National Audit Office

Report
by the Comptroller
and Auditor General

Ministry of Defence

Environmental Sustainability Overview

HC 318 SESSION 2019–2021 13 MAY 2020

Key facts

827,822 tonnes

the Ministry of Defence's (the Department's) greenhouse gas emissions in 2018-19 as reported for the Greening Government Commitments (GGCs) (carbon dioxide equivalent)

50%

the Department's share of central government's GGC reported greenhouse gas emissions in 2017-18 (carbon dioxide equivalent)

42%

reduction in the Department's GGC reported greenhouse gas emissions since 2009-10 (carbon dioxide equivalent)

1.8 million tonnes	Departmental greenhouse gas emissions linked to defence operations in 2018-19 and excluded from GGC reporting (carbon dioxide equivalent)
9%	reduction in the Department's non-GGC greenhouse gas emissions since 2015-16 (GGC emissions reduced by 26% in the same period) (carbon dioxide equivalent)
Not known	future greenhouse gas emissions the Department has committed to in its current 10-year plan for equipment procurement and support
169	Sites of Special Scientific Interest (SSSIs) on Departmental land (3.5% of Great Britain total)
48%	Departmental SSSIs in 'favourable' condition when last assessed, against the English average of 39%
1,700	number of ultra-low-emission vehicles (ULEVs), such as electric vehicles, the Department needs to be using by December 2022 to meet government targets
12	number of ULEVs the Department currently leases, of which 10 are electric

Summary

1 Responding to a request by the Environmental Audit Committee (EAC), this report gives an overview of the approach taken by the Ministry of Defence (the Department) to environmental sustainability. This is the sixth in a series of sustainability overviews we have produced for the EAC, each of which examines how different parts of government fulfil their sustainability remit.

2 Responsibility for environmental protection and sustainability is spread across the Department's Head Office, agencies and the front-line military Commands, as set out in **Figure 1** overleaf. The size and range of the Department's activities make it vital to government's ability to meet its environmental targets, particularly the Greening Government Commitments (GGCs) to reduce departments' impact between 2016 and 2020. The GGCs cover emissions, waste reduction, water use and 'green' procurement of goods and services. In 2017-18, the Department was responsible for half of the greenhouse gas emissions reported by central government. It also has significant sustainability impacts outside the scope of the GGCs. For example, emissions associated with operating and supporting armed forces' equipment are around twice as high as those reported through the GGCs. Also, over one-third of the Department's estate is made up of Sites of Special Scientific Interest (SSSIs), covering a larger area than those of any other government body.

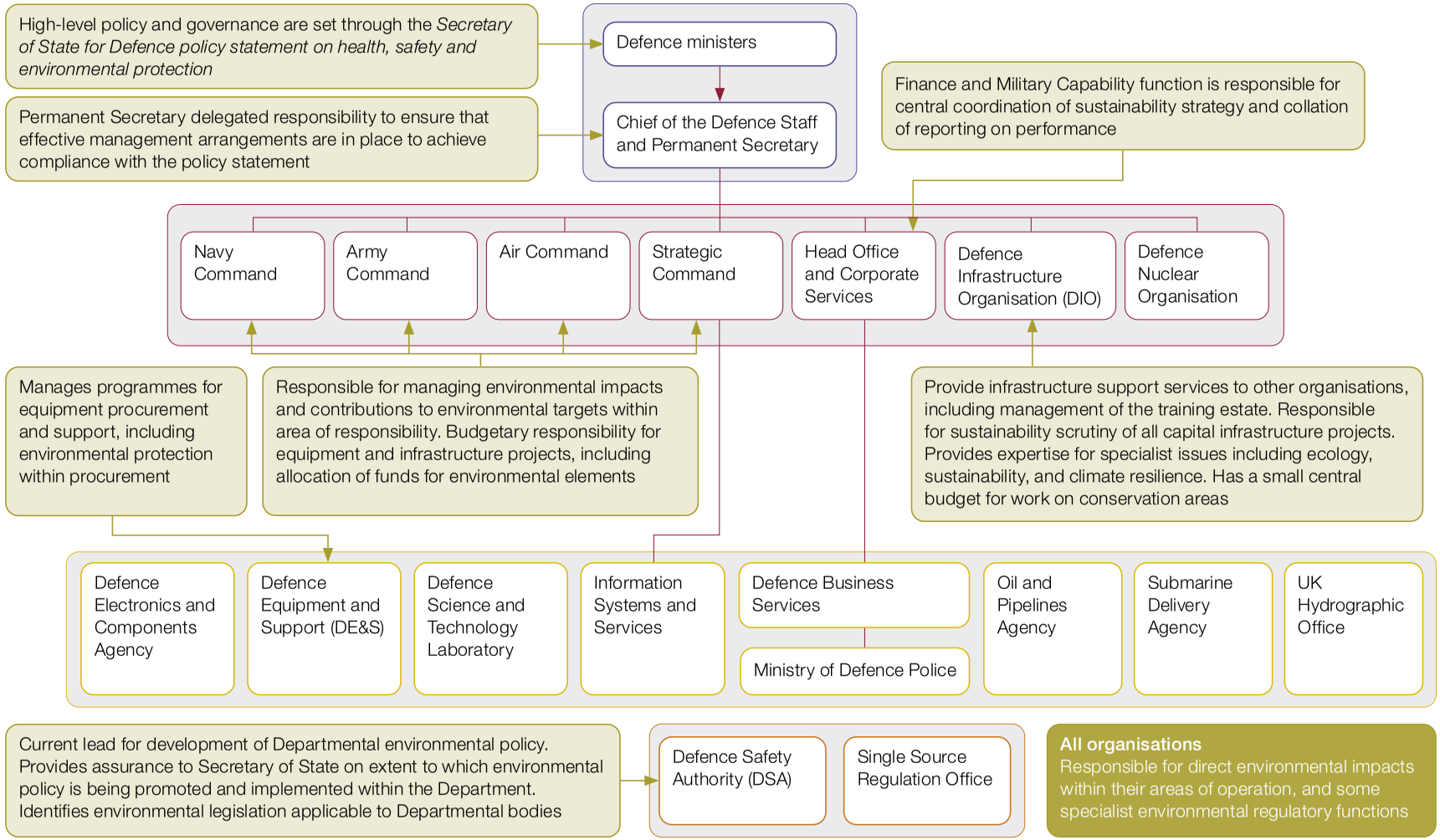
3 It is the standard approach of our overviews to cover areas of activity common to all government departments that impact on sustainability (see Appendix One for more detail). They also take account of the individual circumstances of each department. Accordingly, this overview looks at:

- the significance of the Department for the ability of government to meet its sustainability targets and obligations (Part One);
- sustainability in estates and infrastructure, and the role of the Defence Infrastructure Organisation (DIO) (Part Two);
- the role of sustainability in procurement and the supply chain, and the role of Defence Equipment and Support (DE&S) (Part Three); and
- governance of sustainability within the Department, including the roles of the Department's Head Office, the Defence Safety Authority (DSA) and the front-line Commands (Part Four).

Figure 1

UK defence organisations' responsibilities for sustainability and environmental protection

Responsibility for managing sustainability and environmental impacts is spread across the Ministry of Defence



Source: National Audit Office, *Ministry of Defence Departmental Overview 2019*, and analysis of Ministry of Defence information

Key findings

Performance against the Greening Government Commitments

4 **The Department has already achieved its GGC target to reduce greenhouse gas emissions by 39.9% from 2010 levels, but faces challenges achieving other GGC targets.** It is in a good position to meet the central targets for waste reduction and reducing waste to landfill. However, based on 2018-19 data, it faces significant challenges in meeting targets on waste recycling, paper use and domestic flights. For example, it has reduced paper use by one-third since 2009-10, but the target is to reduce this by one-half. The central target for water use is unquantified and, although a reduction will be achieved, the Department expects to fall short of its own internal target for reducing water consumption (paragraphs 2.4 and 2.5, and Figure 8).

5 **As the Department is responsible for half of all government GGC emissions, its 41% share of reductions achieved by government so far leaves scope for it to contribute more.** The Department's energy mix is one-third grid electricity and two-thirds gas or oil. In the past 10 years the Department has made little progress in increasing the proportion of its energy drawn from renewable sources. If it did so, the Department could have a significant impact on the emissions figures for the whole of government. Planned reductions in the size of the defence estate will also be significant in reducing the level of Departmental emissions (paragraphs 1.3 and 2.5, and Figure 4).

6 **A significant portion of the Department's energy usage is outside the scope of the GGC targets, and these emissions are reducing at a slower rate.** Military activities, such as the operation of defence equipment (including for land vehicles, aircraft and navy vessels) by the armed forces, are out of scope for the GGCs, yet have a significant impact on the environment. Greenhouse gas emissions from these activities are double those reported through the GGCs, yet they are reducing at a slower rate and are not subject to formal targets. The Department plans to take the opportunity of its upcoming Integrated Security, Defence and Foreign Policy Review (Integrated Review) to develop wider targets to support government's legislative commitment to net zero greenhouse gas emissions by 2050 (paragraphs 1.4 to 1.6).

Stewardship of nationally important Sites of Special Scientific Interest

7 **Natural England has assessed 48% of the Department's English SSSIs as being in favourable condition, but more than half have not been assessed since at least 2011.** The Department has a budget of around £1 million a year for maintenance and improvement work on its 169 SSSIs. The proportion of sites in 'favourable' condition, compares well to the English average of 39%, but the assessments are increasingly out of date due to reductions in Natural England's inspection regime. The Department told us it lacks the resources to do its own assessments. As a result, it is unclear whether the assessments are still accurate. There is no monitoring by Head Office of whether good practice in site management is applied consistently across the estate (paragraphs 2.9 to 2.16).

Integrating sustainability into infrastructure projects

8 The Department has developed its own methodology for assessing the environmental impact of infrastructure. New-build and refurbishment projects are required to consider potential environmental impacts. The Department assesses infrastructure projects against its bespoke Defence Related Environmental Assessment Methodology (DREAM), which it sees as equivalent to the BREEAM approach used widely elsewhere, including by other government departments. In 2018-19, 96% of construction projects met the Department's target environmental rating ('excellent' for new-builds and 'very good' for refurbishments) (paragraph 2.8).

9 In practice, the Department has made limited progress in improving the energy efficiency of its buildings. Notwithstanding the high DREAM ratings, there is considerable scope for the Department to do more to improve the environmental performance of construction and refurbishment. Since 2016-17 only 38% of the Department's new-builds and major refurbishment projects have had low- or zero-carbon technologies included in the design. The Department is in the early stages of several infrastructure initiatives which seek to address the energy efficiency of the estate, although it is too early to judge the effectiveness, scalability and cost savings of these initiatives (paragraphs 2.7 and 2.8).

Integrating sustainability into procurement

10 The Department's sustainability guidance for delivery teams goes beyond that seen in other departments. The Department's sustainable procurement policy, and supporting guidance, requires staff to consider sustainability from the start of the procurement process, looking across the whole life of what is being procured. This is more than we have seen in other departments. Where defence procurements are exempt from environmental procurement standards, the Department's policy is to "maintain Departmental arrangements that are, so far as reasonably practicable, at least as good as those required by UK legislation". DE&S, which delivers equipment on behalf of the Department, also has a mandatory process for managing the environmental impacts of equipment projects (paragraphs 3.2 to 3.7, and 4.3).

11 The Department does not bring together its environmental impact assessments for individual equipment procurements to present an overall Departmental position. Each project or programme is required to produce an assessment of environmental risks. We have seen that this requirement is acted upon by project teams, resulting in the identification of a wide range of risks and associated mitigations across the lifecycle of the procured equipment. The assessments produced are bespoke and generally unquantified, which makes it difficult to combine them into a cumulative understanding of future impacts, and the Department has not done so (paragraphs 3.7 and 3.8).

12 The Department is not monitoring compliance with mandatory government sustainable procurement buying standards or its own environmental procurement framework. Departments are no longer required to report compliance with government's sustainable procurement buying standards. Consequently, the Department no longer monitors its own compliance with them beyond the construction standards referred to in paragraph 8, so does not know if it is compliant. When it last reported its performance – in 2016-17 – it achieved 100% compliance in four standards and more than 80% compliance in a fifth. It has not carried out an audit of compliance against its environmental procurement frameworks since 2017, when the approach was refreshed, and an expected audit at the end of 2019 has been delayed, with completion due by the end of June 2020 (paragraphs 3.6, 3.11 and 3.12).

Policy and governance

13 The Department has traditionally seen environmental sustainability as a subset of health and safety risks and hazards, making it a 'Cinderella issue'. We have not seen any other department link health, safety and environmental governance so closely. There are legitimate reasons for doing so in defence because the Department has unique and critical responsibilities for managing serious risks of hazard and damage. The Department's approach to the environment has focused only on the avoidance of incidents, rather than on the positive contribution it can make to government's wider environmental goals. A 2018 Departmental review of governance and resourcing in health, safety and environmental protection observed that environmental protection "is often treated as a 'Cinderella' subject" compared to safety (paragraphs 4.7 and 4.9).

14 The Department has started to reflect its environmental ambitions in policy documents, and to establish new ownership and accountability arrangements. The most recent Strategic Defence and Security Review – in 2015 – did not make any commitments relating to the role of environmental sustainability in security or defence. However, the 2019 Defence Plan, which takes direction from these policy documents, does detail the Department's environmental policies, plans and targets. It identifies safety and the environment as priorities and sets out targets and responsibilities associated with United Nations Sustainable Development Goals and the GGCs. These governance arrangements are more comprehensive than those seen in our previous work with other government departments. The Defence Plan does not, however, contain any specific activities, policy milestones or delivery dates to promote biodiversity and sustainable construction (paragraphs 4.2 to 4.4).

15 The government's net zero emissions target will present a significant challenge for defence and will be considered as part of the Integrated Review. Government has legislated to set a target for the UK to have net zero greenhouse gas emissions by 2050. It has not yet decided whether the Department will be required to meet the net zero target, or whether residual emissions will be offset elsewhere. Either will require the Department to make major changes to its equipment and estate. Almost all vehicles and weapons in use, or under procurement, rely on fossil fuels, and some of the largest are expected to still be in operation in 2050. There are considerable opportunities to use Departmental land for initiatives such as the installation of renewable technology, notwithstanding its existing plan to reduce its built estate by 30% by 2040. The Department plans to examine the issue of how to maintain military capability while delivering net zero emissions in the government's ongoing Integrated Review (paragraphs 1.8, 1.9, 2.5 and 4.6).

16 The Department has identified that its oversight arrangements for environmental matters have not been functioning well. The Sustainable MoD and Energy Steering Group, which is intended to support the Department's sustainability champions, has not met since July 2018. In October 2018 DSA reported that it is "not currently able to provide adequate assurance" of environmental policy and regulation to the Secretary of State. In December 2018, a Departmental review of Head Office governance and resourcing in health, safety and environmental protection found that "the Department remains worryingly unsighted on its overall performance in respect of health and safety and environmental responsibilities", with ownership of environmental protection policy split between DSA and Head Office. The Finance and Military Capability function within Head Office has a central role in coordinating implementation across the Department, but no single body directs all activity. The Department has responded to these issues by establishing a new senior committee to lead on health, safety and environmental protection (paragraphs 4.5 to 4.9).

Conclusion

17 The Department is critical to the government's sustainability objectives, due to its size, supply chain, and the amount of land it controls. It has achieved some of the targets set for it through the Greening Government Commitments, including on greenhouse gas emissions, but has made less progress in other important areas. Environmental data in some areas is incomplete or historical. The Department has put in place guidance and methodologies to deliver against its environmental objectives, some of which goes beyond that which we have seen in other departments. However, it lacks the central oversight to gain assurance over whether the activity that is taking place is sufficient to deliver the desired outcomes, or to spread examples of the good environmental practice that we observed during our work. Activities at the local level have been subject to the dictates of a broader health and safety agenda, rather than being seen as a priority in their own right. It is encouraging that the Department is now carrying out a review of its response to the government's net zero emissions commitment, under senior leadership.

18 In **Figure 2** we set out the opportunities that the Department has available to make a major contribution to environmental sustainability, and the risks of not taking those opportunities.

Figure 2
Examples of environmental risks and opportunities found in the Ministry of Defence's work

Our audit has identified a variety of risks and opportunities the Ministry of Defence (the Department) must manage. It is addressing some, including by initiating discussions with other departments

Area	Risks	Opportunities
Performance against government targets	Using a narrow focus on Greening Government Commitment targets means the full impact of the Department's environmental impacts are not captured in performance measurement (paragraph 6).	The scale of its land holdings means the Department has the potential to contribute widely to the government's 25-Year Environment Plan goals (paragraph 1.7). The size and scale of its activities mean improving the Department's environmental sustainability could have an impact unparalleled in government – particularly in reducing greenhouse gas emissions (paragraph 5).
Stewardship of nationally important Sites of Special Scientific Interest	Lack of systematic monitoring of Sites of Special Scientific Interest, in the absence of Natural England's monitoring, risks deterioration in site condition (paragraph 1.7).	Highlight good practice to other major landowners and lead by example on conservation issues in government (paragraphs 2.13 and 4.15). Good site stewardship contributes to meeting the government's 25-Year Environment Plan (paragraph 1.7).
Sustainability in infrastructure projects	Budget constraints prevent necessary improvements to the defence estate (paragraph 2.6). The Department is not doing enough to build sustainability into its estate (paragraphs 9 and 14).	Invest to improve the defence estate's energy efficiency by embedding low-carbon and other sustainable technologies and make sites more climate-resilient (paragraph 9). Secure future savings on utilities (paragraph 2.5).
Sustainable procurement	The long working life of defence equipment ties the Department to the equipment's associated greenhouse gas emissions for decades, making it difficult to meet net zero emissions targets (paragraph 3.8). It is unclear whether the Department complies with sustainable procurement standards across the board (paragraph 12).	Influence the defence supply chain to move towards more sustainable defence technology (paragraphs 1.9 and 3.10). Reduce both costs and environmental damage through fuel-efficient design of military equipment (paragraphs 3.5 to 3.9).
Policy and governance	Lack of focus on environmental sustainability at senior levels (paragraphs 14, 16 and 4.7 to 4.10). Disproportionate focus on compliance detracts from other positive contributions to environmental sustainability (paragraph 13).	Ensuring compliance with environmental protection legislation maintains the military's licence to operate in the UK and overseas (paragraph 4.12). A commitment to sustainability could increase the attractiveness of the Department as an employer (paragraph 4.15).

Note

1 The 25-Year Environment Plan goals are set out in *A Green Future: Our 25 Year Plan to Improve the Environment* (2018).

Source: National Audit Office summary of our analysis contained in this report (*Ministry of Defence Environmental Sustainability Overview*)