



**BMT Cordah Limited**  
ENVIRONMENTAL CONSULTANCY  
AND INFORMATION SYSTEMS

**RP 549: Development of a  
Protocol for the Treatment  
and Disposal of Oily Waste  
in the UK**

**Task 3: Specific Capacities  
from UK Companies**

**March 2007**



**BMT Cordah Limited,**  
4<sup>th</sup> Floor Holland House  
1-4 Bury Street  
EC3A 5AW  
Tel: +44(0)207 015 0341  
Fax: +44(0)207 015 0344  
Email: [enquiries@bmtcordah.com](mailto:enquiries@bmtcordah.com)  
Website: [www.bmtcordah.com](http://www.bmtcordah.com)

**Report No:** E.MCA.014/2007  
**Status:** Final  
**Version:** 1  
**Date of Release:** March 2007  
**Terms:** The content of this report is confidential.

**Approved and authorised for issue:**

Stuart Hume, Principal;  
Consultant

David Sell, Director



Member of the BMT group of companies

---

## CONTENTS

<b>1</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>2</b>	<b>METHODOLOGY FOR TASK 3 – ASSESSING SPECIFIC COMPANY CAPACITY .....</b>	<b>2</b>
2.1	Contact list developed	2
2.2	Questions developed	2
2.3	Contact made	4
<b>3</b>	<b>TASK 3 RESULTS.....</b>	<b>6</b>
<b>4</b>	<b>PROJECT GIS .....</b>	<b>7</b>
<b>5</b>	<b>PROJECT TEAM SITE VISITS.....</b>	<b>7</b>
<b>6</b>	<b>APPENDIX A: LETTER/EMAIL SENT TO THOSE CONTACTED .....</b>	<b>9</b>
<b>7</b>	<b>APPENDIX B: CD-ROM .....</b>	<b>10</b>
<b>8</b>	<b>APPENDIX C: FIGURES .....</b>	<b>13</b>

## TABLES

<b>Table 1. Overall project structure</b>	<b>3</b>
---	----------

## ABBREVIATIONS

<b>BCA</b>	British Cement Association
<b>BOSCA</b>	British Oil Spill Control Association (now known as UK Spill)
<b>EA</b>	Environment Agency
<b>SEPA</b>	Scottish Environment Protection Agency
<b>EHSNI</b>	Environment and Heritage Services, Northern Ireland
<b>GIS</b>	Geographic Information System
<b>WML</b>	Waste Management Licences

## ACKNOWLEDGMENTS

Project jointly funded by: Maritime and Coastguard Agency, Environment Agency, Energy Institute, and EROCIPS project partnership

The Project Team would like to thank the statutory environment agencies (EA, SEPA & EHSNI), associations and particularly all company representatives who assisted in the compilation of the Task 3 database, through submission of information and details of their capacity. Information specifically deemed as confidential has been labelled as such within the database.

## TASK 3 – Specific Capacities from UK Companies

### 1 INTRODUCTION

As part of a wider study for the Maritime Coastguard Agency (MCA), BMT Cordah Limited (BMT Cordah) have completed a study to identify the specific capacities from companies across the UK who can provide facilities for dealing with oily waste. This work was completed between April and June 2006 by the BMT Cordah project Team for Project Reference: RP 549 Development of a Protocol for the Treatment and Disposal of Oily Waste in the UK. The overall project objective focuses on the management and infrastructure in place to deal with oily waste resulting from a marine spill in the UK.

The project structure is summarised below in Table 1.

**Table 1 Project structure**

TASK	Objective	Description
1	To determine the existing level of contingency arrangements in place for all UK Maritime Local Authorities (MLA's).	Project work included a web-based, online questionnaire designed for MLA representatives to input information concerning the local authorities current level of preparedness to manage large quantities of oily waste.  Questions asked include whether intermediate waste storage sites have been pre-identified within their geographical boundaries, and the extent that waste management arrangements are currently included in their oil spill contingency plans.
2	Identify potential locations within the UK, where companies could provide storage/recovery/disposal operations for oily waste.  Assess the current level of UK capacity.	Desk-based review of information provided by UK statutory authorities, review of industry sectors that may be of assistance (such as cement manufacturing and incineration operations) and provide an assessment of the level of UK capacity.
3	Prepare a detailed, UK-wide inventory of companies that may be able to provide services in the storage/recovery/disposal of oily waste.	Telephone-based interviews with small, intermediate and large companies that either advertise, or listed within trade directories, etc. to obtain specific details concerning their capability to assist within a response effort to deal with large quantities of oily waste.
4	Preparation of a guidance document for general use by MLA's and the provide sector, that captures the latest techniques, tools and technologies associated with the management of oily waste following a maritime spill.	Preparation of a document that uses an easy-to-read format, contains a summary of applicable UK legislation, a statement by statutory regulators detailing the support they will provide and information concerning potential tools, techniques and disposal options that could be employed. In addition, a "blueprint" of an intermediate storage site is provided along with an outline technical specification concerning bottom lining, drainage requirements, and other engineering specifications.

Task 3 involved using the information that was gathered previously during Task 2 from the statutory agencies (Environment Agency (EA), Scottish Environmental Protection Agency (SEPA), Northern Ireland Environment and Heritage Service (EHSNI) and the Environmental Services Agency (ESA). A variety of companies were subsequently contacted for details of their specific capability associated with handling and/or storage facilities. In addition, information about the potential disposal routes for waste oil were also gathered.

## 2 METHODOLOGY FOR TASK 3 – ASSESSING SPECIFIC COMPANY CAPACITY

### 2.1 Contact list developed

In addition to web searches, the sources of information listed below were used to ensure a representative sample of contacts from the waste sector were approached with the aim of ascertaining specific capacities.

- **EA, SEPA and EHSI** provided raw data about licensed sites and operator locations based on their Waste Management Licenses (WMLs) – where possible these were contacted to ascertain further details.
- **UKSpill** provided contact details of their members dealing specifically in the transfer, handling and treatment of oil from a maritime spill.
- **Department for Environment Food and Rural Affairs (DEFRA)** provided a recent consultation list which includes users with an interest in waste issues.

### 2.2 Questions developed

BMT Cordah's initial proposal for this study (Ref: E.MCA.012/2005) dated 28<sup>th</sup> July 2005 listed a number of specific services areas to be investigated during Task 3 which are listed below:

- the supply of oily water separation tanks;
- incineration facilities;
- recycling facilities for waste oil;
- reuse/recovery from facilities including oil refineries and cement manufacturing plants;
- remediation technologies and service companies;
- bioreactors;
- solvent extraction/washing facilities;
- thermal desorption facilities;

- reduction and oxidation facilities;
- mobile waste treatment plants and details of the types of waste that can be treated, capacities currently available and indicative costings for each process;
- plus others, to be identified as the study continues.

During the telephone interviews, it quickly became apparent that it would not be possible to contact company representatives who could provide specific items in relation to the handling and treatment of oily waste. For example, there were no solvent extraction or washing facilities identified from any specific company, and details pertaining to solvent extraction facilities were absent from any company directory or web searches.

The reason as to why such details were hard to find represents the current state of the UK market. At this time, the overwhelming majority of oily waste is handled by a series of waste transfer stations who provide storage facilities in the form of waste oil tanks and skips. The use of thermal desorption facilities and solvent extraction facilities is therefore, limited. In relation to final disposal sites for oily waste, the prime routes at this time is through disposal at landfill sites (meeting the Waste Acceptance Criteria), reprocessing and incineration.

To reflect the current state of the market, the questions asked by the BMT Cordah Project Team were modified slightly, and comprised the following:

- Details including company name, address, contact name, job title, phone number/email address and the company website.
- Location of company equipment and/or facilities.
- Region the company provides cover for their services, or confirmation that this is UK-wide;
- Type of facility or service provided by the company;
- Type of oil handled, or stored;
- Whether the oil handled is in pure form, or mixed with contaminants such as solid material, water, etc.
- Quantity of waste oil that is handled per unit of time (typically 1 year) in tonnes;
- Treatment method of oil waste, which included:
  - Re-processing
  - Oil water separation
  - Emulsion breaking

- Stabilization
  - Bioremediation
  - Beach washing
  - Sand washing
  - Landfill
  - Incineration
  - Thermal desorption
  - All of the above
  - Energy recovery
- Number and location of treatment centres;
  - Details of the potential disposal locations for the waste oil;
  - Details of existing regulatory permits in place, such as Waste Management Licences;
  - Whether the information collected should be treated in strict confidence;
  - Opportunity to provide input into the Task 4 Guidance Document;
  - Additional notes, date of contact by letter/email, date of contact by phone, initials of the BMT Cordah Project Team who compiled the information, and whether confirmation was received from the company agreeing with the information requested.

## 2.3 Contact made

Contact was made by post, email, telephone calls and in person. The covering letter sent to those contacted is attached in Appendix A. As part of this assignment, BMT Cordah staff took the opportunity of targeting a collection of oil spill responders attending the Spill06 and Oceanology exhibition and conference (London, 21-23 March 2006) as a means of gaining an overview of the industry. Contacts were made with representatives of the oil spill community primarily as part of TASK 3 and TASK 4.

Of particular relevance to this study is the **National Spill Alliance** (formally the UK Spill Alliance) <http://www.ukspillalliance.com>. The Edge Group, members of the UK Spill Association, are acting as a facilitator for the National Spill Alliance, which is a commercial enterprise set up to act as an agency to benefit spill contractors seeking work from the insurance industry, and supports the use of Accredited Spill Contractors. It forms a network of consultants, geologists, hydrologists, biochemists, clean up contractors,

chemists, chemical engineers, environmental scientist, marine spill contractors who deal with environmental problems for the insurance industry, loss adjusters, statutory environmental agencies and the MCA.

### 3 TASK 3 RESULTS

The results of Task 3 are compiled into an MS Excel spreadsheet entitled: *RP549 Task 3 Company Database* which is provided as Appendix B of this report on CD-ROM. In summary:

**214** company details working in the waste management sector

**51** were contacted by letter/email and **49** were contacted by phone. **96** organisations approached (involving multiple telephone calls and follow up emails to access the appropriate contact point)

**29** responded to provide further details which have been compiled in the MS Excel spreadsheet.

Information acquired during Task 2 has been combined with additional company details obtained by BMT Cordah. The coverage includes the regions: England, Wales, Scotland and Northern Ireland. Note that capacities from landfill sites are not included, as it is not likely that large quantities of oily waste will use landfill as a disposal route, due to the requirement to meet strict Waste Acceptance Criteria (WAC). An overview of the current situation with respect to landfill sites is presented within Task 2 Report. A summary of (potentially) available capacity from contractors is presented below:

Sector\ Region	collection, cleanup & treatment	transfer	storage	reuse – oil refineries	reuse-cement & lime industry	reuse - steel production
<b>Northern Ireland</b>	4	8		0	2	0
<b>Scotland</b>	35	63		1	1	1
<b>England</b>	38	60		5	15	4
<b>Wales</b>	1	0		2	2	3
<b>e.g.</b>	biffa waste services	biffa/shanks etc		Shell/BP	Lefarge/Bluecircle	Integrated plants
<b>Source</b>	WMLs from the EA,SEPA,EHSNI	ESA = 150	& 15	UK Petroleum Assoc	BCA member locations	UK Steel

Figures presenting the locations of these facilities are provided in Appendix C.

## 4 PROJECT GIS

The Geographical Information System (GIS) constructed during the study includes the geographical positions of the potential oily waste facilities identified through information received from UK statutory environmental agencies, web searches and telephone interviews. This GIS has been used to produce a number of illustrations that graphically represent the **location** and **type** of each facility spatially referenced across the UK.

These figures are provided in Appendix C as Figure 1 to 10c, and comprise the following:

**Figure 1** – UK sites of potential disposal, treatment and reuse of oily waste

**\*Figure 2** – Location of UK Hazardous waste landfill sites licensed to accept oily waste

**Figure 3** – Location of UK Cement companies

**Figure 4** – Location of UK Steel Furnaces

**Figure 5** – Location of UK Oily waste transfer stations

**Figure 6** – Location of UK Oily waste treatment and storage centres

**Figure 7** – Location of UK Oil Refineries

\*Note that Figure 2 reflects the location of hazardous waste landfill facilities only, and does not reflect the location of sites with available or even potential capacity to receive large amounts of oily waste. In addition, landfill as a disposal route is unlikely to be feasible, due to the requirement for waste to meet the WAC.

Copies of the MapInfo files used to compile the Project GIS are provided within Appendix A on CD-ROM.

As a caveat it should be noted that some information has been obtained over the telephone from members of the waste management company staff - therefore some anomalies may well have been generated due to human error (e.g. one responder stated that 200 tonnes of oily waste could be handled at their facilities in a day; another stated 208 tonnes per week). Additional notes accompanying the figures extracted from the GIS are provided in Appendix B.

It is important to note that the range of waste dealt with by the contractors identified may be limited, and that they will not be used to receiving oily waste derived from shoreline clean-up operations following a maritime spill. In addition, some contractors may also be operating around full capacity, and may not have spare capacity to accommodate extra waste streams in the future.

## 5 PROJECT TEAM SITE VISITS

A series of site visits were expected for Task 3 to obtain a detailed, technical understanding associated with the reuse of oily waste within certain types of operations, such as cement

manufacture, oil refining, etc. Despite repeated requests by BMT Cordah staff, no site visits could be organised, due to an underlying reluctance by industry representatives to engage in early, high-level discussion. Instead, industry representatives requested a meeting within a wider forum, with various industry sectors involved and parties from the statutory authorities in addition to MCA staff, all present. Whilst such an activity (or workshop) would have been very useful to the present study, this was not included within the present scope of the project.

Since initial discussions of a site visit involving the MCA the BCA and Lefarge have requested that the following message be passed on, on their behalf:

“We [*Lefarge Cement*] have considered this issue both technically and commercially in some detail. The issues that would have to be faced in order to use such a potential fuel in the cement process are very complex and bearing in mind that any such opportunity would most likely be a spontaneous reaction to a specific problem we concluded that it would not be possible to react quickly enough in the timescales required. This consideration combined with the current intensive and extended processes required by the Environment Agency and the public consultation issues involved means that we could not provide a solution in the timescales required by the MCA.”

## 6 APPENDIX A: LETTER/EMAIL SENT TO THOSE CONTACTED



Maritime and Coastguard Agency  
Bay 1/09  
Spring Place  
105 Commercial Road  
Southampton  
SO15 1EG  
United Kingdom

### ASSESSMENT OF CAPACITY FOR THE MANAGEMENT OF OILY WASTE

Dear Sir/Madam,

BMT Cordah Limited (BMT Cordah) have been commissioned by the Maritime and Coastguard Agency (MCA) to assess the level of existing arrangements for dealing with large volumes of oily waste arising from a maritime spill incident. This is part of a wider study which aims to develop a protocol for the treatment and disposal of oily waste in the UK.

To assist us in the construction of an inventory of UK infrastructure currently in place to deal with oil waste, we would like you to provide BMT Cordah with information concerning the type of facility or service you provide, the type of oil dealt with, and whether oil and water, oil and sediment, etc. can be recovered, treated, etc.

We would also like to gain an overview of your company's overall UK capacity for dealing with oily waste (i.e. what quantity of waste, in tonnes, can be dealt with by the company per unit of time) and if applicable where the resultant oil goes next, after it has been treated. The cement and steel industry will also be approached to ascertain the levels of oil that can be utilised and where. In total there are just 7 questions which BMT Cordah will ask that can be covered over the telephone in approximately 5-10 minutes.

The resulting information obtained from this data collection exercise will be entered into a Geographic Information System (GIS) and stored by the MCA. Please note that BMT Cordah has been commissioned as a consultancy independent of any manufacturing or product marketing interests. Information gathered through the questionnaire will not be used for marketing or any other commercial purpose.

Towards the end of the project, BMT Cordah will prepare a written guidance document which will detail the various ways in which large volumes of oily waste can be handled during shoreline clean-up operations. The aim of this document is to ensure a national consistency of approach in the design criteria of such waste-related operations. When you speak to BMT Cordah staff, you will have the opportunity to identify areas that your company would like to see covered within this Guidance Document.

We would greatly appreciate your co-operation with BMT Cordah's questionnaire. If you wish to speak directly to an MCA representative concerning this request, please contact me on 02380 329 411 or contact me by e-mail: [Kevin.Colcomb@mcga.gov.uk](mailto:Kevin.Colcomb@mcga.gov.uk)

BMT Cordah staff would like to contact you by telephone in the coming weeks. If you would prefer to select a time that is convenient, please feel free to contact them first. Within BMT Cordah, staff dealing with this project are listed below:

AnneMarie Greenwood	0207 234 9176
Catherine Banks	0131 445 6117
Rubina Sharif	0131 445 6120

Thank you for your time and input.

Yours faithfully

Kevin Colcomb  
Counter Pollution and Response Branch  
Maritime and Coastguard Agency

## 7 APPENDIX B: CD-ROM

Containing:

- MS Excel spreadsheet entitled: RP549 Task 3 Company Database
- GIS .TAB files for use with ERSI MapInfo

### **Using the UK Oily Waste Sites GIS system**

Figures 1-6 have all been produced on a Mapinfo GIS system, from the workspace Oil\_waste\_sites.WOR

The workspace consists of the following .TAB files:

- Cement companies.TAB
- Steel companies.TAB
- Landfills.TAB
- Transfer stations.TAB
- Oil refineries.TAB
- Treatment\_Storage Scotland, England & Wales.TAB

Please note that the 'treatment\_storage' file contains sites in Northern Ireland, even though it is called '... Scotland, England & Wales'.

These .TAB files all have accompanying .ID and .MAP files and an Excel spreadsheet (which is in place of the .DAT file that Mapinfo would otherwise automatically produce).

Within the workspace is also the MCA logo, the BMT logo and the background map file which is called 'ponet\_poly'.

The workspace references all the files as being on the local drive of the computer in BMT Cordah's Edinburgh office. However, Mapinfo will automatically ask where to find these files when you open the workspace for the first time, and you should just show the computer where to find them on your own computer, where you have saved them.

When you open the workspace, the front screen will be Layout:1, which is the layout of Figure 1 'UK Oily Waste Disposal Sites'. This displays "Treatment\_Storage\_Scotland\_En,...,ponet\_poly Map" and has a legend box displaying "Legend of Treatment\_Storage\_Scotland\_En,...,ponet\_poly Map:3".

Layout 2 is the layout of Figure 2 'Location of UK Solid Hazardous Waste Landfill Sites'. It displays "Oil\_refineries,...,ponet\_poly Map" as the main map, and it displays "Landfills,ponet\_poly Map" in the smaller, right-hand box showing the Aberdeen landfill sites zoomed in.

Layout 3 is the layout of Figures 3-6, and it displays "Oil\_refineries,...,ponet\_poly Map". You must go to the layer "Oil\_refineries,...,ponet\_poly Map" and go to 'layer control', in the Map menu, to alternate between the layers (i.e. cement companies or transfer stations or treatment and storage centres, etc) which you want to display. Layout 3 will change accordingly, and to save a particular figure, you must change the figure number and title in the top right-hand box in the Layout 3 window before saving the image (File -> Save window as...).

Layout 4 is the layout of Figure 7 'Location of UK Oil Refineries' and it displays "Oil\_refineries,...,ponet\_poly Map".

It should be noted that capacity information for treatment and storage centres has, however, been provided to the Project Team in a variety of alternative units, namely litres, gallons, cubic metres, centimetres, tonnes per week and tonnes per day, in addition to tonnes per annum. The centres whose capacity was provided in alternative units have not been mapped, and are listed below. In addition, some sites have different permitted capacities for treatment of oily waste as opposed to the storage of oily waste. These centres have also not been mapped and are listed below. Please note that some treatment/storage centres which have been mapped may only be treatment centres or only storage centres (unspecified in database).

<b>Company Name</b>	<b>OS X</b>	<b>OS Y</b>	<b>Capacity</b>
Malary Environmental	552033	106339	40000 gallons
Malary Environmental	546100	269200	40000 gallons
Cleansing Services Grp	360000	173800	480 tonnes/week Treatment; 665 tonnes Storage
Seaboard plc	528500	136700	18,000 litres
Associated Reclaimed Oils	539478	178921	Treatment capacity - 70,000 litres per day; Storage capacity - 295,000 litres.
Eco Oil Ltd	628440	233280	No limit on Treatment capacity; Total Storage capacity - 7481 cm
Oikos Storage	577628	182166	6800 cubic metre

Binder Pollution Control	613500	249000	Treatment through oil/water separator - max 1.6 cm; Storage - max volume oil/water = 120cm and max volume of separated oil = 4.5 cm
C & L Waste Oil Collection Ltd	652100	306300	78000 gallons
M Gaze & Co Ltd	641500	297100	Treatment capacity - no limit on licence; All Waste Storage (incl. Oil) - 1283 cm
Frogson Waste Oils	434800	388900	0.5million litres Storage capacity (30% of that is a realistic max)
Oakwood Fuels	465238	360624	Treatment capacity - 4 tonnes per hour; Storage capacity - 240 tonnes
Castle Oil & Waste Services	384996	350590	400 tonnes per day
Central Waste Oil Collections	398739	293247	27000 gallons
Mechanical Cleansing Services	409121	289754	20000 litres
Edge Enviro Services	638100	165000	5 tonnes/hour
Viridor Waste Management	486100	159700	250 tonnes a day
Viridor Waste Management	436900	388300	250 tonnes a day
Thompson Recycled Oil	138000	512000	19,600 gallons
MacWaste Ltd	159000	496000	45 cubic metres
Atlas Environmental Ltd	151000	507000	208 tonnes per week
Orkney Islands Council	344600	993400	10.0cm
Orkney Islands Council	326100	1009900	15.0cm

For 30 treatment/storage centres, no capacity information has been provided by the relevant statutory authority.

## **8 APPENDIX C: FIGURES**