

# **Stakeholder Engagement in UK Emergency Preparedness and Response**

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The UK has a strong tradition of Stakeholder Engagement in decision making in Radiological Protection and in wider societal and environmental matters. This allowed the UK's Society for Radiological Protection (SRP) to take a prominent role, along with the French and Spanish Societies, in developing the Guiding Principles for Radiation Protection Professionals on Stakeholder Engagement adopted by IRPA at IRPA12. The experience and progress in integrating these principles into everyday RP practice is the subject of an oral presentation "Stakeholder Engagement: the UK Experience" by Bandle A. and Croft JR. A subset of this UK experience is the importance of stakeholder engagement in emergency preparedness and response; and it is this subset that is the topic of this paper.

The paper explores how stakeholder engagement is an integral element of the emergency preparedness framework for dealing with emergencies in the UK. The UK preparedness and response framework is described and the stakeholder engagement element explored through an example of a Local Resilience Forum (LRF). The links to the long established Local Liaison Committees for Nuclear sites is also covered.

It is one thing to establish a framework for decision making and developing response plans, but successfully implementing these depends on on-going dialogue and trust between the various stakeholders. For the responding organisations these attributes can be honed in exercises, but dealing with the different elements of the public depends on a mix of building up trust before the event and being seen to be open and honest during the event. Experience from the Polonium Poisoning incident in London in 2006 is used to highlight some aspects of Stakeholder Engagement in an emergency response.

Key words: Stakeholder Engagement, Emergency Preparedness, Polonium Poisoning Incident

## **1. Introduction**

The UK has a strong tradition of Stakeholder Engagement in decision making in Radiological Protection and in wider societal and environmental matters. This allowed the UK's Society for Radiological Protection (SRP) to take a prominent role, along with the French and Spanish Societies, in developing the Guiding Principles for Radiation Protection Professionals on Stakeholder Engagement, adopted by IRPA at IRPA 12. The experience and progress in integrating these principles into everyday RP practice is the subject of an oral presentation at the Congress, "Stakeholder Engagement: the UK Experience" by Bandle A. and Croft JR. It reviews the actions taken to promote the use of the Guiding Principles set against the context of the historical development of Stakeholder Engagement in the UK. Importantly it looks at the professional and societal drivers that encourage processes with Stakeholder Engagement at their heart. A range of case studies, are summarised to examine the current state of play in the UK. Reference is also made to the importance of Stakeholder Engagement as an integral element of the emergency preparedness and response framework that is common for dealing with all UK emergencies. This is a significant subject in its own right and thought worthy of a separate paper, this one, to provide appropriate coverage.

The paper reviews the UK Framework for emergency preparedness and response and how stakeholder engagement is a key integral element. A key element of the framework is the planning work of Local Resilience Fora (LRFs). The Cumbria area includes a number of

nuclear sites, including Sellafield, and the work of the LRF for this area is used as an example.

It is one thing to establish a framework for decision making and developing response plans, but successfully implementing these depends on on-going dialogue and trust between the various stakeholders. For the responding organisations these attributes can be honed in exercises, but dealing with the different elements of the public depends on a mix of building up trust before the event and being seen to be open and honest during the event. Experience from the Polonium Poisoning incident in London in 2006 is used to highlight some aspects of Stakeholder Engagement in an emergency response.

## **2. UK Framework for Emergency Preparedness and Response**

There is a long history in the nuclear sector of emergency planning and interacting with a range of stakeholders. In the early years this revolved around Local Liaison Committees, but over the years this has become part of a much broader and well structured process with stakeholder engagement integrated within it. Stakeholder Engagement is not peculiar to radiological protection but is widely used in all areas and has become an essential element within a UK Framework for planning for and responding to all types of emergency: from naturally occurring events such as flooding and pandemics, through accidents such as nuclear ones, to deliberate incidents such as terrorist attacks.

### **2.1 Emergency Preparedness Framework**

The Civil Contingencies Secretariat (CCS) of the UK Government's Cabinet Office is responsible for the framework of national arrangements, including the primary legislation in this area, the Civil Contingencies Act 2004, [1] together with the supporting Regulations, Guidance Documents and infrastructures [2]. These documents set out a single framework for civil protection in the UK. They establish a clear set of roles and responsibilities for those involved in emergency preparedness and response at the local level. The Act divides local responders into two categories, imposing a different range of duties on each.

Category 1 responders are those organisations at the core of the response to most emergencies e.g. emergency services (police, ambulance and fire and rescue), Local Authorities, National Health Service (NHS), Health Protection Agency (HPA), Environment Agencies etc.. They are subject to the full set of civil protection duties, including being required to:

- assess the risk of emergencies occurring and thus 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 and co-operate with them to enhance co-ordination and efficiency, and
- provide advice and assistance to businesses and voluntary organisations about business continuity management (local authorities only).

Category 2 responders e.g. Health and Safety Executive, transport and utility companies, have a lesser set of duties: but include co-operating and sharing relevant information with other Category 1 and 2 responders.

Category 1 and 2 organisations come together to form Local Resilience Fora (LRFs), which are the vehicles through which all the responders and other stakeholders, co-operate and co-ordinate their plans at the local level. The geographical coverage of LRFs is based on the

boundaries of Police Forces, and the Police take the lead in the organisation of LRFs. There are corresponding arrangements to ensure co-operation at regional and national level. It is clear that Stakeholder Engagement is seen as crucial to effective emergency preparedness. Of course the test is the effectiveness of responses in real situations.

## **2.2 Emergency Response Framework**

The actual response to an emergency, whether it be a transport accident, infectious disease outbreak, flooding, radiological, chemical etc. can involve a large number of organisations that need to co-operate, support each other, and understand their roles and responsibilities in the combined response. To address this the UK has a generic national framework [3] for managing emergency response and recovery that is applicable irrespective of the size, nature or cause of an emergency, but remains flexible enough to be adapted to the needs of particular circumstances. The framework identifies the various tiers of management in emergency response and recovery, and defines the relationships between them. It provides a common framework within which individual agencies can develop their own response and recovery plans and procedures.

Within this framework, the management of the emergency response and recovery effort is undertaken at one or more of three ascending levels: bronze – operational level; silver – tactical level; and gold – strategic level.

Most emergencies, such as traffic accidents and fires, are of a small scale and do not warrant all the levels to be activated. However, where an event or situation has an especially significant impact or substantial resource implications, it may be necessary to implement multi-agency management at the “Gold” level. The multi-agency group, which brings together “Gold” commanders from relevant organisations, is called the Strategic Co-ordinating Group (SCG). Its purpose is to take overall responsibility for the multi-agency management of the emergency and to establish the policy and strategic framework within which individual agencies will work. The SCG is normally chaired by the police, particularly where there is an immediate threat to human life, a possibility that the emergency was a result of criminal activity, or significant public order implications.

Where the scale or complexity of an emergency is such that some degree of government co-ordination or support becomes necessary, a designated Lead Government Department (LGD), for that type of incident, takes responsibility for the overall management of the Government response [1]. Collective decisions are made in the Civil Contingencies Committee (CCC) chaired either by a Government Minister or senior official from the LGD. To facilitate the co-ordination, the Government maintains dedicated crisis management facilities, the Cabinet Office Briefing Room (COBR). The acronym COBR is often used to refer to these overall government arrangements.

Whatever the level of the response it is important that there is effective dialogue between the responders and that each understands the roles, responsibilities and ways of working of the other responders. The responders are clearly stakeholders, as are the public and organisations affected by the emergency.

## **3. Case Studies**

### **3.1 Cumbria Resilience Forum**

The Cumbria Resilience Forum provides an example of an LRF that encompasses significant nuclear sites, namely Sellafield, the Low Level Waste Repository (LLWR) and the Studsvik Metals Recycling Facility. Figure 1 is taken from the Cumbria Resilience Forum’s Strategic

Plan 2010 -2013, and provides a diagrammatic representation of the LRF's structure. What is immediately apparent is that although there are many sub-groups that provide specific foci for co-operation and stakeholder engagement, there is none just focused on nuclear emergencies, even in an area with significant nuclear sites: the same is true for chemical and other major hazards. In broad terms the underlying philosophy is to make a distinction between;

- site or operator specific emergency preparedness plans, and
- overarching and common response elements

So, for example, the nuclear site licencing arrangements [4] require nuclear sites to have site specific emergency response plans and the Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPPIR) [5] establishes a framework of emergency preparedness measures to ensure that members of the public are:

- properly informed and prepared, in advance, about what to do in the unlikely event of a radiation emergency occurring, and
- provided with information if a radiation emergency actually occurs.

Both the development of the response plan and the REPPPIR elements require dialogue with the stakeholders. In the Cumbria example this occurs through The West Cumbria Sites Stakeholder Group (WCSSG). The committee in its various formats has been in operation for well over 40 years and aims to provide a forum through which local stakeholders are able to be updated on the nuclear industry in West Cumbria. Operators from the sites, as well as regulators and the site owners, the NDA, provide reports and are available to answer questions fielded from the committee members and any members of the community who wish to go along and observe proceedings. These meetings are held quarterly: minutes of meetings and more details can be found on the group's website [6].

There are a number of sub-committees that have open meetings including the Emergency Planning Sub-Committee, which has the remit to scrutinise the on and off site arrangements to protect the workforce and public in the event of an emergency at Sellafield, and to suggest possible improvements. These include:

- the On Site Emergency Plan
- the On Site Emergency Exercises
- Cumbria County Council Off-Site Emergency Plan
- Off-Site Multi Agency Emergency Exercises
- Arrangements to warn and inform the public.

Going back to Fig 1, it would be the LRF's responsibility to ensure that the implications of the various site specific plans are taken into account and that there is the necessary dialogue to match expectations of site specific plans with what can actually be delivered. A key element of preparedness is having challenging emergency exercises that both test the plans and allow individuals and organisations to hone their skills. Across the UK there are various programmes of exercises, including nuclear exercises.

Each civil nuclear licensed site in the UK must hold regular level 1 (on-site) exercises involving the emergency services. On a three yearly basis each site must also hold a level 2 exercise, which involves the response of all local responding organisations, supported by those national organisations that would also be represented at the local level. Each year, one of these level 2 exercises is nominated to be the national (level 3) civil nuclear exercise. These exercises are extended to include the lead government department and central government engagement. Emergency exercising of military nuclear assets follows a similar structure. A number of emergency exercises focussing on the response to the malicious use of radioactive materials are also held in the UK every year. The driving factors for these exercises vary considerably, which has an impact on the scale and focus of such exercises.

Thankfully real nuclear or radiological emergencies are very rare but having a single emergency response framework allows one to learn from real emergencies in other sectors, as many of the response elements are common eg. Command and Control, evacuation centres, triaging those potentially affected and warning and informing the public etc.

### **3.2 The Response to the Polonium Poisoning in London, 2006**

It is one thing to establish a framework for decision making and developing response plans, but successfully implementing these depends on on-going dialogue and trust between the various stakeholders. For the responding organisations these attributes can be honed in exercises, but dealing with the different elements of the public depends on a mix of building up trust before the event and being seen to be open and honest during the event. The Polonium Poisoning Incident in London in 2006 provides a useful example [7].

On the 23 November 2006, Alexander Litvinenko died in London allegedly from poisoning by  $^{210}\text{Po}$ , an alpha particle emitter. The spread of radioactive contamination, arising from the poisoning and the events leading up to it, involved many locations in London. The potential for intakes of  $^{210}\text{Po}$  arising from the contamination posed a public health risk, encompassing thousands of people, and generated considerable public concern. Indeed at the time it was not known as to whether or not this was a single event or “the tip of the iceberg”. The scale of the event required a multi-agency response, working within the UK emergency response framework: namely an SCG at Scotland Yard, the Metropolitan Police headquarters; and the Government’s CCC at COBR. Within this framework the Health Protection Agency (HPA) was tasked with leading the co-ordination and management of the public health response. It set the following public health objectives

- Prevent further exposure of the public:
  - work closely with the police to aid their criminal investigation and identify sites and individuals that may be contaminated;
  - develop an environmental monitoring strategy to support this;
  - assess and advise on public access and remediation of contaminated sites.
- Assess risks to those potentially exposed:
  - identify those potentially exposed;
  - triage into risk groups
  - offer, implement and report on personal monitoring through urine analysis.
- Identify and Inform those requiring medical follow up.
- Provide advice and reassurance to those exposed and the public.

Figure 2 provides a schematic representation of the main interactions from an HPA perspective and the points below draw out the stakeholder engagement aspects.

1. The two main threads of the response, the police investigation and the public health aspects, were synergistic in that the police investigation provided the information on the locations where contamination might be found, whilst the profile of contamination found, both on surfaces and in people gave indications of what may have happened. Effective dialogue was therefore essential.
2. Getting the co-operation of the management and staff of locations that needed to be monitored for contamination, required putting effort into explaining the nature of the situation and the significance of the results to those involved.
3. The locations identified included family residences, hospitals, hotels, offices, clubs, bars and restaurants; with management, staff, guests and visitors totalling thousands. It was a mammoth effort to triage these people and identify who had been most at risk and for

whom it would be appropriate to assess intakes of  $^{210}\text{Po}$ , by taking 24 hour urine samples and carrying out alpha spectrometry [8]. This was a major stakeholder engagement exercise, some aspects of which are covered in points 4 to 7 below.

4. Many of the radiation protection resources of HPA were involved in monitoring and assessments. Thus in order to undertake point 3 above it was necessary to combine the skills and expertise of the radiation protection specialists in assessing potential exposure routes, with those of the largest part of HPA, the public health specialists, who could undertake the majority of the stakeholder engagement. This latter group initially knew little about radiation protection, but as Consultants in Communicable Disease Control (CCDCs), along with their nurses and supporting staff, they were used to dealing with unusual situations, and perhaps more importantly, dealing with concerned individuals and getting information on their actions that would allow triaging. There were 3 main groups to be covered; the staff at locations (point 5), UK based guests and visitors (point 6) and overseas guests and visitors (point 7) [9]
5. A public health team, led by a CCDC, was assigned to each of the main locations. With input from the radiation protection specialists, site specific risk assessments and questionnaires were developed to identify those most at risk. For these persons it was arranged for 24-hour urine samples to be collected and then taken for analysis and assessment; with the results becoming available 3 to 5 days later. Throughout it was necessary to explain the process, the results and to respond to the many concerns of the staff and management at the affected locations. A complicating factor was that for many hotel staff, English was not their first language.
6. Some UK guests and visitors could be traced and contacted, but it was known that there were potentially a large number of casual visitors, particularly to the bars and restaurants that needed to be assessed. On Saturday 25 November, following a risk assessment, the HPA made a request, via the media and its own website, asking members of the public who were in specific potentially contaminated locations, in a specified period, to call NHS Direct (a 24-hour National Health Service helpline). To support this, in collaboration with NHS Direct, a questionnaire was developed to assist the collection of key information from callers. The details of any callers associated with relevant locations were forwarded to HPA for further health assessment and follow-up. In addition, the Agency undertook to call back every member of the public who wished it. Overall, there were 3,837 calls to NHS Direct with 1,844 questionnaires going to the Agency for follow up.
7. In addition to UK residents, a large number of those potentially exposed to  $^{210}\text{Po}$  were overseas visitors who had stayed in, or visited, one of the hotels or other locations involved in the incident. This introduced a new set of stakeholders: embassies, international organisations, foreign health bodies and of course the individuals themselves. To address this follow up through diplomatic and public health channels, the Agency established an Overseas Advice Team (OAT) [10]. In total, attempts were made to follow up 664 individuals from 52 countries and territories. Significant difficulties were encountered in obtaining feedback on results due to data protection legislation in the various countries and medical-in-confidence issues. Nevertheless, results were received for about a quarter of the identified individuals. These results were important both to the individuals concerned and in supporting the emerging profile of exposure.
8. Early in the response it became clear that there would be many tens of locations in which contamination would be found and require some level of remedial action. The SCG quickly set up a Recovery Working Group (RWG), led by Westminster City Council (WCC), with membership from the major stakeholders in the response; the other Local Authorities, HPA, Environment Agency (EA), the UK Government Decontamination

Service, Department for Transport and the Health and Safety Executive (HSE). The locations broadly split into “crime scenes” (venues subject to police investigation) and locations subject to health consequences management only. The RWG set out clear policies and procedures (and oversaw their implementation), for early stage clearance (i.e. simple decontamination), prioritisation and the decision to close the whole or part of a location, initial introductory meeting with location owners/ occupiers, the provision of information, the remediation process and the formal process of monitoring and clearance. Many locations were amenable to early stage clearance but there were 11 locations that required remediation by specialists. Throughout, stakeholder engagement, with the clarity and sustainability of the outcomes it brought, was key. WCC brought all the relevant material together and published a document [11] covering the framework strategy for dealing with radioactive contamination in such a situation, to preserve the lessons learned for future incidents.

9. It is clear from the above and Fig 2 that there were a wide variety of stakeholders/ responders involved in the management of the response to the incident and that it required co-operation and coherence. Crucial to the success of this was the fact that there was a national framework for emergency response, which organisations and staffs were familiar with from exercises and other real emergencies. For example there was the early establishment of a “battle rhythm” for the timing of meetings at different levels; CCC, SCG and at organisation level, that facilitated the downward flow of tasking and upward flow of situation reports to form the Common Recognised Information Picture (CRIP).
10. Last, but not least, was the early and regular provision of information to the public and all those involved, through press conferences, media interviews, filming in the laboratories, regular press releases (daily over the first few weeks), websites with material on frequently asked questions etc. Throughout the incident there was a determination to be as open as possible with the media and the public, whilst ensuring it respected the confidential nature of police investigations as well as the sensitivities of those individuals involved in the incident. Significant effort was put into liaising with others involved in the response to ensure that the public received a coherent picture of what was happening.

It might be argued that the elements above were only what would be expected in a response. To an extent this is true, but we would argue that it is the recognition and pursuit of stakeholder engagement, both in developing emergency preparedness arrangements and the actual response that makes for an effective and efficient response. Failure to be seen to effectively engage with organisations or groups of individuals could bring about disharmony and an adverse reaction that could grow exponentially, diverting resources from the response to the point where it is derailed and / or discredited (making the next emergency that much more difficult to deal with).

### **3.3 National Recovery Plan Template**

As evidenced by the Polonium Incident recovery can be a complex and long running process that may involve many more agencies and participants than the response phase. It is likely to be more costly in terms of resources and it will undoubtedly be subject to close scrutiny from the community, the media and politicians alike. It is therefore essential for the process to be based on well thought out and tested structures and procedures for it to work in an efficient and orderly manner. Recent emergencies (e.g. the Buncefield fire and Carlisle floods in 2005), have shown that local responders would benefit from access to more detailed guidance especially a generic Recovery Plan template would be of assistance in taking forward recovery planning. In light of that, a Recovery Plan Guidance Template [12] was drawn up in 2008, using examples from many existing local authority recovery plans and the experience of those affected by events such as severe flooding and other major emergencies both in the

UK and abroad. The Template has been developed to enable it to be adapted for use at different levels, e.g. on a regional, Local Resilience Forum (LRF) or local authority geographic footprint. Further nuclear-specific guidance has subsequently been produced by stakeholders, in the form of a UK Nuclear Recovery Plan Template, for managing events involving offsite releases of radioactivity from a reactors, but which can be extended to apply to recovery from any other emergency involving the release of radioactive material.

## 4 Conclusion

The stakeholders relevant to emergency preparedness and response are numerous, but principally the responding organisations and the public and other organisations affected by incidents. The UK legislation and framework for preparing for and dealing with emergencies ensures Stakeholder Engagement is an integral element throughout. The work of the Local Resilience Fora and the experience from emergency exercise programmes and real emergencies help ensure that Stakeholder Engagement is on-going, effective and embedded in the Emergency Response Framework.

## Acknowledgements

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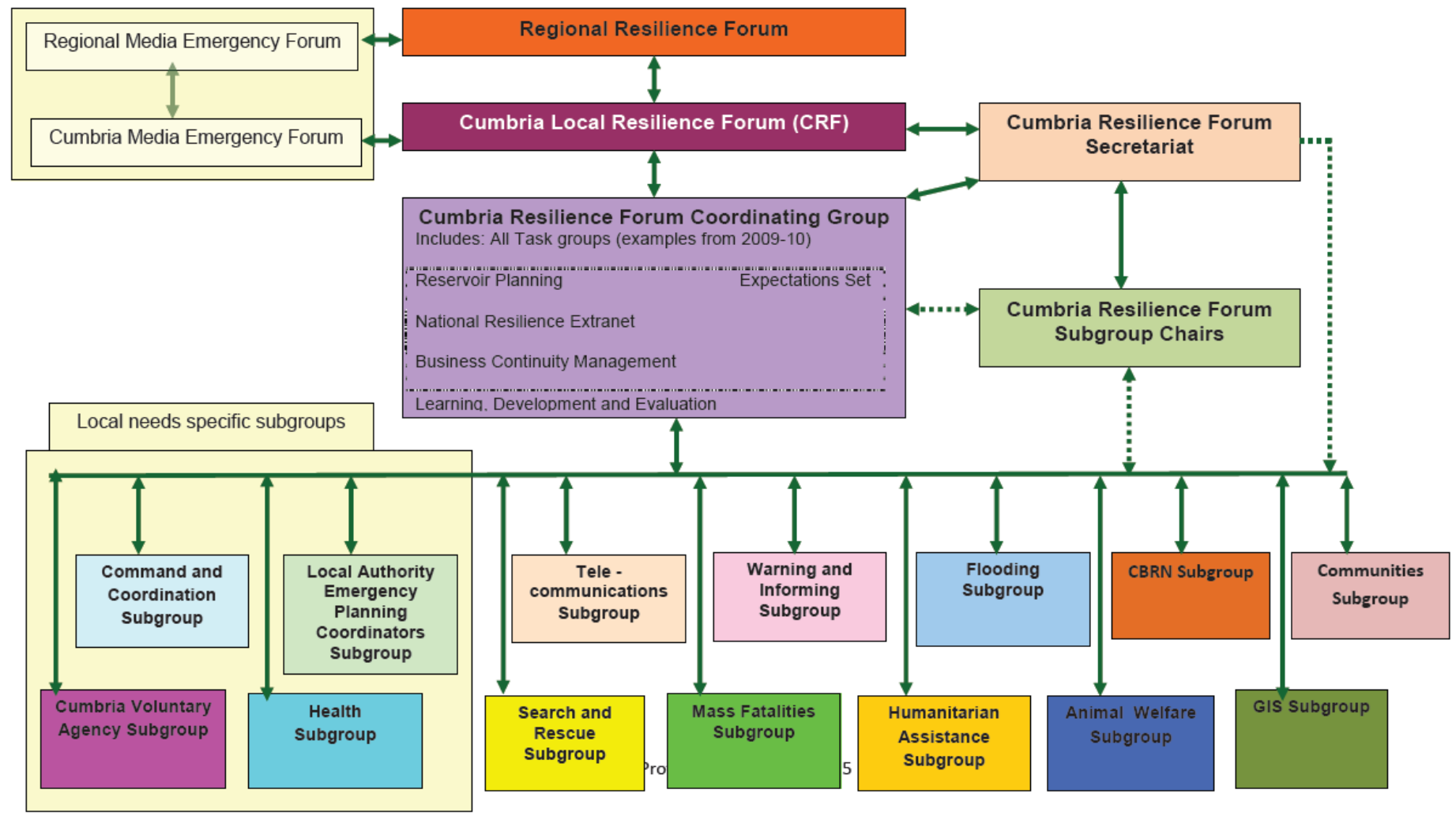
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**Fig 1**  
Appendix B from Cumbria Resilience Forums Strategic Plan 2010-13

Not Protectively Marked

**Annex B: Diagrammatic chart of CRF Structure (while not responding)**



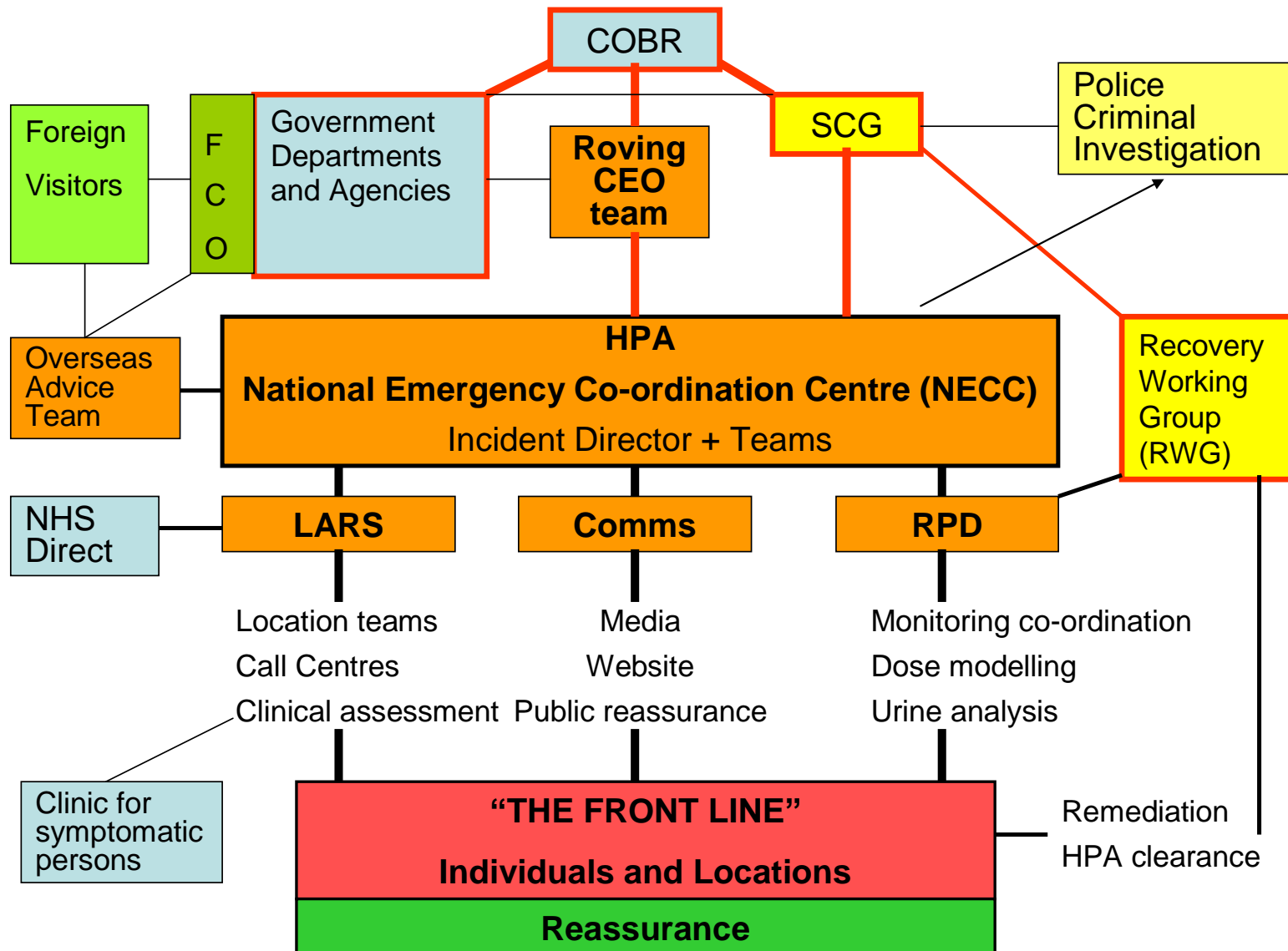


Fig 2. Schematic representation of interactions during the response to the Polonium Incident, London 2006

**Abbreviations:**

COBR: Cabinet Office Briefing Room; location of Civil Contingencies Committee  
 SGG: Strategic Co-ordinating Group; Chaired by the Police  
 FCO: Foreign and commonwealth Office  
 NHS: National health Service

HPA: Health Protection Agency  
 LARS: Local and Regional Services Division  
 Comms: Communications Division  
 RPD: Radiation Protection Division  
 CEO: Chief Executive Officer