



Ministry
of Justice

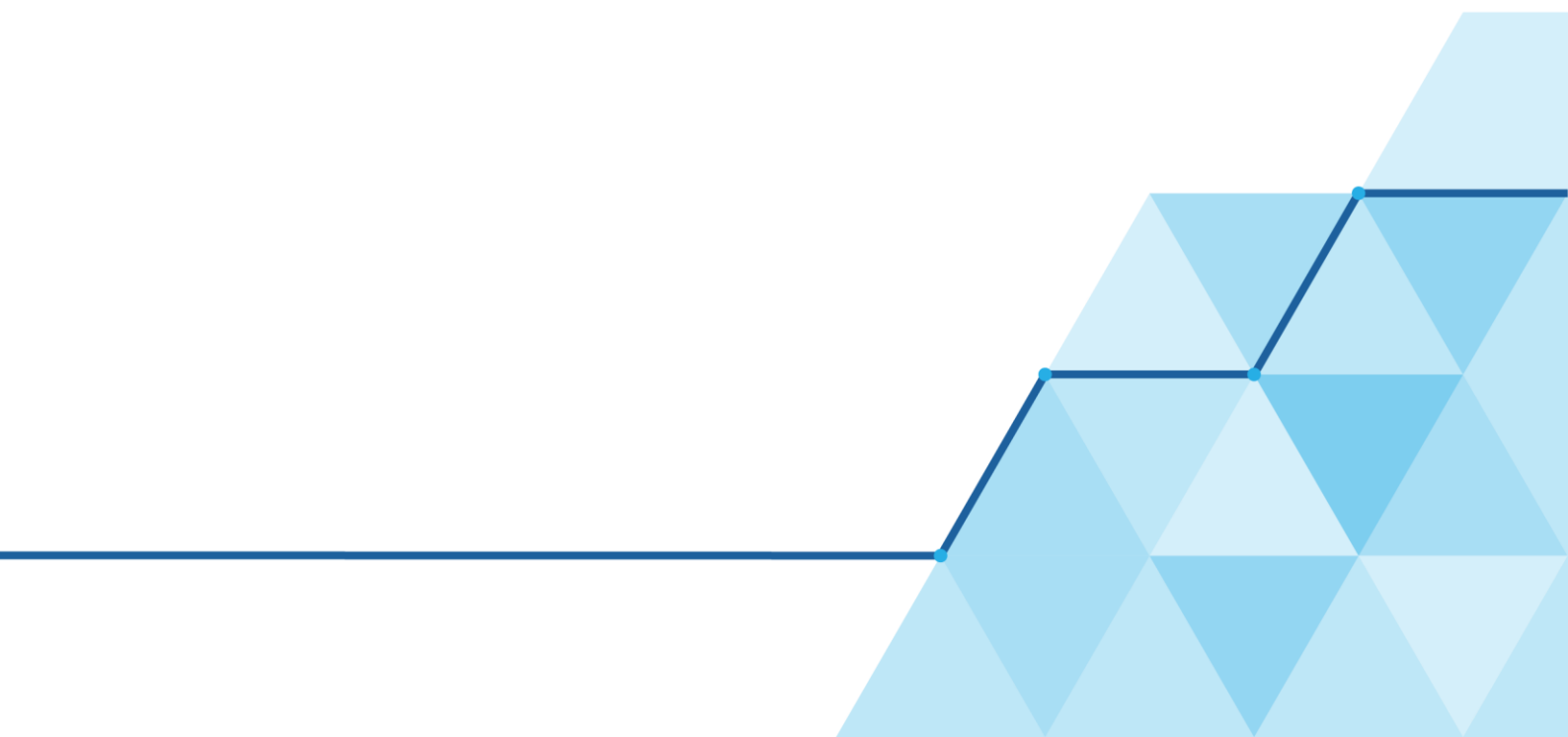
Preparing for Climate Change: A Climate Change Adaptation Strategy

2020

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Version control

Version control

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V0.2	31/10/2019	New draft to Defra
V0.3	25/11/2019	New internal draft
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V0.5	06/02/2020	New internal draft
V1.0	14/05/20	Final strategy for publication

Purpose

To provide a clear outline of what is required to enable the Ministry of Justice (MoJ), including Executive Agencies and Non-Departmental Public Bodies, to prepare for climate change.

Our [Carbon and Energy Reduction Strategy](#) will help the Department contribute to tackling Climate Change by reducing our own carbon emissions, striving for net zero emissions by 2050. This complementary strategy seeks to assess and set out action to address the effects of climate change that are already being observed or anticipated, even if globally nations do meet their carbon emissions targets. This will help the Department to continue preparing for climate change, demonstrating action on the Government's 25 Year Environment Plan goal to ensure that policies, programmes and investment decisions consider the possible extent of climate change this century.

Scope

This adaptation strategy is a part of a set of sustainability policies and strategies that can be found [on Gov.uk](#). It covers the Ministry of Justice, and all Arms-Length Bodies, Public Bodies, and Non-Departmental Public Bodies.

It has been written for a wide audience, and will be of interest to all staff, in particular:

- Estates management
- Governors of prison establishments
- Court and Tribunal managers
- Facilities Management providers
- Commercial colleagues
- Policy makers
- Departments with specific climate change policy interest, such as Department for Environment, Food and Rural Affairs (DEFRA) and Department for Business, Energy and Industrial Strategy (BEIS)
- Contractors connected to the Department and its associated bodies
- Parties interested in the United Nations and the Sustainable Development Goals

All individuals working on the estate or on behalf of the Department, whether staff or contractors, are expected to follow the principles of this strategy, and any related guidance.

Drivers

Even with strenuous efforts to limit global warming, further climatic changes are inevitable in the future and the UK will need to manage the growing risks from climate change. The latest generation of national climate projections, [UK Climate Projections 2018](#) (UKCP18), provides users with scientific evidence on projected climate changes. This up-to-date and robust source of information will be used to inform decision making when responding to climate change. The general climate trend predicted by UKCP18 for UK land is an increased chance of warmer, wetter winters and of hotter, drier summers, along with an increase in the frequency and intensity of extremes. Under UKCP18, Storm Desmond, which occurred in winter 2015/16 and caused £1.3 billion in insurance costs, was deemed more than 40% more likely due to climate change. The [Intergovernmental Panel on Climate Change \(IPCC\)](#) also summarises the increasing impact of climate change, and highlights in its latest report that the projections are following a worsening scenario.

By 2061:

- Summers will likely be drier by 16-42%, and hotter by 3.6°C-5°C
- Hot spells of over 30°C for more than 2 days are likely to occur around 4 times a year
- Winters will likely be wetter by 16-42%
- The intensity of rainfall over the year will likely be increased by 7.5%, significantly increasing the likelihood of flash floods

Figure 1- key predictions from UKCP18

Indeed, temperatures have already increased by 1°C globally. If the UK reaches the commitments made in the [Paris Agreement](#), by limiting warming to 2°C by the end of the century, we are still likely to experience more frequent extreme weather events, higher sea levels, and high risks in some areas of flooding and drought, among others. This means that adaptation is necessary, regardless of the UK's efficacy at eliminating greenhouse gas emissions, due to the emissions already released, and the subsequent effects that are 'locked-in' and the warming that has already taken place. Climate change affects safety, infrastructure and food supplies, and should inform the way the Department conducts its business going forward. Climate Adaptation is also included in the [United Nations' Sustainable Development Goals](#) (UN SDGs), and the UK wishes to demonstrate leadership in the delivery of these goals.

The [Greening Government Commitments](#) state that:

“Climate resilience planning and mitigation shall be incorporated at all business levels. Strategic climate impact risk mitigation shall be embedded in strategic programmes and plans including estate rationalisation and disposal. Similarly, climate mitigation and adaptation measures shall be incorporated into projects to ensure deliverables are climate resilient. Where climate risks are identified, appropriate adaptation actions shall be undertaken”

Advice on a net-zero emissions target for 2050 was published by the Committee on Climate Change (CCC) on 2 May 2019. On 27 June 2019 the [Climate Change Act 2008 \(2050 Target Amendment\) Order 2019](#) came into force. This amended the Climate Change Act 2008 and introduced a net zero target of at least a 100% reduction of greenhouse gas emissions (compared to 1990 levels) in the UK by 2050.

In line with Government’s statutory adaptation duties in the Climate Change Act 2008, Government must produce, on a five-yearly cycle, a UK Climate Change Risk Assessment (CCRA), followed by a National Adaptation Programme (NAP). The NAP is a cross-department collaboration, bringing together government’s policies on managing climate risks in one place. Defra is the lead department for adaptation, and responsible for co-ordinating adaptation work across government. The NAP is primarily for England but also covers reserved and non-devolved matters. Devolved administrations lead their own adaptation programmes. The second NAP was published in 2018, setting out how we will address climate risks between 2018 and 2023. It includes actions in a broad range of areas, including flood and coastal erosion risk management, both in the built and natural environment. The Department will continue to contribute to the CCRA Project Board and NAP development work at appropriate points.

The CCC published its 2019 Progress Report to Parliament (July 2019) warning that:

“Even if net zero is achieved globally, our climate will continue to warm in the short-term, and sea level will continue to rise for centuries. We must plan for this reality. Climate change adaptation is a defining challenge for every government”

“Global average temperatures have already risen by around 1°C since pre-industrial levels and climate risks are increasingly apparent. Annual average temperature in England has also increased by 1°C and will keep increasing – by only 0.5°C by 2100 if the world acts quickly and decisively to cut emissions, but by 4°C+ if current trends continue. We must therefore plan adaptation strategies for a minimum of 2°C and up to 4°C.”

Strategies do not need to explicitly reference temperature thresholds, and certainly, climate change has consequences beyond simply increasing temperatures. However, it is a cornerstone principle of resilience preparation to plan for a wide range of possible future changes, and thus adaption plans should include preparation for reasonable worst-case climate change scenarios. Planning for more extreme change is appropriate where there are high vulnerabilities, low risk tolerance, and a long planning or investment cycle.

Strategic Objective

The Department must act now to prepare for the likely impacts of climate change. This means the Department will be considering its estate, its policies, and its people in planning now for the impacts of a 2°C increase in global and UK temperatures, whilst being aware that a 4°C increase is a real possibility.



Figure 1 shows the top 6 risks to the UK from climate change (Source: UK Climate Risk Assessment 2017)

The UK Climate Change Risk Assessment 2017 (CCRA2) identified 56 risks to the UK from climate change. This means we must prepare for:

- the impact of heatwaves and overheating on buildings (and cold winter extremes)
- risks to health, wellbeing and productivity from high temperatures, adverse weather, and increased risks of air pollution
- increasing likelihood of flooding events, alongside impacts on service disruptions and communities
- water shortages
- food supply and agriculture production and trade disruption
- infrastructure malfunction and unavailability
- impact on natural capital and ecosystems
- some international risks, such as climate-related human displacement, or weather-related shocks to the global food supply chain

This will be achieved through careful application of several tools, including UKCP18¹, the EA climate change risk assessment toolkit², and active participation in the development of new Government-wide strategies.

¹ <https://ukclimateprojections-ui.metoffice.gov.uk/help/start>

² <https://www.gov.uk/guidance/adapting-to-climate-change-risk-assessment-for-your-environmental-permit>

Governance

The Department has a system of governance in place with accountability for sustainability, including Climate Change Adaptation, at Senior Civil Service (SCS) level, through the Senior Sustainability Board (SSB). SSB includes senior representatives from key parts of the organisation, and is chaired by the Chief Property Officer. This strategy will be a regular item at SSB meetings, with senior representatives being held to account for the Department's resilience. SSB also acts as a sub-committee of the Department's Investment Committee.

Sustainability is also reported in the Department's Single Departmental Plan (SDP) and this strategy will sit alongside the SDP as a key consideration for business areas.

The Chief Property Officer sends a monthly report, including the Greening Government Commitments (GGC) performance report, to the Chief Financial Officer. This in turn, is fed to the Permanent Secretary through annual and quarterly reports.

Defra is leading the annual monitoring process for the 25 Year Environment Plan, which has an Outcome Indicator Framework for a number of environmental goals, including biodiversity, which will be included in further reports. Furthermore, continued embedding of sustainable development into the Department's objectives and activities will raise its profile and increase the level of accountability.

The MoJ Sustainability Team is responsible for delivering change and securing sustainability improvements. It is also responsible for coordinating, monitoring and reporting on sustainable operations activities.

The Department is a member of Government's Domestic Adaptation Board (DAB), chaired by Defra, which oversees cross-Government action on adaptation. It includes members from most government departments, the Devolved Administrations and the Environment Agency (EA). The Department is also a member of the Met Office Hadley Centre Climate Programme (MOHCCP) stakeholder group. MOHCCP is one of the main contributors in partnership with scientific collaborators in the UK, and internationally, in answering key questions related to climate science. The group aims to ensure that climate science is aligned to the needs of stakeholders through steering groups.

There are a wide range of organisations responsible for the implementation of actions in the second National Adaptation Programme. A range of around 50 organisations (government departments, agencies and other stakeholders) are assigned responsibility for delivery of actions, often working alongside key partners in their policy areas or networks. One of the key risks highlighted for MoJ was the need to adapt to the increased

and prolonged periods of high temperatures and avoid overheating within both new and existing prisons.

Under the Adaptation Reporting Power (ARP) the Secretary of State for Environment, Food and Rural Affairs has the discretionary power to direct or invite key organisations to prepare reports on how they are adapting to climate change. A wide range of infrastructure providers and public bodies will be participating in the third ARP reporting round (from 2019-2021), including those responsible for water, energy, transport, environment, heritage, health and finance. As well as providing Government and the public with information on the resilience of core sectors, the ARP process provides a tool for awareness raising, for organisational capacity building, and for publicising examples of good practice, many of which come from the private sector.

Key Identified Risks

The climate change risks that the Department faces include those to the health of the prison population, those being transported or held in any other manner, and risks to the delivery of services through changes in service patterns and to infrastructure. The risks presented in the table below have been identified by the CCC under the CCRA2, and pose relevance to the Department. Where mitigations or adaptations are not already in place, these will be assigned owners in the Action Plan, found in Annex A.

For the purposes of this strategy, mitigation is defined as any action taken, or to be taken, by the Department to reduce emissions or to reduce the likelihood of the risk. Adaptation is defined as actions taken or to be taken to maintain safety, decency and security in the context of an already changing environment. Adaptation will need to encompass changes to the existing estate as well as choices to ensure all future sites or buildings will be prepared for the consequences of up to 4°C of global warming.

The Department's key priorities - risks and mitigation/adaptation

Risk	Effect	Mitigation	Adaptation
Extreme weather events such as flooding, storms and droughts	<p>Temporary loss of use of buildings or parts of buildings or buildings are lost entirely.</p> <p>Increased financial costs from repairing and making good and from finding alternative accommodation.</p>	<p>Ensure all contracts incorporate clauses that allow us to ensure that future buildings are designed to cope with and mitigate climate change and associated risks e.g. extreme heat.</p>	<p>Use of EA and SEPA data on flood zones to identify high risk sites, and use UKCP18 to assess how this risk may evolve over time. All sites to have wider climate impact risk assessments, including flood risk.</p> <p>All sites to have an emergency plan that manages flood risk, and other relevant risks as identified through assessment.</p> <p>New builds and refurbishments to have floor levels above flood risk level for that area.</p>

Overheating in buildings	Buildings (or areas of buildings) become too hot, and are unusable. Increased costs and CO ₂ emissions. Compromises prison capacity. Impact on welfare of prisoners, staff and members of the public using our buildings.	Increase use of green and blue infrastructure to absorb CO ₂ emissions and support climate resilience, as well as improving insulation	Sites should assess risks using UKCP18, and use this assessment to inform adaptation plans/actions. Build in more natural ventilation, solar shading and natural cooling. Improve Building Management System (BMS) controls. Build in more natural ventilation, solar shading and natural cooling. There is however potential for this to be a benefit, as warmer temperatures suggest lower running costs in the winter due to lesser need for heating. Have emergency plans in place that consider the likely intensity and frequency of heat. The Department to maintain links with agencies, such as the Met Office, to identify these situations as soon as possible.
Underheating in buildings	Failure to meet relevant Health and Safety standards. Buildings become too cold, and therefore unusable. Increased costs, CO ₂ emissions. Compromises prison capacity.	Improve use of insulating materials, such as blue or green infrastructure.	Sites should assess risk using UKCP18, and use this assessment to inform adaptations. Improve BMS controls. Better emergency plans in place, and increased links with agencies such as the Met Office, to identify these as soon as possible.

	Impact on welfare of prisoners, staff and members of the public using our buildings		
Social or civil unrest in the UK	Challenges court and prison capacity due to increased risk of civil unrest, and rise in crime rates.	Work with other Government Departments/ Agencies to try to prevent unrest occurring in the first instance however, as seen in a recent protest ban being overturned, this may not always be realistic.	Identify estates which are most likely to be impacted the most, such as specific prisons or courts, and create business continuity plans for these.
Disruptions to transport and other critical infrastructure	Compromises prison capacity due to reduced ability to move prisoners. Safety compromises due to impacts on staff movements. Reduces visitor access to prisons, courts and other services. Cascading failures or interdependencies across infrastructure systems	Increase the use of digital services such as webinars/video conferencing or telephone use to reduce the need to travel. This will also go some way to reduce climate impacts themselves. Use the National Infrastructure Commission report on resilience in infrastructure systems, due to be published in January 2020.	Work with Local Authorities and Highways England to ensure these key travel paths can be maintained and/or improved. Use of UKCP18 to identify established travel paths that may be affected by climate change, and business continuity plans to be built to reduce effects. Work collaboratively with Local Authorities and other infrastructure bodies to anticipate and prepare for eventualities.
Climate-related international	Increased migration. Potential increased civil unrest as a result. Increased requirement for detention services.	Work with other Government Departments/ Agencies to try to prevent unrest occurring in the first instance.	Work with the HO to support any need for increased requirement for immigration and detention services. Ensure business continuity plans include possible increases in detained individuals in key sites.

human displacement³			
Risks to natural capital, including terrestrial, coastal, marine and freshwater ecosystems, soils and biodiversity	Loss of habitat on SSSI's & Natura 2000 & qualifying species and features. Loss of ecosystems' services, such as carbon sinks and agricultural impact.	Ecological initiatives can also be used to support the mitigation of other risks, such as cooling on estates from trees, natural flood management, or the use of green infrastructure as carbon sinks. Embed biodiversity into FM to ensure its consideration in all projects.	Work with Natural England, FERA and DEFRA to identify key estates that can be used to promote biodiversity. There is also scope to use ecological initiatives on existing sites.
Risks to domestic and international food production and trade; new and emerging pests and diseases, and invasive non-native species, affecting people, plants and animals	Increased risks of widespread crop failure. Floods and extreme temperatures increase the risk of livestock deaths.		Training FM providers to spot invasive non-native species on the estate, and how to tackle them. Working with DEFRA to ensure that the food supply chain is resilient to the effects of a changing climate. Supporting the growing use of agriculture and farming projects across the estate, which can help reduce the need for external food supplies.

³ From the UK Climate Change Risk Assessment 2017: <https://www.theccc.org.uk/wp-content/uploads/2016/07/UK-CCRA-2017-Chapter-7-International-dimensions.pdf>

<p>Risks to public water supply</p>	<p>Increased risk of water shortages. This is likely to have knock-on effects on agriculture and other industries.</p>	<p>Use of water efficient equipment across the Estate. Prompt leak detection and repair.</p>	<p>Use of grey (recycled) water, and rainwater harvesting, to minimise the use of water. Use of UKCP18 to identify high-risk sites. Use of Core Requirements to build water efficiency considerations into all projects. Business continuity plans in place in case of effects on other industries.</p>
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Reporting

Reporting from respective agencies and business areas will be coordinated by the Sustainability Team, and fed through to senior stakeholders as outlined below.

We will:

- Report our activity in the sustainability section of the Annual Report and Accounts (noting that adaptation now forms part of the guidance for this).
- Report delivery progress to the Senior Sustainability Board (SSB) at least every 6 months.
- Continue to report on progress against GGC targets quarterly to Defra.
- Use Defra's annual monitoring process for the 25 Year Environment Plan, which has an Outcome Indicator Framework for a number of environmental goals, to ensure additional external scrutiny.

Communication and delivery plan

The strategy is to be published on Gov.UK, and all associated intranets (HMPPS/HMCTS). We will also place on the Estate Directorate's Trello board and use the Facilities Management newsletter to share the strategy.

It will also be used to further embed sustainability across the department, through the SDP and business continuity plans. Furthermore, it will be tabled at SSB, and thus used by senior representatives from each business area to champion sustainability. SSB will also provide a valuable platform to hold business areas to account against their identified objectives.

Delivery against the objectives will be through an action plan (Annex A). The action plan will be used to monitor progress of initiatives and actively support the strategic objectives and continuous improvement throughout the estate. The use of this will give clear goals to all areas of the business, as well as providing clear reporting frameworks.

Monitoring and evaluation

The Estates Directorate Sustainability team will co-ordinate, promote and develop this strategy. They will conduct internal monitoring, and evaluation of impact, using the action plan. Other named contacts, from various parts of the business, will also be involved in internal monitoring. External monitoring of our Climate Change Adaptation plans will be carried out by Defra, through the GGC reporting process. The 25 Year Environment Plan's Outcome Indicator Framework will also be used in further reports to use a nation-wide framework to evaluate our performance.

We will liaise with Defra to understand and monitor the emerging impacts of climate change, including the effects on UK food security or supply chain.

We will look at any potential to impact on the Department's staff, including health and welfare issues, transport and staff locations. We will also assess the impacts on the Department's customers and stakeholders, such as prisoners or court users.

Evaluation of the strategy will be carried out through several means. This strategy will form a regular item on the SSB agenda, and the representatives from each business area will be held to account over their objectives. We will also continue to liaise with Defra to understand the Department's objectives within the wider government and national context.

Further Information

Agency/Government Department	Guidance/Plans
Environment Agency	Climate Change Allowances for Planners – Guidance to support the National Planning Policy Framework For businesses/organisations requiring environmental permits- new EA process (2019): Adapting to climate change: risk assessment for your environmental permit
European Union	The EU Strategy on adaptation to Climate Change: 2013 Natura 2000
Defra	25-year Environment Plan Second National Adaptation Programme; Climate Change Act 2008 https://www.gov.uk/government/publications/uk-climate-change-risk-assessment-2017
Met Office/DEFRA	Second National Adaptation Programme United Kingdom Climate Projections 2018
BEIS	Paris Climate Change Agreement Clean Growth Strategy https://www.gov.uk/government/publications/clean-growth-strategy
BEIS and HMT	https://www.gov.uk/government/publications/green-finance-strategy
Adaptation Sub-Committee (ASC) of the Committee on Climate Change (CCC)	UK Committee on Climate Change; 2019 Progress Report on Adapting to Climate Change

For any questions on, or suggestions for improving this strategy, please contact:
SDEnquiries@justice.gov.uk

Annex A

Action Plan

1. The Climate Change Act 2008 and equivalent legislation of the Devolved Administrations places a statutory duty on all public bodies to understand the climate risks posed to their estates from a changing climate, and to undertake adaptation actions. We will continue to assess and manage climate resilience risks to meet current and future infrastructure and built environment capability requirements.
2. Climate resilience/adaptation planning and mitigation shall be incorporated at all business levels where required. Climate risk impact and adaptation and mitigation shall be embedded in strategic programmes and plans including estate rationalisation, management and disposal.
3. Similarly, climate mitigation and adaptation measures shall be incorporated into projects, or plans, to ensure deliverables are climate resilient. Where climate risks are identified, appropriate adaptation actions shall be undertaken.

All staff have a responsibility to understand the importance of ensuring that the Department is meeting the objectives as set out above, and to contribute to the aims of this strategy.

Specific responsibilities for business areas are identified in the table below. Brief reports on progress against these goals should be presented to the Senior Sustainability Board bi-annually. This strategy will be reviewed in year, and as such the action plan and its timeframes will be revised accordingly to ensure efficacy.

Team/Area	Actions
Sustainability Team	<ul style="list-style-type: none"> • Commission a survey of the climate related risk and resilience of the central MoJ estate, HMPPS, HMCTS and other ALB sites, and recommendations for best practice. Each site will then have a responsibility to draw up business continuity and adaptation plans based on the risks identified. These will be owned by each business area, but tracked by the Sustainability Team. • Monitor changes to legislation, government targets, industry best practice, provide advice to teams, and facilitate connections with other relevant specialists.

	<ul style="list-style-type: none"> • Work with Defra to assess our involvement in future UK Climate Change Risk Assessments and National Adaptation Programmes, and continue to be involved at board level. • Improve the resilience of biodiversity on our estate to the effects of climate change. • Ensure that our natural barriers and wildlife corridors (woodlands, linear woodlands and hedgerows) are connected to the wider landscape and that they can combat adverse or intermittent weather changes. • Produce integrated site management plans which allow the natural landscape and its ecosystems to work for the betterment of the whole site.
Business Continuity	<ul style="list-style-type: none"> • Assess whether existing strategy appropriately factors in the changing climate and associated risks • Engage with colleagues across the Department to embed resilience • Refresh and formalise extreme weather resilience planning
Estates Transformation	<ul style="list-style-type: none"> • Ensure that climate change impact assessments for regional centres are shared with relevant stakeholders in Project Delivery, and Facilities Management services.
FM Providers	<ul style="list-style-type: none"> • Capture climate risk information for inclusion in business continuity plans, including maintenance, and ensure guidelines are being put into practice
Commercial & Contract Management Directorate (CCMD)	<ul style="list-style-type: none"> • Continue the programme of replacing de-fleeted vehicles with Ultra Low Emission Vehicles (ULEVs)
Finance	<ul style="list-style-type: none"> • Ensure that anticipated climate change is appropriately planned for in capital expenditure to avoid poor value for money requiring retrofitting at a later date
Technical Standards	<ul style="list-style-type: none"> • Technical Standards kept up to date with technology to ensure relevant sustainability and resilience guidelines are being met.
Project Sponsors	<ul style="list-style-type: none"> • All Project Sponsors are sent a Sustainability in Projects pack which includes a requirement to consider climate change risks, such as flooding, overheating, in all construction projects. • Project Sponsors are asked to take account of present and future flood risk in all decisions around the strategic, site management, estate change and maintenance planning for all projects.

Prisoner rehabilitation	<ul style="list-style-type: none">• Look at assessing those sites which potentially could have an industrial or commercial impact on the natural ecosystems.
Policy colleagues	<ul style="list-style-type: none">• Embed sustainability, including resilience aspects, deeper into the Single Departmental Plan, to ensure that the agenda is in every business area's consciousness



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