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Defence Committee

First Special Report: Defence and Climate Change

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The Defence Committee

The Defence Committee is appointed by the House of Commons to examine the expenditure, administration, and policy of the Ministry of Defence and its associated public bodies.

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First Special Report

The Defence Committee published its Ninth Report of Session 2022–23 Defence and Climate Change (HC 179) on 18 August 2023. The Government's response was received on 31 October 2023 and is appended below.

Appendix 1: Government Response

The Ministry of Defence (MOD) welcomes the House of Commons Defence Committee's Inquiry into Climate Change.

The UK is a world leader on climate change action, decarbonising faster than any other G7 nation, cutting our emissions by 48% whilst growing the economy by 65%, and remaining committed to delivering net zero by 2050 in a way that does not pass unnecessary costs onto the public.

The MOD's priority through this global transition will always be the defence of our nation, we will do what is practical and possible on decarbonisation, but we will never damage our national security for the sake of sustainability targets. Commenting on the Inquiry the Secretary of State for Defence said:

> *"Safeguarding our national defence is our immovable red line, it will always come first above any other considerations. Under this Government we will never sacrifice or compromise the safety of the British people or our national security for the sake of sustainability targets.*
>
> *There are those that would urge us to decarbonise across defence no matter the cost, but to do so would be a dereliction of duty and a gift to our nation's enemies. We will continue to ensure that our Armed Forces adapt to fight and win in an ever- changing world, to secure our strategic advantage against competitors. But we must be absolutely clear, going forward decisions will not be balanced between calls to hit sustainability targets and the need to protect the United Kingdom, we will choose the security of our nation every single time.*
>
> **Defence Secretary, Rt Hon Grant Shapps MP**

Across the MOD work to responsibly address the impact of climate change both physical and transitional, on our national security, is well underway and is already aligned to many of the Inquiry's recommendations. This work builds on the MOD's Climate Change and Sustainability Strategic Approach (published in March 2021) as well as the Department's long standing work as one of the UK's largest landowners with an estate rich in biodiversity. A significant focus has been ensuring that climate change and environmental factors are embedded in Defence decision making where necessary and practical, with climate-related data being incorporated into risk and planning processes. International Allies and Partners, Defence Industry and Academia are all being involved to leverage best practice to inform and shape the MOD's approach and delivery plans, with the MOD now playing a leading role in the establishment of the NATO Climate Change and Security Centre of Excellence. All this work is underpinned by the need to build understanding and increase

literacy across the Whole Force. Additionally, the MOD is assessing the security benefits of alternative energy sources, highlighted by the Royal Air Force's work on sustainable aviation and synthetic fuel, as well as the benefits of greater operational self-sustainment through a sustainable support strategy.

Throughout all this work the MOD must ensure that it never compromises national security solely for a sustainable solution. The MOD appreciates the Committee's recommendations into how to adapt, mitigate and respond to the associated risks and security implications of climate change.

1. **The increasing exploitation of the Arctic for international trade and exploration for critical minerals gives greater importance to the role of the Joint Expeditionary Force (JEF) as a security alliance in the 'High North'.** ***The Ministry of Defence should assess how the JEF might need to be adapted in the face of climate-change induced developments in the Arctic and beyond.*** (Paragraph 24).

The UK is committed to working with Allies and Partners in the 'High North' to ensure that increasing access – through increased ice melt – to the region and its resources is managed safely and sustainably.[1] This commitment recognises the importance of the 'High North' to the UK's environment, prosperity, energy and security.

As the HCDC notes, the Joint Expeditionary Force (JEF) is a key security forum through which the UK and Participating Nations can ensure their continued ability to operate and provide security and assurance in the 'High North' and the Arctic. The JEF is already responding to the impacts of climate change and is actively monitoring and analysing the changing security dynamics it causes. Additionally, through collaboration and information sharing with other international security forums (such as NATO and the Nordic Defence Cooperation organisation) the JEF is designed to take into account overlapping security concerns and responsibilities in the High North and Arctic.

2. **Military equipment will need to be adapted to operate effectively under the more extreme temperature ranges that are predicted, as well to help reduce emissions, although this should be achieved without compromising military capability. This process cannot be delayed; more than a 1,000 new tanks and other armoured vehicles with conventional diesel engines will enter service in the next few years and will still be in service after the 2050 Net Zero target. Armed Forces training will also need to be adapted in the face of rising global temperatures, so military readiness to respond to crises is not eroded.** (Paragraph 29).

Climate Change is an acknowledged threat to capability and readiness levels either through the direct physical impact (more severe or extreme weather events) or transitional risks (the global transition away from fossil fuels).

The Department is already adapting to this threat. A key focus has been assessing the risk to existing platforms. Through the Defence Science and Technology Laboratory (DSTL) and Meteorological Office, it is testing key existing equipment operating parameters against a set of regional environmental data (initially out to 2040) to inform future capability

1 The UK's Defence Contribution to the High North: https://www.gov.uk/government/publications/the-uks-defence-contribution- in-the-high-north

management decisions. Procurement processes are also being uplifted to ensure climate and environment factors are sufficiently incorporated, with training in place to embed these changes.

One of the main transitional risks to Defence is the global energy transition. In response the MOD is developing a Defence Operational Energy Strategy. This strategy will highlight the risks, opportunities and actions that need to be addressed to achieve an orderly transition away from fossil fuels. This transition will be complex, with some of the alternative energy sources not yet viable for defence use. The MOD continues to work to ensure interoperability with NATO and other Allies. A similar approach is being adopted for Estate Energy as well as ensuring that the Defence Estate is adapted to and resilient to both the physical and transitional risk of climate change. This work builds on pre-existing climate resilience work which has been underway for over a decade. Additionally, a new Defence Climate Risk Analysis Model has been designed to identify climate risks being held by Front Line Commands and Enabling Organisations, and so inform actions to mitigate these risks as well as adaptation and resilience planning.

3a. ***Defence should undertake research and assess best practice from academia, industry, Allies and Partners on operating in demanding environments and ensure all Defence Lines of Development are suitably adapted to continue to allow UK Armed Forces to operate effectively across more extreme climatic conditions over the coming decades.*** (Paragraph 30).

A critical part of the MOD's approach to Climate Change has been, and will continue to be, proactive engagement and partnering with academia, industry and Allies and Partners. With Allies and Partners, the Department has adopted a transparent approach, sharing its methodologies and exchanging key artefacts with NATO and key partners such as the USA, France and Australia. External artefacts such as the NATO Climate Action Plan and the US National Intelligence Strategy are also being drawn on to inform the MOD's own activity. Defence has already benefited from these interactions with the transfer of the US Defence Climate Assessment Tool to the UK MOD which has added to existing estate resilience planning.

Through the Defence Suppliers Forum (DSF), the MOD is working with industry to understand climate-related risks to the Defence Enterprise and build sector decarbonisation pathways. An example of this shared approach is the publication of the Defence's Net Zero Aviation Strategy in Jul 23, as well as collaboration on initiatives such as Sustainable Aviation Fuel. Looking forward, the private sector has already begun to implement more stringent climate risk reporting to comply with new accounting standards established by the Task Force for Climate Related Financial Disclosures (TCFD).[2] As an early adopter of Central Government's response to TCFD the MOD will, through the DSF, be seeking to leverage industry's lessons learnt to inform its own actions.

Finally, a recent example of ongoing work with academia is the publication in May of 'Climate Change Dilemmas for UK Defence and Security.'[3] This was a study from the Global Strategic Partnership led by RAND Europe, commissioned by the MOD's Levelling Up, Union, Climate Change and Sustainability Directorate (LUCCS), DSTL, the Secretary

2 About | Task Force on Climate-Related Financial Disclosures (TCFD) (fsb-tcfd.org): https://www.fsb-tcfd.org/about/

3 Climate Change Dilemmas for UK Defence and Security: Exploring implications, challenges, opportunities, and threats through future scenarios | RAND: https://www.rand.org/pubs/research_reports/RRA2596-1.html

of State's Office for Net Assessment and Challenge (SONAC) and the Development, Concepts and Doctrine Centre (DCDC). The study explores the future implications of climate change on defence and security. This relationship with academia will be an increasing part of the Department's response.

3b ***It should also push hard to reduce carbon emissions from its equipment, without eroding military capability.*** (Paragraph 30).

The MOD's Strategic Approach to Climate Change and Sustainability states that 'Defence must preserve its capabilities despite the impact of climate change…while never compromising capability solely for a sustainable solution.' This is why its ambition is to reduce emissions and contribute to the achievement of the Net Zero Commitment, whilst ensuring there is no detrimental impact on the UK's ability to fight and win in ever more hostile and unforgiving world. Specific decarbonisation work, which in many cases has operational benefits, is being driven forward through the MOD's Top Level Budget (TLB) holders supported by its Enabling Organisations as well as Industry Partners.

Examples include:

- Air. All Defence air platforms have been cleared to use a 50% Sustainable Aviation Fuel (SAF) blend, with the first SAF-powered military transporter flight taking place in November 2022. This positions the MOD to take advantage of SAF with the added benefit of reducing lifecycle carbon emissions by up to 80%, while improving operational effectiveness. The RAF is also leading the way in technology development such as Project GLADIATOR, linking synthetic training systems from across the Land, Maritime and Air domains, supporting sustainability initiatives by helping to reduce the environmental footprint of collective training. It will allow for more complex training to occur in a structured setting and reduce the cost of carrying out real life training while helping to reduce carbon emissions. This will reduce the amount of live flying required to maintain operational advantage whilst mitigating the climate impact of live flying. Similarly, the RAF's Rapid Capabilities Office has recently announced a partnership to produce two experimental aircraft, exploring novel propulsion technologies and how they can be applied to military capabilities.

- Maritime. The Royal Navy has already brought into service River Class Offshore Patrol Vessels fitted with catalytic reduction that can reduce nitrogen-based emissions by up to 97%. Looking ahead, it is building through-life adaptability into future platform designs, such as the new Fleet Solid Support ships. This will ensure maximum flexibility for insertion of developing technologies, such as vessel design features to meet the challenge that many future maritime energy sources will be low flashpoint fuels.

- Land. The Army has invested c.£14 million in Battlefield Electrification, with a further £13 million programmed, which will inform hybrid-electric requirements for future capabilities. Trials will deliver robust military evidence and assessment, allowing the Army to commit to investment decisions for both current (in-service) and future capabilities. Testing to date has indicated

that Hybrid Electric Drive will offer long term savings by reducing logistics requirements and simplifying the supply chain, all while offering significant improvements in tactical and operational advantage.

4. ***The Ministry of Defence should set out the balance of investment opportunities around accelerating the fitting of low-carbon energy sources to the defence estate in the UK and abroad to achieve 'estate Net Zero' by 2030. Although this will require additional initial capital outlay, it should reduce whole-life costs and carbon emissions and increase Defence's energy resilience and self-sufficiency.*** (Paragraph 42).

All Public Sector organisations are working to deliver the agreed decarbonisation pathway contained in the UK Net Zero Strategy and associated Heat and Buildings Strategy. This pathway is set against a 2017 baseline and aims to achieve a 30% reduction by 2025, 50% less by 2032, 75% less by 2037 and be Net Zero by 2050. The RAF has a separate estate Net Zero 2030 aspiration to drive its own response, over and above the overall Departmental position.

To achieve this pathway the MOD has already amended its building standards to incorporate more stringent energy targets for new builds and refurbishments. Wider work to decarbonise the estate will need to be a focus of future Departmental fiscal events to provide the funding (or draw of alternative sources of funding such as the Public Sector Decarbonisation Scheme), to enable the MOD to exploit the acknowledged whole life savings, security, resilience and emission reduction benefits. Examples of current activity underway within existing funding include:

- 'No regrets' asset specific actions (e.g., building fabric, LED replacements); solutions that can be undertaken efficiently with effective impacts.
- Site-based behaviour campaigns to improve energy efficiency.
- Self-owned and operated ground mounted solar PV (e.g., Project Prometheus) and MOD-funded solar PV installations, switching demand from grid to self-generation.
- Installation of building energy management systems and automatic meter readings across the Defence Estate.
- Adopting construction methods that reduce emissions early in the life of infrastructure assets.

5. ***This balance of investment analysis should also be applied to the housing stock as, in conjunction with wider upgrades, it could enhance the living conditions of Service personnel and their families, thereby improving retention.*** (Paragraph 43).

The MOD is currently undertaking a significant accommodation investment strategy review which includes Net Zero and energy factors; this is planned to conclude by the end of 2023. It is acknowledged that these factors could also enhance living conditions of Service Personnel and their families and potentially improve retention.

6. ***The Ministry of Defence should assess whether continued reductions in the size of the Armed Forces will likely result in Defence accepting fewer MACA tasks requested***

by Government over the coming decades, and if so, should ensure wider Government is fully aware of the implications of this, including the need for alternative non-regular forces capacity. (Paragraph 48).

The MOD has a distinct and clearly defined role supporting lead government departments, the Devolved Administrations, and civil authorities as they prepare, respond and recover from disruptive challenges and major national events. This is detailed in UK Operations: The Defence Contribution to Resilience (JDP 02).[4]

Current Military Aid to the Civil Authority (MACA) policy is that MACA tasks, with very few exceptions, are not resourced from dedicated military capabilities. The MOD's planning and liaison staff regularly review plans with civil authorities and other government departments as trends change to ensure support is provided, as appropriate.

The MOD has also commissioned DSTL to undertake a review of MACA and Humanitarian and Disaster Relief (HADR) activity, to be complete by end 2023. This study will look specifically at: historical military engagement in these roles; future prediction of military engagement, using Meteorological Office climate change projections; mapping potential military engagement against predicted operational deployments; and understanding any operational risks from supporting MACA and HADR. Understanding these future risks could inform any future discussions about the potential requirement for alternative capacity to assist/carry out MACA tasks.

Defence as a global leader for tackling climate change

7. ***Undertaking the role of global leader is not easy. Rear Admiral Paul Beattie, Director Naval Staff, Royal Navy, recently described the measures necessary for climate change adaption in the military as the "… biggest change programme in defence". He noted that, unusually for technology, countries "can't look to the US" for global leadership and that some were therefore looking to the UK. However, such a role Defence and Climate Change requires considerable resources, and time, so was not a decision to be taken lightly. Influencing with UK partners through international organisations such as NATO and the UN could provide a helpful approach.*** (Paragraph 60).

As recognised by the Committee, the implications of climate change touch almost every element of defence and will profoundly impact the operational environment. This is acknowledged by Allies and Partners, especially NATO. Therefore, the UK, as well as other nations, is taking the lead on set elements of the response either through NATO, multi- laterally or bi-laterally. This includes building climate literacy and awareness and exchanging research and technology with the aim to align approaches and preserve interoperability. For example, the MOD is playing a key role in influencing and supporting NATO on climate change and security through its support to the NATO Centre of Excellence for Climate Change and Security. The MOD believes this will be a key focal point within the Alliance for climate security research, knowledge, education, and training. The UK also plays a key role supporting and influencing NATO's climate agenda through NATO's Environmental Protection Working Groups and NATO Petroleum Committee. There are specific areas where the Single Services are also providing leadership, such as the RAF with the development and use of Sustainable Aviation Fuels.

4 UK Operations: the Defence Contribution to Resilience (JDP 02) - GOV.UK (www.gov.uk): https://www.gov.uk/government/publications/operations-in-the-uk-a-joint-doctrine-publication

8a. ***The Ministry of Defence should work with other UK government partners to encourage the United Nations Framework Convention on Climate Change and the Intergovernmental Panel on Climate Change to update their reporting framework so emissions from military fuel use and other activities are set out in National Inventory Reports.*** (Paragraph 61).

Emissions from military fuel use are included in the UK National Atmospheric Emissions Inventory (UK NAI) under "1A5b_Other: Mobile"[5] and a breakdown of UK military fuel use is reported in the MOD's Annual Report and Accounts – Annex D.[6] The MOD will continue to work with the Department for Energy Security and NetZero (DESNZ) as the lead on UK greenhouse gas emissions reporting and the DESNZ's independent verifiers, Ricardo Energy and Environment.

8b. ***The Ministry of Defence should also urge NATO to increase its transparency and publish its methodology for accounting for greenhouse gas emissions.*** (Paragraph 61).

NATO published its own methodology for accounting for its greenhouse gas emissions following the July 2023 Vilnius Summit. The MOD actively supports this and will remain engaged with NATO initiatives to influence and share its experiences of emissions data collection. This includes the analysis of emissions reporting, lessons learnt and continuous improvement for assessing the Department's carbon footprint using the Green House Gas Protocol.

9. ***Measuring and reporting against the total defence carbon emission figure would support both the Government's agenda of reducing emissions to Net Zero by 2050, but also provide a gold standard of military emissions reporting for other countries to emulate. Good practice would be to ensure these figures are independently verified.*** (Paragraph 66).

The MOD has been publishing data, in accordance with the HMT Sustainable Reporting Guide, since 2010. This includes reporting on emissions from its estate energy consumption, operational fuel consumption[7] and domestic business travel-related emissions in its Annual Report and Accounts (ARAC). All MOD emissions within the scope of the Climate Change Act are included in the total UK greenhouse gas emissions figures reported under the Kyoto Protocol. This data is collected by DESNZ as the lead department for UK greenhouse gas emissions reporting.

The MOD voluntarily sought in its ARAC for Financial Year 2021-22 to re-baseline its reporting to capture emissions that it can directly influence across Scopes 1, 2 and 3.[8] The underpinning methodology was subject to an independent internal review by the Defence Analytics Team which verified that the MOD Carbon Footprint Methodology is a sound repeatable process. This approach does not currently capture Scope 3 emissions from industrial partners.

5 NAEI, UK National Atmospheric Emissions Inventory - NAEI, UK (beis.gov.uk): https://naei.beis.gov.uk/

6 Ministry of Defence Annual Report and Accounts 2022 to 2023 - GOV.UK (www.gov.uk): https://www.gov.uk/government/publications/ministry-of-defence-annual-report-and-accounts-2022-to-2023

7 Capability (or Operational) Energy includes emissions from military aviation, maritime, green fleet, white fleet, and charter fuel emissions.

8 What are Scope 3 emissions and how it differs from Scope 1 and 2 | World Economic Forum (weforum.org): https://www.weforum.org/agenda/2022/09/scope-emissions-climate-greenhouse-business/

Currently, there are no plans to independently verify the MOD's emission reporting due to the scale and complexity of its activities. However, the Department is continuing to modernise, refine and improve its data collection and reporting approach in line with good practice. This good practice is gained not only from industry partners and the MOD's own experience, but from working closely with military Allies and Partners.

10. ***The Ministry of Defence should return to publishing a more in-depth, stand-alone annual review of its climate and sustainability performance, with independent verification of emissions measuring and reporting. It should commission work to better understand total defence carbon emissions. It should also explain the apparent discrepancy in reporting overall emission figures in 2019–20 and again in 2020–21, and then reporting those same (now historic) figures again in the 2021–22 Annual Report but with values that have increased by over 40%.*** (Paragraph 67).

In FY2021-22 the MOD voluntarily expanded the scope of reporting in its Annual Reports and Accounts to cover emissions associated with the worldwide estate, international business travel and those it can directly influence including Service Family Accommodation, Commuting and Waste disposal. Prior to this, the MOD's published emissions figures covered only part of the UK estate, domestic business travel and operational fuels in accordance with Government reporting requirements at the time. This re-baselining, required to underpin future decarbonisation activity, increased the overall emissions reported in the MOD's Annual Report and Accounts from 2.14MtCO2e in FY2020-21 to 3.34MtCO2e in FY2021-22.

There are currently no plans to return to a standalone report for climate and sustainability. However, through Sanctuary Magazine,[9] the MOD's annual sustainability magazine, the Department is seeking to highlight the projects and initiatives underway across Defence as well as mapping activity against indicators such as the UN Sustainable Development Goals. This is in addition to the more traditional content of Sanctuary which has focused on the stewardship and management of the Defence Estate.

Defence's contribution to Net Zero

11. **The Ministry of Defence is in line to achieve its Greening Government Commitments' carbon reduction targets early, but these are insufficiently demanding. It appears that the Ministry can meet its targets entirely by taking advantage of the decarbonisation of the National Grid. Targets are hardly stretching if they can be met without any effort, especially for a department that produces half of all central government emissions.** ***For the next round of Greening Government Commitments from 2025–2030, Defence should ensure its targets are more demanding and accompanied by plans to achieve them.*** (Paragraph 78).

The Government remains completely committed to its net zero and Greening Government Commitments and is a world leader in decarbonisation. Our targets keep us on track to meet these, and to meet international commitments including those under the Paris Agreement.

9 Sanctuary magazine - GOV.UK (www.gov.uk): https://www.gov.uk/government/publications/sanctuary

The current suite of Greening Government Commitments is focused mostly on estate specific targets and the MOD acknowledges that its emissions have historically been half of central Government's estate emissions.

The MOD's past emission reduction performance has been driven primarily through either a reduction in the number of buildings across the estate or through the greening of the grid. To drive further decarbonisation and as part of its 21-25 Greening Government Commitments Defence agreed a 10% direct emission reduction target (against a 2017-18 baseline). MOD officials are already working closely with Department for Environment Food & Rural Affairs and cross-Government colleagues on the approach and design of the new set of Greening Government Commitments. The MOD is using the experience and lessons gained in the most recent target period to shape the most effective set of new targets to drive behaviours and overall performance across the Department.

The MOD does not just use the energy in buildings as shown in its Annual Reports and Accounts. Emissions are created from generating electricity to power ships alongside, air traffic and defence radars and a range of industrial processes. The focus and pace at which the Department can decarbonise is inextricably linked to military capability and maintaining UK security and we will never put our nation at risk for the sake of sustainability targets.

12. **We welcome the Ministry of Defence's efforts to expand coverage of carbon emissions, but more needs to be achieved to ensure all Defence emissions are measured. Best commercial practice for promoting emissions reductions and net-zero targets are the Science Based Targets initiatives (SBTi), which can also apply to major suppliers along with carbon reduction plans.** ***The Ministry of Defence, therefore, should look to adopt Science-Based Targets initiative-approved measures for Defence and major suppliers, and develop carbon reduction plans for major suppliers.*** (Paragraph 86).

The MOD welcomes the Committee's acknowledgement of the expansion of its emission reporting. However, it is currently not planning on using Science Based Targets (SBT) as part of its planned approach. Using SBTs could undermine or drive perverse decisions around the provision of current capabilities, a non-negotiable point already acknowledged by the HCDC.

The MOD's suppliers, through Policy Procurement Notice (PPN) 06/21 (published June 2021), were obliged to publish their climate reduction plans online from September 2021. These plans must include a signed declaration confirming the supplier's commitment to achieving Net Zero by 2050. Whilst suppliers are allowed to use SBTi as an example of the environmental measures they have in place, HMG's commercial guidance is clear that SBTs are not aligned with the requirements of PPN06/21.

13. ***We note with interest the RAF setting itself a demanding target for reducing carbon emissions—a decade ahead of the Government's 2050 goal—and look forward to examining the detailed plan for how it will be achieved. The RAF has also set out clear milestones towards achieving its 2040 ambition, aiming for a Net Zero airbase by 2025 and a Net Zero RAF estate by 2030, but milestones are not plans and programmes. We have not seen similar plans setting out milestones and targets for all other Top-Level Budget holders and enabling organisations to achieve Net Zero by 2050.*** (Paragraph 88).

The MOD's stated 2050 strategic ambition is to contribute to the UK's legal commitment to reach Net Zero Emissions by 2050, where it is practical to do so and not detrimental to our national security. This position reinforces that the Department's primary purpose remains to protect the UK and its interests. It also reflects that in 2050 the MOD is still likely to be operating platforms that require hydrocarbons to maintain its ability to fight and win in a climate changed world.

Through tools such as the Defence Climate Risk Analysis Model and a sectoral approach to emissions, the MOD has built an indicative view of how UK national level policies could affect Defence. This work is being further matured across the Department to understand the actual risk to Defence outputs, the technology that can be employed to mitigate and decarbonise and to build an approach that preserves both capability levels and interoperability with Allies and Partners. It is this work that has resulted in the publication of the Defence Net Zero Aviation Strategy in July 2023 and will inform the development of departmental decarbonisation plans.

In terms of internal target setting, through the delegated model, each organisation is responsible for its own objectives. This is guided by the central Departmental ambition, Defence Plan targets and initiatives. For example, the Chief of the Air Staff set the RAF the ambitious target to be Net Zero by 2040. This stretch target was designed to instil the urgency required to keep pace with accelerating aviation sector innovation and build momentum behind the change required. It has provided the drive for innovation, such as work to synthesize drop-in aviation fuel from direct air carbon capture. The Royal Navy is focussed on setting ambitious emissions reduction targets for the next 10 years and limiting impacts in the mid-term, noting that much of their capability has already been recapitalised. Longer term goals will evolve over time and will align as far as possible to commercial shipping. The Army approach aligns with the UK's Net Zero ambition. However, further work is required to fully establish operational emissions and potential for carbon sequestration to enable a holistic view on the Army's contribution to Net Zero.

14. ***Nor do the various organisations within Defence separately report their emissions publicly, so gauging progress towards their targets is not yet possible. Top-Level Budget holders and other significant enabling organisations should report their emissions separately starting with the 2023–24 Annual Report & Accounts, with emission reduction targets ideally set over 5-year periods to match the GGC plan.*** (Paragraph 89).

As part of the MOD's commitment to continually improve emissions reporting, it will assess whether Top Level Budget holder organisations and Enabling Organisations emissions should also be reported as part of the Department's Annual Reports and Accounts.

15. ***Given increasing scientific concerns around failing to hold to the 1.5° limit on warming and the need for Defence to transition from establishing a comprehensive baseline of carbon emissions in Epoch 1 to significantly reducing emissions in Epoch 2, having the climate change director also responsible for the Union and Levelling-Up in the Ministry of Defence may be too distracting for the important work that needs to be achieved at pace.*** (Paragraph 93).

And

16. ***The Ministry of Defence should appoint a dedicated climate change director who would be able to fully focus on coordinating carbon reductions across the whole of Defence, including holding separate commands and organisations to account for progress in reducing emissions against their individual goals and measuring and reporting that progress in a timely manner.*** (Paragraph 94).

The publication of the MOD's Climate Change and Strategic Approach in March 2021 started to build momentum for action and a narrative for change. The work of the then-Directorate of Climate Change and Sustainability, now the Levelling Up, Union, Climate Change and Sustainability Directorate (LUCCS), continues. This is supported, across the Department, by organisational sustainability champions, their specialist teams, a growing ambassador network, Defence's Green Network (over 1000 members strong) and the array of co- ordinated initiatives. The LUCCS Director oversees this portfolio, which flows from the Defence Command Paper Refresh, through the Defence Strategy, the Climate Change and Sustainability Strategic Approach and into clearly articulated climate and environment Departmental outcomes in the Defence Plan.

The LUCCS Directorate is responsible for the MOD's environmental operating model, including Environmental Protection, to ensure that it is complying with current regulations whilst ensuring that it is resilient to the impact of climate change. To support this, resources are focused on capability, policy and process and on coherence across the MOD's Climate Change and Sustainability activity. This is mirrored by a focused team looking at the Levelling Up and Union considerations across the Department. There is a link between the economic and social elements of Levelling Up and the Union and the environmental aspects of Climate Change and Sustainability. This puts all three pillars of sustainability together in the MOD for the first time.