



Ministry
of Defence

Ministry of Defence Climate Change and Sustainability Strategic Approach



Contents

Foreword - a call to action	4
Why climate change is relevant to Defence	6
From where we are now to where we must get to	8
Defence's strategic ambition 2050	10
Guiding principles to meet our 2050 strategic ambition	11
Adaptation and resilience	12
Sustainability and net zero	15
Global leadership	17
The route to achieving our ambition: an epoch by epoch approach	20
Initial action plan	21

Ministry of Defence Climate Change and Sustainability
Strategy publication:

Photo credit
All photography sourced from:
<https://www.defenceimagery.mod.uk/totoweb/>

Version 1
Creative Media Design ADR009788

'If you don't deal with it today, you will not be able to deal with it tomorrow'

Lt Gen. Richard Nugee CB CVO CBE

Foreword - a call to action

2021 is an important year for Defence. In the Integrated Review, the most comprehensive since the end of the Cold War, the Government has set out the threats and challenges we face into the future. The Defence Command Paper describes how we will address these threats and rise to the challenges. Our forces will continue to protect us, to deter and where necessary defeat those threats.

But there is a clear and present danger that afflicts all of us, every region of the world, every part of society. That is the threat posed by climate change. In Defence we appreciate its impact and how we must all work together to address it.

Climate change will affect the way we protect, operate and fight - from the warming of our oceans through to the increased requirement for humanitarian and disaster relief. We know the way we conduct Defence and the tasks we are called on to carry out will be forced to change as we adapt to new environmental conditions.

Alongside recognising the reality of change, we are determined to play our full part in helping the government address climate change head on and achieve our legal commitment of net zero by 2050.

Inevitably, the very scale of what Defence is called upon to do, makes us a carbon emitter. However, we recognise both the necessity and opportunity to build on our existing successes in cutting carbon and mitigating Defence's impact on the environment.

So I welcome the report on climate change by Lt Gen. Richard Nugee. We will be seizing on the ideas it has generated to renew our focus and redouble our efforts to address climate change and set out in due course our further actions to reduce our carbon emissions, encourage biodiversity and do our utmost to protect our environment just as Defence, protects our people. We embrace the opportunity that a more sustainable approach can bring. This document represents our initial response to the challenges set, and our strategic approach. More will follow as we further develop our multi-faceted response to climate change.



Jeremy Quin - Minister for Defence Procurement

The character of warfare is changing fast; so is the climate. Both issues are changing the way our military fight, live and train in unfamiliar ways. Linking these issues together, they both demand that we adapt to the new circumstances that we face and take transformative action now. We need to change mindsets, and the way we operate in peace, in war and in persistent competition.

Now firmly a Defence problem, climate change is a significant challenge. Without adequate assessment of its effects, we leave ourselves exposed. We cannot let our capabilities become less effective against vulnerabilities we cannot see clearly. We have to afford to keep up with the pace of change.

The threats of our modern world, made worse by rising seas, extreme weather and creeping desertification, will almost certainly lead to more conflict. More conflict in itself will damage the planet (those involved in conflict will not be able to focus on the climate, and instead will be creating more emissions whilst in conflict), therefore making it far less likely that we will reach any of the climate change Paris goals.

As the Chief of Defence Staff has already highlighted, the Integrated Operating Concept will likely look at solutions markedly less dependent on fossil fuels. Reducing our dependency on fossil fuels wherever possible will prove both the right thing to do and the necessary thing to do, to contribute to the Government's legal obligation to net zero by 2050, and to take advantage of new and emerging energy technologies.

The commercial and civilian sector is leading the push for cleaner and more efficient technology, innovating in a way that changes the assumptions for developing military capabilities. Harnessing the potential operational advantages through these novel technologies is no different to every other development over time that Defence has embraced, to retain competitive advantage and be the most capable force possible.

Defence is on the threshold of innovation and modernisation through the Integrated Review. The climate change and sustainability strategic approach is about embracing essential elements of this modernisation which Defence cannot afford to ignore. The imperative could not be clearer: Defence must and will act now.



Lt Gen. Richard Nugee - Climate Change and Sustainability Review Lead in Defence

Why climate change is relevant to Defence

An international priority and global challenge

In 2021 and beyond, the UK Government will make tackling climate change and biodiversity loss its number one international priority. Through the Integrated Review, the UK is building on a record as a climate and sustainability leader, and we will soon host UN COP26. We were the first major economy to pass laws to achieve net zero emissions by 2050. We are committed to delivering the world's most ambitious environmental programme. And as one of five UN security council permanent members, we have an emphasised role and responsibility in meeting (and supporting others to meet) the UN Sustainable Development Goals.

The UK's commitment requires Defence's full involvement, and, in Defence, we are committed to playing our part. Defence can and will take a lead in response to the emerging geopolitical and conflict-related threats exacerbated by climate change. We will adapt our own military and work with others, too.

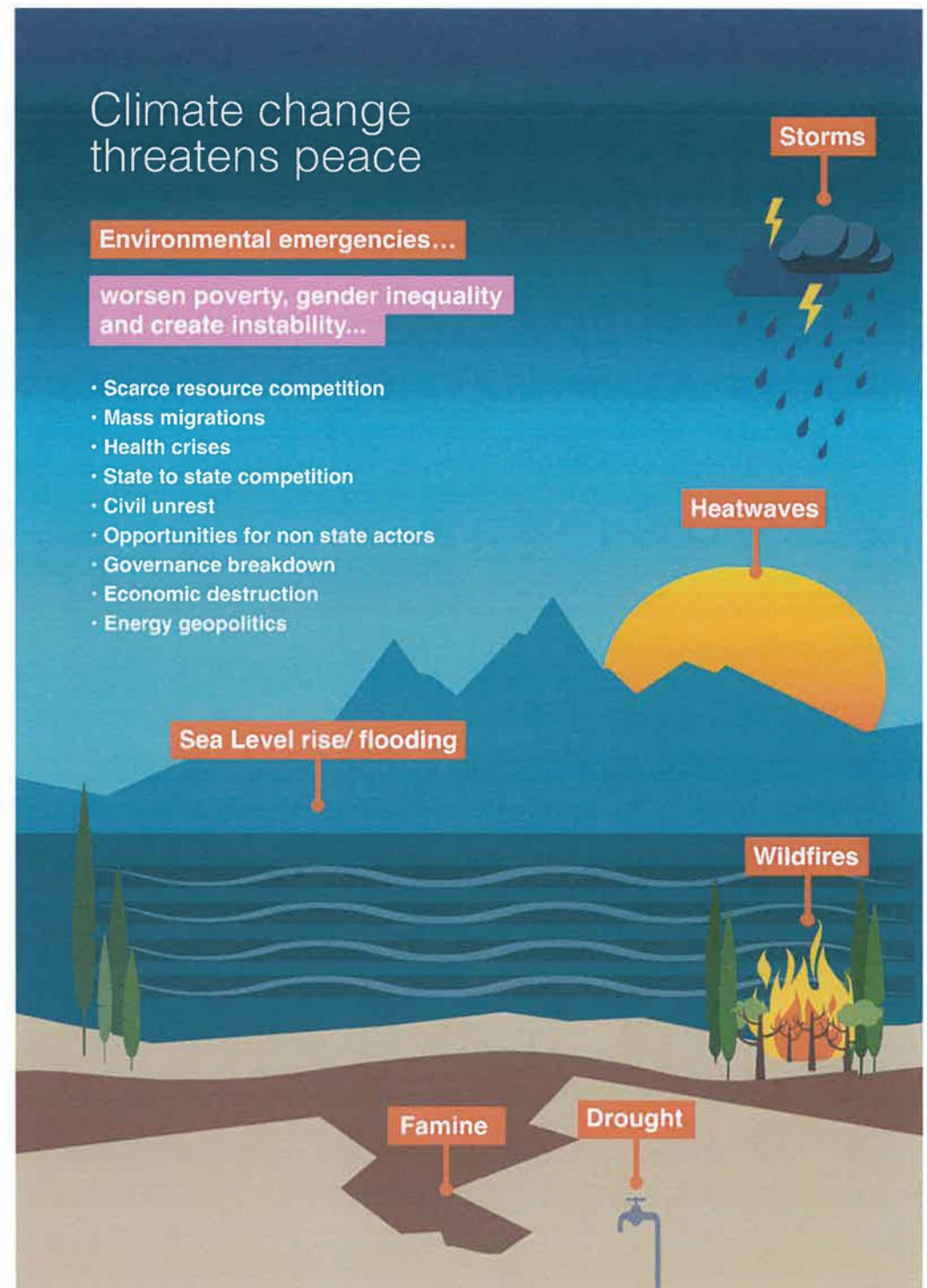
Future environments require our armed forces to anticipate change

Extreme temperatures, increased flooding, new and unfamiliar reasons for conflict: the way climate change could eventually change our world is complex and hard to predict. The severest effects are only just beginning to show.

Armed forces the world over will face this challenge and will need to build resilience. A defence properly organised for climate change is one that will be better able to defend its citizens.

Defence: not just adapting but addressing climate change

Defence accounts for 50% of the UK central Government's emissions. As we look forwards we will have to move away from how it uses energy today to products, practices and behaviours that are more climate aware, environmentally sound and reduce emissions. This means embracing the green energy transition while being ready for the geopolitical shifts it might herald. Defence will be stronger if it keeps up with new, adaptable and efficient options. We are already at the forefront of the new and growing green military agenda, trialling new types of vehicles, fuels standards, energy storage and much more. Done right, this will improve how we meet the defence and security challenges of the future.



From where we are now...

Sustainability has been embedded into what Defence does for a long time. And it will continue to be the bedrock of Defence's growing activity relating to climate change. With a thriving Defence Green Network of almost 1,000 members and expertise spanning sustainable procurement to nature conservation, this is not a standing start. Take our rural estate, for example. Defence is the largest owner of Sites of Special Scientific Interest (SSSI) in England; slightly larger than even the National Trust or the Forestry Commission. Defence on average outperforms other single major landowners in the maintenance conditions of its SSSIs. Defence has also outperformed its emissions reduction targets mandated through the Greening Government Commitments (GGCs). The 2016-20 GGC reporting cycle also saw recycling increase by 56%, and overall waste reductions of 38%. Meanwhile, Defence is often called on for disaster response. From the Caribbean to Calderdale, Defence is experienced in answering the call as a first responder to natural threats and emergencies. Examples of our work include:



Responding to hurricanes and extreme weather

In September 2019, Hurricane Dorian brought devastation to the Caribbean. Three Royal Navy ships supported the response effort. Defence's role included sending a specialist team of military medics, refuelling US coast guard helicopters on-deck and delivering food, water and clothing to thousands displaced. A Royal Navy support ship, RFA Mounts Bay, is now tasked every year to be in the region in case of disasters. Climate change means that the severity and frequency of extreme weather events has increased.



Using algae, alcohol and household waste to power aircraft

Revised aviation fuel standards published in November 2020 enable up to 50% 'drop ins' from sustainable fuel sources for all military aircraft: from F-35 fighter jets to Wildcat helicopters. Aviation is currently two-thirds of Defence's fuel consumption, so any reduction could prove significant in reducing our emissions footprint. This will not only help Defence sustainability efforts. Here in the UK, the commercial and civil airlines follow Defence standards. Several other countries follow UK expert guidance in their aviation sectors, too.



Enhancing biodiversity across our rural landscapes

At Westdown Camp on Salisbury Plain, Defence worked with training estate contractor Landmarc on a 'no-mow' trial for summer months. The environmentally-conscious approach encouraged wild herbs, flowers and shrubs to grow as part of an effort to increase pollinating insect populations. Bees flourished in this more pollinator-friendly approach to land management. Work is now underway to roll the initiative out across the Defence estate.

... to where we must get to

But...demands are increasing and performance is mixed.

The UK public and the global conversation on climate change continues to grow. In the UK, growing public attention is matched by increasing targets and standards for sustainability and emissions reduction. The next round of GGCs promises to stretch all departments to meet their responsibility. Defence's contribution to GGCs and net zero requires a comprehensive target-led approach across all of our organisations, especially to reduce our emissions. We must build up the data and options further, towards a costed pathway for implementation. Defence will be an active partner in meeting UK ambitions and targets.

To date, Defence has seen sustainability as primarily an issue for its buildings and land. But we in Defence do more than just reside in a changing environment. We partner, fight and do business in that changing environment too. The value of widening out adaptation and sustainability will be to broaden the benefits that could result. In widening and embedding adaptation, we will consistently build the future realities of climate change into departmental planning and ensure that we are properly informed and prepared. In widening and embedding sustainability, we will look at our impact on the environment in a whole different way.

This will reveal opportunities for building greater resilience and creating new types of partnership. For example, the momentum of the Government's Ten Point Plan for a Green Industrial Revolution promises real opportunity for many businesses on which we rely. Defence must be agile to market changes and encourage development of low or zero carbon solutions where such opportunities could be feasible and practical. We must ensure that our equipment can be modified for upgrade as new energy options become viable and cost-effective.

A strategic approach; a foundation stone for the journey

Our strategic approach sets out the ambition, the principles and the methods needed to meet the challenge. It seeks to inspire all those in and connected to Defence, through three interlocking ambitions. These ambitions are set around adaptation and resilience, sustainability and net zero, and global leadership. They should guide our way to peace, prosperity and operational effectiveness despite climate change, while reducing our role in contributing to the problem. The strategic approach shows which areas we need to act on and where we will seize the opportunity as we respond to this challenge.

Near-term actions are set out on pages 21-26. Ambitions backed by near-term action represent the foundation stone needed for our journey. We will build on this to ensure Defence remains fit for purpose through a changing climate and through the evolving requirements that will bring.

The UK will be stronger with a climate-prepared Defence.

Defence's strategic ambition 2050



Defence has **adapted** to be able to fight and win in ever more hostile and unforgiving physical environments.



Defence has **reduced its emissions and increased its sustainability** activity and as a department is contributing to the achievement of the UK legal commitment to reach net zero emissions by 2050.



Defence **acts and is recognised as a global leader** in response to the emerging geopolitical and conflict-related threats that are exacerbated by climate change;



Guiding principles to meet our 2050 strategic ambition



Policy and society

Defence must be fully involved in shaping and implementing wider government policy. As a cross-section of the UK, it is important that Defence reflects and aligns with society, the economy and wider government.



Operational capability

Defence must preserve capabilities despite the implications of climate change. Defence will take opportunities to enhance capabilities and resilience with new options while never compromising capability solely for a sustainable solution.



Climate lens

Defence's policies and decisions will need to consistently take account of their effect on Defence's sustainability.



Leadership

The response to climate change and sustainability in Defence must be led from the top and applied across all areas and at all levels.



Constant adaptation

Defence should be continually adapting and learning with new data and knowledge as it matures or emerges. This will be an incremental process, with Defence open to interim solutions and to developments from outside, such as embracing the 'fast follower' concept in technologies.



Partnership

Defence should actively encourage cross-sector collaboration with other government departments, industry, academia and international partners; it should be alert to new types of collaboration that are needed to meet the ambition.

(A 'fast follower' approach required faster adoption of new sustainable technologies and a close relationship with industry to ensure that developments can be adopted for Defence needs. This should involve a few-way exchange where there is the possibility of influencing sensitive intervention points, during development, and Defence can affect the 'settled' technology.



Adaptation and resilience

Achieving our purpose as Defence, relies on operational capability being effective and resilient, now and in the future. Defence will miss important decisions if we do not integrate clear assumptions about a climate changed world. Some of these opportunities also promise significant benefits in reducing Defence's emissions footprint.

The ways we will achieve our ambition are...

Disaster response and support to civilian authorities

As seen during Covid 19, Defence is willing and able to act quickly and effectively at times of national stress. Similarly, the need for Humanitarian Assistance and Disaster Relief operations will become increasingly common. Disasters at home and abroad are likely to grow in intensity and frequency. Defence will face new challenges and will need to collaborate with new types of partners to deal with them.



A Defence climate lens

Equipment and force design will be readied for a climate-changed world of between +2° and 4°C, as recommended by the Committee on Climate Change. To achieve this change, Defence will devise and implement a 'climate lens' into force development processes which uses reasonable, evidence-informed assumptions. Robust Defence climate assumptions would help all those involved in strategic and capability decisions to consider the right questions.

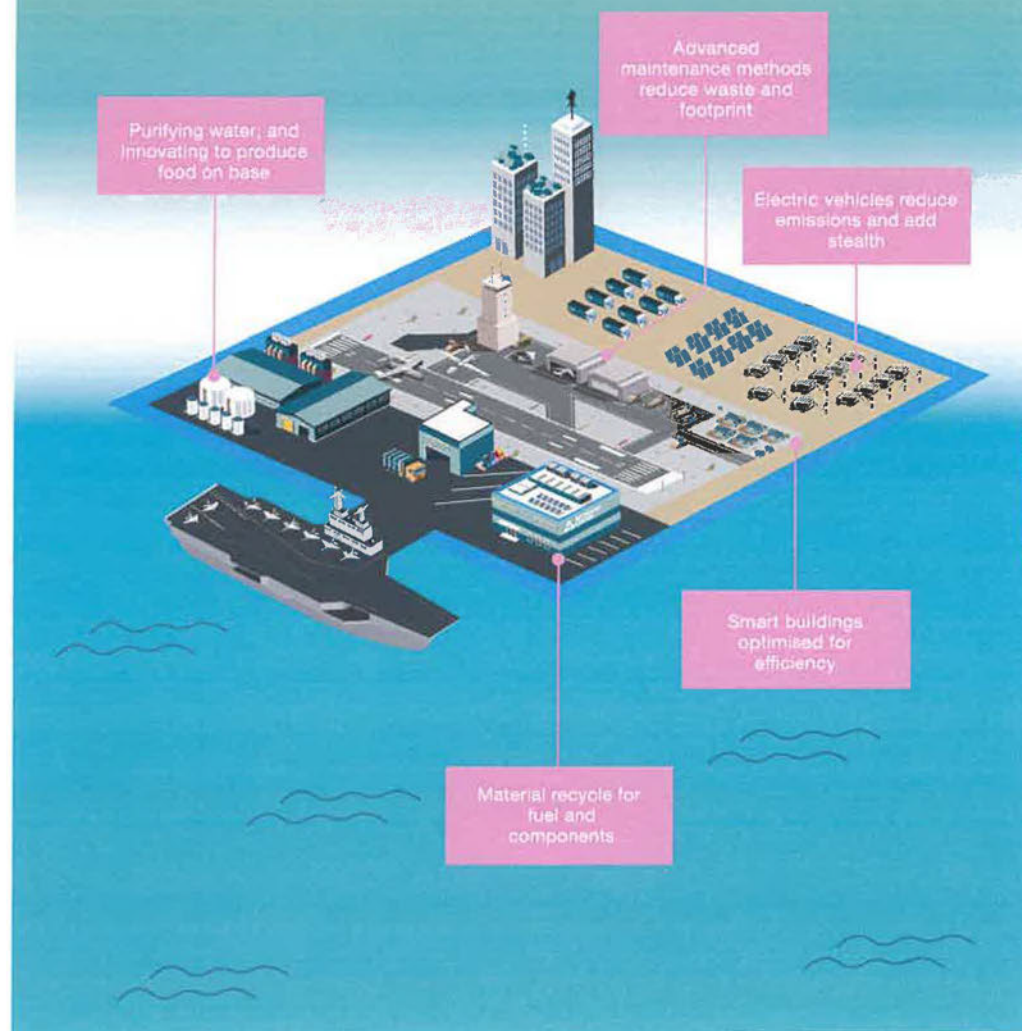


Green transition

Defence will act as a partner in the UK's green industrial transition. Using a fast follower approach and by spurring innovation, Defence will seek to use the green transition to add to capabilities. New energy systems could offer the operational edge against adversaries or take military personnel out of harm's way.



Deployed military technologies should be fitted for the future



Fast follower

Defence could face significant costs if its designs do not allow for moving away from current power options. It will be expensive to transform existing fleets of vehicles outside of their current refurbishment or upgrade plans. Defence will be a fast follower of new developments in the commercial sector, making sure it can embrace and install new technologies as early as is practicable.



Innovation, Research and Development

Intelligent engagement with the science and technology community, especially outside the traditional defence and security sectors, will enable us to shape the way in which discoveries are exploited, to meet Defence priorities, and support our fast follower approach. Innovation and experimentation support from Defence can drive the pace of the exploitation of civilian discoveries and find ways to apply them in military settings. We will review how sustainability is prioritised across our innovation activity, and how we can align this vision with the needs of our stakeholders in future innovation competitions.



Operational self-sufficiency

Greater self-sufficiency on operational deployments would mean that our camps and bases enhance their resilience and reduce their reliance on local communities who may already be facing severe resource pressures. Reducing resupply and maintenance missions takes personnel out of harm's way. And if supply chains and communications are ruptured and weather conditions harsher, then greater self-sufficiency could prove necessary to maintain our operational freedom.



Armed Forces training and medical adaptation

Military training could face greater disruption through changing environments and weather conditions. Defence must ensure that training continues, regardless. Synthetic training offers significant advantages and resilience. Simulation technologies, for example, constantly improve, even for land and maritime. Medical planning also needs to adapt as Defence grows its understanding of the different psychological, disease and injury risks faced.



Sustainability and net zero

Improving sustainability and contributing to net zero requires change in processes and attitudes led from the top.

The ways we will achieve our ambition are...

Behaviour and systemic change

Tackling the consequences of climate change and sustainability offers an opportunity to engage all Defence people in a common cause. We will mobilise the whole Defence community, including serving personnel, civilian staff, and colleagues in industry towards more sustainable behaviours. Sustainability will be an intrinsic part of Defence culture and formal systems.



Net zero build standards

Future construction will be as sustainable as possible, with consideration given to achieving net zero across the lifecycle of new buildings. These modern buildings will also provide the additional benefits of reduced running costs by being more energy efficient as well as an improved working and living environment.



Carbon targets across Defence organisations

Defence will need to set emissions reduction targets and undertake an internal consultation on delegating targets and increasingly sophisticated tracking of them. With a comprehensive understanding of its footprint and good engagement and involvement of others, Defence could set a pragmatic pathway for significantly reduced emissions.



Whole-life costing

Whole-life costing means looking beyond the upfront investment. It means analysing the lifespan of new assets, such as new buildings, so that ongoing operational costs, the eventual cost of disposal and the cost of carbon are included in the assessment. This method is crucial to improving projections of Defence emissions, informing better investment decisions.



Sequestration

Trees, soils, water and wetland peat and bog areas have great potential to capture or offset carbon. Through changing elements of its land management practices, Defence could take carbon out of the environment while improving biodiversity and environmental resilience to climate change.



Cohering natural and wildlife interventions

Defence is looking to better understand its natural capital so that it can optimise the opportunity for wildlife, conservation and agriculture. The military functions of Defence land are dependent on effective vegetation control and healthy environments. Planning needs to be carried out in a coherent way, cognisant of environmental change and opportunity.



Circular economy principles built into Defence

Using circular economy methods means materials are reused, recycled and regenerated. As a design principle, the methods look to minimise wastefulness and fully consider disposal and environmental impact. The circular economy seeks to increase the utility and lifespan of materials, conscious of where they come from and where they are going. Defence will embrace the circular economy, driving it through our supply chain, the way we partner with others, behave and work.



Global leadership

The consequences of climate change will be profound for global security. Defence will play a leading role in supporting wider UK objectives for climate change, protecting UK prosperity and engaging with others. We hope this will also drive forward the broader sustainability efforts in others.

The ways we will achieve our ambition are...

Allies and partners

The UK will aim to set a pragmatic but stretching bar for allies' and partners' ambition, supporting all to be involved and play their part. We believe that now is the time to make sure that the impacts of climate change are centred in the allies' and partners' plans. The NATO Agenda on Climate Change and Security is a welcome building block for further progress.



The UN and International forums

Defence will act in tandem with our partners in the rest of government. Defence's role will be to support wider UK objectives by leading the debate in militaries about climate change and security, and by securing momentum. Militaries are continuing to grow and expand their recognition of climatic threats and the strategic opportunities to be found through greater sustainability. The UK-hosted UN COP26 offers the opportunity to achieve a coalition of the willing for a global declaration.



Horizon-scanning

We will build on our understanding of how climate change, security and other threats coalesce, in partnership with academia and technology partners. A climate threat horizon-scanning capability would reveal potential risks and prompt questions for decision makers. Once this capability is developed, it should be used as an asset internationally for building capacity in others and for supporting Defence engagement through UK expertise.



Our leadership could improve climate security and protect our citizens



Global resilience

Understanding climate change better could help to show where early action and resilience should be built to prevent greater disaster, wider conflict, or political breakdown. Defence will be postured for international engagement. We will consider new mechanisms for building resilience related to climate threats. Strategic alignment will be sought, matching the type of presence with the needs of partners and the situation faced.



Leading by example

Climate leadership is only credible and possible through demonstrable and effective adaptation, resilience and mitigation activities. With expertise in these areas, Defence would find new ways to engage with partners. Through leading by example, we would build international coalitions for greener and more sustainable militaries, and ultimately multiply the impact of the UK's emissions reduction.



The route to achieving our ambition: an epoch by epoch approach

Defence must start to address the 2050 ambitions now in order to achieve success. An epoch by epoch approach is envisaged. Defence is embarking on its first epoch, kick-starting with the initial action plan on the next pages. We will constantly review and align principles, ambitions and actions. A new team is to be established immediately which will turn ambition and early-stage action into implementation. The epoch by epoch approach for the longer-term envisages:

Epoch one – setting the foundations - 2021-2025: Defence will deliver a step change in the projects that are already planned; initially, most of these will be opportunities on the estate. The first epoch will include working with suppliers to identify ways to reduce emissions in the supply chain through the equipment we use and contract conditions we set. We will create the skills base to be able to better apportion carbon targets and develop a fuller cross Departmental understanding of sustainability in the broadest sense. A comprehensive baseline and database will be built to allow decisions on a detailed plan for all themes in epochs two and three. Carbon targets as well as wider sustainability and GGC targets will run through the yearly Defence Plans. These will be disaggregated across Defence's organisations.

Epoch two - minimising and fitting for the future – 2026-2035: Building on the successes from epoch one, in the subsequent years Defence will look to reduce emissions significantly using existing and emerging technology, maximise opportunity to enhance the global response to the threat that climate change poses to current and future operational capability and build further resilience into the estate, supply chain and future equipment. Defence should be committing exploitation, development and innovation funding through the next Defence/Spending Review, to determine how to use emerging technologies for its benefit.

Epoch three - harnessing the future - 2036-2050: In the final 15 year period, Defence must be doing everything it can to harness novel technologies which further build resilience and further reduce emissions. We will deliver on any successor to the UN Sustainable Development Goals. Efficiency and operational effectiveness will depend on the innovation and foresight of previous epochs.

Initial action plan

Sustainable culture and behaviour



By 2025: A sustainable behaviour improvements programme has yielded provable cultural change, reduced emissions and provided enduring, growing benefits to the Defence environment. Incentives for people across Defence have changed, as has the understanding and action on climate change and sustainability.

This means in the first year, Defence will:

1. Analyse the way that climate change and sustainability affects roles now and in Defence's future workforce, understanding the career pathways, demand and opportunities to be mapped and professional frameworks adapted.
2. Grow awareness inside and outside of Defence with a communications plan on commitments and work on climate change and sustainability, inspiring understanding among our people, the wider public, industry and international partners.

Governance and head office



By 2025: A climate change and sustainability directorate coordinates and coheres the Defence approach, owning the carbon and sustainability targets process and policy. The other organisations of Defence are appropriately staffed to meet expectations.

This means in the first year, Defence will:

1. Establish an adequately resourced head office team whose activities are governed at the highest levels of Defence and who oversee delivery of this strategic approach and a future implementation plan.
2. Establish a sustainability non-executive director; ensure the topic is regularly addressed and given appropriate prominence within Defence.
3. Deliver a Defence wide consultation on future disaggregation of carbon targets based on robust data validation and an initial target setting exercise.
4. Revalidate Defence's emissions footprint and develop an emissions reduction trajectory and analytical framework for assessing decarbonisation options.

The built estate



By 2025: Defence has reduced its built estate emissions by at least 30% to meet the GGC target. It has a funded decarbonisation pathway for the built estate, reducing estate emissions and maximising sequestration opportunities over and above the greening of the grid.

This means in the first year, Defence will:

1. Focus on our top emitting establishments, prioritised according to emission intensity and relevant operational considerations.
2. Produce policy on standards for new builds raised to operational net zero with an associated uplift in financial settlement.
3. Cohere all Defence estate initiatives with clear prioritisation set, against Defence's emission reduction targets.

The rural estate



By 2025: The development and implementation of a natural capital register has laid the foundation for resource planning and new initiatives are funded to enable maximum carbon sequestration on the estate. This combines with a single point of data capture to collate biodiversity interventions and so facilitate effective communication within Defence and with its partners.

This means in the first year, Defence will:

1. Develop a natural capital register and modelling tools for the Defence estate.
2. Work with our tenant farmers to ensure maximum engagement with the new agri-environmental programmes across the estate.
3. Engage with local Nature Partnerships and Nature Recovery Partnerships to ensure Defence sites at all scales are making an appropriate contribution to biodiversity.
4. Develop and implement the Nurturing Nature Programme on establishments to support the pollinator strategy, develop small scale woodlands and habitats with community involvement and extend the 'no mow' initiative.
5. Develop a series of 'test and trial' sites on the tenanted estate in England, to develop strategies, enhance land management plans and support on a range of landscape and issues.

Climate, security and international



By 2025: The UK's global credentials on climate security are recognised and have continued from the momentum of this strategic approach. The UK is highly respected for extending its military relationships on climate security, building advanced horizon scanning capabilities and enhancing resilience.

This means in the first year, Defence will:

1. Try to build a coalition of militaries working to achieve commitments on adaptation, resilience and mitigation.
2. Build a cutting-edge climate threat horizon-scanning capability, integrated with partners inside and outside of Government.
3. Explore the feasibility for new types of partnerships helping build resilience capacity in others, at home and abroad.
4. Encourage NATO to further evolve its position on adapting to and mitigating against the effects of climate change and ensure that the climate angle be mainstreamed in NATO policy and capability development.

Operational capability



By 2025: Climate change implications are consistently and appropriately considered across military decision-making. No decisions on the future capabilities are made without evidence-informed assumptions on a climate-changed world. By considering climate change, Defence has further developed its resilience.

This means in the first year, Defence will:

1. Develop a set of Defence climate assumptions for capability development which provide long-term reasonable scenarios, consequences, and questions which can be considered throughout the process of making capability choices.
2. Build the case for a living lab concept and portfolio, aiming to realise operational advantage through sustainable and resilient military technologies and methods.
3. Review and adapt training and medical plans so that they broadly anticipate the trends driven by climate on their areas; anticipating more simulation, less reliability on vulnerable training sites and different types of extreme weather exposure.

Support, maintenance and logistics



By 2025: The Defence Support Organisation understands its dependencies and chosen approach on cleaner, resilient energy options (particularly for fuels and storage) and has started to realise operational benefits from greater self-sufficiency in deployments.

This means in the first year, Defence will:

1. Engage partners, exploring a shared approach and options on transition to lower/zero carbon fuels and more environmentally friendly oils, lubricants and gases.
2. Commence development of an energy and fuels strategy, with the aim of setting out the approach needed to transition away from fossil fuels and to obtain more resilient, sustainable, deployable energy systems.

Procurement and industry



By 2025: The notion of Defence as a fast-follower which exploits low carbon technological opportunities from broader industry is well-established. Defence better integrates the sustainability and emissions angles into procurement and acquisition and circular economy principles are being built into designs.

This means in the first year, Defence will:

1. Understand the emissions footprint of Defence's equipment, support and infrastructure programmes identifying where initial interventions can be most effectively directed.
2. Implement appropriate weighting to low carbon options and sustainability in the acquisition processes. This should incentivise industry to offer whole life low carbon solutions for new equipment while also exploring lower emission modifications existing capabilities.
3. Develop fast follower strategies to exploit low carbon technological opportunities while engaging and educating capability sponsors who set the requirements, so they understand the opportunities and implications of decisions.

Commercial



By 2025: Contracts are awarded with sustainability as an integral part of the investment decision making process. Defence demands clear sustainability requirements to drive change in behaviours and outcomes. Defence's commercial policy and guidance evolve alongside, and align with, wider government policy.

This means in the first year, Defence will:

1. Aim to ensure that the way the social value policy is applied across the department best enables climate and sustainability to be prioritised where appropriate, issuing associated guidance and training.
2. Establish a strategic outcomes-focused sustainability steering group as part of the Defence Suppliers Forum, to enable cross government and industry collaboration on key challenges and opportunities.
3. Leverage the Strategic Partnering Programme to engage with industry on the introduction of new policies and how to drive future behaviour.
4. New and existing commercial arrangements will be used to support and drive sustainability through the life of new purchases (where appropriate and where opportunities are found).

Finance



By 2025: Defence's climate change and sustainability programme is appropriately resourced, meaning Defence is equal to the challenge over the next decades. Emissions and social value are appropriately factored into assessments of cost-effectiveness.

This means in the first year, Defence will:

1. Give a systematic focus to climate change and sustainability when setting programme objectives and emphasise this area in appraisal – covering emissions through to disposal - of whole-life costs. The scrutiny community will have a key role. Opportunities to ensure appropriate skills are available should be considered.
2. Support the new climate change and sustainability directorate to embed sustainability and emission considerations into Defence's finance policies, processes and controls.

Data



By 2025: Data has laid the foundations for Defence to actively manage sustainability targets. This has been realised through a single source data architecture managed from within head office which is recognised as best-in-class by partners and allies.

This means in the first year, Defence will:

1. Adopt best practice in corporate CO2e data governance which leads to a standardised methodology adopted across Defence
2. Establish a single data-dashboard, which can dynamically track and monitor mandated GGC and Defence sustainability indicators.

Research and development



By 2025: Defence will apply the findings of relevant research carried out elsewhere to the defence and security context. Other UK science and technology stakeholders are aware of Defence's climate and sustainability priorities and are seeking ways to meet Defence challenges. Networks of public, private and international researchers collaborate and engage on Defence-relevant work around climate and sustainability.

This means in the first year, Defence will:

1. Explore and set out a range of Defence climate and sustainability research priorities and question-sets and a multi-year engagement plan. This would be to create opportunities, build connections and amplify research benefits across UK government, industry and academia.
2. Configure the Defence science and technology enterprise to ensure Defence action on climate and sustainability is supported with scientific and analytical rigour, and that stakeholders across Defence have access to the scientific and technological advice and support they need to pull through problem-solving technologies at pace.
3. Feed into a fuels and energy strategy, which should be the first-priority for engagement and for building a wider science and technology coalition for Defence sustainability.

