

## Royal Society response to the Department for Environment, Food and Rural Affairs consultation on the Government Decontamination Service

The Royal Society welcomes the opportunity to respond to the Department for Environment, Food and Rural Affairs (DEFRA) public consultation on the recently proposed Government Decontamination Service (GDS)<sup>1</sup>.

In January 2005 the Government announced the establishment of the GDS. The GDS will fulfil three principal roles:

- To provide advice and guidance on decontamination to responsible authorities during their routine emergency planning work, and regularly help test the arrangements that are in place.
- To rigorously assess the ability of companies in the private sector to carry out decontamination operations, and ensure that responsible authorities have ready access to those services if the need arises and advice on their options. If required, help co-ordinate decontamination operations; and
- To advise central Government on the national capability to decontaminate after a chemical, biological, radiological or nuclear (CBRN) incident and on any relevant matters during the decontamination phase of an incident.

In April 2004 the Royal Society published the report *Making the UK safer: detecting and decontaminating biological and chemical agents*<sup>2</sup>, which made a number of recommendations aimed at enhancing the UK's capability for dealing with the deliberate or accidental release of biological and chemical agents. This response has been prepared in consultation with members of the working group responsible for that report.

This response states the Society's overall views on the role, functioning and capabilities of the GDS. It also comments on the specific questions in the consultation document that the Society has the expertise to address.

### Key points

- Detection and decontamination are intrinsically linked. The efficiency of the UK's response to a CBRN incident would be improved if one central organisation was responsible for coordinating all aspects of detection and decontamination.
- Experimental research is urgently required to address data gaps on the efficacy of decontamination and detection equipment and procedures; the GDS should be involved in undertaking or commissioning this work.
- Strong links must be built between the GDS and other Government Departments and bodies involved in responding to a CBRN incident to ensure that its work fits with the entire response.
- The GDS should develop mechanisms to access the best academic and industrial scientific research into novel decontaminants and new detection technologies.
- The GDS would be well placed to develop criteria for safe exposure levels and set threshold levels for different environments to be classified as safe for return to normal use.
- The GDS must ensure that its remit is explicit and its customers are aware of where responsibility lies, to avoid confusion when an emergency situation occurs.

## General points

The establishment of the GDS goes some way to creating the single, central source of expertise recommended in the Royal Society's report *Making the UK safer: detecting and decontaminating chemical and biological agents*. However, the Society strongly believes that such a service should also encompass the detection of CBRN materials because the two activities are so intrinsically linked. Deciding on the appropriate decontamination protocol will depend on quickly and accurately determining the nature of the release.

There are several closely linked areas of detection and decontamination where further work is required, which the GDS should take responsibility for. These include:

- establishing criteria for assessing detectors and decontaminants;
- determining criteria for assessing detection and decontamination procedures for all environments;
- undertaking the assessment of decontaminants, detectors and procedures;
- designing and assessing sampling strategies to determine contamination before and after decontamination;
- developing criteria for safe exposure levels and setting threshold levels for environments to be classified as safe for return to normal use;
- coordinating management of the waste resulting from decontamination;
- advising authorities, organisations and Government Departments on all of the above.

The Service should not be limited to the decontamination of buildings and the environment. Easily accessible expertise on the decontamination of people, animals and vehicles is also needed.

There are many similarities between the protocols needed for the detection and decontamination of accidental chemical releases and naturally occurring disease outbreaks and those required to deal with deliberate releases. The GDS should use its capacity to coordinate responses to accidental as well as deliberate CBRN incidents.

Many Government Departments and bodies have responsibility for elements of preparing for and dealing with a CBRN incident and this presents a challenge in terms of communication and coordination. The fewer bodies with responsibility for coordinating the response to a CBRN incident, the more efficient the response is likely to be.

The GDS must build and maintain strong links with the Home Office CBRN research programme, Ministry of Defence, Cabinet Office, Health Protection Agency and other Departments involved in responding to an incident, to ensure that its work fits with the entire response. It will also be essential to establish feedback procedures to allow the GDS to highlight any capability gaps and research needs to the appropriate Government Department.

The GDS should also develop mechanisms to access the best academic and industrial scientific research. This is necessary so the GDS remains up to date with research into new detection technologies and novel decontaminants. The scientific community should also be involved in the areas of work outlined in the bulleted list above, to ensure that this work is informed by the best science. We believe it is possible to access the widely spread expertise available in the UK, whilst adequately taking into account security concerns.

## Responses to specific questions from the consultation document

The Society has only commented on issues where it has expertise and so not all the questions have been addressed.

### **Q1 Preparation and contingency planning**

*What areas of its remit should the Service address first? Where do you think the Service has the greatest potential to improve the UK's resilience to CBRN incidents? What other advice and guidance would you most like the Service to provide?*

As recommended in our report *Making the UK Safer* the evaluation of decontamination kits and methodologies is urgently needed. The GDS should inform authorities and organisations which decontaminants are suitable for particular agents on specific surfaces materials. It is important that authorities and organisations are made aware of the weaknesses as well as the strengths of the available options.

The Service must be involved in undertaking or commissioning the testing required to determine the efficacy of decontaminants and procedures for decontamination. This will enable the GDS to provide comprehensive advice on decontaminants, and to assess properly competing claims from potential contractors. This evaluation is also essential for informing the preparation of contracts between authorities and specialist suppliers to ensure any equipment purchased is fit for purpose.

The GDS should be involved in designing and assessing detection and sampling strategies for determining contamination levels before and after decontamination. During an incident, these will be needed to inform decisions on decontamination protocols and when an area is deemed safe for return.

The GDS should develop criteria for safe exposure levels and set threshold levels for different environments to be classified as safe for return to normal use. This could be achieved by building on existing occupational safety levels to make them appropriate for different environments. As discussed in chapter 6 of our report *Making the UK safer*, there are many issues around determining when an area is clean enough to be safe for return to use, and the GDS would be well placed to tackle these. It is important that before an incident occurs, it is made clear where responsibility lays for independent verification that threshold levels have been achieved after decontamination. This is important to achieving public trust in the safety of decontaminated areas.

The management of the waste products resulting from decontamination needs to be considered by the GDS. The GDS must work closely with the water industry in tackling this problem.

A longer term objective should be building up a network of experts in computer modelling to provide advice to local authorities and organisations prior to and during an incident. This is important since computer modelling can help in the assessment of hazards and with decisions on the appropriate decontamination protocol to deal with a situation.

Many of the decisions taken during and after an incident will be based on scientific information. Some of this information may be incomplete or uncertain. Authorities and organisations would benefit from advice on how to incorporate scientific uncertainties into the decision making processes at all stages of an incident. The GDS should explore this issue, which is discussed in more detail in chapter 6 and annex 4 of our report.

### **Q5 & Q6 Responding to an incident**

*Q5 Are there circumstances, other than after deliberate releases of CBRN material, when you would want to make use of the GDS? Would it be useful if you could call out and use the GDS in the event of all CBRN and HAZMAT incidents (for which there were no standing contingency plans), regardless of size and scale?*

*Q6 What level of support would you find most useful? What level of support would you consider the minimum necessary?*

The GDS should use its expertise to support authorities after an incident involving hazardous material, regardless of size and scale. Involvement in small scale incidents will provide valuable training experiences for dealing with larger scale incidents.

The GDS must ensure that its remit is clear. The responsibilities and reporting lines of the GDS and local authorities need to be explicit to avoid confusion when an emergency situation occurs.

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<sup>i</sup> The consultation document can be found at <http://www.defra.gov.uk/environment/risk/cbrn/gds/index.htm>

<sup>ii</sup> Royal Society (2004) *Making the UK safer: detecting and decontamination chemical and biological agents*. Policy document 6/04. Royal Society: London. Available online at: <http://www.royalsoc.ac.uk/document.asp?tip=0&id=1345>

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