



Cymru Gydnerth
Wales Resilience

Scientific and Technical Advice Cell (STAC)

Arrangements in Wales



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Section 1 - Purpose and Scope

- 1.1 Where timely, co-ordinated scientific and technical advice is required during the response to an emergency in Wales the Chair of the Strategic Co-ordinating Group (SCG) may request the urgent and immediate activation of a Scientific and Technical Advice Cell (STAC).
- 1.2 This document sets out the activation arrangements, membership, role and operation of the STAC in Wales.
- 1.3 The establishment of a STAC is likely to be particularly important where there may be significant public health and environmental consequences. The STAC will bring together technical experts involved in the response as appropriate (ie Local Authority Environmental Health Officers or Public Health Wales etc.) who may provide scientific and technical advice to the SCG Chair.
- 1.4 Although public health advice is generally required from a STAC there may be occasions where the advice required is solely of a scientific and technical nature and public health bodies will therefore not be required to play a role.
- 1.5 The purpose of the STAC is to ensure that, as far as possible, scientific or technical debate is contained within the cell so that the SCG or SCGs (and others involved in the response) receive the best possible advice based on the available information in a timely, co-ordinated and understandable way.
- 1.6 The STAC will provide scientific and technical advice not only to the SCG but also, where required, to the individual sub-groups established under the SCG such as the Recovery Co-ordinating Group.
- 1.7 Where an incident is isolated to one Local Resilience Forum area it will be appropriate for a STAC to be established locally to provide advice directly to the SCG.
- 1.8 Where an incident affects more than one LRF area a single STAC should be established at the right level to provide consistent advice to the SCGs operating within the affected area. In this instance there may be a requirement for health and scientific advisers to be represented on the SCG to interpret scientific advice to local circumstances. The setting up of a single Wales STAC will be facilitated by the Welsh Assembly Government.
- 1.9 Where emergencies have national impact such as a flu pandemic the required scientific and technical advice may be provided to Government from the Scientific Advisory Group on Emergencies (SAGE). This may be augmented by groups established by the Welsh Assembly Government to

provide specific advice in areas of devolved responsibility such as health and animal health. (See further information at paragraph 2.8)

- 1.10 The SCG Chair will be responsible for requesting a STAC to be called and for nominating an interim Chair. The interim Chair will establish the initial STAC meeting where the permanent Chair and the methodology of the cell's operation will be agreed. This will be undertaken on a case-by-case basis, based on the circumstances and nature of the emergency. The administration and facilities required by the STAC meeting will be the responsibility of the lead service or organisation and will be set out in the Strategic Co-ordination Centre activation arrangements.¹
- 1.11 The STAC will bring together technical experts operating under the strategic direction of the SCG or SCGs. The SCG will agree the high-level objectives guiding the multi-agency response, including the immediate priorities. The STAC will respond to questions raised by the SCG and will advise on issues such as the impact on the health of the population, public and responders safety, environmental protection, and sampling and monitoring of any contaminants.
- 1.12 This document should be read in conjunction with the RESTRICTED 'STAC Activation Arrangements' which sets out the processes for activating the STAC in Wales and which includes the relevant contact details of the agencies concerned.

¹ Where SCC facilities cannot accommodate a STAC other local arrangements will be put in place as agreed by the STAC Chair.

Section 2 - Activation Arrangements

- 2.1 The STAC is activated upon agreement of the Strategic Co-ordinating Group Chair.
- 2.2 On the advice of any relevant SCG member the recommendation can be made to the SCG Chair that a STAC needs to be established due to the potential impact on the local population from an actual or evolving incident.
- 2.3 It is likely that the STAC, once activated, will take several hours to stand-up. Therefore, immediately following an incident the incident commander may still be without a co-ordinated source of scientific and technical advice provided by the STAC. In this situation, the primary source of advice will be local expertise (e.g. Public Health Wales, Environmental Health Officers, etc.) which will provide an early assessment as far as possible of the actual or likely impact the incident may have on the environment, public health and public safety. This may include advice on sheltering and first responder safety.
- 2.4 Once the SCG Chair requests a STAC and nominates a Chair, the STAC Chair will convene the STAC by drawing in all the scientific and technical advisers which are thought to be relevant to the cell. Administrative assistance and facilities assistance for the STAC and to support the STAC Chair will be provided by the police as necessary.
- 2.5 The STAC will operate as a virtual group where this is more appropriate.
- 2.6 It will be for the STAC Chair and SCG Chair to decide whether the full STAC needs to be in attendance at SCG meetings or whether this should be solely the STAC Chair or a core group.
- 2.7 The STAC Chair will also decide whether the full group, core group or individuals should attend SCG sub-group meetings. Such decisions will be made on the nature of the advice required and the areas of expertise of the individuals concerned.
- 2.8 In some instances, the STAC may be required to link to the Scientific Advice Group for Emergencies (SAGE) convened on the UK level for wider advice and expertise.

Section 3 - Role

3.1 The role of the STAC in response to an incident is to:

- provide a common source of science and technical advice to the SCG Chair and other members of the SCG on the extent of the evidence base available, and how the situation might develop, what this means, and the likely effect of various mitigation strategies;
- monitor and corral the responding science and technical community to deliver on the SCG's high-level objectives and immediate priorities;
- agree any divergence from agreed arrangements for providing science and technical input;
- pool available information and arrive, as far as possible, at a common view on the scientific and technical merits of different courses of action;
- provide a brief to the SCG Chair on the extent of the evidence base available, and how the situation might develop, what this means, and the likely effect of various mitigation strategies;²
- identify other agencies / individuals with specialist advice who should be invited to join the cell in order to inform the response;
- liaise with national specialist advisors from agencies represented in the cell and, where warranted, the wider scientific and technical community to ensure the best possible advice is provided;
- advise on sampling and monitoring requirements and strategy; and

3.2 A written record of the advice on which the decisions are based will be maintained.

² In extremis, such a common brief does not prevent a STAC member providing separate advice to their agency representatives at the SCG where an issue cannot be resolved within the STAC. STAC Guidance to Local Responders (April 2007)

Section 4 - Membership

4.1 In the initial stages of any emergency the immediate concern is likely to be the risk to human health from the substances involved and any possible mitigation measures required. As these are largely health related issues Public Health Wales is best placed to Chair the cell during the early response phase of an emergency reflecting the likely initial focus on public health issues. However, a Chair from another organisation may be more appropriate if the issues do not relate to health.

4.2 The membership and function of the STAC will be incident specific and tailored to local requirements. Members will have the necessary knowledge and skills to collectively provide scientific and technical advice in any emergency. The cell is always likely to include specialists in health, the environment, and site specific response concerns (site / infrastructure owner / operator).

4.3 Agencies covering other specific capabilities and/or responsibilities will be represented dependent on the type of incident and requirement for specific technical advice, such as local authorities, Met Office, Government Decontamination Service, utility and transport operators.

4.4 The core membership of the cell will be decided by the STAC Chair based on the nature of the incident and the expert scientific and technical advice required. The SCG Chair may request wider advice which will be considered in consultation with the STAC Chair.

4.5 Although not exhaustive, membership will be drawn from:

Welsh Assembly Government Scientific and Technical Advisers	Health and Safety Executive
Public Health Wales	Local authorities (including Environmental Health & Trading Standards)
Health Protection Agency	Met Office
Health Boards	Government Decontamination Service
Emergency services technical advisers	Animal Health
Site operator technical advisers	Marine and Fisheries Agency/Marine Management Organisations
Environment Agency Wales	Welsh Assembly Government Fisheries Unit
Food Standards Agency	Welsh Assembly Government Communications Division
Countryside Council for Wales	
Other agencies invited to address sector specific issues, such as the Utilities or transport operators and other environmental organisations	

Section 5 - Media Support

- 5.1 Any incident which may affect the health of the population will attract intense media interest. As with any major incident, it is important that the public are accurately and regularly warned and informed, most likely through the media, of potential risks.
- 5.2 In particular, the public will need information on sheltering and potential hazards of self evacuation. All media statements particularly on public health aspects of the incident or where scientific or technical information is being provided must be agreed by the STAC (or STAC Chair) through the SCG.
- 5.3 Where a regional or national dimension is required to media lines the STAC will link with the Wales Civil Contingencies Committee and COBR to agree a consistent public message.

Section 6 – STAC Variations

Counter Terrorist Chemical, Biological, Radiological, or Nuclear Incident

- 6.1 In a Counter Terrorist incident, there are existing arrangements set out in the Home Office Counter Terrorism Contingency Planning Manual for the provision of specialist advice to the Police Gold Commander and the appointment of a Senior Scientific Advisor to advise on response measures. This will be provided through the MOD's Defence Science and Technology Laboratory (Dstl) for the handling of a chemical or biological device and through the Atomic Weapons Establishment (AWE) for the handling of a radiological or nuclear device.
- 6.2 The focus of this activity is primarily within the 'hot zone' and immediate surrounding area, although they would be available to provide advice on any aspect of the response if that was requested by the incident commander. Those agencies with statutory functions to perform will also be involved and will provide advice into the SCG, through a STAC where appropriate, to consider wider scientific and technical issues affecting the response outside the 'hot zone'. The Police Commander will also be able to draw upon the expert advice and assistance of the Police National CBRN Operations Centre which will also be considered by the STAC in respect of the advice given for outside the 'hot zone'.
- 6.3 Where a STAC is established in Wales, a member of staff from Defence Science and Technology Laboratory (Dstl) or the Atomic Weapons Establishment (AWE) will ensure the effective sharing of scientific and technical advice between Dstl or AWE teams and the wider scientific and technical community working in the STAC.
- 6.4 The provision of emergency co-ordination of scientific advice (ECOSA) has been identified as a key capability gap since the creation of the *Model Response* in 2005 to a CBRNE incident. Since that time, a great deal of work has been conducted on the creation of a Science and Technical Advice Cell (STAC) and the Scientific Advisory Group for Emergencies (SAGE) for CBRNE terrorist incidents. However, neither of these two bodies are currently remitted to provide immediate scientific advice to emergency responders across the UK during the first two hours of a CBRNE incident.
- 6.5 The Home Office led Emergency Services Steering Group (ESSG), which consists of senior representatives from the Police, Fire and Rescue, and Ambulance services, has been tasked with filling this capability gap and recommending their proposals to the cross-government CBRNE Oversight Board. A separate provision for such scientific advice is therefore likely to feature in future revisions of this document.

Marine Pollution Incidents

6.6 In accordance with the National Contingency Plan for Marine Pollution from Shipping and Offshore Installations, an Environment Group will be established for maritime emergencies. This will provide environmental and public health advice to all response cells as set out in the NCP. Where an incident originates offshore the Environment Group will provide scientific and technical advice for the marine response. In such an incident a STAC will not be required.

6.7 Where a maritime incident poses a significant threat to public health on land (e.g. chemical fumes blowing in to a coastal town), the Environment Group will be extended by the relevant SCG to form a STAC to provide wider scientific and technical advice; particularly in respect of public health.

Animal Welfare

6.8 Animal Health is responsible for providing advice on animal welfare, and the management of animal disease outbreaks. However, there will be a distinction drawn between Animal Health contributing advice on wider emergencies in terms on the impact on animal health and the actual response to a predominantly animal health emergency.

6.9 In animal health incidents, access to scientific advice will be from various groups at UK level, including the Science Advisory Council, National Experts Group and National Epidemiology Emergencies Group, all of which could be called upon to assist in a given situation. These groups not only provide technical advice to UK government departments, but also help provide reassurance to the European Commission that disease is being handled effectively.

Section 7 – Air Quality Monitoring Co-ordination Arrangements for Major Incidents in England and Wales

7.1 For major incidents in England or Wales, which involve a release of hazardous substances to air with the potential to cause significant harm to the public and the environment, the Environment Agency will activate an Air Quality Cell (AQC).

7.2 The AQC will respond to incidents such as fires involving toxic combustion products which might involve offshore incidents where the plume can reach mainland.

7.3 The AQC will not respond to radiological, nuclear or biological incidents or acts of terrorism involving Chemical Warfare agents, as these are covered by other response arrangements.

7.4 The Environment Agency will act as the AQC co-ordinator and also provide a monitoring service for incidents other than terrorism (CBRN) or nuclear. Local Authority Environmental Health Officers will also have an advisory and regulatory role in respect of air quality.

7.5 The Air Quality Cell (AQC) will provide advice to the HPA and/or Public Health Wales representatives (who work closely as part of a coordinated team) at a STAC or directly to SILVER or GOLD Controls.

7.6 Air quality data may also be used after an incident to assess the likely exposure to residents in the affected area.

7.7 The AQC is a virtual group, chaired by the Environment Agency, with technical expertise from:

- Environment Agency
- Health Protection Agency (public health advice)
- Met Office (weather forecast and basic modelling capability)
- Health and Safety Laboratory (advanced modelling capability, chemical reactivity advice and enhanced monitoring)
- Food Standards Agency (food uptake and contamination)
- Other organisations/individuals (specific expertise as required)

7.8 Although the AQC will be a virtual group there may be a need in some circumstances to have a close proximity observation team to relay facts about the visual behaviour of an evolving plume situation.

7.9 The primary role of the AQC is to provide immediate ongoing technical advice on specific health protection issues, and operates 24/7. Its primary role is to:

- Plan and deliver the modelling strategy
- Interpret real-time data
- Provide considered and timely advice on air quality information via HPA to SILVER or STAC
- Respond to questions and direction from SILVER or STAC
- Decide the nature and scale of the monitoring and modelling response

Annex 1 - Roles and Responsibilities for Providing Scientific and Technical Advice at the Local Level in an Emergency

A number of agencies have statutory responsibilities to perform during the response and recovery phases of an emergency. This note provides SCG Chairs and other responders with guidance on which agency should be advising the Strategic Co-ordination Groups on scientific and technical matters.

Site Specific Information

The site operator is responsible (by law in respect of COMAH³ sites) for providing timely and accurate information on substances stored on an affected premises and the risk they pose to the public and others (additional information may be available from the Health and Safety Executive and other regulatory/advisory bodies). The site operator and regulatory/advisory bodies, such as the Health and Safety Executive (HSE), should assist SCG members to assess the local and the wider implications for public health and the environment (see below).

Specialist Public Health Advice

Public Health Wales is responsible for providing specialist public health advice and leadership relating to the public health aspects of a major incident. This includes those relating to chemical, biological, radiological and nuclear hazards.

Public Health Wales Emergency Management (Major Incident) Plan describes the processes required to deal with any aspect of a major incident.

Public Health Wales will provide assistance on public health issues to responders such as the NHS, other Category 1 Responders and the wider general public. The Public Health Wales will give advice on public health threats and may, where appropriate, make this advice public. Specialist support will be provided to Public Health Wales by the Health Protection Agency.

Direction of NHS Resources

The relevant Health Board Chief Executive is responsible for ensuring the most effective mobilisation and deployment of NHS (non-ambulance service) assets to meet the health needs of those affected.

Health and Safety of Responders and other Employees affected by the emergency

Employers (e.g. site operators and Category 1 responders) are responsible for ensuring the health and safety of their employees. (The Fire and Rescue Service has traditionally had primary, though not statutory, responsibility for ensuring the **safety of responders from the emergency services operating within the inner cordon** during the response phase of an emergency. However, it has recently been agreed that the Fire and Rescue Service should manage gateways into the inner cordon but that individual services maintain responsibility for their own personnel's Health and Safety)

The Health and Safety Executive (HSE) is responsible for the enforcement of Health and Safety Legislation at most industrial, major hazard and local authority premises.

³ Control of Major Accident Hazard Regulations 1999 (COMAH).

This will include advice on how responders might fulfil their duty of care obligations to workers, responders and others involved in the response to an emergency. The HSE will provide advice on sampling and testing for harmful substances arising from an affected workplace once the Fire and Rescue Service or other competent authority has advised that the site, or parts of it, is safe to enter. They may take samples for the purpose of enforcement of Health and Safety Legislation.

Local Authorities have responsibility for the enforcement of many premises including warehouses etc. and also undertake sampling in premises they enforce.

Food Safety

The Food Standards Agency (FSA) has statutory responsibility for ensuring the **safety of the food chain** (excluding tap water) and for advising the public on food safety matters. The FSA may undertake testing, sampling and analysis of an area affected by potentially hazardous substances to determine the consequences for the food chain and take any necessary actions to protect public health.

Local Authorities – Local Authorities have statutory duties in their areas and in practice undertake the majority of sampling and enforcement actions

Environmental Protection

The Environment Agency is responsible for **protecting the environment** from incidents that threaten air, land or the aquatic environment. These include potential or actual ground water pollution incidents and incidents where water abstraction might be affected. In addition to its regulatory role for certain sites where there is a risk of atmospheric pollution, for major incidents involving release to the atmosphere the Environment Agency will activate an Air Quality Cell (AQC). Full details are set out in Section 7.

It is also responsible for flood prevention and management and waste regulation. The Agency may undertake sampling and testing of material collected during incidents to assist with identifying the cause, and these may later be used in any enforcement or legal action.

The Environment Agency may request the assistance of the Fire and Rescue Service in pollution prevention, or employ specialist contractors.

Local Authorities – Local Authorities also have a role environmental protection.

In the event of an Environment Group (EG) being established to support the National Contingency Plan (NCP) for a maritime emergency that has an impact on the environment and health, the EG will provide Scientific and Technical Advice. The EG in Wales will be chaired by either a representative for the Countryside Council for Wales (CCW) or from Environment Agency Wales.

Public Water Supply

Water companies are responsible for ensuring the **safety of the public water supply**.

The Department for Environment, Food and Rural Affairs (DEFRA), through the Drinking Water Inspectorate and Water Supply Regulation Division is responsible for notifying other stakeholders of actual / potential water supply emergencies and

providing advice / support as necessary to ministers, water companies and responders. The Inspectorate maintains a call-off contract for 24/7 testing of water samples collected by the water companies to identify contamination by chemical or biological agents.

Local Authorities – Local Authorities also have a role in the protection of water supplies; particularly private water supplies.

Meteorological Information

The Met Office is the lead agency for the **provision of meteorological information**, and the issue of **plume dispersion information** (but not the content of the plume). The Met Office may also be able to make available in conjunction with the Natural Environmental Research Council (NERC) an airborne sampling capability to support the multi-agency response.

Radiological Contamination

Defra is responsible for co-ordinating the monitoring of fallout from overseas nuclear accidents through the Radioactive Incident Monitoring Network (RIMNET) system. In the event of a civil nuclear site accident having or considered likely to have off-site effects. The UK Government would appoint a Government Technical Adviser (GTA) to provide independent advice on what actions should be taken to protect the public.

Terrorist use of CBRN material

MOD technical experts from the Defence Science and Technology Laboratory (Dstl) or Atomic Weapons Establishment (AWE) would deploy, on behalf of the Home Office and in support of the police, as part of the **Government response to a terrorist incident involving (or suspected of involving) Chemical, Biological, Radiological, or Nuclear material**. The teams would provide advice on handling any device as well as identifying and advising on the material involved and appropriate counter-measures that might be taken during the initial response phase. They would also undertake the plume modelling. Advice and support may also be provided during the recovery phase.

Decontamination

The Government Decontamination Service (GDS) (an executive agency of Defra) does not have a statutory function but provides **advice and guidance on decontamination** of buildings, infrastructure, mobile transport assets and the open environment following CBRN or significant Hazardous Materials (HAZMAT) incidents. This includes access to the GDS Supplier Framework which contains details of contractors with decontamination capability. The GDS ensure ready access to those services if the need arises.