

RESCUE SERVICES IN NORTHERN SCOTLAND

REPORT ON THE PRIMARY RESCUE SERVICES IN REMOTE AND RURAL NORTHERN SCOTLAND



VERSION 1

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1 Facts about the country

1.1 Introduction



Scotland is the most northerly of the countries which are part of the United Kingdom. It occupies one third of the landmass of the UK (approximately 78,772km²) and has a coastline of 11,800km.

Scotland's population of over 5.14 million is mainly situated within a stretch of land known as the *Central Belt*. This area is situated between Scotland's capital city, Edinburgh (population 468,000) and the industrial city of Glasgow which, with a population of 2.3 million within its surrounding conurbation, is Scotland's most

densely populated metropolitan area. Other major cities include Aberdeen, Dundee and Inverness.

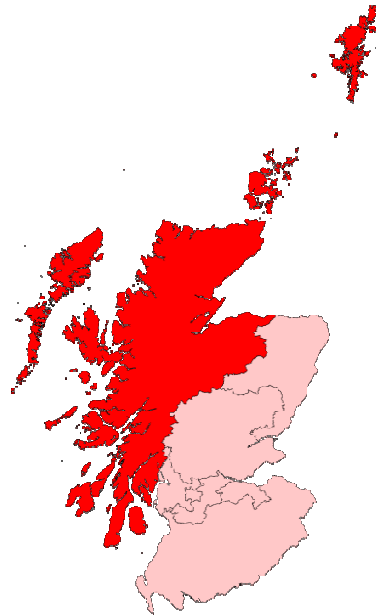
1.2 Geography

Over 90% of the landmass of Scotland is remote and rural.

1.15 million people (22% of Scotland's total population), live in a *Sparsely Populated Area*.

The area has over 9,500km of coastline, including 800 islands (130 inhabited) and is comprised of mountainous uplands separated by deep glacial valleys and large bodies of water. The area includes the UK's highest mountain, Ben Nevis (1344m).

Due to the west coast being influenced by the *Gulf Stream* from the Atlantic Ocean it has a temperate maritime climate giving rise to a changeable, wet climate. The area is milder during the winter than other areas at the same latitude (e.g. Moscow in Russia, Juneau in Alaska or the Labrador Peninsula in Canada), but is also cooler and wetter in the summer months.



Settlements within the Highlands and Islands are generally linear, sporadically placed, separated by high passes and serviced by a poor road infrastructure.

Many people assume that remote and rural country areas are relatively low-risk areas, however with the move to locate high-risk facilities such as nuclear power stations and military sites away from dense population centres and the recognised globalisation of risk (e.g. Chernobyl) the countryside has some considerable risks associated with it.



The remote and rural areas of Scotland are also particularly susceptible to infrastructure damage due to severe weather events. High winds and low temperatures can cause damage to power lines, telecommunications and transport links.

Nationally recognised risks include:

- Pandemic Influenza
- Terrorism
- Fuel Disruption (e.g. Strikes, Shortages)
- Critical National Infrastructure (e.g. Power, Transport, Water)

The Highlands and Islands are subject to recognised regional risks including:

- Nuclear Facilities (e.g. Dounreay, Vulcan NRTE, Military sites)
- 7 Top-tier COMAH Sites (e.g. Sullom Voe, SGN Stornoway)
- 23 Lower-tier COMAH Sites
- 1 international airport & 8 regional airports
- Northern & Southern Tracks transatlantic flight paths
- Severe Weather events
- Flooding
- Loss of Communications
- Loss of Power Supply
- Transport accident
- Flooding

These risks are recorded in the regional Community Risk Register (CRR). Each region records and publishes the risks recognised locally. The Highlands and Islands CRR is available on the internet at:

<http://www.handiprepared.gov.uk/full-list.asp>



2 *The organisation of the rescue service*

2.1 Background of the rescue service

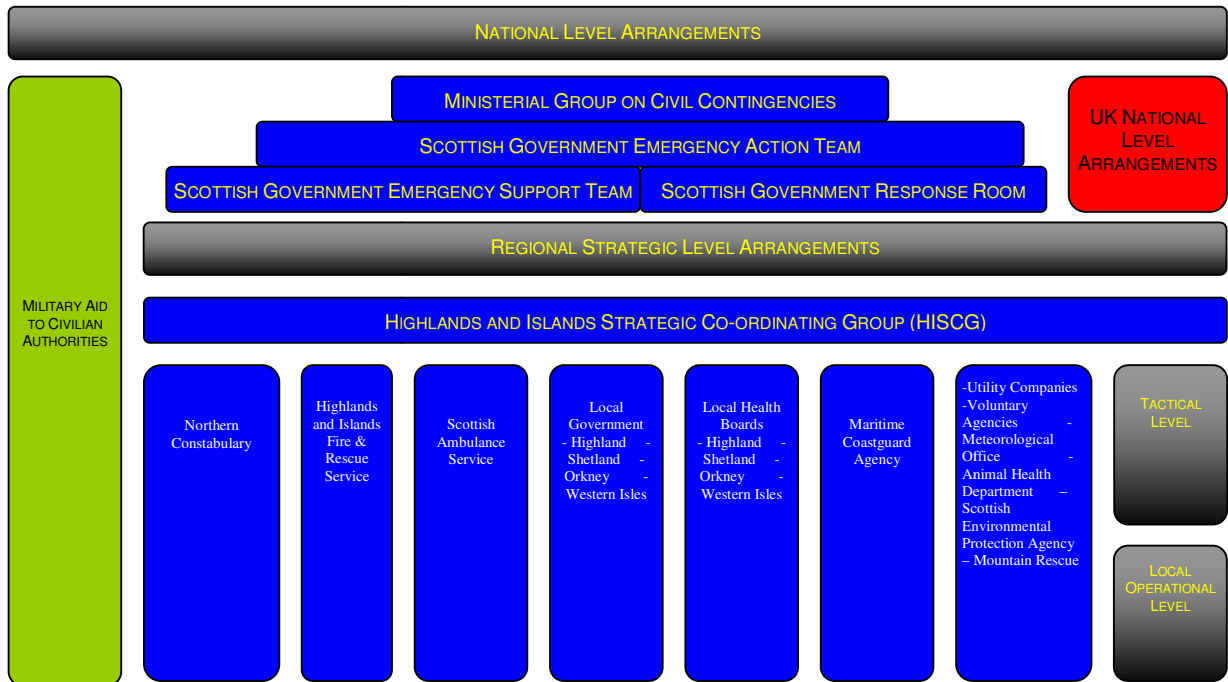
Scotland, as part of the UK, is subject to the Civil Contingencies Act (2004). This law and the subsequent regulations are based on the concept of “Integrated Emergency Management” (IEM). Civil Contingencies does not focus on reducing or mitigating risks but on *responding to the effect* of a major incident.



Civil Contingencies is divided into three levels; *Strategic, Tactical* and *Operational*. IEM is structured in such a way that the response starts from the operational level and escalates as further resources are required or it is recognised that a level of response will become overwhelmed by the incident.



Additionally there is also a national level of response designed to co-ordinate cross-region incidents or national level emergencies. The diagram below illustrates the response arrangements in a grid form.



Guidance is supplied from the devolved Scottish Government in the form of generic and specific publications. These include:

Preparing Scotland - Preparing Scotland provides a framework for civil protection within which the contingency plans of the emergency services, local authorities, health services, government departments and other statutory, commercial and voluntary organisations at local, Scottish and UK level can be prepared. Its purpose is to support preparation and effective response to emergencies that may occur in Scotland.

Pandemic Flu (A Scottish framework for responding to an influenza pandemic) – Pandemic Flu provides a framework for all involved agencies in responding to a global outbreak of influenza. It is supplemented by documents which further focus on vulnerable aspects of our community such as mental health, children’s services and geriatric care.

2.2 Resources / major units involved

Under the Civil Contingencies Act (2004), there are two levels of agency involved in responding to major emergencies and major incidents.

Category 1 Responders are those agencies which in day-to-day terms are classed as the emergency services (police, fire & rescue, ambulance, etc) and those other primary agencies involved in dealing with or supporting others in a major incident; organisations such as National Health Service Boards and Local Authorities.

Category 2 Responders are the organisations who would play a secondary role in responding to major incidents. These include; National infrastructure utility companies (i.e. water, gas & electricity suppliers, road agencies, transport authorities), voluntary organisations (British Red Cross, WRVS & Salvation Army), meteorological agencies & environmental protection agencies.

2.2.1 Police

All police forces in Scotland maintain arrangements for immediate response to any incident involving any danger to people or property, or which might lead to disorder or to disruption of the ordinary life of the communities they serve.

Northern Constabulary is responsible for the large remote and rural area of the Highlands and Islands. The primary role of the police force during a major incident is to:

- Exercising overall co-ordination of all action at the scene of the emergency and in immediate response to it.
- Controlling access to the scene of the major incident and of crowds and traffic elsewhere to support the work of all responding services, e.g. ambulance routes, access points to hospitals.
- Provision of communications.
- Establishing the identity of any dead or injured, maintaining suitable records and informing relatives.
- Arranging mortuary facilities and disposal of the dead.
- Conduct a criminal investigation if necessary.



2.2.2 Scottish Ambulance Service

The Scottish Ambulance Service is a nation-wide Specialist Health Board with roles and responsibilities regarding responding to major human health incidents.

The Scottish Ambulance Service provides life-sustaining immediate care to casualties at the scene together with transport, and in-care transit, of patients to, from and in between health care facilities.

As the Scottish Ambulance Service operates through a centralised national command and control structure (Emergency Medical Dispatch Centre – EMDC) which allows for a rapid response to major incidents across the country by enabling a rapid implementation and redeployment of national assets.

To meet the additional challenges of a major incident, the Scottish Ambulance Service maintains a variety of resources for deployment in such occurrences. These include the Special Operations Response Teams, Emergency Support Units and additional communications support equipment.



To supplement its road ambulances, the Scottish Ambulance Service operates a 24 hour a day, seven days per week fixed wing and helicopter air ambulance service to transport those patients whose condition and need for urgent transfer make air transport necessary. Should its own resources be insufficient, or unable to meet requirements, the Scottish Ambulance Service will make arrangements for use of

RN, RAF or HM Coastguard Search and Rescue (SAR) helicopters or other aircraft. The Scottish Ambulance Service may also use air assets to transport personnel and equipment to the scene of an incident.

When necessary, the Scottish Ambulance Service will deploy a Mobile Ambulance Control Unit (MACU) and associated staff to the scene of a major incident. In addition to providing support for the Ambulance Incident Officer, it is equipped with a wide range of facilities for the local control of ambulances and ambulance personnel in the vicinity of the scene, and for maintaining communication with the Ambulance EMDC. It will normally be able to provide direct communications links from the scene to Designated Receiving Hospitals and Board Control Centre where these are needed by the Medical Incident Officer.

2.2.3 Regional National Health Service Boards

NHS Boards are accountable to the Scottish Government for the overall assessment of health needs of all people within their geographic areas, and for arranging for those needs to be met. This strategic function, together with their specific responsibilities for public health within their geographic areas gives NHS Boards an overall leadership role in regard to health and the functioning of the NHS within their areas.

It involves working in close partnership with local authorities and securing the collaboration of others with a part to play, both routinely and in emergency, in safeguarding and improving the health of people in the area.

During a Major Incident the local Health Board is expected to provide;

- Site Medical Team

Provides immediate pre-hospital life support and stabilises casualties to enable transport to the designated casualty receiving hospital. Contains a mix of medical personnel, nursing staff and support personnel.

- Casualty Receiving Hospital

A hospital designated by an NHS Board in its Emergency Plan to receive casualties. It has the facilities to receive and treat patients who are seriously injured or critically ill on a 24 hour a day basis.

- Support Hospital

A hospital (acute or otherwise) which in an emergency can receive casualties or other patients in support of Designated Receiving Hospitals or provide staff or other resources to support them.

- Incident Control Centre

The effective operation of the hospital's emergency plan is dependent on central control and co-ordination of the hospital's activities with those of other agencies involved. This is best effected from a Hospital Control Centre equipped with the necessary internal and external communications. The Hospital Control Centre should be staffed by a Hospital Control Team which normally would include a senior doctor, specifically appointed by the Chief Executive to be the Hospital Medical Controller, a Senior Nursing Officer and other officers to oversee control of their particular functions. The role of the Hospital Medical Controller is one of overall responsibility, in consultation with other members of the team, for arranging and co-ordinating the hospital's response to the total need for patient care. The Hospital Control Centres in Designated Receiving Hospitals should include provision for the Ambulance Liaison Officer, and for liaison with the police.



2.2.4 Mountain rescue services



Mountain Rescue Teams provide land-based Search and Rescue capabilities and are capable of operating in remote and rural locations and during hostile weather conditions. Mountain rescue services are normally mobilised through the police. Services are provided by the Royal Air Force, by some police forces and by local volunteer groups.

Mountain rescue teams have worked at several major incidents throughout the UK, most notably during the Lockerbie Air Crash and at Nevis Range ski resort when a gondola came loose and collided with another causing multiple casualties.

Mountain rescue service expertise can include;

- Provision of search capabilities in remote and upland areas.
- Swift Water Rescue.
- Use of rescue dogs (Scottish Search and Rescue Dog Association) to locate missing persons.
- Technical rope rescue.
- Emergency Medical Technicians.



2.2.5 Fire and Rescue Service

Fire and Rescue services provide a full time fire-fighting capability, urban search and rescue and a chemical hazard response.

Highlands and Islands Fire and Rescue Service (HIFRS) are tasked with the responsibility of providing these services to the Highlands and Islands area.

The service relies on a core of 151 paid personnel and 1049 retained (voluntary) personnel to man 1 full time fire station (in Inverness) and 95 retained fire stations throughout the region.

During a major incident they are responsible for:

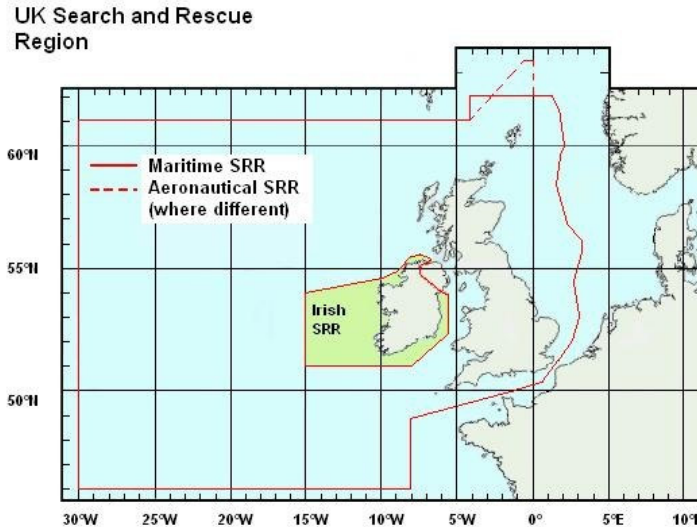
- Providing fire-fighting capability at the scene.
- Providing a search and rescue capability.
- Providing the capability to free trapped casualties (e.g. in a road traffic collision).
- Providing advice to the other responding agencies with regard to chemical hazards.
- Providing a chemical hazard response.



2.2.6 Maritime Coastguard Agency

The Maritime Coastguard Agency (MCGA) is the responsible authority for the initiation and co-ordination of civil maritime search and rescue within the UK Search and Rescue Region. This includes the mobilisation, organisation and tasking of adequate resources to respond to people in distress at sea or to people at risk of injury or death on the cliffs or shoreline of the United Kingdom. Its Maritime Rescue Co-ordination Centres

(MRCC) and their supporting Maritime Rescue Sub-Centres (MRSC) covering Scottish offshore waters and coastline are located across the UK.



Resources immediately available to MRCCs and MRSCs are known as Declared Facilities, which are those designated as available according to specific criteria. Declared Facilities include RNLI lifeboats, military and coastguard search and rescue aircraft and HM Coastguard cliff rescue teams. Additional facilities are those such as warships and other vessels at sea and nearby offshore oil/gas installations which may be available and offer assistance. Control of

resources at the scene will normally be vested in an on-scene commander. This role may initially be assumed by the vessel/installation with the problem, or be delegated by the MRCC or MRSC to another appropriately equipped ship, aircraft or nearby installation.

Whether survivors, including those injured, are brought ashore by ship, boat or helicopter, procedures at the landing point and during subsequent transfer and admission to hospital or reception centre should follow those used for a land based incident. Initial co-ordination of onshore activities arising from an offshore emergency will be undertaken, as normal, by the police who will maintain close liaison with HM Coastguard.

2.2.7 Local Authorities

Local authorities in Scotland are designated as 'Category 1 Responders' under the terms of the Civil Contingencies Act 2004. This obliges them 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;
- Provide advice and assistance to businesses and voluntary organisations about business continuity management.

The general purpose of local authorities to support the welfare of people in their areas gives them a uniquely comprehensive knowledge of those areas. The broad range of their planning, education, social work, housing, transport and protective services gives them both immediate access to considerable resources and widespread influence locally. These attributes, together with that of their locally elected basis, gives local councils unrivalled potential to provide leadership in an emergency.



Following the concepts of Integrated Emergency Management and Combined Response, local authorities will initially provide such corporate support and assistance needed by the emergency services, NHS or individual council services (e.g. Social Work, Environmental Health) in responding to an emergency. They will work closely with the police or other authority leading the co-ordination of the initial response and if necessary undertake a support co-ordination

role. Following the immediate response phase of an emergency, a local authority is likely to assume from the police or other initial coordinator overall leadership of follow-up activity needed to restore normality.



2.2.8 Meteorological Office

The Met Office provides advice and support to responding agencies during major incidents where necessary. The range of services includes;

- RIMNET (Radiation Incident Monitoring NETWORK)

RIMNET, the national radiation monitoring network and emergency response system, enables any increases in radiation levels within the UK, which arise from a nuclear accident overseas, to be detected via a network of monitoring sites in England, Wales, Scotland and Northern Ireland. The system sends out automatic alerts when it detects such increases.

- PACRAM (Procedures And Communications in the event of a release of RADIOactive Material)

PACRAM is a comprehensive service which responds to any potential incident at a UK nuclear power plant. The service allows the nuclear industry and overseeing government bodies' access to predictions of the trajectory of the contamination plume.

- Public Weather Service Advisors

The Met Office has a team of regionally based Public Weather Service Advisors with responsibility for Government Office regions in England and Wales, and for the Devolved Administrations and regions of Scotland and Northern Ireland. These advisors work with regional emergency planning groups to assist in devising plans and exercises and respond to real-time emergency incidents.

- FireMet

FireMet is a weather system designed to provide fire and rescue service (FRS) responders with the latest weather information to help them identify a safe approach when dealing with a major incident.

- CHEMET (CHEmical METeorology)

Similar to PACRAM, CHEMET can be used to track the dispersion of a chemical release. On demand, the customer is provided with instant telephone advice in the form of a simple short-range prediction of the anticipated behaviour of the plume. Within 15 minutes, this is followed by meteorological and dispersion maps which provide a more detailed forecast. A map of areas at risk is faxed to the emergency services. The situation is constantly monitored, and updates given until the emergency is over.



2.2.9 *British Red Cross*

The British Red Cross voluntary organization is a key supporting agent to the frontline emergency responders in the UK and provides staffing and other important resources to those agencies during time when additional capacity is required. Assistance can be provided in the form of personnel (first aid staff, reception centre staff, etc.), equipment, specially adapted vehicles, logistical support, humanitarian support and flood rescue teams.

2.2.10 *Women's Royal Voluntary Service*

The WRVS can provide Emergency Services Response Teams during a major incident.

These teams are situated all over the country, ready to provide a rapid response in emergency situations. Duties range from providing refreshments for rescue workers to helping to run a rest centre for people who have been evacuated from their homes.

2.2.11 *Central Alarm Co-ordination Services*

There is no Centralised Alarm Co-ordination centre in Scotland. All calls are received via a contracted private sector service. The call is then forwarded based on which services are required and a lead responder will process the call. Each emergency service has co-ordination centre as shown below;

- Northern Constabulary: Force Operations Centre (FOC).
- Highlands and Islands Fire and Rescue Service: Service Command and Control Centre (SCCC).
- Scottish Ambulance Service: Emergency Medical Dispatch Centre (EMDC)
- Maritime Coastguard Agency: Maritime Rescue Co-ordination Centre (MRCC)

2.2.12 *Military Aid to the Civilian Authorities (MACA)*

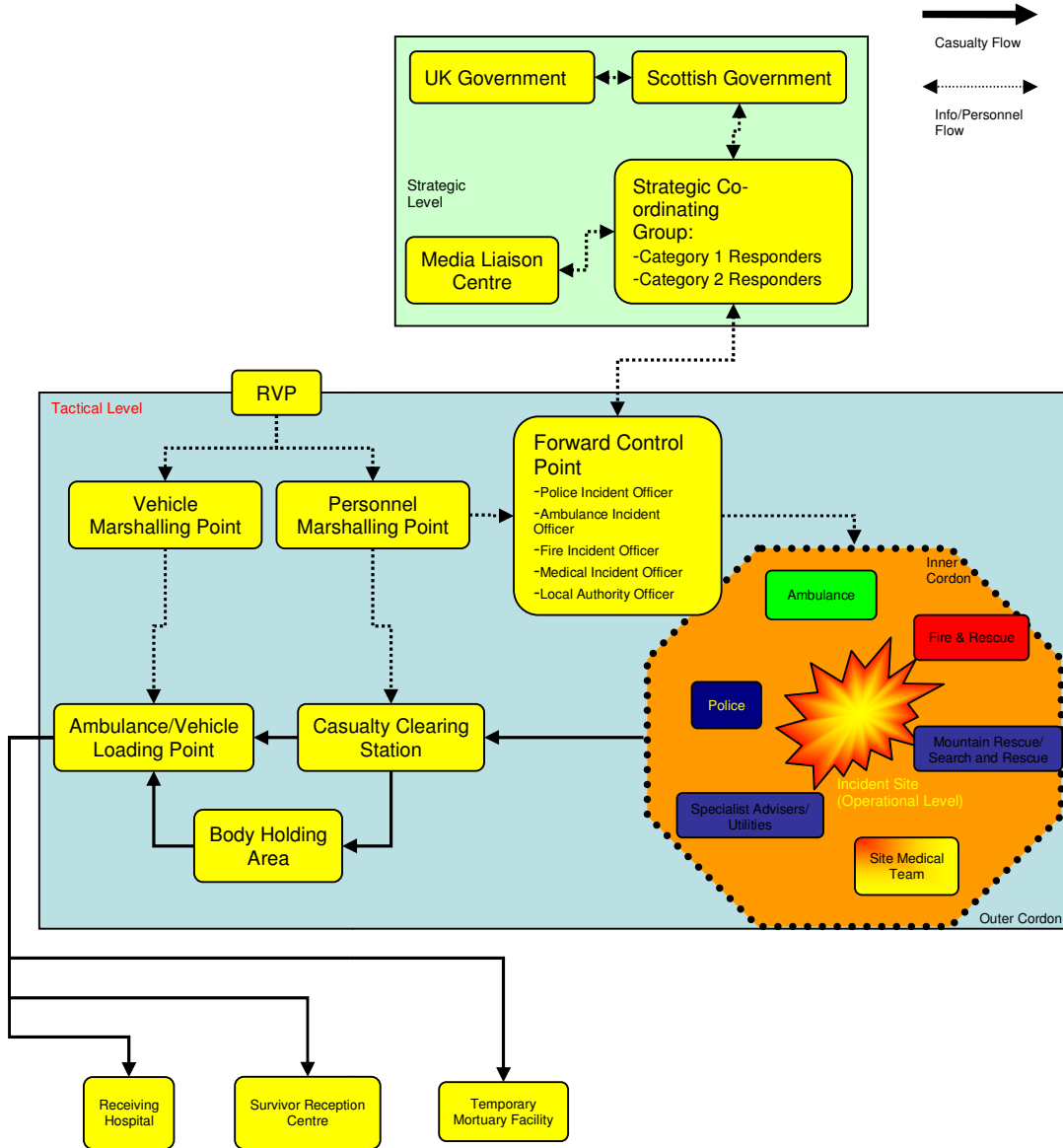
While there is a strict regulation on the use of military forces within the boundaries of the UK and stringent constraints on what the armed forces can be used in relation to, it is not uncommon for the armed forces to release assets to be used. The most common use of military assets is in the use of military search and rescue personnel during civilian incidents and the provision of air transport for medical missions. This was most recently highlighted during a high profile mission to transport a seriously ill mother from Stornoway to Glasgow during severe weather conditions using a C-130 Hercules.



The Air Rescue Co-ordination Centre (ARCC) at RAF Kinloss co-ordinates all tasking of air assets (including RAF/Royal Navy Rescue Personnel throughout the UK).

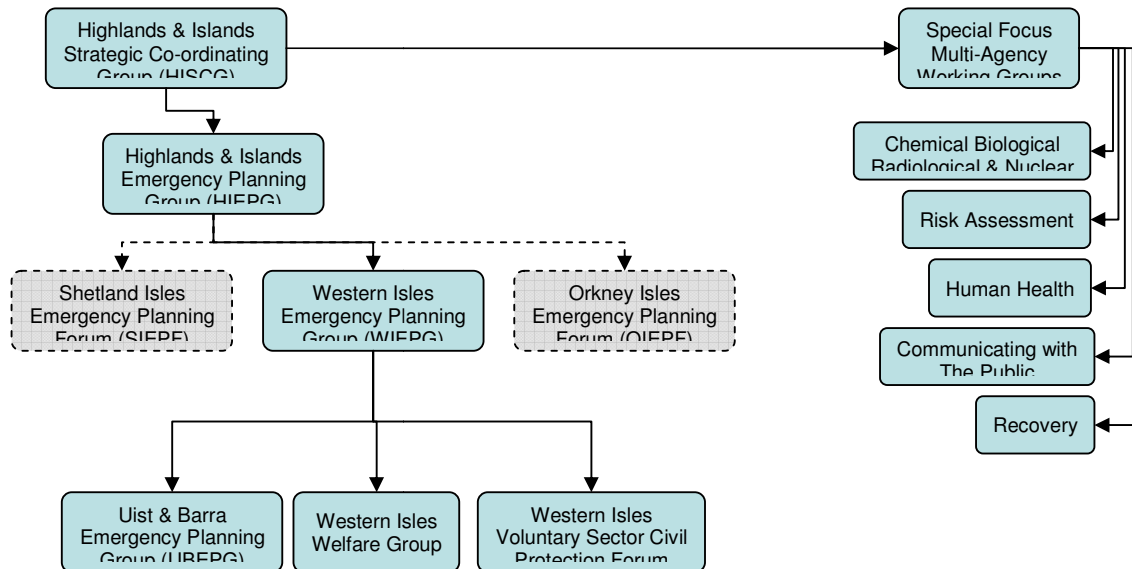


2.3 Operational procedures



2.4 Cooperation of the service providers in the country

Cooperation of the emergency service providers in Scotland is regulated by the Civil Contingencies Act (2004). A concise structure is suggested and the framework for the Highlands and Islands of Scotland is shown as example below;



3 Education and training

Education and Training are paramount to Category One Responders under the Civil Contingencies Act (2004) and there are several work streams which take this into account. Each responder has an internal process, such as the Scottish Fire Service College located in Gullane, near Edinburgh, or the Scottish Ambulance Services College in Barony Castle, Peebles. These colleges deal with the services own training requirements and provide specialised training for the respective service.



In addition to these, there are also two national education services available to responders; the Emergency Planning College, based in Easingwold in Yorkshire and the Scottish Resilience Development Service, based in Perthshire. These providers develop courses specifically based around the skills and knowledge required for major incident



planning and business continuity. For example courses may revolve around planning for major incidents at large sporting events or look at the requirements for developing large scale communications systems designed to operate across agencies during major incidents.

The other route through which responders have the opportunity to test their skills and competencies is through regular exercises. Opportunities to exercise are most commonly taken through statutory regulations. This means that exercise revolve around high risk installations such as airports and COMAH (Control of Major Accident Hazards) sites, such as oil refineries and gas storage plants. As these are run on an annual basis, most responder agencies use these to test their response plans.



4 International cooperation

The UK is a member of the UN and as such has a role to play in disaster response across the world. As such, there is UK involvement in the United Nations High Commission for Refugees (UNHCR) and the United Nations Disaster Assessment and Co-ordination Group (UNDAC).

As the UK is primarily a maritime nation the majority of international co-operation is dependent on the Maritime Coastguard Agency (MCGA) and the UK's Armed Forces to provide resources. The UK Search and Rescue Region extend into the North Atlantic and the UK takes responsibility for providing rescue capabilities within this area.

The UK's Health Boards under the auspices of the National Health Services have mutual aid agreements which allow personnel and equipment to be deployed to foreign disaster areas and also has agreements in place to admit casualties from other countries to primary hospitals across the UK.

5 Summary

The UK under the provision of the Civil Contingencies Act (2004) has a well structured framework for responding to major incidents, although these protocols and procedures rely heavily on voluntary agencies and personnel to provide additional capacity to the primary responder organisations. The five primary principals are;

- Assessment
- Prevention
- Preparation
- Response
- Recovery

A major weakness within this structure is the provision of resources to remote and rural regions and the ability to cope with extreme weather conditions. This is caused by two distinct policies; a) of providing for day-to-day situations and, under the principals of Integrated Emergency Management, 'stepping up' normal working activities to provide a disaster response, as opposed to having extraordinary protocols and equipment, and b) of focusing primarily on dense population centres using the assumption that these are the places of highest risk.

Response to major incidents relies on the primary Category 1 Responders; Police, Fire and Rescue, Ambulance Service, Coastguard, Local Authorities and Regional Health Boards. These in turn rely heavily on the voluntary sector (including British Red Cross and local Mountain Rescue Teams) to provide additional support services.



Responders are obligated to work together and co-operate on planning for and responding to major incidents by statutory regulations and this is accomplished using local resilience for a, known as Strategic Co-ordinating Groups (SCG's).

These SCG's work at a strategic level and practitioners in local working groups provide the tactical level of operations.

Training is becoming more prevalent for disaster planning and the framework for knowledge and skills has been agreed at all levels through the National Occupational Standards scheme. This has become apparent in the personnel requirements of responders when recruiting into Emergency Planning.

Funding is still a major issue when considering the capabilities of responders to major incidents and there is an element of risk acceptance involved in the political aspects of emergency planning.

