

SI0717

Chemical, Biological, Radiological or Nuclear Incidents

(Responding to CBRNe events and CBR incidents)

SI Identification Number SI0717

Policy Ownership Operational Support Department

Initial Publication 06 February 2017

Review Cycle 5 Years

Reviewed 18 January 2022

Last Amended 12 June 2023

Governing Service Policy Emergency Planning

Cancellation of N/A

Classification **OFFICIAL [PUBLIC]**

The Police Response to incidents involving Chemical; Biological; Radiological or Nuclear material whether as a result of criminal intent or not.

This includes the response to terrorist attacks using CBRN materials, potentially through the use of explosives (e) as a means of dissemination.

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1. Introduction

The Police Service of Northern Ireland (PSNI) will respond to all perceived threats to the public and is committed to Keeping People Safe. Terrorist attacks involving the use of chemical, biological, radiological or nuclear materials (CBRN) potentially involving explosives (e) as a means of dissemination are thankfully rare in the United Kingdom.

The PSNI will respond to an:

- Actual or threatened dispersal of material with a deliberate criminal, malicious or murderous intent, targeted at a given population or an economic or symbolic place (CBRNe event);
- Incident resulting from the deliberate or accidental release of a substance where the effects could include illness or injury to the public or responders or contamination of the environment (CBR incident).

Incidents or investigations in which chemical, biological or radiological (CBR) materials are present are much more prevalent than Officers and Staff may be aware. These incidents place the public,

responders and the environment at risk from contamination and its consequences.

Some forms of contamination exposure hazards are obvious:

- Unknown white powders;
- Drugs;
- Explosive materials;
- Fuel laundering; ,
- Asbestos,
- Man-made machine fibres (MMMMF) etc.

While others are less obvious:

- Carbon monoxide,
- Materials from chemical suicides,
- Methane from slurry etc.

Exposure to these materials can arise from both proactive and reactive operations.

2. Aims

Police Officers and Police Staff must be able to recognise reactive incidents which involve CBR materials and understand how to provide an initial response to them.

It is also important that there is a Service wide understanding of how to activate a specialist response to manage and safely

conclude such events whilst maximising evidential opportunities where required.

Specialist support is also available during the planning for proactive operations to ensure they can be delivered within a safe system of work, as a matter of Officer / Staff safety.

3. Outline

In the initial stages of an incident or investigation it may be unclear if the event; is a CBRNe incident or relates to the deliberate or accidental release or possession of CBR materials.

The reactive police response is delivered in line with the Joint Emergency Services Interoperability Principles ([JESIP](#)) and consists of three phases:

- Initial Operational Response (IOR);
- Transition phase; and
- Specialist Operational Response (SOR).

The police capability to respond is built around a series of flexible tactical options and considerations which ensures joined

up emergency services response from the strategic to operational level.

The proactive response is also delivered in line with the JESIP doctrine but immediately engages specialist Command and Support officers and staff.

4. Initial Call Handling

The successful response to a CBRNe event or CBR incident requires early recognition of the hazards.

Information gathered at the very start of an incident can have a significant impact on the nature and scale of the response.

In the absence of a Police CBRN Commander and / or CBRN Tactical Advisor, Call handlers will be responsible for carrying out an Initial Assessment (IA) in consultation with multi-agency partners. They should seek sufficient information to enable an informed judgement about the nature of the incident and the resources required to respond effectively with particular emphasis on the following questions:

- Where exactly is the incident?

- What type of incident is it? (chemical, biological, radiological)
- What is the scale of the incident? (How many casualties? How many scenes? etc.)
- What signs and symptoms are the casualties displaying?
- What type of premises / venue / location is affected?

Callers and responders should be provided with advice and guidance based on the Initial Operational Response (Remove, Remove, Remove) as outlined in [Section 5](#).

As soon as a CBRNe event or CBR incident is identified which involves either contamination (or the possibility of contamination) the control rooms at the Fire and Rescue and Ambulance Service should be notified. Consideration should also be given to seeking advice from the on call CBRNe cadre officer to guide the Police response as outlined in [Section 6](#).

5. Initial Operational Response (IOR)

Initial Operational response to a CBRN incident should be in line with the JESIP Initial Operation Response Guidelines 2023.

In the initial response to an incident, or accidental exposure to CBR material, a rapid response may be critical to saving life. On arrival at the scene send an incident report to control using the M/ETHANE acronym ([see Appendix A](#)).

In order to establish the Type of Incident and Hazards involved responders should be familiar with Recognise Assess React (RAR) Guidance ([see Appendix B](#)) and the CRESS Tool ([see Appendix D](#)).

Recognise, Assess, React (RAR)

Recognise	The indicators of a hazardous substance incident.
Assess	The incident to inform an appropriate response strategy.
React	Appropriately to reduce the risk of further harm.

Irrespective of the number of casualties if you think someone has been exposed to a hazardous substance keep a safe distance to avoid exposure to yourself and follow the principles of '**Remove; Remove; Remove**'.

([See Appendix C](#))

Tell those affected to:

REMOVE	Themselves from the immediate area to avoid any further exposure to the substance;
REMOVE	Outer clothing if affected by the substance; and
REMOVE	The substance from skin using a dry absorbent material to either soak it up or brush it off. RINSE continually with water if the skin is itchy or painful.

Unprotected responders should never be deliberately exposed to a risk of contamination. If personal protective

equipment¹ is available responders should actively consider whether it is suitable for the hazard. If unsure seek specialist advice.

Clearly and continually communicate with those affected including what you know about the incident, what you are doing to help and how they can help themselves; Recognise that those affected may be non-English speaking or hard of hearing.

Recommendations for communication include: keeping groups of same language speakers together to use any bilingual expertise present and providing simple pictorial instructions; Privacy and dignity can be protected by providing a private area where people can disrobe, and providing modesty coverings as soon as possible following decontamination.

Personnel from any emergency service can identify an incident as a suspected or potential CBRN(e) event or CBR incident. Such identification should be sufficient for all agencies to ensure the IOR principles are followed and where appropriate transition to SOR is activated.

¹ Gloves, facemask etc.

Implementing the IOR may result in accidental contamination of uniform or PPE. Guidance on disposal of items can be provided by the on call CBRNe Cadre officer, Health and Safety Branch or online (PPE removal and decontamination safety procedures).

6. Transition from Initial Operational Response to Specialist Operational Response

As soon as a CBRNe incident or an event involving CBR materials occurs consideration of the requirement to seek specialist advice should take place.

The PSNI maintains an on call facility to enable responding officers to access specialist advice 24 hours a day from the CBRNe cadre.

Initially advice and guidance will be provided by phone. If required CBRNe Specialist Officers will deploy subsequently.

In the event of a failure in this process initial advice can be obtained from the National CBRN Centre duty officer.

Incident or event specific generic risk assessments are also available in relation to:

- Unintentional release of chemical / gas / toxic fumes (PSNIGRA 75);
- Asbestos and other dusts encountered at scenes (PSNIGRA 77);
- Clandestine laboratories (PSNIGRA 89).

7. Specialist Operational Response (SOR)

The SOR is a multi-agency response which engages partners from local and national agencies.

The response is framed within the Department of Justice's CBRNe Concept of Operations Document delivered collaboratively in line with the JESIP CBRNe Joint Operating Principles.

In the event the Specialist Operational Response is triggered guidance will be

provided by the National CBRN Centre at Ryton to determine the appropriate response protocols.

8. Investigating a CBRNe event

The response to any suspected or confirmed CBRNe event will be coordinated by the Police where criminality is suspected.

Once it is clear that an incident may be terrorist related Counter Terrorism (CT) command should be activated to ensure an effective investigation takes place commanded at an appropriate level.

9. Cyclamen

Programme Cyclamen is the name for a joint programme managed by the Home Office and UK Border Agency, which can on occasion engage a policing response.

Radiation detection screening has been introduced at key points of entry to screen inbound goods, vehicles and passengers for the illicit importation of radiological / nuclear (RN) materials that could be used by terrorists.

On notification by the Borders Agency to Incident Coordination Centre (ICC) of a Cyclamen Event requiring police deployment specialist advice should be sought as outlined in [Section 6](#).

10. Training

An IOR briefing package is delivered to all foundation students at the Police College.

All officers in roles which may expose them to CBR materials are required to complete the online LEARN package. (PSNI CBRN – Initial Operational response).

Control room staff are required to complete the online LEARN package, and receive additional training in relation to managing a CBR incident or CBRNe event as part of their ongoing development.

All front line staff (in Districts and Departments) will receive a training package which outlines the JESIP doctrine and Initial Operational Response (IOR) as part of their Continuous Professional Development (CPD).

Armed Response Unit (ARU) Officers receive an enhanced IOR package, which

includes a series of firearms range based scenarios. This is intended to enable them to act as IOR 'champions' as part of their daily operational role.

The CBRNe TAC (Tactical) advisors and Commanders are trained by the National CBRN Centre.

All Incident Coordination Centre (ICC) staff receive training in relation to Cyclamen alerts and notifications as part of their role.

11. Additional Information

Additional information is available from [HQ Emergency Planning](#).

When an officer or staff member is contaminated as a result of a CBRNe event or CBR incident, immediate medical advice should be sought. Thereafter consideration should be given to referring the individual to Occupational Health & Welfare.

A record of what happened must also be completed on accident / incident report form 23 / 10 and submitted to Health and Safety Branch within 7 days.

In the case of exposure to asbestos form ASB1 is also required. Asbestos and exposure guidance: reporting and record keeping.


Appendix A M/ETHANE Report


M	Major Incident	Has a major incident or standby been declared? (Yes / No – if no complete ETHANE message)	Include the date and time of any declaration
E	Exact location	What is the exact location or geographical area of the incident?	Be as precise as possible, using a system that will be understood by all responders
T	Type of incident	What kind of incident is it?	Is chemical, biological, radiological or nuclear material present? Is it a CBRNe event or a CBR incident?
H	Hazards	What hazards or potential hazards can be identified?	Consider the likelihood of a hazard and the potential severity of any impact with particular regard to contamination
A	Access	What are the best routes for access or egress with particular regard to wind direction?	Include information on inaccessible routes and RVPs. Remember that services need to be able to leave the scene as well as access it and that responders may become contaminated if they move straight to the scene
N	Number of casualties	How many casualties are there? What condition are they in?	Use an agreed classification system such as the ambulance triage process
E	Emergency Services	Which, and how many, emergency responder assets and personnel are required or are already on scene?	Consider whether specialist assets trained to respond to a CBRNe event or CBR incident are required


Appendix B RAR (Recognise Assess React) Guidance



The **actions you take** immediately following a Chemical, Biological or Radiological (CBR) incident can significantly improve the outcome for all people on the site.


Recognise
the indicators of a CBR attack




Assess
the incident to inform an appropriate response strategy


React
appropriately to reduce the harm to yourself and others



Recognise

the indicators of a CBR attack

Physical symptoms



Disorientation and sweating



Eye and skin irritation



Twitching and convulsions



Nausea and vomiting



Airway irritation and breathing difficulties

Signs



Two or more people incapacitated for no explainable reason



Unexplained smells or tastes



Unexplained liquids, powders or vapours



Unusual and/or unattended materials, devices or equipment

Any one of these may be indicators of a CBR incident. Multiple indicators may increase the likelihood that an incident is CBR-related.

Assess

the incident to inform an appropriate response strategy

Do not put yourself or others in danger to assess the incident.



1. Where are CBR indicators present?

To avoid moving people on the site through affected routes.



2. Where are casualties located?

To identify who is exposed and advise Emergency Services.



3. Where are other people on the site located?

To identify who isn't exposed and nearby routes for evacuation.



4. Which routes are unaffected?

To identify unaffected routes for evacuation of people on the site.



5. Are there any obvious secondary threats?

To reduce the risk of a further non-CBR attack.

If there are significant external hazards consider moving occupants to a safe internal location.

React

appropriately to reduce the harm to yourself and others



Do not put yourself or others in danger to assess the incident.

Appendix C Initial Operational Response (IOR) Remove aide memoire

ACT QUICKLY.
These actions can
SAVE LIVES.

MY TACTICAL ADVICE CONTACT:



If you think
someone
has been
exposed to a
**HAZARDOUS
SUBSTANCE**

Use caution and keep a
safe distance to avoid
exposure yourself.

TELL THOSE AFFECTED TO:



REMOVE THEMSELVES...

...from the immediate area to avoid further exposure to the substance. Fresh air is important.

If the skin is itchy or painful, find a water source.

REPORT... use M/ETHANE



REMOVE OUTER CLOTHING...

...if affected by the substance.

Try to avoid pulling clothing over the head if possible.

Do not smoke, eat or drink.

Do not pull off clothing stuck to skin.



REMOVE THE SUBSTANCE...

...from skin using a dry absorbent material to either soak it up or brush it off.

RINSE continually with water if the skin is itchy or painful.

REMEMBER:

Exposure is not always obvious.

SIGNS CAN INCLUDE:



The presence of hazardous or unusual materials.



A change in environment, such as unexplained vapour, odd smells or tastes.



Unexplained signs of skin, eye or airway irritation, nausea, vomiting, twitching, sweating, disorientation, breathing difficulties.

Appendix D CRESS Tool

For use at potential CBRN incidents by Frontline Responders

CRESS TOOL

CRESS has been developed for Emergency Services and Military to aid the early assessment of persons who may have been exposed to Chemical or Biological hazardous/materials (CBRN).

CRESS uses five main clinical indicators;

C	Consciousness	What is the level of consciousness?
R	Respiration	What is the respiratory rate - is it increased or decreased?
E	Eyes	Examination of pupils and their reaction.
S	Secretions	Are there increased or decreased secretions?
S	Skin	Examine for colour and other signs such as sweating.
Other features		Other symptoms should also be noted such as vomiting, incontinence and fever.

CRESS		NERVE AGENT	CYANIDE	OPIATE (MORPHINE)	ATROPINE	SEPSIS	HEAT STROKE
C	Consciousness	Convulsions	Unconscious/ Convulsions	Reduced -> unconsciousness	Agitated/ Confused	Normal, reduced or altered	Altered
R	Respiration	Increased or reduced -> stopped	Increased or stopped	Reduced -> stopped	Increased	Increased	Increased
E	Eyes	Pinpoint pupils *	Normal/ Large pupils	Pinpoint pupils	Large pupils / Blurred vision	Normal	Normal / Large pupils
S	Secretions	Increased *	Normal	Normal	Dry mouth/ Thirsty	Normal/ Sputum	Normal
S	Skin	Sweaty	Pink -> blue	Normal / Blue	Flushed / Dry	Warm -> pale Non-blanching rash	Varied
Other features		Vomiting Incontinence Slow pulse	Sudden onset		Fast pulse	Fast pulse Fever (>38.3°C) Bio Syndrome ** No radial pulse	High temperature (>38.3°C)

* Pinpoint pupils (and/or increased secretions) may be delayed if agent absorbed through the skin or eye protection worn.

** 'Bio-syndromes' include respiratory, cutaneous (skin), lymphadenopathy, gastrointestinal, and neurological (central & peripheral).



National Ambulance Resilience Unit
NARU



Police Service
of Northern Ireland

Appendix E Contact Us

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