Written Evidence submitted by the Human Security Centre (DIS0046)

Background

The Human Security Centre (HSC) is an international, independent, not-for-profit foreign policy think-tank based in London. The HSC adopts and promotes the concept of human security as a central pillar of foreign policy in the twenty-first century.

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Executive Summary

- The UK's national security priorities in the North Atlantic and High North focus on securing the maritime, airspace and terrestrial territory of relevance to Britain and its allies' military security; the closely linked issue of sustaining the UK's continuous at-sea deterrent (CASD); supporting economic security; managing the consequences of climate change and other environmental issues that may impact UK security; and countering criminal activity and supporting international law.

- Scotland provides basing facilities for a broad range of UK military capabilities, including many of relevance to the North Atlantic and the Arctic. These include the Royal Navy's (RN) ballistic missile submarine (SSBN) fleet of four vessels, Arctic-trained Royal Marines, the RAF's (P-8) Poseidon MRA1 maritime patrol aircraft force, four squadrons of Typhoon combat aircraft and, in the near future, three (E-7) Wedgetail AEW (Airborne Early Warning) Mk1 aircraft and the RN's entire attack submarine (SSN) force.

- Critical North Atlantic/Arctic taskings of the Armed Forces in Scotland include policing the UK air defence region (as well as periodically undertaking Icelandic Air Policing), securing the Greenland-Iceland-UK (GIUK) Gap, supporting littoral/land operations in the Arctic region (particularly Norway), fielding and defending the CASD, and supporting military exercises.

- The MOD's 2022 Arctic Strategy is comprehensive but contains little that is new in terms of policy and only a minimal indication of additional resources. Defence capabilities in Scotland of relevance to the region are lacking in both mass and resilience.

National Security Priorities in the North Atlantic and High North

1. The UK's national security priorities in the North Atlantic and High North can broadly be outlined as follows:

   Securing the maritime, airspace and terrestrial territory in these regions of relevance to the UK, its allies and partners to support peace and stability

   1.1 This threat includes conventional and grey-zone challenges to UK national security that may emanate from or transit through the North Atlantic or Arctic. As befits the name, NATO as an alliance is critically dependent on free and open access to the North Atlantic to function – in part due to European NATO's reliance on US support, much of which can only be brought in by sea.[1] NATO's northern flank anchored in the High North has a major role to play in alliance security as a result of Russian maritime, land and air forces based in the region. Beyond NATO, the Joint Expeditionary Force (JEF) (composed of the UK, Denmark, Finland, Estonia, Iceland, Latvia, Lithuania, the Netherlands, Sweden, and Norway), has significant member territory in the High North and acts as a conduit through which to enact the UK's priorities in the Arctic.

   1.2 Examples of the challenges facing the UK and its allies in these regions include Russian surface vessels and submarines (many based in the Arctic on the Kola Peninsula) which in times of tension or war may seek to attack the UK's interests, including through disrupting the sea lines of communications in the North Atlantic between North America and Europe, interfering with underwater infrastructure including cables and pipelines, and launching missile strikes against UK and allied targets on land.[2]

[1] Additionally, during the Russia-Ukraine War, much of the heavy equipment and supplies for Ukraine from the US has been shipped across the Atlantic, and a significant portion of Europe's loss of access to Russia's gas has been compensated for by Liquified Natural Gas (LNG) shipped from the US.

1.3 Russia's Northern Fleet ballistic missile submarines typically deploy within the Barent Sea in the Arctic Circle as part of a 'bastion' strategy which supports their protection by allowing them to remain under the umbrella of friendly forces based in Russia. These vessels carry a high percentage of Russia's nuclear weapons, and represent the most survivable element of its nuclear force.

1.4 The Greenland-Iceland-UK (GIUK) Gap acts as a transit point through which Russian naval forces of the Northern Fleet must pass to enter the North Atlantic, and is therefore an important region for monitoring and interdicting movements.[3]

1.5 Russian aircraft based in or transiting through the Arctic hold the potential to launch missile strikes against allied targets at sea (including in the North Atlantic and Arctic regions) or on land, including within the UK.[4] A direct threat from adjacent Russian land forces also exists to NATO and JEF partners Norway, Estonia, Latvia, Lithuania and JEF partner (and current NATO candidate) Finland.

1.6 Russia has also sought to increasingly militarise its Arctic territory in general, opening a number of new facilities including airfields and surveillance sites.[5] Additionally, China may seek to move beyond its economic-focused 'Polar Silk Road' initiative – which seeks to exploit the newly open Arctic Sea lanes for trade purposes – to use the shipping routes through the Arctic as an access route to the North Atlantic for its military.[6]

Sustaining the UK's continuous at-sea deterrent (CASD)

1.7 The CASD is embodied in the uninterrupted deployment of at least one Royal Navy SSBN carrying Trident D5 missiles armed with nuclear warheads. These deployments

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[2] During the wars in Syria and Ukraine, the 3M-14K/T Kalibr land attack cruise missile has been fired at targets from both submarines and surface ships. The damage to the Nord Stream pipelines in the Baltic Sea is likely the result of Russian sabotage and may be intended to convey a message regarding the vulnerability of allied undersea infrastructure.

[3] While passage through the North Sea and the English Channel is possible, the latter in particular is relatively easy to monitor.

[4] The wars in Syria and Ukraine have both demonstrated Russia's ability to strike targets with conventionally armed air and ground-launched cruise and ballistic missiles.

[5] Melino, M. and Conley, H.A. (2020) 'The Ice Curtain: Russia's Arctic Military Presence. CSIS [Online]. Available at https://www.csis.org/features/ice-curtain-russias-arctic-military-presence [Accessed 16th January 2023]

[6] Nakano, J. (2018) 'China Launches the Polar Silk Road'. CSIS Newsletter, 2nd February [Online]. Available at: https://www.csis.org/analysis/china-launches-polar-silk-road [Accessed 16th January 2023]

necessitate ensuring the availability of adequate submarines for operations, securing their base of operations and the exit and entry routes from their base of operations, and minimising the potential for detection when on patrol. Patrols are typically undertaken in the North Atlantic, and the primary threat they face during these patrols emanates from Russian submarines based in the Arctic region.

Supporting economic security

1.8 As well as their significance for defence, both the North Atlantic and High North have a critical role to play in the UK's economic security. Global warming is opening up access to new sources of fossil fuels and other natural resources in the High North. Notably, Greenland may become an important new supplier of rare earth minerals as demand increases and the West seeks to diversify its supplies away from China.[7] As well as the importance of such elements in general to the economy, they are also critical for components in many advanced weapons systems. Additionally, secure sea lanes for trade are vital, with a high percentage of the UK's trade carried in ships across the North Atlantic. Undersea data cables are also critical to the UK economy Although largely located in the North Sea, English Channel and Irish Sea, the UK's offshore oil, gas and wind platforms, together with undersea oil and gas pipelines and electricity cables, are also vulnerable to threats emanating from the Atlantic and Arctic regions. Fishing remains important to several UK regions, and the North Atlantic and Arctic are hosts to several key species that require careful management to remain sustainable.

Mitigating the consequences of climate change and other wider environmental issues that may impact UK national security

1.9 The impact of climate change includes the melting of the northern icecaps opening up shipping routes between Asia and the Atlantic along Russia's northern coastline, as well as easing access to new sources of fossil fuels and mineral resources. The likelihood of environmental accidents with consequences for the UK and its allies will also increase as industrial activity in the Arctic rises.

[7] Kvanefjeld Project (2023) Energy Transition Minerals [Online]. Available at: https://etransmin.com/kvanefjeld-project/ [Accessed 16th January 2023]

Countering criminal activity and supporting international law

1.10 Illegal overfishing and pollution, as well as miscellaneous criminal activity such as arms, technology, drugs and people trafficking, also present a challenge to UK and allied interests. Many of the natural resources that will become more accessible as the icecaps retreat are governed by the UN Convention on the Laws of the Sea (UNCLOS), and several of the relevant territories are subject to competing claims. There may also be attempts to disrupt maritime traffic in contravention of the UNCLOS.

The role of Scotland-based defence capabilities in the North Atlantic and High North

2. Defence capabilities based and maintained in Scotland make a major contribution to UK defence activities. These include:

2.1 **Naval operations**:

- *Providing a basing facility for all Royal Navy SSNs*: It is planned that the entire UK fleet of nuclear-powered but conventionally-armed submarines, which are designed to engage hostile submarines, surface vessels and strike land targets amongst other missions, will shortly be based at HM Naval Base (HMNB) Clyde. [8]

- *Providing basing facilities for the UK's nuclear deterrent*: All four of the *Vanguard*-class Trident D5-carrying ballistic missile submarines (SSBN) are based at HMNB Clyde, and this arrangement will continue with the four planned *Dreadnough*t-class SSBNs. HMNB Clyde is also home to 43 Commando Fleet Protection Group Royal Marines, the Faslane Patrol Boat Squadron and a MOD Police unit which provides facility and asset security. HMNB Clyde incorporates the nearby Royal Naval Armaments Depot (RNAD) Coulport, which provides storage and loading/unloading facilities for the nuclear warheads which arm the submarines.

- *Ordinance disposal*: HMNB Clyde hosts C Squadron of the Royal Navy's Diving & Threat Exploitation Group, which specialises in the key areas of In-Water Maintenance and Repair (IWMAR) and Explosive Ordnance Disposal (EOD). The

[8] At the time of writing, only the last remaining *Trafalgar*-class submarine, *HMS Triumph*, is based outside of Scotland at HMNB Devonport in Plymouth and is due to retire by 2025.

Royal Navy's remaining *Sandown*-class minehunters are also based at HMNB Clyde, although they are due to be decommissioned by 2025.

- *Providing Royal Marine basing*: 45 Commando Royal Marines is based in Royal Marine (RM) Condor in Arbroath, as are a number of sub-units.

- *Hosting reserve units*: The main Royal Marine Reserve detachment in Scotland is at MOD Caledonia in Rosyth, with further detachments in Aberdeen, Dundee, Edinburgh and Glasgow. HMS *Dalriada* in Glasgow and HMS *Scotia* in Rosyth and Dundee are the Royal Navy Reserve's main bases in Scotland.

- *Munitions storage*: Defence Munitions (DM) Glen Douglas is a defence munitions storage depot located near Loch Long.

2.2 **Air warfare**:

- *Providing basing facilities for RAF fixed-wing maritime patrol aircraft*: All nine of the RAF's (P-8) Poseidon MRA1 aircraft are based at RAF Lossiemouth.

- *Providing basing for combat aircraft*: Four squadrons of RAF Typhoon aircraft are stationed at RAF Lossiemouth and are tasked with air defence (including the UK's northern Quick Reaction Alert), offensive strike and reconnaissance.

- *Providing basing for airborne early warning (AEW) aircraft:* RAF Lossiemouth will shortly become the base for the UK's three new Wedgetail AEW Mk1 aircraft.

- *Providing basing for ground*-based air surveillance: Remote Radar Heads (RRH) at RAF Saxa Vord (Shetland Islands), RRH Benbecula (Outer Hebrides) and RRH Buchan (Aberdeenshire) provide the Scottish military element of the UK's Air Surveillance and Control System (ASACS).

- *Provide basing for the ground-based defence of air assets:* RAF Lossiemouth hosts Number 5 Force Protection Wing, which comprises 51 Squadron RAF that provides ground defence to RAF facilities, aircraft and personnel, and 4 RAF Police Squadron which conducts general policing work, counterintelligence and special investigations at the station.

- *Hosting reserve units:* 612 Squadron is based at Leuchars Station, 2622 (Highland) Squadron at RAF Lossiemouth, 602 Squadron in Glasgow and 603 Squadron in Edinburgh

2.3 **Land warfare**:

- *Providing basing for British Army formations*: 51 Infantry Brigade and Headquarters Scotland is the most senior British Army formation in Scotland and acts as the operational command for units directly under its auspice in Scotland, and as administrator to units in Scotland that are under the command of other brigades. The Royal Regiment of Scotland has its HQ in Edinburgh, and its Second Battalion is based in Glencorse Barracks, Penicuik; The Black Watch Third Battalion at Fort George, Inverness; and Balaklava Company, Argyll and Sutherland Highlanders 5th Battalion acts as the public duties company in Edinburgh. The Royal Scots Dragoon guards are also based in Edinburgh. A wide range of other units are also based in Scotland.

- *Hosting reserve units*: The Seventh Battalion Royal Regiment of Scotland, Scottish and North Irish Yeomanry, 5 Military Intelligence Battalion and 105 Regiment Royal Artillery are among the Army Reserve units fully or partially based in Scotland.

3. Examples of activities in the North Atlantic and the Arctic and the contribution of Scotland include:

3.1 *Policing the UK air defence region*: the UK ASACS is part of the NATO Integrated Air and Missile Defence System (NATINAMDS). Britain's air defence sector covers the UK and extends into the North Atlantic. There is also an agreement with Ireland for the UK to support the policing of the Irish Flight Information Region owing to Dublin's lack of suitable aircraft. Air defence capabilities are primarily drawn from seven frontline Typhoon squadrons, four of which are based at RAF Lossiemouth in Scotland.[9] Lossiemouth is responsible for QRA North, and given its geographical location typically manages Russian activity. RAF Coningsby is the only other

[9] If required, F-35B aircraft based at RAF Marham could also undertake the air defence role.

Typhoon operating base, and routinely provides QRA South, which typically focuses more on anti-terrorism tasking given its proximity to London. These efforts will soon be supported by three Wedgetail AEW Mk1 aircraft, which will be based in Lossiemouth. As noted, Scotland also hosts three RRHs to support surveillance efforts.

3.2 *Atlantic Patrol Tasking North*: while notionally covering the entire North Atlantic, in reality, this tasking typically focuses on disaster relief operations and counternarcotic efforts in the Caribbean. The *HMS Medway*, built on the River Clyde in Scotland, is currently on long-term assignment to the tasking.

3.3 *GIUK-gap operations*: nine RAF Poseidon MRA1 aircraft are based at RAF Lossiemouth and provide anti-submarine, anti-surface vessel and general maritime patrol capabilities (as well as search and rescue support) over the North Atlantic, including over the GIUK Gap. These are typically supported by Royal Navy attack submarines, which will soon be exclusively composed of *Astute*-class vessels based at HMNB Clyde.

3.4 *Cold weather training*: Scotland-based 45 Commando is one of the select UK military formations that regularly undertake cold weather training in Norway to acclimatise personnel to such environments in the Arctic and elsewhere. In the event of a threat to Norway, Finland or Sweden, it is likely to be amongst the units deployed as part of a NATO/JEF force.

3.5 *Littoral Response Force (LRF) (North)*: this formation is focused on the Atlantic (including the Arctic), Baltic and Mediterranean region, and is typically composed of an *Albio*n-class landing platform dock (LPD), a *Bay*-class LSD, an escort ship (frigate or destroyer), a supply vessel and a Royal Marine detachment led by an infantry company from the Scotland-based 45 Commando.

3.6 *CASD*: as already described, this mission is focused on ensuring that at least one Trident missile-armed submarine is continuously on patrol, typically in the North Atlantic.

3.7 *Towed Array Patrol Ship (TAPS)*: the TAPS is a frigate tasked with short-notice anti-submarine operations centred on ensuring the safety of the CASD from potential enemy submarines – chiefly when the Trident-carrying submarines are departing and returning from HMNB Clyde. Currently the mission of one of eight towed array-equipped Type 23 frigates, the task will in future be undertaken by one of eight towed array-equipped Type 26 frigates, all of which are being built on the Clyde.

3.8 *Exercises*: The British military leads or participates in several exercises of relevance to the Arctic and North Atlantic that are linked to Scotland. Notably, Exercise Joint Warrior is UK-led and takes place twice a year: it is Europe's largest regular military exercise and is primarily staged out of Scotland. Exercise Trident Juncture 2018, which took place in Norway and was NATO's largest exercise in the region in 30 years, included Scotland's 45 Commando. NATO anti-submarine warfare exercise Dynamic Mongoose, which alternates yearly between Icelandic and Norwegian waters, has seen participation from Scotland-based Poseidon MRA1.

3.9 *Icelandic Air Policing*: The UK periodically contributes to providing combat aircraft to secure NATO member Iceland's airspace. In 2019, the mission was undertaken by RAF Typhoon aircraft from RAF Lossiemouth.

The MOD Arctic Strategy and its delivery in Scotland

4. The MOD's 2022 Arctic Strategy, *The UK's Defence Contribution in the High North*, is designed to guide defence policy in the region over the next decade.[10] The document builds on the broader 2018 *Arctic Policy Framework – Beyond the Ice* and incorporates decisions made in the 2021 Integrated Review *Global Britain in a Competitive Age* and the 2021 Defence Command Paper *Defence in a Competitive Age*. It presents a summary of the region's importance, likely future challenges, current UK initiatives and plans for the future. It presents the following as the MOD's key objectives:

    - *Protect our Critical National Infrastructure and our other national interests, and those of our Allies.*

[10] Ministry of Defence (2022) 'The UK's Defence Contribution in the High North'. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1063855/The_UK_s_Defence_Contribution_in_the_High_North.pdf [Accessed 16th January 2023]

- *Ensure our freedom to navigate and operate across the wider region.*
- *Reinforce the rules-based international system, particularly UNCLOS.*
- *Contest malign and destabilising behaviours*[11]

5. It is clear that the MOD is not seeking to overly militarise the Arctic region given the relative threat level, and the list does not, for example, directly address the potential threat of an Article 5 situation in the region. However, a pledge that "As a leading European NATO Ally, the UK is prepared to defend our Arctic Allies and respond to aggression" does appear elsewhere. The document in its totality succeeds in accurately identifying the UK's priorities in the region. Critically, it notes the importance of the Arctic in ensuring that reinforcements from the US can transit the North Atlantic to Europe in a crisis.[12]

6. In relation to delivery pathways, the MOD states that its priorities are to:

    a. *Improve our understanding of the region, how it is changing, and the activities of state and non-state actors within it.*
    b. *Work with regional Allies and partners, including through NATO, the Northern Group, and the Joint Expeditionary Force, aligning policy, activity, and capability where possible and across all domains.*
    c. *Maintain a coherent Defence posture, presence, and profile in the region, including training, partnering, and operating from and in the Arctic.*
    d. *Develop sustainable, modernised, and proportionate Defence capability for the region, including through investment in Research and Development*[13]

7. Points b and c are broadly commitments to maintain the status quo. Points a and d are more future-orientated, but lack significant commitment towards new capability development beyond the conceptual and R&D phases for the Arctic specifically, although various programmes including those involving space technology are noted as being inclusive of the High North. For the most part, the paper serves to consolidate already ongoing initiatives into a single coherent policy set with no minimal resources.

8. Looked at narrowly, the lack of empirical benchmarks in the Arctic Strategy does strictly mean that the Government can claim to deliver on it effectively in Scotland. However,

[11] Ibid, p.8
[12] Ibid, p.10
[13] Ibid, p.8

while it is adhering to the *letter* of the paper, it is arguably not adhering to its *spirit*. Most, although not all, of these issues, come down to a lack of capability depth. Multiple areas of capability have wider global roles, and even when available for tasking in the Arctic region can only operate at a restricted scale. Examples include:

8.1 *Attack submarines*: As noted, Scotland will soon become the base for the entire Royal Navy SSN fleet. These vessels are capable of operating under the Arctic ice and are a vital component of the wider system for tracking Russian submarines in the North Atlantic. Individually, they are amongst the most capable in the world. However, even when the full envisaged fleet of *Astute*-class submarines is delivered, it will only comprise seven vessels. This force is tasked not only with North Atlantic and Arctic operations but also has responsibilities globally. Given the need for several vessels to be undertaking refits, maintenance and training duties at any one time, this leaves the Royal Navy with only a patchy capacity for Arctic under-ice operations.

8.2 *Ground forces*: Scotland's 45 Commando currently provides the infantry element of the LRG (North), and as such can be assumed to be in the lead for cold weather ground operations. However, having only a single infantry company (the lead company responsibility rotates within the Commando) available at sporadic intervals (LRG (N) is responsible for the Atlantic, Baltic and Mediterranean) represents a highly limited capability against a state-level opponent, even if it could be augmented given time. It should also be noted that a crisis in the Arctic is less likely to occur in isolation, and more likely to be only one part of wider events – possibly including a crisis in Eastern Europe. As a result, additional forces may not be readily available. While the Future Commando Force is primarily intended as a littoral deterrence and strike force, mass allows for more intense and complex operations or for more than one operation to be carried out simultaneously. There is a pledge within the Arctic Strategy to increase Army cold weather training, with JEF (and soon NATO) partners Finland and Sweden being referenced as recent locations of such training. However, specific commitments (including regarding those units based in Scotland) are lacking, and it may be that the training envisaged is of greater relevance to winter weather conditions in Eastern Europe rather than the Arctic.

8.3 *Air operations*: The RAF's ability to contribute to UK activities in the Arctic is centred at RAF Lossiemouth. Typhoon, Poseidon MRA1 and (soon) Wedgetail AEW Mk1 aircraft are all platforms which have a part to play. However, all have a global role and are not routinely focused on the region. Even if this were to change, nine Poseidon MRA1 and three Wedgetail AEW Mk1 cannot provide a persistent presence – particularly given that their air-to-air refuelling systems 'boom' receptacles are incompatible with the 'probe and drogue' system supported by RAF Voyager tankers.[14]

8.4 *Ground-based air defence*: HMNB Clyde and RAF Lossiemouth are two of the most important military bases not only in Scotland but also in the UK as a whole. As illustrated, they have important roles in the Arctic. However, neither have a permanent ground-based air defence capability, being dependent on combat aircraft for their defence. The UK's ground-based air defence missiles are controlled by the British Army and are extremely limited in number.[15] As demonstrated in Syria and Ukraine, Russia possesses a substantial standoff strike capability. In wartime, the UK would face a threat from Moscow's bomber and submarine-launched missiles. This opens the possibility of raids on these bases to degrade key UK systems. A single airbase housing around half of the RAF's fast jet squadrons and its entire maritime patrol and AEW&C fleet is an inviting target. A conventional strike against the attack and ballistic missile submarines docked in the Clyde to inflict sufficient damage to prevent their deployment is also a possibility.

Conclusion

9. Scotland plays a critical role in enabling the UK's defence priorities in the North Atlantic and High North, and this will only increase in the coming years. The MOD's Arctic Strategy successfully consolidates the broad set of existing policies, but offers little in terms of new initiatives or resources. The key air, land and sea assets present in Scotland that are of relevance to the North Atlantic and High North lack both capacity and resilience, and only a mix of new investment and prioritisation will adequately address this.

[14] It was originally planned to replace the Poseidon MRA1's predecessor, the Nimrod MR2, with 21 Nimrod MRA4 aircraft. The Wedgetail AEW Mk1's predecessor, the E-3D Sentry, originally comprised a fleet of seven aircraft, and plans to replace them with five Wedgetails were later cut to three. Both the Nimrod and Sentry were fitted with refuelling booms compatible with RAF Voyager tankers.

[15] The RAF Regiment's final Rapier missile units were phased out in 2006/2007

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