

### Written Evidence Submitted by Emergent

1. This evidence to the Defence Committee is submitted by Emergent BioSolutions Inc. (“Emergent”), a global life sciences company whose mission is to protect and enhance life by providing speciality products, including medical countermeasures, for military and civilian populations, that address accidental, deliberate, and naturally occurring biological and chemical threats. Emergent has an almost 25-year-long record of partnering with the United States and international governments to support the development of preparedness strategies and medical countermeasures for these threats. This includes a 14+ year period supporting the UK Ministry of Defence and UK public health agencies to bolster UK resilience.
2. In submitting this evidence, we seek to draw the Committee’s attention to the increased risk of chemical and biological threats for UK defence and security and to raise the question of whether this has implications for the readiness of the armed forces to “protect the UK and our allies” against complex threats. We are mindful that there are currently considerable pressures on UK military spending and resources, particularly considering the UK’s substantial support for Ukraine against Russia’s invasion. Nevertheless, events in recent years have shown that both chemical and biological threats for both military and civil defence remain significant, and we are anxious to ensure that these are considered by the Committee when examining the armed forces’ readiness.

#### The threat from state actors

3. Despite the existence of treaties to limit the use of chemical or biological weapons, the threat of states using chemical and biological weapons has grown. As Defence Secretary Ben Wallace summarised in 2021<sup>1</sup>, the use of chemical weapons in Syria by the Asad Regime in 2018<sup>2</sup>, along with the attack by Russia in Salisbury using Novichok in March 2018, presents clear evidence that there remain multiple countries which still believe that it is acceptable to use nerve agents and pathogens against their opponents.
4. At the same time, persistent concerns remain about the aspirations and capabilities of hostile states such as North Korea to develop biological or chemical weapons.<sup>3</sup> South Korean military agencies have identified facilities in North Korea that could be involved in the research and production of biological agents,<sup>4</sup> including facilities developed in North Korea for agricultural purposes that could serve as potential dual-use sites capable of developing weapons such as anthrax.<sup>5</sup>
5. The threat of chemical or biological weapons use has also been raised during the conflict in Ukraine.<sup>6</sup> Russian state media such as the TASS news agency has since December 2021 promulgated disinformation about US and Ukrainian biological weapons threats, including the threat from weaponised botulism and “plague, anthrax, tularaemia and other dangerous pathogens”.<sup>7</sup> US and

<sup>1</sup> The Times, *Growing risk of attacks as world order crumbles*, 9 February 2021. Available at:

<https://www.thetimes.co.uk/article/growing-risk-of-attacks-as-world-order-crumbles-rhhqv6fhm>

<sup>2</sup> HMG, *UK condemns Assad for using chemical weapons in Douma, Syria, in 2018*, 27 January 2023. Available at:

<https://rb.gy/ssb5h>

<sup>3</sup> New York Times, *North Korea’s Less-Known Military Threat: Biological Weapons*, 15 January 2019. Available at:

<https://www.nytimes.com/2019/01/15/science/north-korea-biological-weapons.html>

<sup>4</sup> Rand National Security Research Division, *The Challenge of North Korean Biological Weapons*, 11 October 2013. Available at:

<https://www.rand.org/pubs/testimonies/CT401.html>

<sup>5</sup> The Telegraph, *Kim Jong-un pesticide facility ‘may double as weapon factory’*, 10 July 2015. Available at:

<https://www.telegraph.co.uk/news/worldnews/asia/northkorea/11731735/Kim-Jong-un-pesticide-facility-may-double-as-weapon-factory.html>

<sup>6</sup> House of Commons Library, UK Parliament, *Ukraine: Fears Russia could use chemical weapons*, 18 March, 2022 Available at:

<https://commonslibrary.parliament.uk/ukraine-fears-russia-could-use-chemical-weapons/>

<sup>7</sup> See for example, <https://tass.com/world/1379319> dated 22 December 2021 and <https://tass.com/politics/1418689> dated 8 March 2022.

NATO<sup>8</sup> officials have warned this could be a pretext for the use of chemical or biological weapons by Russia itself.<sup>9</sup>

6. NATO has since stated that “Russia poses NATO’s most pressing CBRN security challenge. Russia’s illegal, unprovoked full-scale invasion of Ukraine has starkly illustrated the Putin regime’s contempt for international law and global norms. This has amplified the concerns posed by Russia’s demonstrated capability, rooted in Soviet programmes, to produce chemical and biological weapons, its large, diverse and expanding nuclear capabilities, as well as its continued assault on international non-proliferation tools and regimes...The Alliance also has grave concerns that Russia is considering the use of chemical or biological weapons in the future”.<sup>10</sup>
7. Summarising its views on the current state of CBRN threats, NATO observes that “We face a world in which the potential use of CBRN materials or WMD by state and non-state actors remains a central and evolving threat to Allied security. It is a world in which NATO increasingly cannot assume that the international norms and institutions related to the proliferation or use of Weapons of Mass Destruction (WMD) will ensure our security, and in which scientific and technological innovation and other emerging trends have accentuated CBRN risks to the Alliance.”<sup>11</sup>

### **The threat from non-state actors**

8. The armed forces play a crucial role in security against non-state actors, at home and abroad. As the Committee will be aware, the Government’s 2021 Integrated Review, when summarising the current threats from non-state actors, made a stark warning regarding CBRN threats, stating: “Terrorism will remain a major threat over the coming decade, with a more diverse range of material and political causes, new sources of radicalisation and evolving tactics... Overseas, poor governance and disorder, particularly in Africa and the Middle East, is likely to increase space for terrorist and extremist groups to operate. There is a realistic possibility that state sponsorship of terrorism and the use of proxies will increase. It is likely that a terrorist group will launch a successful CBRN attack by 2030.”<sup>12</sup>
9. These concerns are, again, supported by NATO, which warns that “Hostile non-state actors including terrorist organizations continue to seek to acquire WMD, CBRN materials, and means of delivery, and to use them against NATO populations, territories and forces. Terrorists believe that a WMD attack or deliberate use of CBRN materials has the potential, inter alia, to sow panic and strain national emergency response capabilities...scientific and technological innovation continues to reduce the barriers to acquiring or developing advanced and diverse CBRN materials and means of delivery. Consequently, the risk of CBRN use or proliferation by non-state actors is likely to continue to grow.”<sup>13</sup> Similar concerns have also been echoed by the UN<sup>3</sup>, the US Government, the Council of Europe<sup>5</sup> and the European Centre for Disease Prevention and Control<sup>6</sup>, which have warned that COVID-19 has exposed vulnerabilities to biological threats and could “inspire” malicious actors to pursue bioweapons.
10. Thanks to advances in molecular biology in recent decades, students at universities around the world have access to all the information required to engineer a biological weapon, while some scientific journals have “published information that a terrorist could use to concoct a new pathogen”.<sup>14</sup> The

<sup>8</sup> <https://www.reuters.com/world/europe/nato-chief-says-russia-may-use-chemical-weapons-german-paper-2022-03-13/>

<sup>9</sup> NBC News, U.S. warns Russia could use chemical weapons in false-flag operation in Ukraine, 9 March 2022. Available at: <https://rb.gy/nlw59>

<sup>10</sup> NATO, *NATO’s Chemical, Biological, Radiological and Nuclear (CBRN) Defence Policy*, 14 June 2022. Available at: [https://www.nato.int/cps/en/natohq/official\\_texts\\_197768.htm](https://www.nato.int/cps/en/natohq/official_texts_197768.htm)

<sup>11</sup> *Ibid.*

<sup>12</sup> HMG, *Global Britain in a competitive age: The Integrated Review of Security, Defence, Development and Foreign Policy*, March 2021. Available at: <https://rb.gy/x9oav>

<sup>13</sup> NATO, *NATO’s Chemical, Biological, Radiological and Nuclear (CBRN) Defence Policy*, 14 June 2022. Available at: [https://www.nato.int/cps/en/natohq/official\\_texts\\_197768.htm](https://www.nato.int/cps/en/natohq/official_texts_197768.htm)

<sup>14</sup> Bill Gates, *How to Prevent the Next Pandemic* (Allen Lane 2022), p.194.

internet means it has become “relatively easy” for a malicious state or group to access the information and material needed to be able to “make relatively small amounts of chemical and biological materials for hostile acts”. NATO also warns the “internet is a key channel for the proliferation of WMD-related technical knowledge and expertise.”<sup>8</sup>

11. The increased prevalence of facilities working on biological threats all over the world also means that armed forces operating abroad may also be increasingly required to consider scenarios in which chemical or biological threats are accidentally released. By way of illustration, according to the World Health Organisation (WHO), the current conflict in Sudan poses a “huge biological risk” due to the presence of an internationally funded laboratory holding infectious disease samples in the capital Khartoum. The country’s National Public Health Laboratory is reported to contain pathogens including measles, polio and cholera and its security at present can no longer be guaranteed.<sup>15</sup>

### **Potential Implications for Armed Forces Readiness**

12. The increased threat as acknowledged by the UK Government and its allies above has significant implications for armed forces. Furthermore, if there were to be another significant or larger CBRN event in the UK, such as that which took place in Salisbury in 2018, the armed forces would very likely be called upon to support civilian first responders. Following the potentially increased risk of chemical and biological threats, this is a scenario which may require more consideration when examining the armed forces’ readiness to “protect the UK and our allies”. While the armed forces have specialised CBRN capabilities, in particular the 28 Engineer Regiment (C-CBRN)<sup>16</sup>, as well as significant measures to protect military personnel against certain CBRN threats, one issue that the Committee may wish to consider is whether an increased risk of chemical and biological threats may necessitate a wider review of CBRN protections/preparedness measures for a wider array of personnel. It may wish to consider to what extent the armed forces could be reasonably expected to supplement civil defences in the event of another CBRN incident and how well it is resourced to do this.

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<sup>15</sup> The Telegraph, ‘Huge biological risk’ as Sudan fighters seize disease laboratory, 25 April 2023. Available at: <https://www.telegraph.co.uk/global-health/terror-and-security/sudan-unrest-militia-rapid-support-forces-who-khartoum/>

<sup>16</sup> <https://www.army.mod.uk/who-we-are/corps-regiments-and-units/corps-of-royal-engineers/28-engineer-regiment/>