

**FORMAT FOR THE ANNUAL REPORTING OF INFORMATION ON NATIONAL
PROGRAMMES FOR PROTECTION AGAINST CHEMICAL WEAPONS, UNDER ARTICLE
X OF THE CHEMICAL WEAPONS CONVENTION**

Name of State Party providing the information:

1. *The United Kingdom of Great Britain and Northern Ireland*

Reporting period:

2. This report covers the calendar year: 2023

**INFORMATION ON THE EXISTENCE OF A NATIONAL PROGRAMME(S) RELATED TO
PROTECTION AGAINST CHEMICAL WEAPONS**

3. Does the State Party have a national programme(s) for the
implementation of protective measures against CW? YES ☒ NO ☐

If Yes, do these cover:

a) protection of military personnel against attack from CW? YES ☒ NO ☐

b) protection of the civilian population against attack from CW? YES ☒ NO ☐

**GENERAL INFORMATION ON THE MAIN ELEMENTS OF A NATIONAL
PROGRAMME(S) RELATED TO PROTECTIVE PURPOSES**

4. Summarise (in general terms) the national programme(s), and/or regional and local differences (as appropriate to and within the territory of the State Party), for the implementation of protective measures against CW attack against the State Party's armed forces or civilian population (continue on a separate sheet if necessary):

The UK Cabinet Defence Committee decided to abandon the UK's offensive chemical weapons capability in 1956. Since the implementation of this decision, activities relating to CW have been defensive in nature, focussing on the need to provide the UK, its overseas interests, and its Armed Forces with effective protection against the threat of attack by CW.

The UK's key policy aim in relation to protective measures for the Armed Forces, consistent with our membership of NATO, is to maintain our political and military freedom of action, despite the presence, threat or use of CW. Our Counter-CBRN policy consists of four pillars: understand, prevent, protect and recover, which are all underpinned by understanding the strategic, operational and tactical context. This policy is informed by the UK Integrated Review of Defence, Security and Development and Foreign Policy and the UK Defence Command Paper 2023.

The UK's military posture with regard to the threat from CW is made up of:

- *The ability to remove or reduce the threat by taking direct action;*
- *Measures to minimise our vulnerability to the weapons;*
- *Capabilities, training and equipment that protect our forces and allow them to manage the battlefield risks.*

These all interrelate, and all are needed to ensure that we have a balanced defensive posture, and to give us the flexibility required to maximise operational effectiveness. Our force protection programme includes research to evaluate the threat and develop new and improved protective measures, procurement of equipment capabilities, the use of specialised military units to perform specific chemical defence functions and comprehensive programmes of protective training for all members of the Armed Forces.

The UK's civilian emergency service posture with regard to the threat from CW is made up of four similar interrelated elements:

- *Measures to minimise the vulnerability of the public to CW threat;*
- *The ability to remove or reduce the threat by taking direct action;*
- *Expert science advice, capabilities, training and equipment that protect our emergency services and allow them to manage CW risks.*
- *Public/private capabilities and expert science advice to provide environmental remediation of the hazard.*

All elements interrelate and all are needed to ensure that we have a vigilant emergency service posture, evaluating the CW threat to the UK populace, with the ability to respond effectively should a threat occur. Our Emergency Services protection programme includes continuous intelligence review of the CW threat to the UK, enabling the development and procurement of the most effective protective equipment and counter measures to reduce risk to responders and the public alike. Comprehensive programmes of training and continuous professional development are afforded to Emergency Services personnel to maintain their operational readiness.

Government uses generic capabilities to address the common consequences of emergencies, ensuring that departments have the tools they need to respond flexibly to the impacts of any emergency scenario. Any civil emergency can call upon a number of different capabilities and require them to work together, for example a fire event may require us to deal with a health

demand surge and the evacuation and sheltering of those affected simultaneously. The Cabinet Office's National Capabilities Programme provides a framework for assessing our preparedness against these generic capabilities. Each capability is also owned by a lead government department (LGD) to ensure accountability and encourage constant improvement. The CBRN capability, with Home Office as the LGD aims to ensure that effective and proportionate arrangements are in place to respond to and minimise the consequences of any emergencies involving chemical, biological, radiological or nuclear material, preventing avoidable deaths and mitigating the impacts.

The Government's National Security Council (NSC) brings together all the senior ministers concerned, under the chairmanship of the Prime Minister. The NSC ensures a strategic and tightly coordinated approach across the whole of government to the risks and opportunities the country faces.

In the event of a civil incident involving CBRN hazards, the COBR Unit within Cabinet Office's National Security Secretariat would ensure that a Lead Government Department (LGD) is identified for the emergency response and recovery phases. LGDs have been identified already for the most likely emergencies.

When there are clear indications that an incident is the result of terrorism, the Home Office will take the immediate lead. The Home Office is the LGD for counter-terrorist policy and has strategic responsibility for responding to terrorist incidents in the United Kingdom. This includes ensuring that the UK has the necessary capabilities in place to respond effectively to CBRN attacks. The Home Office also leads, in partnership with law enforcement agencies and other Government departments, a programme of work to reduce our vulnerability to CBRN attacks. This includes denying terrorists access to hazardous substances.

Work to prepare for remediation activities begins in parallel to the response from the beginning. When the investigative process permits and matters move to the stage of long term recovery from a CBRN terrorist attack, such as decontamination of the built and open environment, the lead would be transferred to the Department for Environment Food and Rural Affairs (Defra), the Scottish Government, the Welsh Government or the Northern Ireland Executive, dependent upon the location of the incident. The UK has a range of options for the remediation of the open and built environment following a CBRN attack, including military and private sector specialists with decontamination and hazardous waste capability.

The response to a CBRN incident would be a multi-agency one and a number of UK and Devolved Government Departments have key responsibilities. For example, in England the Department of Health and Social Care is responsible for the impact on public health from all forms of disruptive challenge, including CBRN, and the Department for Transport has strategic responsibility for transport security, including airports, in-flight security and transport of hazardous materials. Over a number of years, the UK Government has invested in the provision and ongoing maintenance of equipment and training to enable the Fire and Rescue Service to undertake the mass decontamination of people affected by CBRN incidents on behalf of the National Health Service, and there is a continued exploration led by the Home Office of how to improve and enhance the capability. The Foreign, Commonwealth & Development Office has a strategic responsibility for the UK's international response to disruptive

challenges involving UK citizens and our interests overseas, including through supporting UK engagement in the Organisation for the Prohibition of Chemical Weapons (OPCW) and with other international partners and organisations.

Many of these processes were used in response to the use of a Novichok nerve agent in Salisbury in 2018. The Cabinet Office coordinated the UK's overall response to the incident. Public Health England (now The UK Health Security Agency), in coordination with the Department of Health and Social Care provided advice to the public, first responders and healthcare workers on necessary safety measures. The Home Office and police worked with the Defence Science and Technology Laboratory (Dstl) to test biomedical and environmental samples. The Foreign, Commonwealth & Development Office, the Department for Business, Energy and Industrial Strategy, and the Ministry of Defence worked together to enable the OPCW's Technical Assistance Visits, which confirmed the UK's assessment of the chemical agent that had been used. Defra led the decontamination and recovery effort, in coordination with the military and government scientists. Other departments and agencies were also involved at various stages of the cross-government response.

5. List the main national government and/or regional and local bodies (as appropriate to the circumstances of the State Party) that have primary responsibility within the State Party for:

a) protection of armed forces:

The Ministry of Defence (MOD)

b) protection of specialist personnel such as police, fire fighters, ambulance and medical personnel, or government officials:

The primary responsibility will rest with the employers within the organisations concerned, for example the Chief Fire Officer will have operational responsibility for the safety of the fire fighters within their local brigade on behalf of the local Fire and Rescue Authority. They will be supported by the relevant sponsoring Departments in the UK Government, or Devolved Government:

Home Office for Police in England and Wales, and Fire Services in England; Department of Health and Social Care for Ambulance/Medical personnel in England;

Scottish Government for Police, Fire and Ambulance/medical personnel in Scotland;

The Welsh Government for Fire and Ambulance/medical personnel in Wales;

Northern Ireland Executive for Police, Fire and Ambulance/medical personnel in Northern Ireland.

c) protection of the general public:

*Cabinet Office, Home Office, Department for Environment Food and Rural Affairs
Department of Health and Social Care, Department for Transport, Scottish Government,
the Welsh Government, Northern Ireland Executive,*

6. If protective equipment is provided for armed forces or civilians, is it:

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|--|---|-----------------------------|
| a) developed from government-sponsored research and development? | YES ☒ | NO ☐ |
| b) acquired commercially? | YES ☒ | NO ☐ |
| c) acquired from the governments of other States Parties? | YES ☒ | NO ☐ |

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| 7. Has the State Party's government made an offer of assistance through the OPCW under Article X, paragraph 7 of the CWC? | YES ☒ | NO ☐ |
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INFORMATION ON THE MAIN ELEMENTS OF RESEARCH AND DEVELOPMENT ACTIVITIES RELATED TO PROTECTIVE PURPOSES

8. Does the government of the State Party undertake research and development related to protection against CW, in the following fields:

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|--|---|-----------------------------|
| Respiratory protection | YES ☒ | NO ☐ |
| Protective clothing | YES ☒ | NO ☐ |
| Collective protection | YES ☒ | NO ☐ |
| Decontamination technologies for area, personnel and materials | YES ☒ | NO ☐ |
| Detection/identification of CW agents | YES ☒ | NO ☐ |
| Laboratory analysis for CW agents | YES ☒ | NO ☐ |
| Medical countermeasures | YES ☒ | NO ☐ |
| Hazard modelling | YES ☒ | NO ☐ |

INFORMATION ON THE EXISTENCE OF UNITS, ONE OF WHOSE PRINCIPAL FUNCTIONS MAY BE PROTECTION AGAINST CHEMICAL WEAPONS

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|--|---|-----------------------------|
| 9. Are there any military units one of whose principal functions is protection against CW? | YES ☒ | NO ☐ |
| 10. If Yes, briefly state their main tasks (such as collective protection, decontamination, detection, and/or medical countermeasures). Continue on a separate sheet if necessary: | | |

28 Engineer Regiment provides Defence with both mounted and dismounted specialist Counter-CBRN operational capability. This includes CBR Target Reconnaissance, Sampling and Identification of Biological, Chemical and Radiological Agents (SIBCRA) and the ability to courier CBR samples as necessary. The unit also provides specialist advice to military commanders.

INFORMATION ON THE TRAINING PROGRAMME RELATED TO PROTECTIVE PURPOSES

11. Does the State Party conduct operational training for its armed forces using real CW agent or simulants: YES ☒ NO ☐

12. Does the State Party train its military personnel in the following fields:

a) use of personal protection equipment? YES ☒ NO ☐

b) decontamination? YES ☒ NO ☐

c) detection? YES ☒ NO ☐

d) medical aspects of protection? YES ☒ NO ☐

13. Has the State Party's government provided, in the last year, training of foreign military or civilian personnel on protection from a possible CW attack? YES ☒ NO ☐

INFORMATION ON PROTECTION OF THE CIVILIAN POPULATION

14. Does the programme for protection against CW provide for support to the civilian population in case of use or threat of use of CW? YES ☒ NO ☐

15. If yes, indicate which of the following will provide the support:

a) Fire service? YES ☒ NO ☐

b) Emergency medical personnel? YES ☒ NO ☐

c) Police? YES ☒ NO ☐

d) Military units? YES ☒ NO ☐

e) Other contracted entities (e.g. private companies)? YES ☒ NO ☐

16. If the answer to Question 14 is No, is there an objective for specialist personnel to provide such support in the future? YES ☐ NO ☐
17. Are training exercises carried out which involve practising the response to CW attacks against the civilian population? YES ☒ NO ☐
18. Is the general public provided with training to protect themselves against the effects of CW attack (excluding those involved in regular military training as part of compulsory national service)? YES ☐ NO ☒
19. Is educational information available to the general public regarding protection against CW attack (e.g. leaflets, internet sites etc)? YES ☒ NO ☐
20. Provide references (if available) to select, publicly available, scientific papers published in the reporting year related to national CW protective programmes.

ADDITIONAL INFORMATION

- MUELLER P., VRIZA A., CLAYTON A. D., MAY O. S., GOVAN N., NOTMAN S., LEY S. V., CHAMBERLAIN T. W., BOURNE R. A. Exploring the chemical space of phenyl sulfide oxidation by automated optimization, *Reaction Chemistry and Engineering*, **2023**, 8 (3), DOI: 10.1039/d2re00552b
- IZQUIERDO P. G., CHARVET C. L., NEVEU C., GREEN A. C., TATTERSALL J. E. H., HOLDEN-DYE L., O'CONNOR V. Modelling organophosphate intoxication in *C. elegans* highlight nicotinic acetylcholine receptor determinants that mitigate poisoning, *Plos One*, **2023**, 18 (4), DOI: 10.1371/journal.pone.0284786
- HOLMGREN K. H., HAKULINEN H., NORLIN R., DE BRUIN-HOEGEE M., SPIANDORE M., SEE S. Q. S., WEBSTER R., JACQUES K. L., MAURAVAARA L., ANG L. H., EVANS C. P., OVENDEN S., NOORT D., DELAPORTE G., DAHLEN J., FRAGA C. G., VANNINEN P., ASTOT C. Interlaboratory comparison study of a chemical profiling method for methylphosphonic dichloride, a nerve agent precursor, *Forensic Chemistry*, **2023**, 33, DOI: 10.1016/j.forc.2023.100473
- STOLL A., SHENTON D. P., GREEN A. C., HOLLEY J. L. Comparative Aspects of Ricin Toxicity by Inhalation, *Toxins*, **2023**, 15 (4), DOI: 10.3390/toxins15040281
- BAGHA H., HEIN R., LIM J. Y. C., DURR C. B., SAMBROOK M. R., BEER P. D. Halogen Bonding Tripodal Metallo-receptors for Phosphate Recognition and Sensing in Aqueous containing Organic Media, *Chemistry (Weinheim an der Bergstrasse)*, **2023**, DOI: 10.1002/chem.202302775
- SÄDE S., DELAPORTE G., FRAGA C. G., HAKULINEN H., HOLMGREN K. H., SPIANDORE M., ASTOT C., AKMEEMANA A., DE BRUIN-HOEGEE M., DOWARD J., JACQUES K., KESAH S. A., SEE S., THOMSON S., FLINCK J., KALLIOVIRTA L., VANNINEN P. Interlaboratory development and proposition for a new quality control

sample for chemical forensics analysis of chemical warfare agents, *Talanta Open*, **2023**, 8, DOI: 10.1016/j.talo.2023.100249

7. DALTON C., WATKINS R., PRITCHARD S., GRAHAM S. Skin decontamination of Carfentanil in vitro, *Toxicology Letters*, **2023**, 388, DOI: 10.1016/j.toxlet.2023.10.005
8. RICE H., WHITFIELD S. J., FAIRHALL S. J., SCOTT I. R., STEVENTON G. B., TATTERSALL J. E. H. Efficacy of the oxime HI-6 dimethanesulphonate in the treatment of guinea-pigs exposed to the nerve agents GB and GD, *Toxicology Letters*, **2023**, 391, DOI: 10.1016/j.toxlet.2023.11.007
9. MISTRY S., SCOTT T. E., JUGG B., PERROTT R., SAFFARAN S., BATES D. G. An in-silico porcine model of phosgene-induced lung injury predicts clinically relevant benefits from application of continuous positive airway pressure up to 8h post exposure, *Toxicology Letters*, **2023**, 391, DOI: 10.1016/j.toxlet.2023.12.005
10. HEMSTROM P., JUGG B., WATKINS R., JONASSON S., ELFSMARK L., RUTTER S., ASTOT C., LINDEN P. Phospholipid chlorohydrins as chlorine exposure biomarkers in a large animal model, *Toxicology Letters*, **2023**, 391, DOI: 10.1016/j.toxlet.2023.11.008