth with Spring Tide range of approximately 2.20 metres. The tidal range decreases further up river. At Norwich the extreme spring range is approximately 1.50 metres. In the northern part of the system (Rivers Bure, Ant, Thurne) tidal ranges are smaller, a matter of a few inches and frequently distorted or masked by rainfall and meteorological conditions. Tidal streams likewise are strongest in the lower reaches: streams of up to 4 knots are common in the lower reaches of the River Yare and the narrow stretches of the River Bure in Gt. Yarmouth. In the middle reaches (above Reedham on the Yare, St. Olaves on the Waveney and Acle on the Bure) streams seldom exceed 2 knots.

The rivers connect a number of larger open waterbodies or shallow lakes – the “broads”. In some cases (e.g. Barton Broad) the main river flows through the broad, but most broads are connected to the main river by a side dyke. 12 broads are connected to the rivers system and open for navigation. A number of others are connected but are not open for navigation and some broads are not connected to the rivers system at all.

River and channel widths vary from around 70 metres in the widest reaches of the River Yare down to about 15 metres in the narrowest parts of the River Chet and some navigable dykes. Some private dykes and basin entrances are narrower.

The banks and channel edges of the rivers and broads also vary widely. In the lower reaches the rivers flow mainly between man-made flood embankments, the marshes beyond being lower than the rivers with marsh water levels being maintained by pumping into the rivers. The area between the flood embankment and the river edge is known as the rond. Rond widths vary. In the lower reaches where salt-water inundation is more common the ronds are of a salt-marsh nature, frequently with an exposed muddy foreshore at low water, and subject to ongoing erosion. Where, through prolonged tidal scour, wave action and exposure to boat wash the rond has been eroded, often on

the outside of river bends, so far that the flood embankment is threatened, commonly steel sheet piling has historically been installed to contain the river and protect the flood embankment.

Further up river reduced tidal range and less frequent saltwater inundation makes for traditional Norfolk reed ronds, often with 'reedswamp' fronting them. These ronds and their fringing reed are of particularly high conservation and landscape importance. In many areas, however, historical erosion and declining water quality has resulted in loss of emergent reedswamp and undermining of the rond edge which has prompted 'hard' engineering treatments of the channel edge including steel sheet piling, timber sheet piling, alder pole piling and various experimental bank treatments including fascine mattresses, gabions and geotextile applications.

Further upriver again, in the upper reaches of the navigable system, incursion of scrub and trees into the historically open reed marsh landscape has led to the river banks being heavily treed, with overhanging vegetation, exposed tree roots, heavy erosion between trees and much fallen vegetation.

In villages and settlements, river edging is mainly of timber or steel sheet piling.

1.9.1 Broads Authority Management and Presence around the Broads System

The Broads Authority is the statutory harbour and navigation authority and is also a special statutory authority with powers very similar to those of a national park authority. Because the Broads area developed very early as a major holiday destination, particularly for self-drive boating holidays and continues to be busy and heavily used for this purpose as well as private recreational boating, the Authority has traditionally maintained a high level of patrolling presence of both river and shore-based .

The Authority's team of ten full time and an additional six seasonal Rangers (formerly known as Navigation Rangers/Countryside Rangers) together with voluntary Rangers operate eight patrol launches based at Wroxham, Irstead, Ludham (2 launches), Burgh Castle, Burgh St. Peter, Hardley and Thorpe St. Andrew. The Rangers patrol the Broads seven days weekly during summer season according to defined attendance/service levels. Winter season patrolling is also carried out on a less frequent basis. The patrol launches are equipped with on-board supplies of oil sorbent pads, sorbent booms, disposal bags and personal protective equipment so as to be able to immediately commence containment and removal of minor spillages.

The Authority also operates a maintenance team of twenty three people on general river maintenance projects. The works teams operate from well-equipped workboats similarly provided with sorbent booms, pads, disposal bags and personal protective equipment. The Authority also maintains one trailer-borne Rigid Inflatable Boat for rapid/emergency response and a shallow draught and highly manoeuvrable weed cutter/litter collection barge, which is suitable for application and recovery of containment booms and sorbent booms, sheets etc or deployment of skimming equipment.

1.9.2 Radio Control and Communications

The Authority's vessels when patrolling or engaged in river works, and the Authority's shore based Rangers and other staff maintain permanent VHF radio and/or mobile phone contact with the Broads Authority Broads Control radio base at Dragonfly House, Norwich. Broads Control has a dedicated private VHF channel (Channel 33 with anti-interference/scrambling facility) for contact with Authority staff/vessels, as well as a 'Smart-Patch' telephone/radio link. All field staff/Rangers also carry mobile phones.

Hire craft are not fitted with VHF radios but many private craft are so fitted. The majority of private craft and very many hire craft now carry mobile phones and signal strengths are good throughout the major part of the system.

In combination these communications facilities mean that any sighting of spilled oil can be and in practice always is very quickly and easily reported to the Authority, and will be investigated by the Authority's navigation staff very quickly, either by boat or by land/vehicle as appropriate. Any reported spillage during working hours in summer would usually receive attendance or investigation within one hour. At night or on winter weekends (when risk of oil spillage is comparatively low) the telephones at Broads Control are remotely monitored. Environment Agency, Police, Coastguard, and Fire Service have contact numbers for Operations section staff for emergency call-out at these times.

The Authority maintains additional stocks of oil sorbent pads, sorbent booms, inflatable containment boom, disposal equipment, personal protective equipment, and associated damage control gear at its Fieldbase at Ludham and also in an oil-spill response trailer based at its Fieldbase at Ludham. (see Section 10, Resources Directory).

1.9.3 Boating Activity

The only remaining potential for seagoing cargo traffic using the Broads system is the heavy fuel oil traffic to Cantley sugar factory, dealt with in a separate OSCP.

The Broads system is however very heavily used by recreational craft, including large numbers of self-drive hire craft which include motor cruisers of up to 14m length. Each year the Broads Authority registers approximately 13,000 recreational vessels.

Annual boat registrations are approximately:

| | |
|---|-------|
| Hire Motor Cruisers | 870 |
| Private Motor Cruisers | 4,530 |
| Hire Sail Yachts | 200 |
| Private Sail Yachts | 3,000 |
| Launches and Dayboats | 1,000 |
| Sailing Dinghies, Canoes, Rowing Craft etc. | 3,200 |

There are also approximately 15 MCA Certificated Passenger Vessels of length up to approximately 25 metres operating mainly from Wroxham, Potter Heigham, Norwich and Oulton Broad.

Additionally there are various dredging pontoons, mud wherries, and workboats used for maintenance of the system and operated by two principal contractors (Broads Authority from their dockyard at Thorpe and Broadland Environmental Services Ltd, flood defence contractors for the Environment Agency, from their depot at Haddiscoe).

There are a handful of smaller workboats operated by small local piling and riparian maintenance contractors.

Section 2: Risk Assessment – Spillage from Vessels

2.0 Risk Assessment: Spillage from Vessels

Spillage from vessels may take place in the following principal circumstances:

2.1 Spillage While Refuelling

There are over 90 locations around the Broads where vessels take fuel (almost exclusively diesel oil) by hose from an onshore storage tank via a conventional dispenser pump. These are located in boatyards and marinas principally in the main boating centres. Established boatyard refuelling facilities are listed in Appendix 9.

In all such locations delivery is via a conventional vehicle forecourt type hose and nozzle with automatic backpressure shut-off.

Most owners of larger inboard powered boats will refuel from boatyard or marina pumps. The prices charged for fuel can however be very high and a minority of owners, particularly those at un-serviced and low cost moorings of which there are many round the system, may bring fuel in cans. There is a significant risk of spillage by fuelling from cans. However the difficulty of handling fuel in cans means that the maximum size is 25 litres, and in the worst case of a full open can being lost overboard that is the most that is likely to be lost. 25 litres of diesel oil will spread an oily iridescent sheen over a very large area of water or, if held into a corner or confined area by wind or stream or containment, will cause a thick red diesel slick, which it will be possible to remove by use of sorbents or skimming equipment.

There will be immediate local damage and soiling to river edge vegetation etc, and possibly oiling to waterfowl if they are for any reason trapped in dense oil, but it will not cause severe lasting damage to the ecosystem or habitats. In very many cases refuelling by can will be of small diesel engines which use very modest amounts of fuel and where the containers used may very likely be 5 or 10 litre cans.

Some sailing yachts and a minority of small motor cruisers have inboard petrol engines. There are very few locations where boats may take petrol from onshore delivery pumps. The majority of such refuelling will be by cans. However restrictions on storage and transporting of petrol and on the size of container which can be filled at petrol service stations means that most such refuelling will also be from 5 litre or 10 litre cans. The risks of pollution by spillage are correspondingly reduced. More significant is the risk of fire or explosion whilst filling petrol tanks from cans.

A possible area of concern is the frequent refuelling from cans of dayboat hire operations, where intensive use of a number of boats from a single base location may lead to repeated very small spillages which may combine in dykes or still waters to make a discernable slick.

Experience over the past decade has indicated that spillages from refuelling have very seldom if ever approached the worst case 25 litre volume.

Individual spillages are frequent but they are almost always much smaller: seldom more than 0.5 litre.

A particular cause of spillage, which has taken place several times in recent years, has been mistaken filling of the fuel tank with a freshwater hose, leading to fuel being displaced and overflowing into the river. This is usually the result of inexperience on the part of boat hirers, despite the fact that hire craft fillers are clearly marked. The oil so spilled comes out diluted with large quantities of water so that it tends to spread widely in a thin iridescent sheen.

The three most significant spillages of oil into the navigable Broads system in the past decade have been from boatyard oil storage installations, but not during the course of refuelling. In one instance a drain valve on a shore storage tank at ankle level was knocked open, presumably accidentally, allowing a significant quantity of diesel to leak into boatyard dykes off the main river at Wroxham. This was dealt with by containment and removal of oil by absorbent sheets. In the second incident negligent removal/relocation of a boatyard diesel storage tank allowed oil to enter Hobro's Dyke, Brundall, from underground pipework which had not been properly drained. The offenders were prosecuted by the Environment Agency and heavily fined. Lastly, a driver delivering hydraulic oil to a shore storage compound in a boatyard inadvertently knocked a valve on an oil storage container which allowed oil to escape onto the unmade floor of the compound and to seep through the ground into the boatyard basin. Such incidents can best be controlled by regulation of design and condition of shore storage and dispensing facilities, including bunding of storage tanks. The Broads Authority does not have statutory power to regulate on-shore oil storage facilities, but the Environment Agency does have such powers. All non-domestic non-waste(and non-agricultural) oil tanks above 200 litres are required to have secondary containment to contain any spill, including valves, filler pipes etc. The environment Agency is responsible for enforcing these regulations.

2.2 Spillages Resulting from Fire, Explosion or Navigational Incident

Sinking or flooding of boats within the Broads occurs from time to time. On average about five or six sinkings each year involve cabined boats with inboard engine installations. This is usually as a result of inexperienced helmsmen colliding with river banks or, very occasionally, because of failure of watertight integrity of the hull or sometimes other vessels. Experience has shown in these circumstances that there will be initial light pollution from oily bilge water and contents of engine drip trays, followed sometimes by a slow discharge of oil from the fuel tank vent pipe if that is submerged. Such spillage is usually easily dealt with by sorbent booms and sheets, and vessels are ordinarily recovered promptly and before significant amounts of oil have entered the river. The great majority of hire craft (which are at greatest risk of incident) have diesel fuel tanks of between 120 litres and 240 litres capacity.

The Broads, especially the rivers Yare and lower Waveney, are however also used by significant numbers of larger modern seagoing motor yachts, based mainly at Brundall and Oulton Broad. The largest of these may have two diesel tanks each of around 900 litres capacity. Such tanks are always of steel construction and are not integral to the hulls of the vessels, so that risk of breaching of tanks in the event of collision is very small.

Oil spillage may also take place as a consequence of fire or explosion. Historical records in the Broads indicate a consistent pattern wherein annually two or three vessels are the subject of major fires, which result in their becoming a total loss. The worst case of boat fire in memory was when eleven hire cruisers closely moored in a boatyard basin in Horning were burned out, probably as a result of arson, and the risk remains that in a dense boatyard or marina mooring situation a fire in one vessel may spread to adjacent craft. Experience has shown that boat fires, even particularly violent fires, give rise only to moderate local pollution, wherein a small amount of oil pollution is mixed with charred material and debris, and which can be managed by containment booms around the affected vessel and the use of absorbent booms and sheets, together with manual removal of debris. Very seldom is there a large scale escape of fuel oil from the vessel's tanks, although if the burned vessel sinks there may be slow leakage via vent pipes etc, and the condition of the wreck may be such that recovery or removal may be delayed.

2.3 Summary of Risk Assessment

Very small spillages of less than 1.00 litre of oil or oil in water are frequent. Where these are isolated, wind or tidal streams usually disperse the oil such that containment or removal is not practicable. Prevention by education, good housekeeping and appropriate regulation is more relevant.

There is a comparatively high risk of spillage of up to about 25 litres of oil associated with refuelling from cans.

There is a very much smaller risk of spillage of up to about 2,000 litres of oil in the event of a serious navigational incident to a large private motor yacht. Although historically no such large spillage has occurred it remains a possibility and an adequate response procedure is required.

2,000 litres is also a potentially likely volume of oil which might enter the waters as a result of serious mishap or equipment failure at a boatyard fuel storage installation.

2.4 Tiered Response Strategy

The MCA Oil Spill Contingency Plan Guidelines require that the internationally recognised three-tier oil spill classification system form the basis of the response strategy.

Tier One:

Small operational spills that can be dealt with immediately utilising local resources. A Tier One spill is not likely to require recourse to resources outwith the area or mobilisation of external incident response arrangements (except for purposes of notification).

Tier Two:

Medium sized spills, which will be handled by Broads Authority personnel and nominated oil spill response contractor or other external assistance and resources as detailed in this plan.

Tier Three:

Larger spills or serious failure of containment which will require full involvement of other authorities and possible mobilisation of national stockpiles and resources. It is considered extremely unlikely that spillage from pleasure vessels or boatyards in the Broads could ever approach a Tier Three incident.

Risk assessment undertaken for preparation of the Authority's approved OSCP for the Cantley HFO traffic concluded that for the purposes of that plan spillages should be classified as: Tier One – up to 2,000 litres HFO; Tier Two – up to 20 tonnes HFO and Tier Three – in excess of 20 tonnes HFO. Accordingly the Broads Authority holds significant stocks of oil sorbents and other equipment (see Section 10). The Authority also has in place contracted Tier Two response cover with Braemar Howells Ltd.

It follows that the Authority would be able to respond from its own resources to a spillage of diesel oil which was equivalent to a 2000 litre HFO spill. However spillages of diesel or marine gas oil are different in character to spillages of HFO: Diesel and marine gas oils are less persistent and will biodegrade much more quickly than HFO, but will also spread more quickly and thinly than heavy oils. The waters and conditions in which they are likely to occur are also likely to be different in nature and sensitivity to the waters of the lower Yare where an incident to the Cantley vessel might take place.

Accordingly for the purpose of this OSCP the definition of each tier should be reduced. The oil spill tiers for the purpose of this plan are defined as:

Tier One: Up to 200 litres diesel/marine gas oil.

Tier Two: Up to 10,000 litres diesel/marine gas oil.

Tier Three: In excess of 10,000 litres diesel/marine gas oil.

2.5 Minor Spillages/De Minimis Provision

There will be a certain de minimis level of spillage, referring to the frequent very minor spillages which occur around the system, which cannot practicably prompt the mobilisation of this Oil Spill Contingency Plan. Given the ability of a small volume of oil to spread a visible iridescent sheen over a very large area of water it is always very difficult to judge the quantity of oil or oily water which has entered the river, dyke or basin. Also the location and circumstances of the spillage greatly affect the visibility of the spill, the practicability of containment and removal, the likely speed of natural dispersion and biodegradation and the potential environmental consequences. However it is concluded that any spill estimated to be of less than 5.00 litres of oil should be regarded as being too small to justify mobilisation of this Oil Spill Contingency Plan.

For the avoidance of doubt: a spill of 5.00 litres or less may well be visible and capable of containment and removal. In those circumstances the practice is, and will continue to be, that Broads Authority staff (especially Rangers and Operations Maintenance Teams) will notify the spillage in accordance with this plan but will proceed promptly to deal with it using the sorbent booms and pads carried on Authority vessels and back-up supplies (including containment boom) kept at the Authority's Fieldbase.

Section 3: Environmental and Economic Impacts

3.1 Nature Conservation Designations

The Broads area is of extremely high international importance for nature conservation and hosts a very wide range of habitats and species many of which are protected under European law. This is reflected in the large number of designated nature conservation sites, which either form part of (such as Barton, Hickling Broads and Heigham Sound) or are adjacent or close to the navigable waterways (such as Martham, Cockshoot Broads as well as the fen, reedbed and grazing marsh).

In consultation with Natural England it has been concluded that the sites principally at risk in the event of an oil spill are those which are waterways or fen or reedbed in direct connection to the waterways and are 'undefended', that is not protected from inundation by flood embankments. 'Defended' sites, being those protected by flood embankments, would only generally be at risk if a serious oil spill coincided with a severe storm surge which involved widespread overtopping or breaching of the flood embankments, which would be an extremely unlikely event. However there are several river water intakes that supply freshwater to designated wetlands, such as the Stracey intake on the Bure and South Fen intake on the Ant for example. Should these intakes be supplying water to these wetlands at the time of an oil spill these 'defended sites' would also be at risk of environmental degradation.

Natural England has identified the following designated sites as being potentially at risk from an oil spillage within the Broads Navigation system:

SSSIs:

Broad Fen, Dilham
Ant Broads and Marshes
Upper Thurne Broads and Marshes
Bure Broads and Marshes
Burgh Common and Muckfleet Marshes
Trinity Broads
Cantley Marshes
Yare Broads and Marshes
Hardley Flood
Stanley and Alder Carrs
Sprat's Water and Marshes, Carlton Colville SSSI
Halvergate Marshes SSSI (directly the ronds only, indirectly the whole SSSI through the IDB intake))

All of the above SSSIs are components of the following European Sites:

The Broads SAC
Broadland SPA
Broadland Ramsar

Breydon Water, being within the navigational jurisdiction of Great Yarmouth Port Company Ltd is not formally within the scope of this OSCP, but Breydon Water would potentially be affected by an oil spill in the lower reaches of the

Broads rivers so it is appropriate to note its designations. Part of Breydon Water is also designated as a Local Nature Reserve by Great Yarmouth Borough Council:

Breydon Water SSSI
Breydon Water Ramsar
Breydon Water SPA

Maps and Citations for all of the above designated sites are at Appendix 8.

3.2 General Strategy

On every occasion when an oil spill affects or is likely to affect a designated conservation site or nature reserve Natural England and the organisation/land manager responsible for management of the site or reserve will be contacted and kept fully informed of the extent of the spill, of the consequences as they become apparent and of progress and proposed methods for dealing with the spill.

3.3 Environment Group

In the event of a more serious spill of Tier Two volume (over approximately 200 litres of oil spilled), whether or not the spill is directly threatening any designated conservation site, reserve or equivalent conservation interest to a SSSI 'sites of high conservation value', an immediate step would be to establish an Environment Group, the purpose of which would be to guide the Broads Authority and its appointed Tier Two response contractors through the process of oil recovery and clean-up with minimum immediate or prospective harm to the natural environment, wildlife and ecology.

The Environment Group would consist of officers of the Broads Authority, Natural England, Environment Agency, Public Health, and non-governmental conservation organisations whose property or interest might be threatened. The Norfolk and Wash Environment Group have already produced a Marine Pollution Contingency Plan which covers the area from Gibraltar Point to Kessingland. This included MMO, Environment Agency, Natural England, the Norfolk Wildlife Trust, Norfolk County Council, Royal Society for the Protection of Birds, Health Protection Agency, and the Maritime Coastguard Agency, This is a group ready set up in case of a spill.

3.4 Principal Strategy for Response, Containment and Clean-up

The area of operation of this plan is extremely large, with a very wide range of natural conditions and circumstances which may be encountered. It is not possible in this plan to describe in detail the intended response and actions to be taken in particular scenarios or circumstances. However it is possible to set down certain principals that should govern the actions taken in response to spills which might affect areas of high conservation value and designated areas.

- (a) The aim will be to contain and limit the spread of oil with priority on preventing oil or its effects spreading into areas of high conservation value/designated areas.

- (b) Booming and containment sites will, so far as is practicable, be chosen to give effect to this priority (see Appendix 11).
- (c) Particular attention will be given to preventing oil from reaching locations where river water is abstracted for maintaining appropriate water levels in marsh dykes, or other conservation management purposes. If it is not possible to keep oil away from water abstraction pumps etc, steps will be promptly taken to ensure that abstraction is suspended while the threat of oil pollution remains. Priority will also be given to excluding oil from dykes which run into designated areas, nature reserves or other areas of conservation significance, especially where no water control structure exists. (examples being dykes connecting to the Reedham Marshes are of How Hill, Hoveton Great Broad to the main river, dykes draining into the north side of Ranworth and Malthouse Broads, the Dykes system around White Slea on Hickling and many other similar locations).
- (d) The aim will be to remove as much as is possible of the oil from the environment by use of skimming equipment and absorbents. Use of chemical treatments or dispersants will not be appropriate.
- (e) Removal of spilled oil will be undertaken by means which cause minimum damage to the natural environment. In particular, damage to ronds, reedbeds and reed fringes will be avoided. Access for oil recovery will be limited to locations which will minimise damage to the environment and to habitats. Emphasis will be placed on recovery of oil by vessels.
- (f) Where removal of spilled oil would cause damage to the natural environment it may be preferable to allow it to degrade naturally. The Authority's response in such circumstances will be undertaken in consultation with the Environment Agency and relevant conservation organisations, having regard also to the effects of spilled oil and removal/clean-up operations on amenity, recreation and navigation.
- (g) The conduct and management of the clean-up and oil removal operation and the storage and disposal of oil removed will be undertaken in accordance with best practice and the terms of licences, conditions and directions issued by the Environment Agency.

Section 4: Response in the Event of Oil Spill

4.1 Responsibility and Incident Control Arrangements

The response team will be lead by the Navigation Officer or in his absence by the Head of Safety Management and will involve The Rivers Engineer and Deputy Head Ranger.

A Marine Response Centre will be established at the Broads Authority's principal office, Dragonfly House, 2 Gilders Way, Norwich. In the event of a major spill, especially in the River Thurne or Ant, the Marine Response Centre may be located at the Authority's Fieldbase, Horsefen Road, Ludham.

The Navigation Officer will act as Incident Controller/On scene Commander (or in his absence the Head of Safety Management).

Broads Authority Rangers will be involved as clean-up operators.

4.2 Environment Group

In the event of a more serious spill of Tier Two proportions (more than 200 litres of oil spilled) an Environment Group would be formed (see Section 3.3)

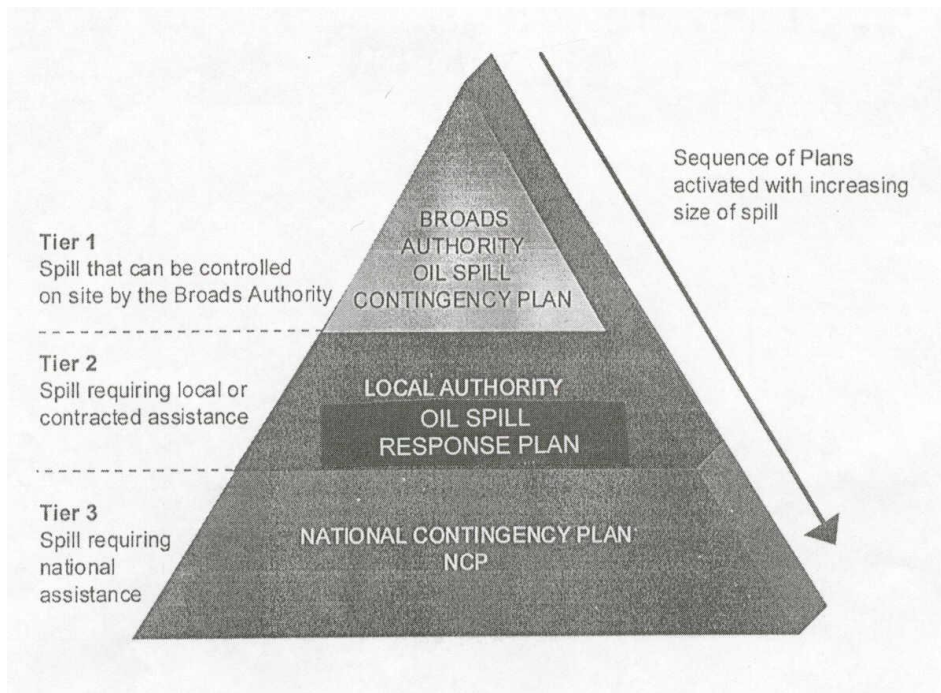
4.3 Dispersant Use

After due consultation dispersant would be used within the area covered by this plan only in circumstances when its use would be essential to avoid genuine risk to human health or safety. It would not be the Broads Authority's policy to allow the use of dispersant unless a genuine risk requiring its use could be established. Approval from MMO would be sought before applying dispersants unless urgent application were needed to avoid risk to public health or safety.

Under the terms of the Marine and Coastal Act 2209 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 MMO, in addition, specific permission from 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 one nautical mile of such an area. This includes any use in tidal estuaries and rivers such as the Broads system.

4.4 Interface with other Contingency/Emergency Plans

This plan will be used in conjunction with Great Yarmouth Port Authority's OSCP, Environment Agency's Incident Plan, Norfolk County Council's Oil Spill Response Plan and the Norfolk and Wash Environment Group which has been set up and would offer advice on a Tier 2 or 3 incident.



4.5 Internal Alerting and Call-out Procedures

An initial spill report will come, in the first instance, to the Broads Authority Office. There is a possibility that reports could come from members of the public or boatyard staff, EA, Norfolk County Council offices or the Police. The information received must be passed immediately to the Navigation Officer, or in his absence to the Head of Safety Management. Police and HM Coastguard are provided with home and mobile telephone numbers and addresses of both officers. He will do his best to confirm the incident details and determine the level of clean-up operation necessary and the requirements as to whether to activate the Broads Authority Response Team. All calls and decisions made must be recorded, and an Oil Spill report Form raised.

4.6 Communications and Reporting

4.6.1 Reporting of Oil Pollution

It is essential that all spills are reported by whatever means as quickly as possible.

- (a) Responsibility for reporting of oil pollution rests with the Master in all cases involving a vessel and with the berth operator in the case of a berth or quayside incident. In cases involving a vessel alongside both parties are equally responsible.
- (b) Any person either ashore or afloat, seeing oil pollution on the water within the Broad Authority's jurisdiction or liable to pose a threat to it, should report it whether or not the source is known.
- (c) The Navigation Officer is responsible for ensuring statutory notifications are made.

4.6.2 Communications

Initially reports will be passed by telephone both landline and mobile (consideration should be given when using mobiles for security reasons). Broads Authority maintains VHF sets which would be issued to supervisors once a clean-up strategy had been established.

In the event of a clean-up operation a shift system will be instituted to ensure the office is manned on a 24-hour basis.

4.6.3 Records

It is essential that all events occurring during an incident are logged and recorded (sheet shown in Appendix 4). This will provide assistance if liability, compensation or reimbursement issues arise as a result of the incident. To achieve this, all key personnel must keep logs. Entries in the log should detail as a minimum, events, actions taken, communications with outside agencies, decisions made and points relevant to the operations.

These logs should be forwarded to the Navigation Officer once the incident has ended to form part of the final incident report and provide the basis for a 'wash-up' meeting.

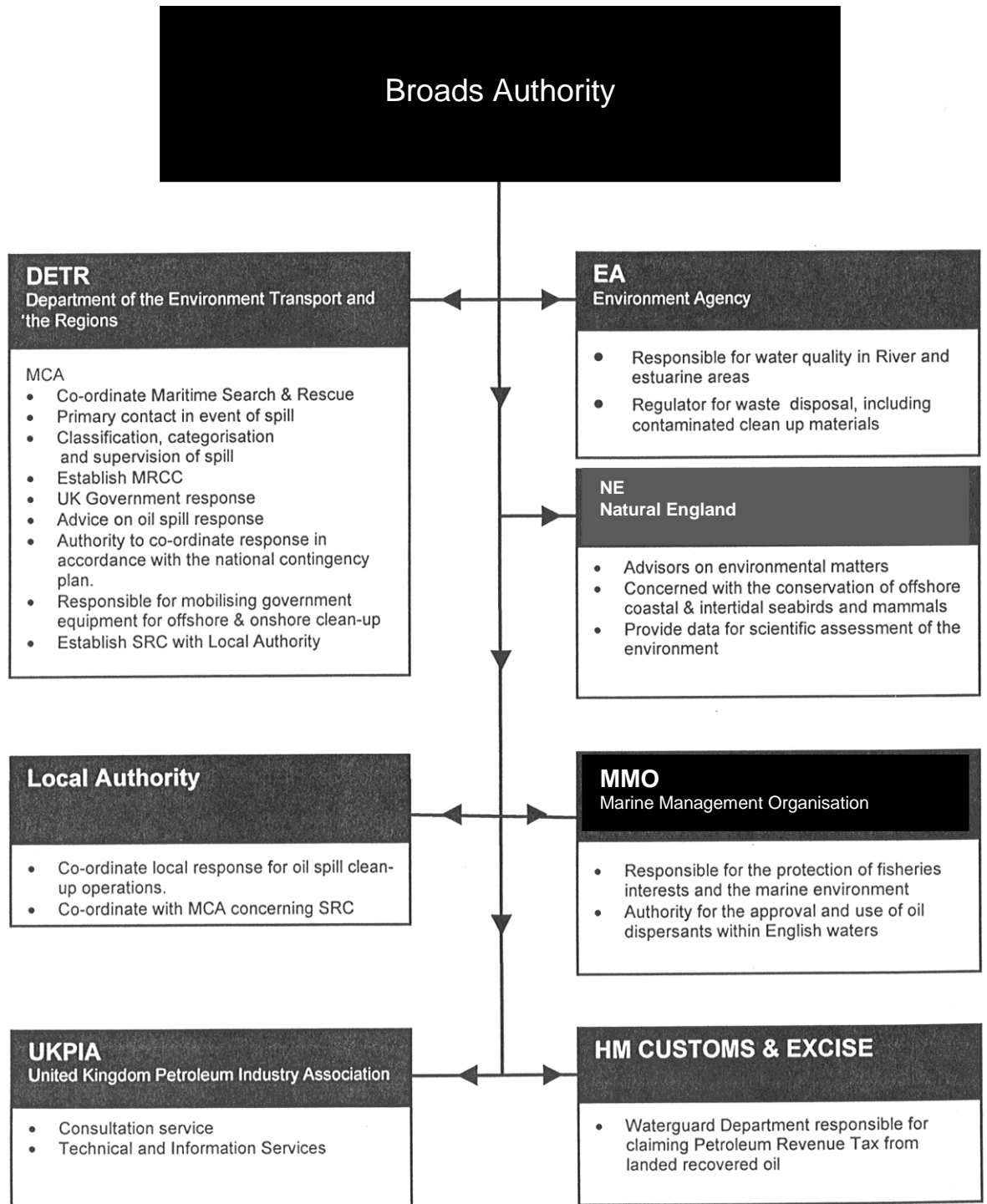
4.7 Notification Matrix

| Organisation | Oil Spill Tier | | | For contact numbers see Section 9 Contact Directory | |
|----------------------|----------------|--------|--------|---|---|
| | 1 | 2 | 3 | Method | Remarks |
| Chief Executive | ✓☎ | ☎ | ☎ | Telephone | |
| MCA (HMCG) | ☎ ☏ | ☎ ☏ | ☎ ☏ | Telephone Fax | Coastguard will require information on the Oil Spill Report Form in Appendix III. Confirm details with fax. |
| Natural England | ✓☎ ☏ | ☎ ☏ | ☎ ☏ | Telephone, Fax | Fax all spills. Contact in every case of spillage. |
| Environment Agency | ☎ | ☎ | ☎ | Telephone, Pager | Contact in every case of spillage. Confirm by fax. |
| MMO | ✓☎ | ☎ | ☎ | Telephone, Fax | Annual report provided for Tier 1 |
| Oil Spill Contractor | | ☎ | ☎ | Telephone | Contact the 24-hour contact number and ask for the Duty Manager. |

- ☎ Notify immediately by phone
- ☏ Notify immediately by fax
- ✓☎ Notify during normal working hours.

4.8 Liaison Procedures with Other Agencies

Rapid passing of information to other affected agencies is essential for effective response. Shown below are agencies concerned and their roles.



4.9 Operational Response:

The operational response in the event of an oil spill incident will depend on a large number of factors:

- (i) The seriousness of the spill: Tier One, Two or Three.
- (ii) Location of the spill.
- (iii) Wind, tide and natural conditions.
- (iv) Whether there is risk to life or health of persons.
- (v) Whether there is risk of pollution to nature conservation sites, nature reserves or important habitats.
- (vi) The level of risk to creatures (especially birds/waterfowl and fish).
- (vii) Whether there is risk of serious landscape damage or damage to property.
- (viii) Whether there is risk to convenience or amenity of persons (including navigational convenience or amenity).
- (ix) The type, extent and thickness of spilled oil.
- (x) Whether containment and removal are possible.
- (xi) Whether access is possible for oil recovery (from land or boat).
- (xii) Practicality of temporary storage and onward licensed disposal.
- (xiii) Whether wind or tide has caused or will cause the spillage to disperse or spread widely.
- (ivx) Whether attempted containment/recovery will cause further environmental damage
- (vx) Whether and how quickly the spilled oil will disperse or biodegrade through action of wind, tide, oxidation or, as appropriate, agitation.
- (vix) Particular weather or environmental conditions e.g. ice cover, very strong winds, extremes of heat or cold, surge conditions or very high fluvial flows etc.

With such a large range of potential factors and having regard to the very wide range of conditions and circumstances to be encountered throughout the Broads system it is not possible to prescribe in this plan a detailed operational response for every particular hypothetical spillage incident in any particular location.

It is possible however to plan for such events and to set out a range of operational response actions and the principles according to which they would be applied:

4.9.1 Oil Dispersants

It is not the Authority's policy to use oil dispersants.

4.9.2 Containment Booming

Where it is possible to contain spilled oil with prospect of being able to recover a significant part of the spillage the Authority will endeavour to do so.

Whether it is practicable or worthwhile to contain spilled oil depends on many factors including tidal streams and weather conditions, tidal rise and fall, the width of the waterway, accessibility and working space for assembling and deployment of booms and for recovery of oil, availability of relatively still water areas for deflection, containment and removal of oil, ability to secure and seal containment booms to banks, availability of space for temporary

holding/storage tanks and effects on other persons including delays or closures to navigation.

Oil booming may be worthwhile in locations where recovery cannot practicably be achieved; to prevent or deflect oil from entering nature conservation designated areas, nature reserves, water abstraction points etc.

In very many instances, especially where relatively small amounts of oil have been spilled into the main river, tidal streams may have dispersed oil by the time the spill is investigated so that containment is no longer practicable and the oil may be lying so thinly on the water over so large an area that recovery using absorbents is not practicable or worthwhile. This widely dispersed but thin skim of oil usually manifests itself as the typical multicoloured iridescent sheen, which is very obvious to the observer. Oil of this thickness will disperse and biodegrade by natural action, especially in warm and bright conditions and may be assisted in doing so by wind and wave action, or by artificial agitation by boat wash etc.

If the spillage is into a boatyard basin or side dyke it may not so quickly disperse by wind or tidal action. In these conditions it may, if it is disturbed and becomes mixed with water, take on a milky or opaque appearance (especially if it is lubricating or hydraulic transmission oil). Although this is less obvious than the coloured sheen, it may indicate a higher concentration or thickness and correspondingly greater prospect of containing and recovering significant amounts of oil. Likewise spillages of diesel or marine gas oil into an undisturbed basin or still water dyke may result in the oil building up to considerable thickness on the water surface. In these circumstances it may be possible to install effective containment booms at the mouth of the basin or dyke to prevent the oil dispersing out into the main river (perhaps on turn of tide or change of wind), and also to prevent boats entering the oil with the effect of firstly breaking up the thick and hence easily removable oil, and secondly spreading oil by it attaching to their hulls.

In circumstances where oil has accumulated to considerable thickness removal by disc skimmer or oleophilic mop will be particularly effective.

Therefore the Authority will install containment booms especially across the entrances of boatyard and marina basins and side dykes where that will operate to contain oil for removal and prevent spread of oil out into the rivers system.

While there are hundreds of side basins and small dykes where containment booming might become appropriate, there are a number of locations where frequency or intensity of boatyard and refuelling activity suggests that preparation for emergency booming should be a priority (for example Hobro's Dyke, Brundall or Daisy Broad, Wroxham). Such locations are listed in Appendix 11.

4.9.3 Management of River Traffic

The Broads rivers are very heavily used by large numbers of recreational craft, both hire and private. Boat traffic census information indicates in excess of 1,000 boat movements per day (0900 to 1800) at busy locations in the northern part of the system in summer. Of these movements about 80% are self-drive hire craft of different kinds. Sustained delay or interruption to boating

traffic on the main rivers can have severe operational and commercial consequences for boat hire operators and is therefore not to be undertaken lightly. Closures of the main rivers to navigation for dredging or river maintenance work usually takes place only out of season and after publication of Notices to Mariners, and is usually limited to overnight or very short period closures. However the Authority has the powers to close the river to navigation in the event of emergency and those powers would be used in the event of a major oil spill, especially where:

- There might be risk to health or safety from continued boat traffic through the affected area.
- Cross-river containment booming was required to prevent a major spill entering or affecting a designated nature conservation area, nature reserve or important habitat.
- Cross-river containment booming was required to prevent a major spill entering or affecting a village or urban area where there was serious threat to the amenity of riverside residences or properties.
- Passage of vessels through the affected area might exacerbate the effects of the oil spillage (e.g. by effects of boat wash) or might hinder or delay clean-up operations.

It should be noted however that the Authority has no means of communicating directly with the majority of boats circulating in the system and that emergency closure of any section of the system can only be achieved by direct communication to vessels from the Authority's patrol launches. Closure for periods of more than a few hours can be communicated by fax/email to boatyards and marinas (the Authority maintains an up to date contact list) and by direct leafleting of craft at moorings, especially those near the closed section.

It should be further noted that in the frequent case of small spillages of oil which have become well dispersed so as to be beyond practicable containment, the passage of vessels with attendant wash and agitation may be beneficial in promoting break up, dispersion and biodegradation of spilled oil.

4.9.4 Potential Temporary Waste Oil Storage Sites

There are a great many possibilities for siting temporary waste oil holding tanks, including over one hundred boatyard sites (subject to owners' permission) which all have good road access.

The Broads Authority also owns/operates over fifty public mooring areas, although not all these have road access.

There are also a large number of Riverside Pubs with good road access where, subject to permission of the proprietors, temporary oil storage tanks could be established in car parks etc.

Temporary waste oil holding tanks would need an exemption from the waste management regulations. Such an exemption would be a "paragraph 18" and

needs to be notified to the Agency, but no fee is payable. The local office (Environment Management Team) should be contacted for registering this exemption.

4.10 Information to be obtained as initial Spill Report

| | |
|--------------|---|
| Date: | _____ |
| Time: | _____ |
| 1. | Name of person reporting incident: _____ |
| 2. | Job Title: _____ |
| 3. | Details of company/organisation or address: _____ _____ |
| 4. | Call back number: _____ |
| 5. | Location of incident: _____ |
| 6. | Estimated quantity of spilled oil: _____ litres/tonnes |
| 7. | Type of oil spilled: _____ |
| 8. | Action taken to prevent further spillage: _____ _____ |
| 9. | Other relevant information: _____ _____ _____ _____ _____ |

4.11 Action Sheet

In the event of a call out requirement, the following action sheets should be used as a check list to ensure proper cover of all aspects of response.

| NAVIGATION OFFICER | | |
|------------------------------|---|--|
| NO. | ACTION | REFER TO |
| 1. | Obtain all available information. Ensure that an Incident Log has been started and POLREP Report Form filled in. | |
| 2. | Determine initial level of manpower and equipment resource mobilisation required. | Tiered Response and Section 10 |
| 3. | Establish communication with all concerned parties and ensure that statutory reporting requirements have been carried out. | Statutory Notification Section 4.6 and 4.7 |
| 4. | Determine level of response that has been initiated and inform MCA, EA and NE of intended response. Determine level of response required from duty personnel. | Tiered Resources |
| 5. | Contact/Call out Response Team personnel as appropriate. | Mobilisation Procedure |
| 6. | Ensure that a sample of spilt oil is taken in accordance with the Police and Criminal Evidence Act, especially when the origin of the spill is unknown or legal proceedings are liable to be taken. This will ensure that it could be used in a court of law if required (e.g. continuity of evidence) | MCA's STOP Notice 4/2001 Appendix |
| TIER 1 SPILL RESPONSE | | |
| 7. | Call out additional personnel as required to handle spill notifications. | Statutory Notification Section 4.6 |
| 8. | Monitor situation. Obtain regular briefings from Clean-up Supervisor on progress of clean up. | |
| 9. | Determine likely impact of incident. Consider deployment of booms to shut off waterways. Complete and log a full report. | |
| 10. | If it appears that the spill has escalated, proceed for Tier 2 incident. | |

| TIER 2 INCIDENT | | |
|-----------------|--|-----------|
| 11. | Contact Response Contractor and agree primary level of response required. | Section 9 |
| 12. | Start and maintain an accurate log of all communications with contractor. | |
| 13. | Establish communication link with the contractor's Response Manager and issue a call back number. | |
| 14. | Determine extent of incident in terms of: <ul style="list-style-type: none"> • any casualties; • any safety hazard; • damage to facilities; • extent of pollution; • results of any actions taken so far. | |
| 15. | Brief Response Supervisor of actions as appropriate. | |
| 16. | Establish review/planning meetings. Continue normal communications and ad hoc briefings. | |
| 17. | When incident stood down confirm incident closure with all agencies involved. | |
| 18. | Complete incident log and ensure receipt of report from response supervisor. | |

4.12 Escalation of Response

In the event that a response escalates to Tier 2 level, sufficient office based personnel must be mobilised to establish a Marine Response Centre. A room must be made available to meet with personnel from external agencies.

The Navigation Officer will retain the position of on-Scene Commander unless any change is agreed with the Government Agencies involved.

If the response is likely to become protracted, the Navigation Officer must make arrangements for the Marine Response Centre to be managed and run according to the needs of the response team. This may entail providing catering and accommodation arrangements locally.

In the event that outside contractors are employed to assist with the clean-up, due notice must be taken of the Health and Safety Policy contained in Section 7 of this plan.

4.13 Broads Authority, Chief Executive

The Chief Executive should be ready to assist if deemed necessary by the Navigation Officer and must be in a position to make corporate decisions regarding media reporting, liaising with underwriters and agreeing contracts.

| CHIEF EXECUTIVE | | |
|------------------------|---|--|
| NO. | ACTION | REFER TO |
| 1. | Obtain briefing from Navigation Officer with situation report and then relocate to Head Office if required. | |
| 2. | Assess incident in terms of: <ul style="list-style-type: none"> • people; • environment; • damage to facilities • disruption to business. | |
| 3. | Approve outline response strategy. | Response Strategy |
| 4. | Approve immediate and future contracted equipment requirements. | Tiered Resources Section 10 |
| 5. | Arrange initial public relations programme. | Utilise advice and pro-forma statement Section 8.3 |
| 6. | Attend review meetings in Marine Response Centre. | |

Section 5 : Waste Disposal Operations

5.1 Relevant Legislation

The safe handling and disposal of recovered oil is governed by relevant sections in the following legislation:

- (a) The Environmental Protection Act 1990
- (b) The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991
- (c) Control of Pollution (Amendment) Act 1989
- (d) The Waste Management Licensing Regulations 1994
- (e) Hazardous Waste Regulations 2005

If oily waste material is produced as a result of a pollution incident then the polluting party (operator) has a duty of care to ensure that the waste is handled, transported and ultimately disposed of in an appropriate manner. If the material is to be handled by contractors then the operator (to reduce liabilities to a minimum) has to ensure that each contractor has the relevant waste transportation and disposal licenses.

Natural England should be consulted on any proposal to dispose of or store waste material to ensure that sensitive wildlife areas and designated/protected sites are not affected. The Environment Agency must also be consulted to ensure any storage of waste does not cause risk to the Environment and is within the waste regulations – see section 4.94

It is vitally important that the waste streams are kept separate, rather than being mixed together to enable the waste to be recycled or reused effectively.

In addition HM Customs and Excise must be notified if recovered oil is brought ashore by dedicated oil recovery vessels. Landing should not be hindered by the absence of an official from HM Customs and Excise; however, the Operator should maintain a careful log on quantity and nature of the recovered oil.

The options for waste disposal or treatment of material, be it oily liquids or oiled solids are:

- (a) temporary store, clean, stabilise and then recover or re-use;
- (b) temporary store and then take to appropriate disposal site for burial;
- (c) take to a refinery/incinerator (mainly for oily liquids only);
- (d) take to appropriate disposal site.

Each disposal option will be examined in turn with various points for consideration highlighted.

(a) Temporary Storage/Clean, Treat, Stabilise, Recover, Re-use

This option aims to store temporarily the material and then, slowly over the ensuing period, to clean it or stabilise it and then to recover or reuse it.

In most cases this is the best environmental option. It avoids the risk of changing what was a marine oil pollution problem into an inland surface pollution problem or groundwater pollution problem.

From temporary storage the contaminated material can be stabilised with cement, lime, clay, organic binders, asphalt and composting. The characteristic of each product needs to be considered when determining the ultimate disposal route or any perceived end use. It is important to note that the treatment of wastes also comes under the waste management licensing system. Therefore, any strategy to deal with the waste in this manner can only be developed through close liaison with the local authority concerned and the Environment Agency.

(b) Temporary Storage and Appropriate Disposal Site for Burial

The reasons for constructing a temporary storage site are as follows:

1. There is no immediate disposal outlet for large quantities of oil/sand mixture or for oil/water mixtures and clean-up cannot be allowed or stopped.
2. The equipment used to clean beaches is usually labour intensive and therefore requires an immediate transfer area adjacent to the site to be provided.
3. The nature of the roads precludes high traffic densities.
4. The in situ treatment of contaminated material is often preferable to removing large quantities of material from the shoreline.

In addition, under the above legislation, the temporary storage site including demountables may require a Waste Management Licence. Each site will have to be constructed in a specific manner. It is therefore essential that the construction of temporary storage sites be done through close liaison with the local authority concerned and the Environment Agency.

(c) Take to a Refinery/Incinerator (mainly for oily liquids only)

This material should be removed from site by a licensed waste handling company who will then arrange for its disposal in an appropriate manner. If there is suitable access, oily liquids produced from a shoreline clean-up operation can be removed from site by road tanker.

If the oily liquids are onboard a dedicated recovery vessel following an at sea containment and recovery operation then it can be transferred across the quay, at a suitable berth, to a road tanker or other suitable waste reception facility. Alternatively this waste can be fed directly into the reception facility at a marine terminal of an oil refinery. It is the responsibility of the ship's Master to ensure that this waste is disposed of appropriately. However, the Broads Authority must confirm that any contractors have the necessary licences to handle and dispose of the

waste. The disposal route should also be agreed with the Environment Agency to ensure it meets with their satisfaction.

(d) Direct to Appropriate Disposal Site

All disposal sites require a Waste Management Licence. The licence is specific to the type of material that can be disposed of at the site. There are only a few sites that are licensed to receive organic or chemically polluting materials (includes oily waste). There will be a charge levied by the site operator for depositing material at the site. In addition there is landfill tax/levy applied to all waste deposited in a landfill.

5.2 Special Waste Transportation

Furthermore, waste oil is likely to be classified as Special Waste and should be treated as such until otherwise determined. It would therefore be subject to the Special Waste Regulations (as amended) 1996. Mixes of oil/sand and oil/seawater etc. would probably be considered as Special Waste if the percentage of carcinogenic compounds is above 0.1%. It is therefore likely that oily beach materials and oil/water liquids would have to be handled as Special Waste.

The transportation of Special Wastes generally requires that the Environment Agency (EA) be informed before the waste is removed. This is done by filling in parts A, B and D of a Special Waste Consignment Note, available from the EA, which is sent to the Department responsible for the receiving facility. This should be done at least three clear working days before the waste is to be moved.

However, in the event of an “emergency” the EA may waive the requirement for pre-notification. The licensed waste carrier completes part C of the Consignment Note and takes it with the load to the receiving facility. The licensed operator of the receiving facility then signs the consignment note to say that they have accepted the load and that they are authorised to manage it properly.

The requirement for pre-notification generally does not apply to special waste from ships. Therefore oil recovered at sea by a dedicated Oil Recovery Vessel could be discharged within a harbour to an appropriate waste reception facility without having to pre-notify the EA. However a consignment note will have to be supplied with each load sent for disposal.

To ensure that oily waste material is transported and disposed of in an appropriate manner, a licensed waste carrier and disposal company should be contracted. The Operator and Waste Disposal Company should then liaise with the EA to confirm that the disposal route identified meets with their satisfaction.

5.3 Disposal Plan

Waste Oil is classes as a hazardous waste, and should be treated as such. It would therefore be subject to the Hazardous Waste Regulations 2005. Mixes of oil/sand and oil/seawater may be considered hazardous waste if the percentage of carcinogenic compounds is above 0.1%. It is likely that oily beach materials and oil/water liquids would have to be handles as Hazardous waste.

It is not necessary to contact the Environment Agency before transport of hazardous waste. An appropriate contractor would be required to remove the waste from its initial storage site and they would then become the waste producer. All hazardous waste producers are required to register as a hazardous waste producer at the Environment Agency and the contractor should be asked to provide proof that they are registered.

A member of the Broads Authority should be present when the waste is removed to ensure that waste is removed appropriately.

5.4 Waste Disposal Action Checklist

Waste Generated from a Shoreline Clean-up Operation

(a) Temporary Storage/Clean, Treat, Stabilise, Recover, Re-use

1. Discuss requirement to establish temporary storage sites along the river bank with EA, Natural England (NE) and the Local Authority, when on or adjacent to an SSSI.
2. If agreed, identify temporary storage sites in close liaison with EA, NE and Local Authority.
3. Instruct Oil Spill Response Contractors to construct temporary storage sites. Area to be isolated, outlets and drains plugged, membrane laid, bunded area created, skips set or lagoons lined.
4. Confirm treatment methods and ultimate disposal with EA and Local Authority.
5. In close liaison with the Oil Spill Response Contractors agree course of action and assist with the necessary arrangements where necessary.

(b) Temporary Storage and then to Appropriate Disposal Site for Burial

1. Discuss requirement to establish temporary storage sites along he riverbank with EA, EN and the Local Authority.
2. If agreed, identify temporary storage sites in close liaison with EA, NE and Local Authority.

3. Instruct Oil Spill Response Contractors to construct temporary storage sites. Area to be isolated, outlets and drains plugged, membrane laid, bunded area created, skips set or lagoons lined.
4. Identify suitably licensed waste carrier to remove material from site.
5. Confirm with waste carrier the disposal route and ultimate disposal site. Liaise with EA to ensure that the disposal strategy is acceptable.
6. Ensure all associated paperwork, i.e. consignment notes, are retained and catalogued.

(c) Take to Refinery/Incinerator (mainly for oily liquids only)

1. Identify suitably licensed waste carrier to remove material from site.
2. Identify suitable facility to receive the waste.
3. Confirm with waste carrier the disposal route and ultimate disposal site. Liaise with the Regulator to ensure that the disposal strategy is acceptable.
4. Ensure all associated paperwork, i.e. consignment notes, are retained and catalogued.

(d) Direct Transportation to Appropriate Disposal Site for Burial

1. Identify suitably licensed waste carrier to remove material from site.
2. Confirm with waste carrier the disposal route and ultimate disposal site. Liaise with the EA to ensure that the disposal strategy is acceptable.
3. Ensure all associated paperwork, i.e. consignment notes, are retained and catalogued.

Section 6 : Training and Exercise Policy

6.1 Training Policy

In order to familiarise personnel in the use of this Oil Spill Contingency Plan and comply with MCA guidelines, Oil Spill Response training courses will be held for all appropriate employees of the Broads Authority and river operators with an identified role within the plan. In addition, there will also be awareness briefings with other river users and the Agencies who were involved in the consultation process.

After initial training, instruction will be specific; with the use of Tier 1 and Tier 2 oil spill response equipment located at Ludham Field Base and on board Broad Authority's launches. This will be tested and deployed using those personnel who will be responsible for operating this equipment in the event of a spill.

In order to meet the minimum levels as recommended in the MCA guidelines, the training and exercising of key personnel is detailed below.

| TRAINING IN THE USE OF THIS PLAN | | | |
|--|--------------------------------|---|--|
| Position | Timing | Type of Training | |
| The Navigation Officer and Head of Safety Management | At plan approval | MCA level 4p | |
| Broads Authority designated staff | At plan approval plus annually | MCA level 1 | |
| Chief Executive | At plan approval | Contingency Plan Familiarisation briefing | |

6.2 Exercise Programme

To ensure that the Oil Spill Contingency Plan is "user friendly" and understood by all those involved in its use, communications and practical exercises will be undertaken on an annual basis.

The Navigation Officer will hold a record of all Personnel Training and Contingency Plan Exercises. Post exercise/incident reports to be forwarded to the Counter Pollution and Salvage Officer.

| EXERCISE IN THE USE OF THIS PLAN | | | |
|---|----------------|--|--|
| Annual Exercises | Timing | Type of Exercise | |
| Desk top | First Quarter | Communications test | |
| Inspection and use of equipment | Second Quarter | Inspect and use the equipment, updating personnel in procedures and use | |
| Oil Spill Response | Second Quarter | Simulation of an Oil Spill Incident using the Oil Spill Contingency plan, mobilising equipment and personnel, as appropriate | |
| Revalidation | 5 years | Update and test | |

An Incident Management Exercise will be undertaken every three years.

Section 7 : Health and Safety

7.1 Statutory Duties

Applicable Statutory Law and its Implications

The Health and Safety at Work Act 1974 places a clear duty on all employers and persons responsible for premises to ensure that the workplace is safe and in the case of the employer, to have a safe system of work. This duty is placed regardless of whether the workers are employees; sub-contract workers, temporary workers or self employed persons.

Implementation of the Health and Safety at Work Regulations 1992 requires that all employers carry out suitable and sufficient Risk Assessments of all tasks to be undertaken in the workplace. Where five or more employees are employed then the Assessment is to be recorded and those at particular risk must be informed according.

These same regulations require that the employer executes a Safety Management System and that measurement of performance against standards is made. All employees must receive adequate training, information and supervision. Additionally, there is a requirement for all employees to receive suitable and sufficient health surveillance to ensure that they are fit to carry out the work and that the work conditions do not cause them adverse effect.

The Provision and Use of Work Equipment Regulations 1992 requires that all equipment provided for use at work is safe and fit for purpose. The persons using the equipment must be adequately trained in its use and the operation must be properly supervised.

The Personal Protective Equipment Regulations 1992 requires that all equipment provided is fit for purpose and does not cause adverse effect. That all personnel are trained in its use and that all associated risks are recorded, controlled and pointed out to those affected.

The Manual Handling Regulations 1992 requires that all work where lifting, pulling and pushing is involved, is assessed and all risks to the health and safety of those involved are reduced to a level as low as reasonably practicable.

The Control of Substances Hazardous to Health Regulations 1995 requires that all substances to which a worker may be exposed, including dusts and gasses are properly assess and the risks to health reduced to a safe and acceptable level.

7.2 Site Safety Assessment

To achieve a Safe Operation, those in charge of the Response must follow those generalised parts of the Contingency Plan, which apply in all circumstances. Additionally they must have available the means to prepare those elements of the plan which are Site and Response Specific.

The Site Safety Assessment is intended to prevent uncontrolled incidents occurring which may cause further damage to the environment or loss due to damage, injury or illness. The Site Safety Assessment should comprise the following sections:

- A. Site Survey
- B. Operations Analysis
- C. Site Control
- D. Logistics and Supplies
- E. Personnel.

Each section should be addressed jointly and severally before work commences and the appropriate steps taken to ensure that requirements are adequately met.

(a) Site Survey

A Site Survey Form should be available, which when followed correctly will add all of those site unique details which assist in the decision making process and remind staff of essentials which might otherwise be omitted.

The Site Survey should address the safety of those personnel taking part in the clean-up as well as those members of the public who may also be involved.

The following list indicates a few of those subjects which should be addressed, assessed and reported in the survey. The list is by no means exhaustive.

- communications requirements;
- exposure to temperature;
- feasibility of handrails or ropes;
- hazards to the eyes;
- lack of or shelter from weather;
- lighting conditions;
- machinery usage;
- manoeuvrability;
- manual handling;
- pedestrian traffic;
- requirement to access confined spaces;
- sample collection;
- terrain surface and incline;
- vehicle traffic;
- visibility;
- water hazards.

(b) Operations Analysis

Having surveyed the site and assessed the aspects which are influenced by the terrain, water conditions, and other pertinent factors, the On Scene Commander will assess the way in which the operation is to be conducted.

The intention to use the following facilities should be stated and the reasons for and priorities of each facility established.

- cranes;
- boats;
- breathing apparatus;
- dispersants
- fork lifts;
- hoses and pumps;
- low loaders;
- motor vehicles;
- raking and sweeping gear.

(c) Site Control

It is essential that those in charge of the spill clean-up have control of the site as soon as possible and before any significant part of the clean-up operation begins. Access to the site must be restricted to those personnel who are essential to the clean-up operation.

Arrangements must be made for the area to be barriered, closed and policed such that no one can enter the work area without reporting to the site supervisor. No workers should be allowed onsite until they have received the full vetting and briefing with respect to the Safety Plan.

(d) Logistics and Supplies

Specifically with respect to safety, it should be ensured that the appropriate equipment, materials and substances are available at the required times. Particular attention should be paid to the availability of the various sizes of protective clothing required. This sometimes cannot be established until the members of the workforce have been detailed and their individual roles and tasks decided.

Consideration must be given for a prolonged clean-up operation, possibly stretching to 24 hour operations. In this case shelter, accommodation, feeding, refreshment, rest areas, sanitation and first aid must be available.

Where training has to be delivered prior to work commencing, the necessary instructors and equipment must be available before work commences. It is an error to allow experienced workers to commence work while others are waiting for training.

Protective Clothing. If the weather is at all inclement, the protective clothing issued to workers must be warm, water and chemical-proof. It should include coveralls, gloves, boots, eye protection and headgear. If the weather is warm, the use of the same protective clothing may be necessary, but the requirements for ventilation and cooling will be greater.

Personal Protective Equipment (PPE)

PPE includes;

- breathing apparatus including respirators;
- flotation suits and vests;
- gloves/gauntlets;
- protective clothing;
- goggles, visors and safety glasses;
- hard hats;
- insulated clothing;
- reinforced boots, shoes and gloves.

First Aid. The Health and Safety (First Aid) Regulations 1981, together with the New Code of Practice on First Aid lay down the requirements for trained first aiders and the equipment that must be provided. A foreshore clean-up is considered as a special circumstance and the appropriate extra provisions should be taken into account.

(e) Personnel

Selection of personnel to carry out the clean-up must be dominated by safety considerations.

7.3 Safety on the Foreshore

During the execution of a foreshore Site Survey, access to the area to be cleaned must be carefully assessed. Account needs to be taken of low and high tides and the need for workers to access inlets, cliffs and terrain difficult to navigate. Tide tables should be consulted as well as the taking of advice from those with knowledge.

Where necessary and appropriate, the use of equipment such as handrails, ropes and ladders should be considered.

Where workers are, by necessity, required to work out of sight of one another, communication between them and the supervisor is essential.

The provision and use of Personal emergency Beacons and Distress Flares by appropriate personnel should be considered.

7.4 Safety on the Water

Agreements with the Coastguard should be reviewed and complied with. At the very least, they should be informed of the vessels operating in their area together with all necessary detail of vessel capability and persons on board (POB).

Protective Clothing. Workers operating from seagoing vessels should be equipped with harnesses built to BS 1397. They should, at all times, wear a self or automatic inflating lifejacket and should be protected by a survival suit.

7.5 Safe Operations

Risk Assessment

Hazard Identification. The identification of all hazards at a worksite or spill location is a singular task that should be done by involvement of the people who are expected to carry out the work. The supervisor responsible for co-ordinating the risk assessment should ensure that all hazards are identified before the next step in the process is attempted. A hazard is an object, place, processor circumstance with the potential to do harm in the form of injury, damage, delay or pollution.

7.6 Decontamination

Conditions requiring decontamination. Where workers have been wearing waterproof and protective clothing it is likely that the clothing will become contaminated by crude oil or chemicals that might have been used during the clean-up operation. The clothing needs to be cleaned to prevent further contamination. Facilities for such cleansing should be made available either near to rest or feeding areas or close by, but clear of the work site

Personal hygiene practices on the job. Workers should be instructed on the dangers of ingesting hydrocarbons and chemicals through contact of contaminated equipment or clothing, such as gloves via the mouth and nose.

Facilities for removing protective clothing and washing before consuming food or smoking should be made available.

Decontamination area drainage. The decontamination area where clothing and personal equipment is cleansed should be arranged so that cleansing water and contaminants are drained into tanks. Care should be taken to ensure that contaminated waste does not drain into either the normal drainage system or into the soil under the decontaminated area.

Disposal of contaminated clothing. Clothing which is not fully washable or capable of having all traces of contaminant removed may need to be disposed of safely. Such clothing may comprise Special or Hazardous Waste. If incineration facilities do not exist at the site, the clothing may need to be delivered to the local authority or to a Special Waste Contractor.

Section 8 : Press and Public Information

8.1 Media and Information Policy

In the event of a pollution incident, it will be necessary for an efficient and comprehensive information service to be brought into action so as to:

- Deal professionally with the representatives of the media.
- Co-ordinate and release information to the general public regarding the pollution incident and the Broads Authority's response to it.
- Keep staff and Authority members informed of developments regarding the progress of the incident; insofar as it affects their responsibilities.
- Minimise the pressures on those directly concerned with combating the spill.

Responsibility for media relations will be dealt with by the Broads Authority's Public Relations Office (PRO). All enquiries are to be forwarded to the Broads Authority's PRO.

8.2 For guidance it would be expected as follows:

Tier 1 spill - Broads Authority involvement only

Tier 2 spill - Broads Authority and Norfolk County Council's involvement

Tier 3 spill - not applicable.

It is essential that the media are provided with a 'balanced' view of the incident and actions taken. Remarks like 'No comment' only increase rumour and fuel unnecessary speculation. Below is the format of an Initial Press Statement that can be used by a responsible Broads Authority representative pending full details becoming available and a press release issued.

8.3 Initial Press Statement

"The Broads Authority confirms that an incident has occurred (*state where and give brief description*) at approximately (*give time*) hours today.

Emergency response procedures have been initiated and relevant authorities (*have been/are being*) advised. All support services are being co-ordinated through the Authority's incident response team and every possible effort is being made both to minimise risk to personnel at the scene and to contain and mitigate any effects.

Further information will be released, (*as it becomes available/at a press conference scheduled for time*) today".

Section 9 : Contact Directory

9.0 Contact Directory

Broads Authority

Head Office, Dragonfly House, 2 Gilders Way,
Norwich, NR3 1UB

Tel: 01603 610734

Fax: 01603 765710
email: broads@broads-authority.gov.uk

Navigation Officer

Home Tel: 01508 494979
Mobile: 07771 617210
email: adrian.vernon@broads-authority.gov.uk

Chief Executive

Mobile: 07796 224224

Head of Safety Management

Home Tel: 01692 583359
Mobile: 07899 891429

Broads Control, Dragonfly House

Tel: 01603 756056
Fax 01603 765710
email broads.control@broads-authority.gov.uk

Senior Ecologist

Work Tel 01603 756015
Mobile 07711 451503
email andrea.kelly@broads-authority.gov.uk

Maritime and Coastguard Agency

Yarmouth Coastguard Maritime Rescue
Co-ordination Centre (24 hours)

Tel: 01493 851338
Fax: 01493 852307

Environment Agency

Regional Control Room (24 hour) - all contacts
(Marine Incident Standby Officer)

Tel: 0800807060
Fax: 01733 231944

Marine Management Organisation

Marine Management Organisation Emergency Contact dedicated Spill Response number
0870 785 1050

If there is no reply call the 24hr Duty Room on: 0845 051 8486

Fax Numbers

DEFRA Duty Room(provides 24 hour cover for
MMO

0845 051 8487

MMO (not 24hr

0191 376 2682

Non emergency contact address

dispersants@marinemanagement.org.uk

Marine Management Organisation, PO Box
1275, Newcastle Upon Tyne NE99 5BN

Natural England

Norfolk Team, Dragonfly House, Norwich
Tel: 01603 674920
Fax: 0300 060 1991
email: norfolk@natural-england.org.uk

Norfolk Team (out of hours)
Rick Southwood
Tel 01603 720788

Peterborough Head Office
Tel: 01733 455000
Fax: 01733 568834

EastPort UK (Great Yarmouth Port Company)

Harbour Office
Tel: 01493 335501
Fax: 01493 852659
24 Emergency
Tel 01493 335511
email portops@eastportuk.co.uk

HM Customs and Excise

Haven Bridge House, Great Yarmouth
Tel: 01493 843686
Fax: 01493 337217

Norfolk County Council

Resilience Team
Tel: 01603 222016

Resilience Manager
Tel: 01603 222014
Fax: 01603 223010

Emergency Planning Duty Officer (24 hrs)
Pager 07623 837737
Mobile 07771 527243

RSPB

Regional Office, 65 Thorpe Road, Norwich
NR1 1UD
Tel: 01603 661662
Fax: 01603 660088
email: helen.leach@rspb.org.uk
Strumpshaw Reserve
Tel: 01603 715191
Fax: 01603 727927
email strumpshaw@norfolkwildlifetrust.org
Berney Marshes Reserve
(office not manned - for emergency ring
Strumpshaw)
Tel: 01493 700645
Fax: 01493 842195
Mobile 07711 435711

Norfolk Wildlife Trust

22 Thorpe Road, Norwich NR1 1RY
Tel: 01603 625540
Fax: 01603 598300
email: admin@norfolkwildlifetrust.org.uk

Ted Ellis Trust

Warden Wheatfen Reserve

Tel: 01508 538036
email info@wheatfen.org

National Trust

Warden Horsey

Tel: 07885 581 070
email stephen.prowse@nationaltrust.org.uk

Norwich City Council

District Emergency Planning Officer

Tel: 01603 212269
Fax: 01603 213005

North Norfolk District Council

Civil Contingencies

Tel: 01293 516172
Fax: 01263 514267
email Emerg-planning@north-norfolk.gov.uk

Broadland District Council

Emergency Planning Manager

Tel: 01603 430643
Fax: 01263 731677
Mobile 07884 976716
Email Emergency-planning@broadland.gov.uk

South Norfolk District Council

District Emergency Planning Officer

Tel: 01508 533606

Great Yarmouth Borough Council

Head of Engineering Services

Tel: 01493 846435

Waveney District Council

CCTV Ops Room (24 hrs)

Tel: 01502 523523
Fax: 01502 523363

Oil Spill Response Contractor (Tier Two)

Braemar Howells
Emergency Response Base
3 Stockwell Centre
Stephenson Way
Crawley
West Sussex
RH10 1TN
Stanstead
Unit 6,
Harold Close,
Harlow,
Essex CM19 5TH

Tel: (24 hour) 08700 73776673
Fax: 01646 663705
email: info@braemarhowells.com
Tel: +44 (0)1279 424644
Fax: +44 (0)1279 424902
e-mail: stanstead@braemarhowells.com

| | | |
|-------------------------------------|--------------|-----------------|
| EMERGENCY OIL SPILL CALL OUT | 08700 | 73776673 |
|-------------------------------------|--------------|-----------------|

Oily Waste Disposal Contractors

Binders
Progress Works
Claydon
Ipswich Suffolk IP6 OAG

Tel: 01473 830582
Fax: 01473 832175
email: info@binders.co.uk

Section 10 : Resources Directory

10.0 Tier 1 - Resources held by Broads Authority:

| | |
|----------|--|
| Vessels | 8 x River Patrol launches 1 x 4m RIB, 25 hp outboard 1 x 28' twin screw steel work barge 1 x 24' steel work barge 1 x 24' weed harvester/litter collecting barge 3 x 16m Wherries with open hold 3 x 18m Wherries with open hold Tug Cannonbrook 12 metre Tug Richard 9 metres Tug Bantam 7.3 metres 4 cranes on pontoons (various locations on system) 1 x Land based crane at Dockyard 2 x JCB excavators 1 x JCB tractor with trailer and 2 tonne lifting arm |
| Vehicles | 2 x Ford Transit Tipper Trucks 4 x 4 wheel drive pickups 2 x LWB Landrovers plus work trailers 1 x Ford Escort Van |

Oil Pollution Containment and Clean-up Equipment held by the Broads Authority

Field Base, Ludham

| | |
|------------------|---|
| Containment boom | 1 x 20m inflatable boom 2 x 5 m inflatable booms |
| Sorbents | 6 x 3m heavy duty sorbent booms 20cm 3 x 3m Arcosorb booms 12cm 50 x sorbent pads 46 x 46cm 1 x 150' x 36" roll Matasorb sheet |
| Miscellaneous | Inflator for containment boom 50 x heavy duty oily waste disposal sacks 60 x light rubbish sacks 8 x oil sample bottles Rond anchors and rope Mudweights Toolbox and miscellaneous hand tools Telescopic floodlights/Floodlight stand First Aid Kit |
| PPE | Hard hats Waterproof suits Goggles Rubber gloves Leather gauntlets |

Held in Oil Spill Trailer

| | |
|------------------|--|
| Containment Boom | 3 x 20m inflatable containment boom 2 x 5m inflatable containment booms |
| Sorbents | 8 x 3m sorbent boom 20cm 200 x sorbent sheets 46 x 46cm |
| Miscellaneous | Inflator for containment boom plus 12 volt adaptor Miscellaneous ropes/shackles etc. Rhond anchors Mudweights 14 x heavy duty oily waste disposal sacks 50 x sandbags 50 x plastic rubbish sacks 2 x 'Oil Spill No Entry' signs 1 x red/white safety tape Miscellaneous tools Torches / Batteries Spot light. Flashing warning lights. Patching/leak control equipment 2 x wreck buoys Oil spill sample kit 2 x Buckets First Aid Kit Mechanical hand Light on clamp Foot pump Hand Saw Crow Bar Piston Air Pump |
| PPE | 7 x long arm rubber gloves 2 x vapour respirators 2 x eye wash kits 16 x goggles 1 x safety glasses 1 Box face masks 3 x visors 1 x ear defenders 4 x hard hats 3 x overalls 3 x yellow waterproof suits 2 x work gloves 100 x disposable rubber gloves 2 x First Aid Kits Handwipes Handwash 1 x blanket Sun Screen (Factor 30) Sharps Container 1 x Box J Cloths 10 x Complete PPE kits |

Kits held on each of 8 Broads Authority patrol launches and 3 workboats

- 1 x 3m sorbent boom 10cm diameter
- 1 x sorbent pillow 40 x 8cm
- 10 sorbent sheets 46 x 46cm
- 1 x nylon cord
- 2 x heavy duty oily waste disposal sacks/ties
- 1 x goggles
- 1 x gloves
- 1 x Instruction Sheet

Tier 2 equipment

Resources held by Tier 2 Response Contractor Braemar Howells Ltd for immediate deployment on call-out basis (on site 0 - 2 hours).

Equipment commensurate with Tier 2 responder. Exact equipment list to be reviewed at time of contract placement.