

The Integration of Waste Legislation into Response Planning and Operations

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Introduction

The Environment Agency is an independent Government sponsored body responsible for, amongst other things, the regulation of waste storage, treatment and disposal in England and Wales. The Scottish Environment Protection Agency has similar functions in Scotland, whereas waste regulation falls to the Environment and Heritage Service in Northern Ireland.

The United Kingdom National Contingency Plan for Marine and Offshore Spills makes a number of references to the environmental regulator and the need to comply with environmental regulations.

The role of the environmental regulator and how compliance is to be achieved is not prescribed. Practical experience has shown that the presence of a regulator can be viewed either as a hindrance to the response and a threat to the responder or as a key team member in facilitating an effective response.

This paper will outline the new statutory context of contingency planning in the United Kingdom and explain the duty placed on regulators in dealing with emergencies involving hazardous waste.

The paper will detail how regulations can be a useful guide to contingency planners and responders. Reference will be made to the progress being made in the collaborative Interreg EROCIPS (Emergency Response to Oil, Chemical and Inert Pollution of the Sea) project and by the UK Maritime and Coastguard Agency (MCA) led research project into waste management.

A new guide on waste management in the form of an MCA Scientific, Technical and Operational note is currently out to consultation with other UK environmental regulators. The paper will describe how the draft note intends to inform response planners and act as a guide to the clean up operation.

Legislative Basis for Response Planning

Civil Contingencies Act

Contingency Planning in the United Kingdom has recently undergone one of the most comprehensive revisions in many years.

The Civil Contingencies Act 2004 has provided a new framework for co-operation between Government, emergency services, Local Authorities and Government Agencies. Civil Protection at the local level previously took place under Civil Defence legislation dating from 1948. This legislation defined the events local responders should prepare for in terms of a “hostile attack” from a foreign power. With the ending of the Cold War such a threat evaporated and local efforts have focused on preparing for civil emergencies such as localised flooding and major transport accidents. In modernising the legislation a new updated definition of an emergency was necessary, which now includes threats to the environment.

An emergency is defined as :-

- an event or situation which threatens serious damage to human welfare;
- an event or situation which threatens serious damage to the environment;
or
- war, or terrorism, which threatens serious damage to security.

The Act establishes a new statutory framework for civil protection at a local level. Local responders are seen as the building blocks of resilience in the United Kingdom. The Act establishes a clear set of roles and responsibilities for local responders, giving greater structure and consistency to local civil protection activity and establishes a sound basis for performance management.

The Act divides local responders into two categories depending on the extent of their involvement in civil protection work, and places a proportionate set of duties on each.

Category 1 responders include Police, Fire authorities, Ambulance, Maritime and Coastguard Agency, Local Authorities, Health bodies such as the Health Protection Agency and Government Agencies such as the Environment Agency. Category 2 responders include Health and Safety Executive and Water and Energy companies. Category 1 responders are required to :-

- assess the risk of emergencies occurring and use this to inform contingency planning;
- put in place emergency plans;
- put in place Business Continuity Management arrangements
- Put in place arrangements to make information available to the public about civil protection matters and maintain arrangements to warn, inform and advise the public in the event of an emergency.
- Share information with other local responders to enhance co-ordination
- Co-operate with other local responders to enhance co-ordination and efficiency.

Responders are currently co-operating in local resilience forums compiling local risk registers and developing measures to mitigate impacts of incidents and address recovery and return to normality. As a category 1 responder the Environment Agency will form part of the local resilience partnerships and will support the working groups who will be drawing up waste plans to facilitate recovery. The Maritime and Coastguard Agency is, as part of its research into the treatment and disposal of oily waste, conducting a survey of maritime local authorities to assess the ranking of maritime incidents in their risk registers. The authorities are being asked to comment on the consequences of any ranking on the development of their contingency plans. There is a concern that although Local Authorities are under a duty to prepare contingency plans for the first time, the perceived risk could be ranked low to the point where the issue is not adequately addressed.

The Civil Contingencies Act does not replace existing legislation. Emergency plans are already required under specific legislation.

Major Industrial Hazards

The Control of Major Accident Hazards (COMAH) Regulations implements European Council Directive 96/82/EC. Amongst other things, local authorities around scheduled processes are required to prepare plans to contain and control incidents so as to minimise the effects, and to limit damage to persons the environment and property. The plans must contain measures to implement the steps necessary to protect persons and the environment from the effects of major incidents. Arrangements need to be included in the plans for communicating necessary information to the public and to the emergency services and authorities. The plan must provide for the restoration and clean up of the environment following a major accident.

Recent experience of a Kerosene leak to ground has revealed that waste management has not been sufficiently addressed in some COMAH plans. The Environment Agency is a statutory consultee in the plan production process and will be using lessons learnt from recent incidents when reviewing plans.

Pipelines

Another potential source of inland spills is through high pressure pipelines. Although the Pipeline Act 1962 places obligations on pipeline operators to provide information and procedures to be followed in the event of an incident, the scope is more limited than that envisaged by the Civil Contingency Act. Where recovery issues are not addressed in the current plans, provisions are now in place for clean up and recovery to be placed on a sound footing.

Ports and Harbours

Under the Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998, there is a requirement in the UK for

ports, harbours and oil handling facilities, to prepare and submit oil spill response contingency plans to the Maritime and Coastguard Agency (MCA) for approval.

The plans must address waste management issues.

Regulatory compliance under the Hazardous Waste Directive 91/689 EC in circumstances of emergency or grave danger.

Environmental regulators in the UK are under a duty to take the necessary steps to mitigate or avert an emergency or grave danger.

The regulator has a role in facilitating the clean up and recovery operation. Emergency planners have a clear remit to include clean up and recovery in their plans either explicitly under specific legislation or as part of the general duties under the Civil Contingencies Act. Under the terms of the Hazardous Waste (England and Wales) Regulations 2005 section 63 -

- 1) The Agency shall exercise its functions (whether under these Regulations or otherwise) so as to take all reasonably practicable steps necessary or expedient to avert or mitigate an emergency or grave danger.
- (2) An authorised person shall in exercising functions in relation to an emergency or grave danger so exercise his powers under sections 108 and 109 of the 1995 Act as to take all reasonably practicable steps to avert or mitigate the emergency or grave danger.

Coupled with the classification of category 1 responders, a new climate of co-operation in contingency planning has been created. The principles of sound waste management can be incorporated into response plans by co-operation and consultation with the environmental regulator.

A knowledge of the normal legal requirements of waste management will assist emergency planners in designing systems, procedures and operations that can meet the spirit and intent of legislation.

Recovery plans will evolve in time as measures are put in place to address the challenges identified in risk registers. Currently the National Contingency Plan for Marine Pollution from Shipping and Offshore Installations (NCP), perhaps more than other plans, has identified a structure for dealing with waste disposal and can inform the more general requirement for recovery plans. Appendix 1 contains a diagram showing the NCP response cells.

The Waste Management sub group has the following key tasks as identified in the National Contingency Plan:

- Development of a waste disposal strategy
- Advising on waste minimisation and segregation

- Preparing a plan for temporary storage of collected oily waste both from shoreline and at sea.
- Provision of technical advice on the location and format of temporary storage and treatment areas and disposal options for the oily waste
- Ensure that all waste regulations are followed by the technical team and fully understood by the forward control centres and beachmasters
- Ensuring oily waste is transported by registered carriers and in compliance with the Hazardous Waste Regulations.
- Management of the final disposal options and identification of sites for oily waste.

Waste Management Strategy

The initial strategy adopted by a the sub group would be to facilitate the recovery and removal of bulk oil and contaminated material from the environment with reference to the principles of sustainable waste management.

This would be achieved by:-

- Ensuring that advice is available to the technical team guiding operations to ensure that clean up is planned to minimise waste production and deliver net environmental benefit.
- Putting in place measures to segregate waste types at the shoreline to facilitate the assessment of the best practicable environmental option for each waste stream. This measure would assist in the legislative requirement to treat wastes prior to any hazardous waste landfill.
- Estimate and anticipate quantities and types of wastes to be produced in relation to the capacity of the waste industry to deal with the waste generated.
- Plan and develop interim storage and treatment areas to comply with Landfill Directive waste acceptance criteria. The NCP requires that the emergency response meets statutory requirements. In effect the regulator will through its part in the response cells provide guidance on where derogation from regulation is appropriate to ensure protection of public health and the environment. It is not practical to require full regulatory compliance with all waste legislative requirements. However in developing plans reference to regulations can provide useful guidance to providing effective response. Waste management licences or pollution prevention and control permits are required for waste storage and treatment in order to ensure that waste is handled without harming human health, damaging the environment or causing nuisance. In considering options for beach head storage and in situ treatment options, planners will need to ensure the principles underlying the regulations are complied with. Guidance issued by regulators to applicants for licenses can be a useful source of

advice. The MCA waste project will assist in the development of template plans for design of treatment areas and storage facilities in partnership with the environmental regulators. This should be a useful tool for local authorities to adapt to their appropriate circumstances.

- Identify disposal routes and manage the production, storage and transport of waste to the final treatment or disposal options. The Environment Agency will require compliance with waste tracking procedures. Compliance with Hazardous Waste Regulations will provide a system of identifying waste according to the European system under the List of Waste Regulations. Waste movements would be tracked and more accurate estimates made of waste generated, treated and disposed of than possible in previous UK large spills such as Sea Empress. Better record keeping will also facilitate cost recovery. By identifying the legal requirement, planners can design compliant management systems. Incorporating the legislative requirements into the design of management systems will avoid conflict with regulators and also deliver a response that is better managed through adherence to a tried and tested system that can be audited.

The above guidance is contained in a draft MCA Scientific, Technical and Operational note currently with other UK environmental regulators for consultation. The draft guide identifies key tasks:

Minimise waste production

For each shoreline management sector the technical team will develop a clean up strategy. These strategies will require input from the Environment Group and Waste Management sub group. No instruction should be issued to the beachmaster until the contributions from both groups are received and documented. The waste management sub group should be represented when Beachmaster and Shoreline Clean-up Assessment Teams are briefed to emphasise the importance of adhering to agreed plans. The removal of beach debris before oil comes ashore should be discussed with the Environment Group. For each shoreline sector consideration should be given to the potential for in situ treatment at the shoreline, beach head or nearby, to minimise the production or storage of waste. Potential treatments and facilities should be identified in the onshore contingency plans, and could typically include decanting, screening or washing. The sub group will need to ensure that the treatment carried out will be a physical, biological or thermal process, change the characteristics of the waste to reduce its mass, or reduce its hazardous nature or facilitate its handling, or enhance its recovery. Burning or heat treatment is not permitted without the issue of a regulatory permit. This assessment of treatment will be crucial to determining whether landfill can be included as a disposal option. Incorporating the regulatory requirements of the landfill directive within the onshore plans of local authorities will provide a common understanding of how the strategy is to be achieved and will prevent disposal options becoming limited.

All decisions should be regularly reviewed in the light of operational developments.

Store segregated waste streams at the beach head

Before clean up operations get underway, waste storage facilities must be identified and procured or constructed. These should be identified in contingency plans along with a description of likely waste types produced from the shoreline type for a range of spill scenarios. Wastes should be segregated by physical state: liquid or solid, and also as organic, plastic/combustible, mineral. Best endeavours should be employed to allow segregation to facilitate subsequent selection of the best practicable environmental option for each waste type.

Logistics

Estimates and anticipated quantities and types of wastes to be produced in relation to the capacity of the waste industry to deal with the waste generated will need to be made. Equipment provision to beach masters must include facilities to store all anticipated waste types matched to anticipated clean up rates. If the logistics of collection and onward clearance fail, the waste management strategy fails. Waste quantity and type estimates must be kept under constant review in consultation with the Beach masters, technical and procurement teams. It is recommended the collection of waste arisings data is a specific task allocated to a designated waste sub group member. By using the hazardous waste consignment procedure including the use of European Waste Catalogue codes, the Environment Agency believes that the overall waste management response will be more efficient.

Plan and Develop Interim Storage and Treatment Areas.

The logistics of shoreline clean up make it inevitable in Tier 3 responses that large scale storage facilities will be required. It would be unusual for a waste management option to be available for direct beach head transfer of waste. It will be necessary to seek early identification of waste industry options available including:

- Composting facilities
- Incinerators
- Landfill
- Liquid waste recovery plant and waste water treatment plant with oil capacity

It will also be necessary to identify other treatment options available such as washing/ thermal remediation / other mobile plant including a technical brief on logistics, setting up time, loading rates, resource requirements, manpower etc. In liaison with the procurement team, identifying costs and loading rates.

The identification of interim storage and treatment areas in contingency plans including procedures for construction and operation has already been discussed. It is essential that the contingency plan should include construction standards agreed with the regulator if the recovery phase is to progress smoothly and efficiently. Managers of interim storage areas must have approved qualifications and be chosen in consultation with the environmental regulator.

A Management Team brief on estimates of wastes to be generated and the infrastructure required to support the waste management strategy will need to be prepared. Significant costs will be involved and it is essential that early notification is given to the Management team. Waste arisings should not be underestimated and close liaison with MCA representatives and other technical advisors for validation of assumptions should be made.

Project developments

Mention has been made through the text of the MCA project RP 549 Development of a Protocol for the Treatment and Disposal of Oily Waste in the UK. This collaborative project with the support of local authorities and environmental regulators has been let to consultants BMT Cordah in a competitive tendering process. The project will identify the current level of local authority contingency planning and seek best practice. An important product will be the development of a manual to assist local authorities plan their response in a manner approved in principle by regulators. Contingency planners have to deal with uncertainty. By agreeing regulatory principles into plans at an early stage, some of that uncertainty can be removed. By working with regulators at the planning stage, relationships can be built to develop the trust and understanding to facilitate the teamwork required when there may need to be improvisation around the plan. The manual will consider the disposal and treatment options available, as well as the short and medium term operational needs.

The MCA project will provide information to the more strategic Interreg 111 Emergency Response to Oil, Chemical, and Inert Pollution of the Sea (EROCIPS). This European project involves France, Spain, Portugal, Ireland and the UK (Devon, Dorset, Pembrokeshire and Ceredigion). The project consists of a series of seven work packages designed to provide shoreline responders with the necessary information to ensure a targeted counter pollution response. The intention is to provide a procedure that can be applied elsewhere in the coastal regions of Europe.

The aim of the EROCIPS project is the '*development of common, transnational methodologies, tools and techniques for dealing with the*

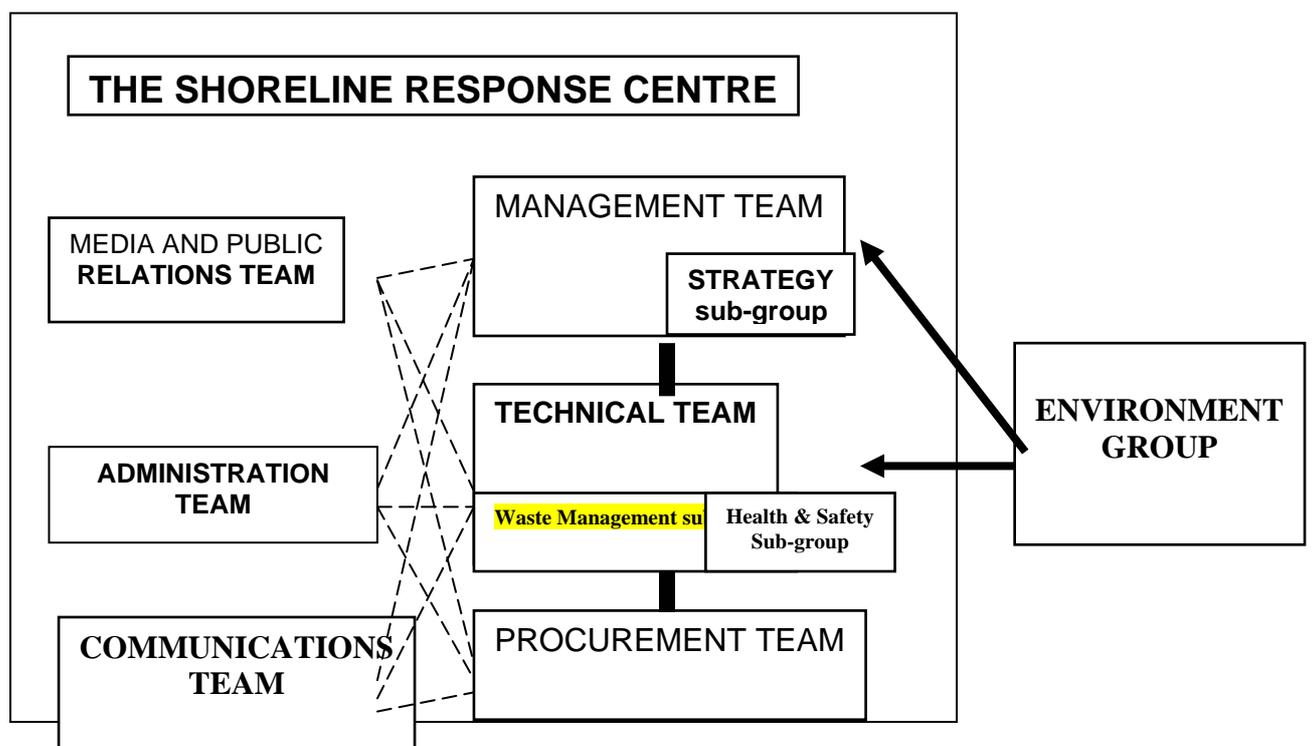
shoreline response to coastal pollution incidents, transferable across the EU, in order to support the sustainability of sea transport systems'.

The work packages are listed in appendix 2. The MCA project will inform Work package 2.

Conclusion

The integration of waste legislation into response planning incorporates the benefits of meeting the protective principles underlying the law and translating those principles into efficient operations with regulatory support.

Appendix 1 NCP Response cell structure



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Appendix 2 EROCIPS work package structure

Figure 1

