

Thames Valley HEALTH EP System: HPA Perspective



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The Health Protection Agency (HPA)



Non-departmental Governmental Body

Function

Protect the community (or any part of the community)
against

infectious diseases and other dangers to health

Provides

Support & advice

Integrated approach to protecting UK public health



What does the HPA do



Protect health, prevent harm, prepare for threats

Chemicals, radiation, other NIEH, communicable diseases

New public health threats

Public health expertise

Local HPUs - Consultants, nurses, information specialists

CHaPD – Consultants, toxicologists, environmental scientists

Rapid response to health protection emergencies

Information and advice

'Independent voice'

Strategic planning



Thames Valley HPU



Eamonn O'Moore – Interim Unit Director

Consultants in Communicable Disease Control

Consultants in Health Protection

Health Protection Practitioners

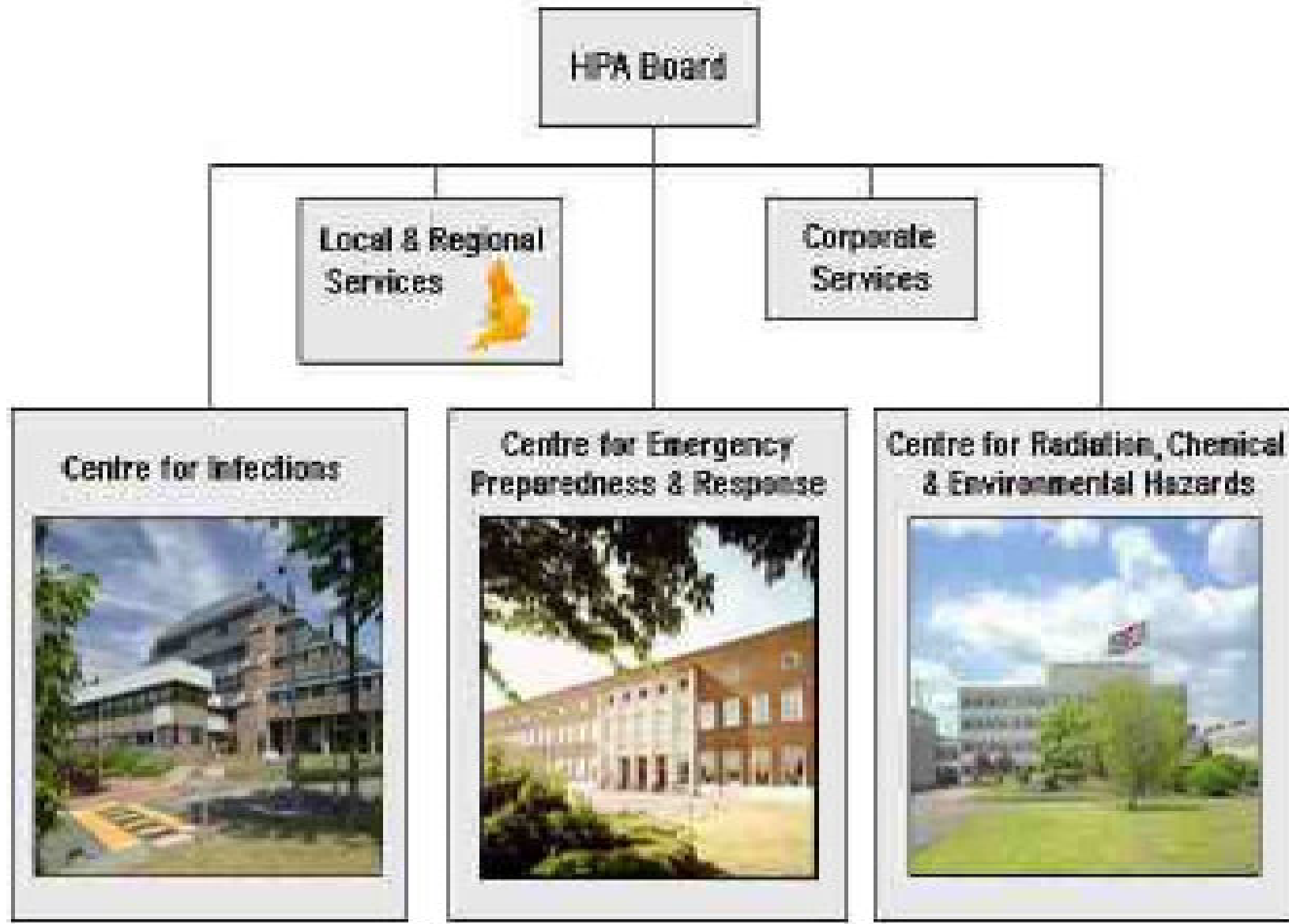
Surveillance team

Admin team

Trainees on attachment

Based at Chilton





HPA: TYPES of INCIDENT



Type	Example
A. Infectious disease events	Localised meningitis outbreak Avian influenza National salmonella outbreak
B. Chemical incidents	Spills & discharges Fires Poisonings
C. Naturally occurring events	Flooding, heat wave, cold Major transport accidents Challenges to CNI
D. Radiological and Nuclear	Source found in public domain Contaminated area Nuclear installation release
E. Event in Devolved Administration	Any of above - MoU
F. Overseas Incident	SARS, Tsunami, Chernobyl
G. Terrorist or security incident	Intelligence led event Bombings, CBRN attacks

Civil Contingencies Act - 2004



Legislative framework for civil protection for emergencies in the UK.

Two parts; local arrangements for civil protection (Part 1) and emergency powers (Part 2).

In addition to the CCA, there is statutory guidance entitled 'Emergency Preparedness' and non-statutory guidance entitled 'Emergency Response and Recovery' to complement the Act and provide advice on how the provisions of the Act should be implemented.

Clear roles and responsibilities for those involved in emergency preparation and response at the local level.

Local responders are divided in to two categories – Cat 1 and Cat 2

Civil Contingencies Act - 2004



Category 1 responders:

Those organisations at the core of emergency response e.g. emergency services, NHS PCTs/ other Trusts, HPA, Local authorities. They are subject to the full set of CCA civil protection duties as follows:

Cooperation, information sharing, risk assessments, emergency planning, business continuity planning, and warning and informing the public, emergency response

Category 2 responders - those agencies and organisations which, in general terms, support the Category 1 responders especially during the recovery phase e.g. utilities – including water, power & communications, transport, Health & Safety Executive.

Their duties are to co-operate with Category 1 responders in building and maintaining the resilience to cope with emergencies.

Civil Contingencies Act - 2004



CATEGORY 1 responders

Emergency services

- **Police forces**
- **British Transport Police**
- **Fire authorities**
- **Ambulance services**
- **Maritime and Coastguard Agency**

Local authorities

- **All principal local authorities (i.e. Metropolitan districts, Shire counties, Shire districts, Unitaries)**

- **Port health authorities**

Health bodies

- **Primary Care Trusts**
- **Acute Trusts**
- **Foundation Trusts**
- **Local Health Boards (in Wales)**
- **Any Welsh NHS Trust that provides public health services**
- **Health Protection Agency**

Government agencies

- **Environment Agency**

CATEGORY 2 responders

Utilities

- **Electricity distributors and transmitters**
- **Gas distributors**
- **Water and sewerage undertakers**
- **Telephone service providers (fixed and mobile)**

Transport

- **Network Rail**
- **Train operating companies (passenger and freight)**
- **London Underground**
- **Transport for London**
- **Airport operators**
- **Harbour authorities**
- **Highways Agency**

Health bodies

- **Strategic Health Authorities**

Government agencies

- **Health and Safety Executive**

HEALTH – National to Local - Resilience



- Department of Health (DH) – national policy leads NHS
- Strategic Health Authorities (SHAs) *regional* HQs - NHS
- SE region – two SHAs (others have one)
- SHAs and HPA SE link to GOSE for regional resilience
- SHAs - strategic leadership & ensure effective local health services
- NHS locally is led by Primary Care Trusts (PCTs)
- Ox PCT – coordinates across TV for EP/ resilience
- HPA national, regional and local – HPU – TV front door
 - Suite of Emergency Response Plans
 - Generic/ Incident specific

Health Organisations – Thames Valley



South Central Strategic Health Authority

PCTs (5):

- Oxfordshire PCT – LEAD PCT for EP – LINK to Local Resilience Forum (LRF)
- Berkshire East Teaching PCT
- Berkshire West PCT
- Buckinghamshire PCT
- Milton Keynes PCT

Acute Trusts - Thames Valley (6):

- Buckinghamshire Hospitals NHS Trust
- Heatherwood and Wexham Park Hospitals NHS Trust
- Milton Keynes General Hospitals NHS Trust
- Nuffield Orthopaedic Centre NHS Trust (specialist)
- Oxford Radcliffe Hospitals NHS Trust
- Royal Berkshire Hospital Foundation NHS Trust

Ambulance - South Central Ambulance Service NHS Trust

And Isle of Wight Ambulance Service (Community Trust)

Non Acute: Thames Valley (3)

- Berkshire Healthcare NHS Trust
- Oxfordshire and Buckinghamshire Mental Health Partnership Trust
- Oxfordshire Learning Disability NHS Trust

HPA: TValley Health Protection Unit (HPU)

COMAH – Control of Major Accident Hazards Regulations



- The aim of COMAH is to prevent and mitigate the effects of major accidents involving dangerous substances – notably chemicals
- Applies where dangerous substances identified in the regulations are kept or used in quantities over defined thresholds
- Mainly applies to chemical industry and some storage activities, explosives & nuclear sites & other industries
- Site operators fall into 2 categories:
 - “top tier” (more onerous duties)
 - “Lower tier” – defined by quantities

COMAH – HPU Engagement



- Civil Contingencies Act – HPA - First Line Responder
- CCA: LRF - Risk Register. Duty to share information
- The COMAH Site LA's Off Site Emergency Plan
- Prepare, review, revise, test off-site emergency plan
- Information to public who may be affected by activities
- Plan deals with off-site consequences of major accidents at top tier sites
- Off-Site Planning Group – HPU rep key member
- Regulator – HSE/ NII – will want to be assured key partners are engaged

COMAH – HPA Advice



- personal protective equipment
- decontamination and evacuation
- toxicological and epidemiological advice on impact on public health
- clinical advice on antidotes and medical treatment
- the public health impact of industrial sites
- health effects from chemicals in the environment (including water, soil, waste)
- But – HPU ltd resource - prioritise

Emergency Response – HPU Added Value

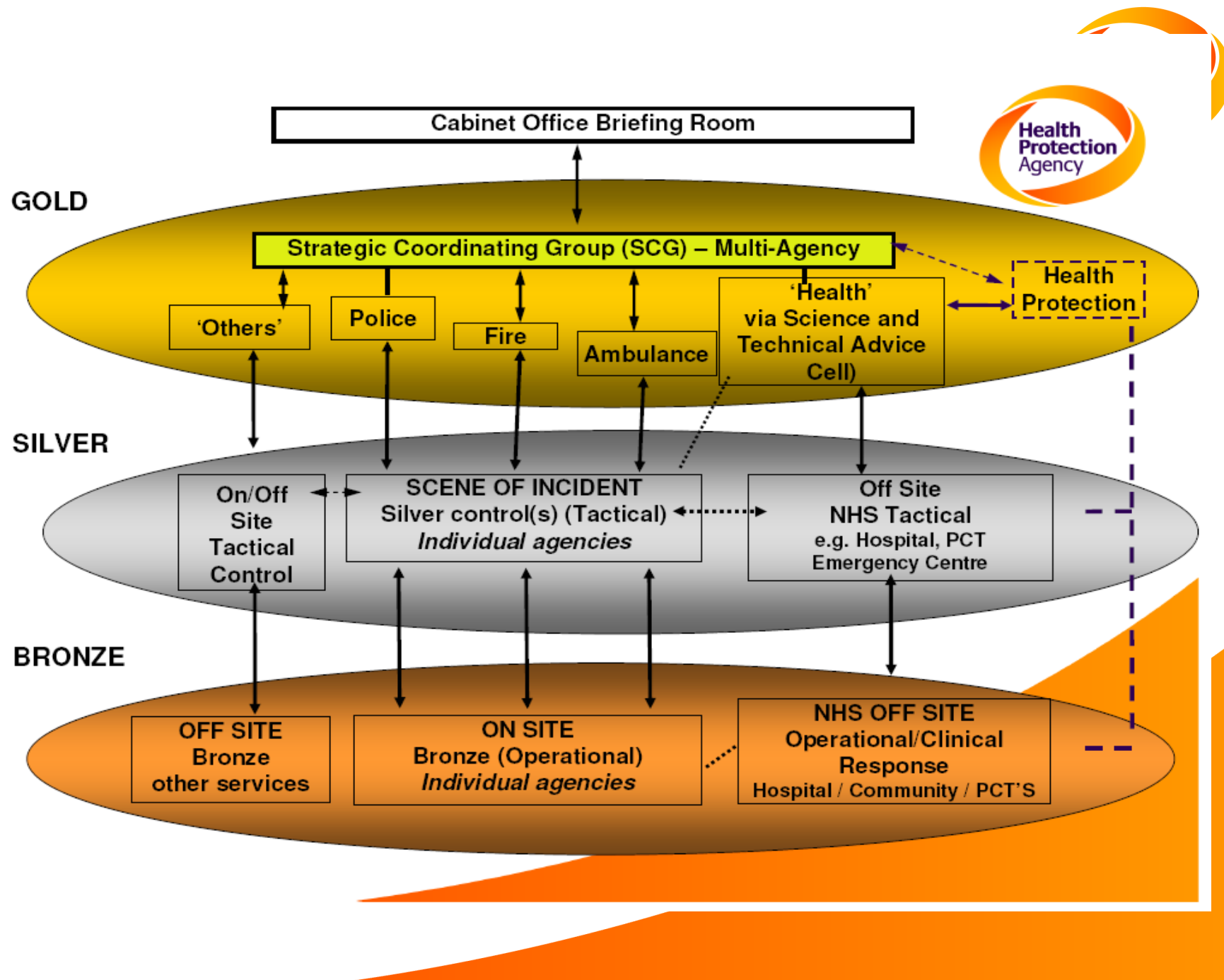


- HPU is the local “front door” into the HPA
- Competence - plans, training and exercising
- HPA specialised services and divisions on chemicals, radiation and infections – accessed through the HPU
- HPU is a key member of the Local Resilience Forum and its multi agency emergency response system
- HPU has a valuable network of contacts and working arrangements with key partner agencies
- HPU is a key member of the “family” of local health NHS services – Ambulance, PCT, hospitals, health authority

Emergency Response – HPU Added Value



- HPU – 7x24 Duty Room – emergency response system
- Key interfaces
 - Infections/ Chemicals & Poisons/ Radiation Divisions
- Acquires database of invaluable local knowledge
- STAC member
- PPE – advice
- Countermeasures – plume modelling
- Fire and police – Silver/ tactical links – as well as Gold
- Media/ public information on health – comms links



Command and Control in Thames Valley



Police lead multi agency command and control

SCALE may necessitate county or Thames Valley wide co-ordination of the NHS response

Lead PCT - Health Strategic Control – for TV

SHA may set up their EOC – depending on incident

Health Function: Overview, co-ordinate/ support/ troubleshoot, diverting demands, whole system capacity management, PR, link to Gold and region/ RDPH and DoH Ops Room

HPU EOC activation

Set up STAC (Scientific & Technical Advisory Cell) at Gold/ SCG

Recovery phase.....

Disease:
Public
Health
Surveillance

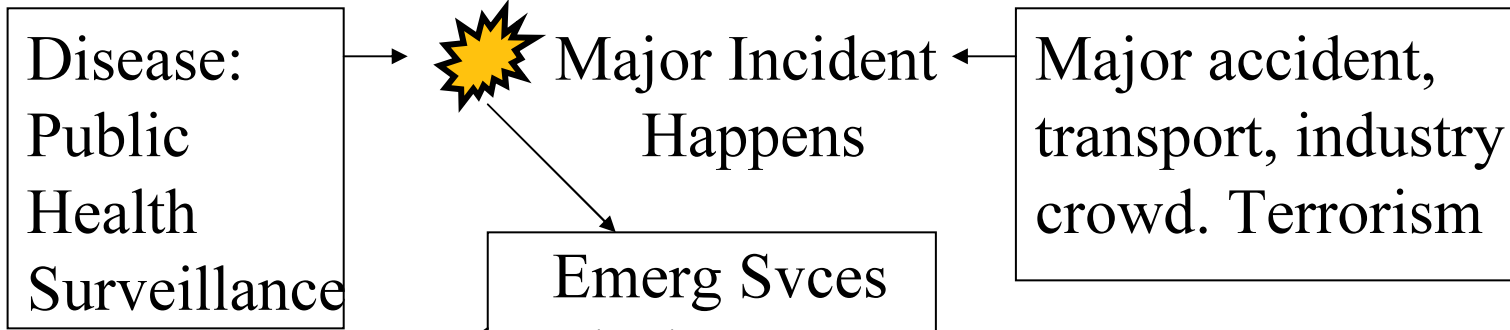


Major Incident
Happens



Major accident,
transport, industry
crowd. Terrorism





Emerg Svces declare MI

Multi Agency COMMAND & CONTROL

Operational - Bronze

Tactical - Silver

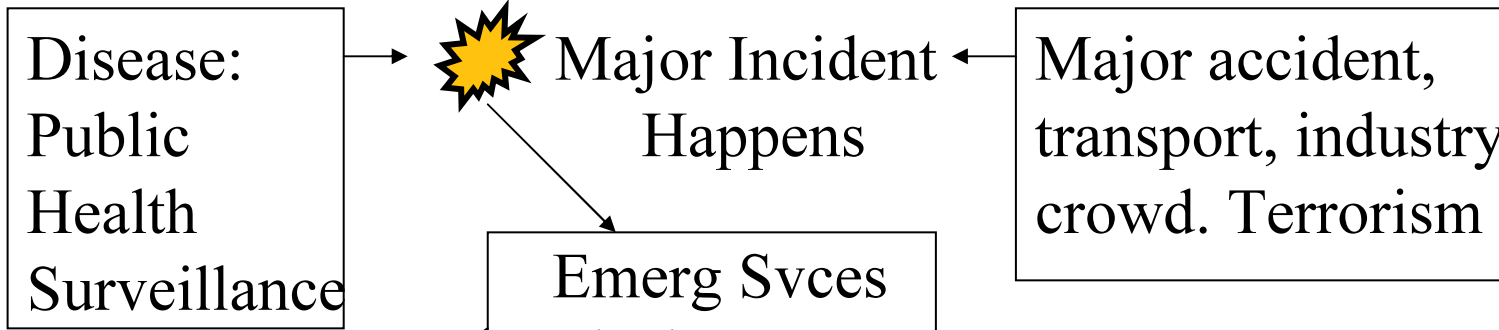
Strategic - Gold

HEALTH RESPONSE

Amb Control

Other agencies - LA, EA, etc





Emerg Svces declare MI

Multi Agency COMMAND & CONTROL

Operational - Bronze

Tactical - Silver

Strategic - Gold

HEALTH RESPONSE

Amb Control

Other agencies - LA, EA, etc

Receiving Hospital

HPU

PCT

StHA

- A&E - Hosp call out
- MIO/ MMT
- Command & control

- CCDC
- Environmental
- CBRN
- HPA

- DPH/ Ops Dir
- GP/ nurse
- Rest Centre
- Prep for impact
- Co-ord/ Comms

- Link - lead PCT
- Prep for impact
- Co-ord/ Comms
- Regional
- National

Emergencies and Radioactivity



Police activate NAIR - minor incidents.

(Nat Arrgts Incidents Involving Radiation)

Designated Hospitals (ORH, RBH) - facilities:

A&E, Med Physics, haemat, path, biochem

Capability to measure & monitor contam – decontam as with chem

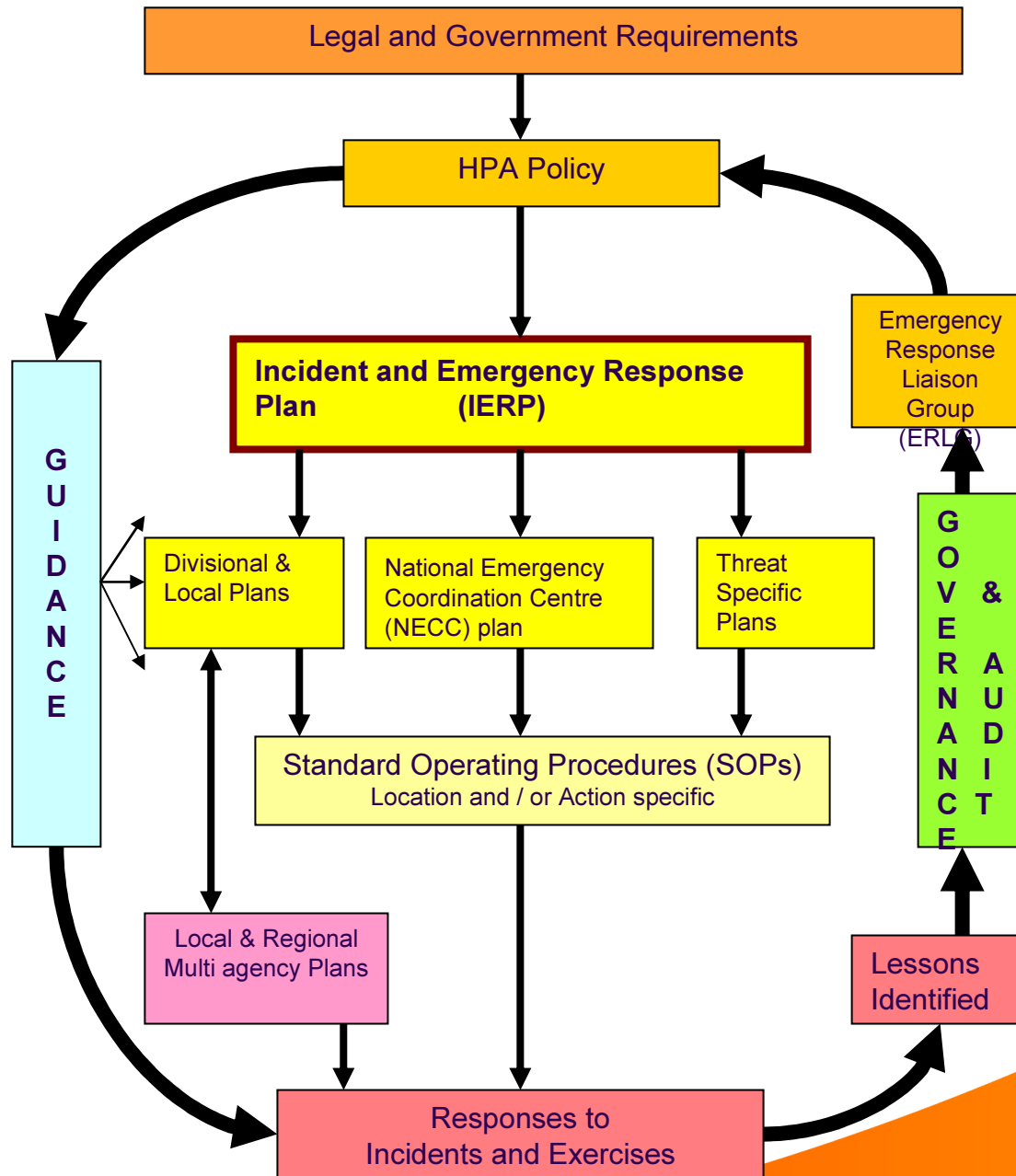
Life saving - priority over decontam. Safe working practices

Countermeasures: shelter, evacuate, iodine, food, water, environment

Nuclear Installations: Off Site Plans

Radiation Protection Div - HPA response role

Mass Monitoring of the Worried Well. Recovery



HPA Incident & Emergency Response Plan - Incident Response and Resource Matrix



Level	Impact	LaRS	Rest of HPA
5	Catastrophe, overwhelming impact on HPA. CCC will sit	NECC established, all parts of HPA involved, Likely to have protracted recovery component	
4	Severe impact, major disruption to parts of HPA CCC will sit, 1+ SCGs	>>1 Region Support required Divisional lead	NECC overall Command 1+ Divisional EOCs
3	Significant impact on 1 or more parts of HPA SCG, HAT or national outbreak team	1+ regional resources Divisional lead	Support from other Divisions. Full or Core EOCs CEO decision on NECC
2	Wider local impact, can be managed within local or regional resources	Resources of 1 region	Consulted, Support team as necessary
1	Limited local impact	Resources of 1 HPU	Consulted as needed



Plume rising over central London on Sunday 11th AP Photo Barry Phillips Image licensed through EMPICS



Satellite image of the plume over England. Image courtesy of MODIS Rapid Response Project at NASA/GSFC

Example of Incident

Initial concerns - risks to health of burning petrochemicals



- Blast injuries
- Particulate matter $<10\mu\text{m}$ – acute phase - exacerbation of respiratory disease – vulnerable groups
- Potential for and fear of:
 - carcinogenicity and teratogenicity - partial combustion e.g. polycyclic aromatic hydrocarbons (PAH) and other chemicals
 - drinking water contamination – hydrocarbon contamination; contamination from fire fighting foam including perfluorooctane sulphonate (PFOS)

Buncefield Miracles



- Sunday
- Time of initial explosions
- No deaths, few casualties
- Perfect weather to minimise plume grounding in UK
- Environmental sampling confirmed the theoretical toxicological risk assessment
- Links to other agencies and organisations and availability of air quality monitoring network

Agencies involved



Police

Fire

Ambulance

National Health Service and related agencies

Health Protection Agency

Met Office

Institute of Psychiatry

London Fire Brigade Scientific Advisers

Health and Safety Laboratory

Environment Agency

National Poisons Information Service

Defence Science and Technology Laboratories

**Environmental Research Group
King's College**

NETCEN (Harwell) Defra

**Pan London Local Authority
Environmental Health Officers
Network**

Local Authorities in Surrey

Ministry of Defence (RAF)

Drinking Water Inspectorate

Three Valleys Water

Thames Water

Food Standards Agency

etc



The Public Health Impact of the Buncefield Oil Depot Fire



July 2006

[http://www.hpa.org.uk/publications/
2006/buncefield/buncefield.pdf](http://www.hpa.org.uk/publications/2006/buncefield/buncefield.pdf)

Health advice following floods – chemical and environmental hazards



The recent flooding in central parts of England has affected domestic, industrial and agricultural premises. Therefore, it is inevitable that some chemicals may have been released into the floodwater. The advice given so far by the Health Protection Agency on avoiding possible infections from sewage in floodwater is also generally applicable to chemical pollution. (See the leaflet **Health advice following flooding** for more information.)

The sheer volume of water will dilute chemical pollution but there could be local problems and so precautions should be taken when cleaning up after flooding.

Important – risk from Carbon Monoxide

Be aware of the dangers of using **indoors** portable generators, camping stoves or other gasoline, propane or natural gas devices that are meant for outdoor use.

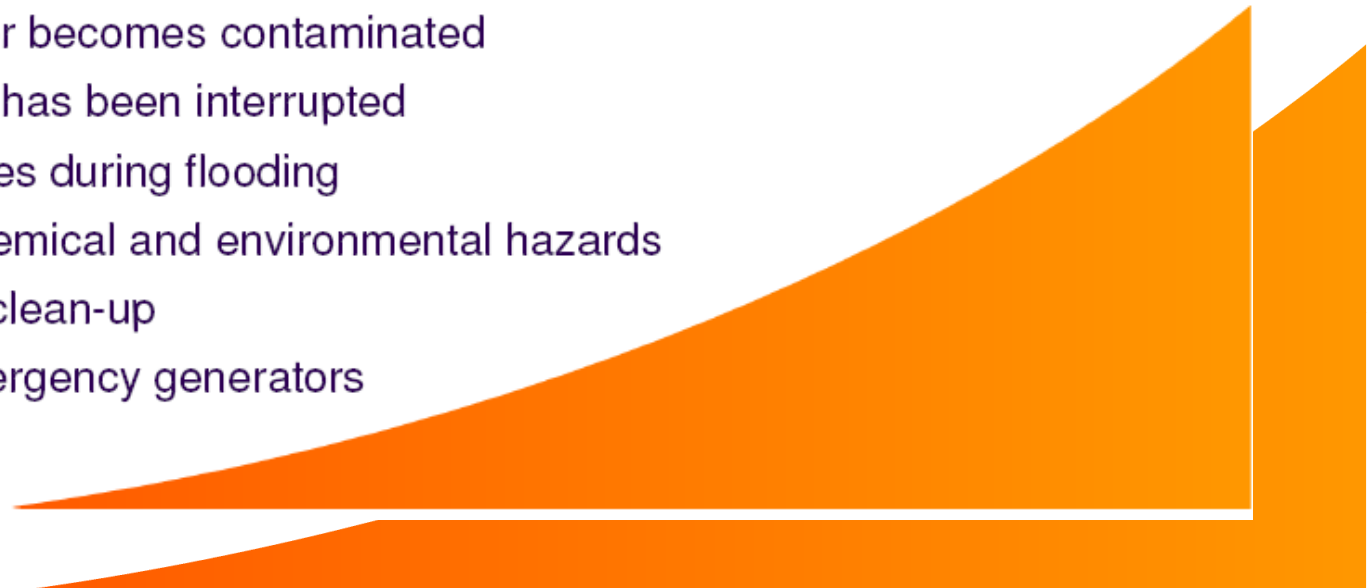
These devices should not be used indoors for heating or, ideally, for boiling water. Use of these devices indoors can lead to carbon monoxide poisoning, which can be fatal. If you have to use

HPA advice covers

<http://www.hpa.org.uk/flooding/default.htm>



- General advice on protecting against infection
- Hand washing guidance
- How to clean up
- If you are returning to your home
- If you are still in the home
- Food preparation and storage
- Water for infants during disruption to public water supplies
- If your drinking water becomes contaminated
- If your water supply has been interrupted
- Private water supplies during flooding
- How to deal with chemical and environmental hazards
- Precautions during clean-up
- The safe use of emergency generators



Health Protection Regulations



Health Protection legislation in England has been updated to give public authorities new powers and duties to prevent and control risks to human health from infectious diseases and contamination by chemicals and radiation. (Health and Social Care Act 2008).

The change introduces an all “hazards” approach to health protection

Implementation 6th April 2010

