



HM Government

Responding to the Climate Change Committee's (CCC) Annual Progress Report 2022 Recommendations

March 2023

HC 1270



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Presented to Parliament pursuant to Section 37 of the Climate Change Act (2008)

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Responding to the Climate Change Committee's (CCC) Annual Progress Report 2022 Recommendations

We welcome the Climate Change Committee's (CCC) 2022 Progress in Reducing Emissions report, which highlights the successes of the government in setting an ambitious climate mitigation agenda, whilst also providing healthy challenge to our progress to net zero by 2050. It correctly emphasises that the journey to net zero requires swift delivery, and that this is a decisive decade for tackling climate change which Global Britain must take a leading role in.

The departmental and devolved administration responses to the CCC's joint recommendations from the 2022 Progress in Reducing Emissions report sit as the following annex to the Net Zero Growth Plan, which should be considered together. Responses detail the actions that are being taken across different UK Government departments and the Devolved Administrations, as well as outlining next steps in specific areas. They provide a clearer picture of the broad spectrum of efforts that are required across the economy.

Departments have worked closely to develop shared responses to recommendations that cover mitigation and adaptation. Policies supporting net zero should be made resilient to current and future climate change risks, to prevent locking in future vulnerabilities, unintended consequences, and maladaptation. For example, we must consider the impact that climate change will have on the suitability of our land for different uses, and resilience to weather extremes must be built into the energy systems and infrastructure which will support net zero.

Action in the Devolved Administrations

Scotland

- **Met their 2020 Greenhouse Gas (GHG) emissions reduction target; and**
- **Published the 2nd Annual Monitoring Report on our current *Climate Change Plan*.¹**

The latest Scottish GHG emissions data (including international aviation and shipping), shows that emissions have fallen by 58.7% between 1990 and 2020, exceeding the 2020 target of 56%, however some of the fall was due to COVID response measures. In May 2022 their progress report on implementation of the *Climate Change Plan* update was

¹ [Climate Change Plan: Monitoring Reports 2022](#)

published and out of the 44 indicators across seven sectors, excluding negative emissions technologies, 27 indicators were on track and 10 were too early to say.

In the last year, Scottish Government (SG) has laid out the following additional plans to drive delivery:

- The Heat in Buildings Strategy² (October 2021) sets out their vision and the actions they are taking in the buildings sector. Resource spend has increased to deliver the strategy by up to £75 million per year, directly supporting £1.8 billion of overall public investment;
- A route map to reducing car kilometres travelled by 20% by 2030 (January 2022), a world leading commitment³ aiming to support people to live healthier, fairer and more sustainable lives by choosing alternatives ways of accessing goods, services, amenities and social connections;
- The ScotWind⁴ leasing round and clearing process awarded a total of 20 projects for a total of 27.6GW and option fees for around £756m.
- The *Fuel Poverty Strategy*⁴ (December 2021), sets out policies and proposals for national government, local authorities and third sector partners to help us collectively make progress towards meeting the targets set out in the Fuel Poverty (Targets, Definition and Strategy) (Scotland) Act 2019;
- *The Vision for Agriculture*⁵ (March 2022) and the *National Test Programme*⁶, aim to transform agriculture, ensuring Scotland become a global leader in sustainable and regenerative agriculture. That vision began in Spring 2022 with up to £51 million funding. A consultation on a new Agriculture Bill⁷ was published on 29 August 2022;
- The following consultations: the Circular Economy Bill⁸, the Waste Route Map⁹ with proposals supporting Scotland's transition to a zero waste and circular economy, and Land Reform Bill in a Net Zero Nation¹⁰; and
- The Scottish Government has prepared a climate funding map¹¹ available to the public sector.
- Published the revised draft National Planning Framework 4¹³, the Joint Budget Review¹⁴, the draft Energy Strategy and Just Transition Plan¹⁵ and the Biodiversity Strategy¹⁶;

² [Heat in Buildings Strategy -](#)

³ [A route map to achieve a 20 per cent reduction in car kilometres by 2030](#)

⁴ [Tackling Fuel Poverty in Scotland: A Strategic Approach](#)

⁵ [Sustainable and regenerative farming - next steps: statement](#)

⁶ [A National Test Programme to start Transforming Agriculture in Scotland - Sustainable and regenerative farming - next steps - gov.scot \(www.gov.scot\)](#)

⁷ [The vision for Agriculture](#)

⁸ [proposed Circular Economy Bill: consultation](#)

⁹ [Delivering Scotland's circular economy: A Route Map to 2025 and beyond](#)

¹⁰ [Land reform in a Net Zero Nation: consultation paper](#)

¹¹ [The Sustainable Scotland Network](#)

¹³ [National Planning Framework 4:revised draft](#)

¹⁴ [Scottish Budget:2023-24](#)

¹⁵ [Draft Energy and just transition Plan](#)

¹⁶ [Biodiversity strategy to 2045: tackling the nature emergency](#)

- Ran Scottish Climate week 2022, an annual event raising awareness of the global climate emergency and encouraging climate action across the country.

Milestones for next 12 months:

- **In May 2023, publish the 3rd Annual Monitoring Report and in June 2023 Scotland's performance on the annual emissions reduction target for 2021 will be known; and**
- **The Scottish Government is aiming to lay a draft of the next full Climate Change Plan by November 2023, setting out their emissions reduction policies to reach Scotland's statutory targets up to 2040.**

Wales

- **Published Net Zero Wales**
- **Met the first Carbon budget and published the first Statement of Progress**
- **Held COP Cymru a weeklong programme of virtual events looking at the climate action being taken across Wales.**

In December 2022, Welsh Government published its first final Statement of Progress for the first carbon budgetary period covering 2016 to 2020. The statement sets out the steps taken to calculate the Net Welsh Emissions Account for the first carbon budget (CB1) and interim target. **It shows that Welsh Government has met both the first carbon budget and interim target.** The statement also shows delivery progress in relation to Prosperity for All: A Low Carbon Wales (also known as the first Low Carbon Delivery Plan (LCDP1)) with a supporting Monitoring, Reporting and Verification (MRV) system, providing an insight into how the policies set out in the Plan have contributed to meeting the targets and budgets. The statement also sets out the Welsh Governments first legislative assessment of consumption emissions in Wales.

The Welsh Government is now focussing on delivery of Net Zero Wales, which cover the second carbon budget. (*Carbon budget 2, 2021-2025*). The plan sets out 123 policies and proposals from Government alongside the commitments and action needed from business, communities and the UK Government. The Government's delivery focus has included publishing a 10-year Wales Infrastructure Investment Strategy to support a zero carbon economy alongside the draft budget, showing how it is aligning investments to support net zero. To increase uptake in cycling, £1 million has been provided to trial electric bike loan schemes, providing bikes on medium-term loan to residents at no cost and investing £50 million in cycling routes and new cycling facilities. Active travel maps have been approved for nearly all local authorities in Wales. It is also investing in the future of renewable energy to move away from the use of fossil fuels for energy production by providing £31 million to the Morlais project, a major tidal energy scheme off Anglesey. Almost £2.35 million has been provided for the expansion of community owned renewable energy. It launched My Tree, Our Forest, offering every household in Wales a free tree. Three commemorative woodland sites have been announced to remember those who died during the pandemic, and the Woodland Investment Grant launched as part of ambitious plans for a National Forest in Wales.

In 2022, Welsh Government has also laid out the following additional plans to drive delivery:

- It published *Working Together to Reach Net Zero*, which recognises and showcases the all-Wales approach to tackling climate change with pledges and case studies from every corner of the country. Delivery is already underway and a revised stakeholder *engagement plan* was launched in June 2022; and
- It published a *Draft Strategy for Engaging the General Public* in action on climate change.
- The first *Welsh Public Sector Net Zero: Baseline and Recommendations Report*, was published in June 2022. It estimates the full range of GHG emissions both direct and induced by the public sector in delivering services for the people of Wales.
- It launched a *Call for Evidence* around a Just Transition.
- Established Net Zero Industry Wales to support decarbonisation of Welsh industry.

Milestones for next 12 months:

By the end of 2023, Welsh Government will:

- Publish its Net Zero Skills Action Plan.
- Deliver the Clean Air Wales Plan and the Clean Air Bill is planned to be introduced into the Senedd in March 2023
- Consult on a *Review of Wales' renewable energy targets*.
- The Agriculture Bill will provide Welsh Government with the powers to introduce a new system of farm support. The Bill has been introduced to the Senedd and is currently moving through scrutiny. An outline of the proposed Sustainable Farming Scheme was published in July 2022 and a further process of co-design is currently concluding. Further info under: <https://www.gov.wales/sustainable-farming-scheme-guide>

Northern Ireland

- **Climate Change Act (Northern Ireland) 2022 received Royal Assent on 6 June 2022;**
- **Published Path to Net Zero Energy Strategy December 2021 and Action Plan January 2022;**
- **Published Skills Strategy March 2022; and**
- **Funding in place for 900 hectares per year (ha/yr) of afforestation through Forests for Our Future to 2025.**

The Northern Ireland Assembly passed the Climate Change Act (Northern Ireland) 2022, committing the region to net zero greenhouse gas (GHG) emissions by 2050. The draft *Green Growth Strategy*, which will help deliver this, is awaiting sign off by the NI Executive following public consultation. Work is progressing on the delivery of the *Path to Net Zero Energy Strategy* and the 22 points included within the Action Plan, including a £10 million green innovation fund (with £4.5 million being made available during 2023), a hydrogen

centre of excellence and a one-stop shop for energy advice. Funding is in place under the *Green Growth Capital Investment Programme* to deliver 900 ha/yr of afforestation through the Forests for Our Future programme by 2025. Funding sources will be required to meet the increased requirements of 1400 ha/yr by 2029, 1800 ha/yr by 2034 and 2200 ha/yr by 2038. A Phase 1 uplift for building standards for new builds took effect from June 2022. Stage 2 evidence gathering discussion on the feasibility of early introduction of requirements based on low carbon heating is progressing, with potential for a stage 3 uplift in 2023.

In the last year, the Northern Ireland Assembly has laid out the following additional plans to drive delivery:

- The Climate Change Act (Northern Ireland) 2022 set new 2030 targets including: 80% renewable electricity consumption by 2030 and a recycling target of 70% of waste by 2030. Work is progressing to achieve these.
- As part of the agricultural policy programmes, the *Soil Nutrient Health Scheme* is being rolled out in stages over a four-year period commencing 2022. It will deliver up to £45million in funding to baseline soil nutrient levels and estimate farm carbon stocks.
- New policies on Northern Ireland Civil Service (*NICS Hybrid Working and Scoring Social Value for Public Procurement*) were implemented in June 2022 as well as a new collaborative contract for metered electricity sourced from 100% renewables across the Government Estate in April 2022.
- The Housing Executive's Corporate Sustainable Development Strategy and Action Plan (2022-2027) sets out their strategic approach to balancing their responsibility to provide quality, affordable housing and improving on our social and environmental impact. The strategy is guided by current policy and is built on the principles of sustainable development. It provides a framework for tackling environmental and social challenges over the next five years, including responding to the climate emergency.

Milestones for next 12 months:

- Set the first three carbon budgets for NI by the end of 2023 through regulations.
- Develop Northern Ireland's first Climate Action Plan by December 2023.
- Progress the development of regulations to establish a Just Transition Commission.
- Progress public body climate change reporting regulations (in operation by Dec 2023).
- The draft Circular Economy Strategy for Northern Ireland was launched for public consultation on 9 January 2023 and runs for 10 weeks up to 20 March 2023. It is expected that the strategy will be finalised by September 2023 (subject to Ministerial & Executive approval)
- Publish NI Peatland Strategy and associated Action Plan during 2023 (subject to Ministerial approval).
- Implement Energy policy on Injection of methane into the gas grid, during 2023.

#	Recommendation	Response
1	Produce a roadmap to inclusion of saltmarsh and seagrass in the greenhouse gas inventory, which specifies a suggested level of inclusion (i.e., Tier 1, 2 or 3), the additional data required to facilitate this, and an indicative timescale to inclusion.	The Department for Energy Security and Net Zero is responsible for the UK Greenhouse Gas Inventory (GHGI). At present there are significant data gaps surrounding emissions from coastal wetlands (including saltmarsh and seagrass habitats), activity data regarding extraction activities, and habitat extent which hinder the accurate reporting of emissions from these habitats. This information must be collected before a decision on inclusion in the GHGI can be made. Defra has established a cross administration UK Blue Carbon Evidence Partnership to progress the evidence base on blue carbon. Through this partnership, Defra, the Department for Energy Security and Net Zero and the Devolved Administrations will work together to produce a roadmap to potential inclusion, and fill identified evidence gaps, which have been set out in recent reports.
2	Complete legislative changes for inclusion in the Carbon Budgets of NF3 from the Fourth Carbon Budget onwards and international aviation and shipping from the Sixth Carbon Budget onwards.	Legislation to extend the scope of emissions captured and reported under the Climate Change Act 2008 to include nitrogen trifluoride (NF3) as a targeted greenhouse gas was made on 2 February 2023. This means that NF3 emissions will be included within the scope of emissions for the Annual Statement of Emissions 2021 (published by 31st March 2023), the full accounting period for the UK's Third Carbon Budget ("CB3"), and for subsequent carbon budgets. We will legislate for the inclusion of International Aviation and Shipping emissions in the Sixth Carbon Budget at the earliest opportunity, subject to Parliamentary scheduling.
3	Conduct further research to understand when overheating occurs in existing homes, including ongoing monitoring of temperatures in the housing stock, monitoring of overheating	The Government is building on the research on the overheating risks and impacts published in 2021. Further analysis of the Energy Follow Up Survey (EFUS) data has

#	Recommendation	Response
	exceedances in homes, and the number of homes currently adapted.	<p>been commissioned to examine in more detail the overheating risk and particular vulnerabilities.</p> <p>Government also launched the £5 million 'Climate Services for a Net Zero Resilient World' 4-year research programme (2021 to 2025) led by a consortium of some of the leading authorities in environmental science such as University College London and the UK Centre for Ecology & Hydrology. The programme will support evidence-based climate policy and develop tools for local authorities and Local Enterprise Partnerships to inform local adaptation and decarbonisation planning. Future research on the impact of the risk of overheating will particularly consider the sectors of the building stock most at risk and the most vulnerable locations and groups of occupants.</p>
4	Develop and publish new guidance and information for homeowners with the steps that can be taken if their homes overheat. This should include an outline of behavioural options and the measures that can be installed to reduce internal temperatures.	<p>As the Government's UK Climate Change Risk Assessment 2022 made clear, we are working across Government to develop and deliver actions that Government and others will take to adapt to the challenges of climate change in England. In July 2022 Government updated the <i>Beat the heat: keep cool at home checklist</i>¹² and the <i>Beat the heat: staying safe in hot weather guidance</i>¹³ for the public. They provide guidance if a home may be at risk of overheating and how to reduce overheating and its impacts on health when this occurs. This highlighted occupants likely to be most at risk of ill health from overheating and where to get help. The UK Health Security Agency is developing the Single Adverse Weather and Health Plan which includes</p>

¹² <https://www.gov.uk/government/publications/heatwave-plan-for-england/beat-the-heat-keep-cool-at-home-checklist>

¹³ <https://www.gov.uk/government/publications/heatwave-plan-for-england/beat-the-heat-staying-safe-in-hot-weather>

#	Recommendation	Response
		raising awareness of actions that can be taken by the public to protect themselves and vulnerable people in a heatwave.
5	Encourage retrofit of passive cooling measures. Consider how policies can ensure that when energy efficiency retrofit is carried out, overheating is considered and mitigated against if necessary.	The <i>Heat and Buildings Strategy</i> published in 2021 sets out our plan to decarbonise the UK's 30 million homes and workplaces. Within the Strategy we committed to considering current and possible future climate scenarios, including overheating risk and indoor air quality risk when developing future policies to future-proof buildings. The <i>Cooling in the UK</i> report published in 2021, recognised the benefits of passive cooling measures. Government plans to undertake further research in this area, while developing the detailed policy framework underpinning the strategy. Government also sponsors the development of the Publicly Available Specification (PAS) 2030/2035 standards which includes ventilation requirements. Energy efficiency measures installed under current Government funded schemes must be done in accordance with the PAS 2030 and PAS 2035 standards. The latest iteration of the standard is expected to be published this year, following a review to reflect industry best practice and consideration for future climate change.
6	Make finance available to install adaptation measures. This could be via grant schemes or green finance for private owners, with public funding targeted at low-income or vulnerable households alongside energy efficiency retrofit.	Government recognises the importance of considering future climate scenarios when developing policies to improve the performance of buildings. The Government is investing £6.6 billion over this Parliament on low carbon heating and improving energy efficiency. The government has committed to a four-year, £4 billion extension of the Energy Company Obligation (ECO) with ECO4 to accelerate improvements to fuel poor homes and a further £1 billion extension through Great British Insulation

#	Recommendation	Response
		<p>(formerly ECO+) to start in Spring 2023. A further £6 billion will be made available from 2025 to 2028.</p> <p>Under Government funded domestic energy efficiency schemes, installers need to be TrustMark registered and compliant with PAS2035/2030 for energy efficiency measures and MCS certified for low carbon heating. PAS 2035/2030 requires the retrofit of homes to provide or upgrade ventilation to good internal air quality and minimise the risks of issues including condensation and overheating. The Department for Energy Security and Net Zero sponsors updates to the PAS 2035/2030 document, with the next iteration due for publication this year.</p>
7	<p>Develop and publish new policies (with a clear implementation timeline) to ensure that owner-occupied homes reach a minimum energy performance of EPC C by 2035, through incentives or regulation. This should be stronger than the current proposed voluntary minimum requirement for mortgage lenders to improve the efficiency of the homes they lend to, and could include a policy requiring EPC C from 2028 at the point of sale and/or a mandatory minimum requirement for mortgage lenders.</p>	<p>We are planning to consult by the end of this year on how to improve the energy efficiency of owner-occupied homes. One of the Government's priorities is to catalyse the market for green finance so that homeowners have access to attractive and affordable financing options. We have consulted on incentivising mortgage lenders to help homeowners to improve their energy performance and are carefully considering the responses received to refine the policy. We will publish our response this year. Government will also continue supporting the finance sector to develop innovative lending products which incentivise retrofit. The Green Home Finance Innovation Fund (2019-2021) supported the piloting of novel green mortgages. The new Green Home Finance Accelerator (GHFA) programme, which launched in 2022, is making £20 million of funding available for the development of a wider range of green finance products. This will enable homeowners to decarbonise and improve thermal comfort in the years to come. It is expected that products and services developed</p>

#	Recommendation	Response
		with GHFA funding will be piloted from December 2023. The programme is also anticipated to generate case studies to galvanise the wider green home finance market.
8	Legislate to require privately rented homes in England and Wales to reach EPC C by 2030 (as was promised in autumn 2021).	We have consulted on raising the standard to EPC C for new tenancies from 1 April 2025 and for all tenancies by 1 April 2028. We will publish a summary of responses to the consultation.
9	Set a long-term regulatory standard for social homes to reach EPC C by 2028 and finalise policy plans and a delivery mechanism.	The government has published the <i>Social Housing White Paper</i> , in which we commit to reviewing the Decent Homes Standard, to consider how it can better support the decarbonisation and improve the energy efficiency of social homes. We will consider setting a long-term regulatory standard to improve social housing to EPC Band C and consider levers required to decarbonise the stock in line with net zero. Government has committed to consult on improving the energy efficiency of social housing within 6 months of the Social Housing Regulation Bill receiving Royal Assent. In the <i>Heat and Buildings Strategy</i> and <i>Net Zero Strategy</i> it was announced that £800 million has been committed for the Social Housing Decarbonisation Fund (SHDF) as part of the 2021 Spending Review process, bringing the total committed grant funding for the SHDF and associated demonstrator to just over £1 billion. Wave 2.1 of the SHDF closed to applications on 18 November 2022 and successful projects have been announced ¹⁴ .
10	In the context of record high energy prices, recognising that action on energy efficiency can help both meet climate targets	The Government recognises that best way to tackle fuel poverty in the long term is through energy efficiency measures, which contribute to reduced energy bills and

¹⁴ <https://www.gov.uk/government/publications/social-housing-decarbonisation-fund-wave-21-successful-bids>

#	Recommendation	Response
	<p>and bring down energy bills, increase ambition and public funding commitments for decarbonisation in fuel poor homes.</p>	<p>reduced carbon emissions in line with net zero. In England, government has set a target to 'ensure that as many fuel poor households as is reasonably practicable achieve a minimum energy efficiency rating of a Band C by 2030'. Support for fuel poor households is available through multiple energy efficiency schemes specifically targeted towards low-income households. Schemes include the Local Authority Delivery Scheme, the Home Upgrade Grant, the Energy Company Obligation and the Social Housing Decarbonisation Fund. Our fuel poverty strategy, <i>Sustainable Warmth</i>, sets out how we will tackle fuel poverty while also decarbonising buildings, ensuring that those in fuel poverty are not left behind in the move to net zero and, where possible, can be some of the earliest to benefit.</p>
<p>11</p>	<p>Publish plans to improve the targeting of support for fuel poor households to retrofit their homes, including through clear steps and timelines to facilitate data sharing between Government departments.</p>	<p>Schemes and policies designed to support low income and fuel poor households with energy efficiency measures are primarily targeted using proxies such as households in receipt of means tested benefits. Some schemes are delivered through local authorities who have a comprehensive understanding of their local area and can effectively deliver the support to those who need it most, such as through the Local Authority Delivery Scheme. Government is committed to improving targeting where possible. A major part of this is exploring the data options available whilst ensuring data safety and privacy. Interdepartmental work continues in this space to explore how best data related to income, health and housing could be used to better target support to fuel poor households.</p>

#	Recommendation	Response
12	Implement legislation for heat network zoning in England and Wales this parliamentary session and provide Ofgem with powers to regulate heat networks.	The Government introduced the Energy Bill in July 2022. The Bill will appoint Ofgem as the heat networks regulator and provide the Government and Ofgem with powers to make regulations about heat networks. The Bill will include provisions for fair prices and transparent information for consumers, a high quality of service, minimum technical standards and the ability to set limits on carbon emissions. The Bill will also provide the Government with powers to make regulations to implement heat network zoning in England. Zoning involves central and local government working together with industry and local stakeholders to identify and designate areas within which heat networks are expected to be the lowest cost solution for decarbonising heat. Additional requirements in zones, such as a requirement for certain categories of building to connect to heat networks, will help overcome barriers to deployment that the heat network market currently faces and help deliver growth in the market.
13	Publish targets for low-carbon heat networks which explicitly set out their contribution to decarbonising heat, outline plans for converting existing heat networks to low-carbon, and ensure that new heat networks are low-carbon from the start.	Our analysis published in the <i>Opportunity Areas for District Heating</i> report identified a likely maximum potential of 20% of heating could be supplied by Heat Networks corresponding closely with the Climate Change Committee's figure of 18%. As we develop heat network zoning policy we will work with industry and local government on how best to express the Government's ambition for low carbon heat networks so as to drive investment and delivery. We will consider the benefits of expressing an ambition in terms of cities/towns with district heat networks, homes/buildings supplied or percentage of heat. The <i>Net Zero Strategy</i> sets a marker of enabling at least 29 TWh of heat to be delivered through Heat Networks by 2035.

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14	<p>Launch the delayed Fairness and Affordability Call for Evidence and follow on by implementing plans for energy price reform which remove market distortions (i.e. that historical policy costs are primarily placed on electricity prices) and consider the role of carbon pricing. Plans should ensure that heat pumps will be cheaper to run than gas boilers.</p>	<p>The Government is determined to cut costs for consumers wanting to make the transition to low-carbon heating. <i>The Heat and Building Strategy</i> sets a clear ambition that heat pumps should be no more expensive to buy and run than gas boilers by 2030. The <i>British Energy Security Strategy</i> reconfirms the Government's intention to 'rebalance' the costs placed on energy bills away from electricity to incentivise electrification across the economy and accelerate our shift away from volatile global commodity markets. This shift in the way costs are apportioned across electricity and gas will also ensure heat pumps are comparatively cheap to run over time.</p>
15	<p>Publish a final policy plan for the market-based approach to low-carbon heat. This must include a clear explanation of how the obligation on manufacturers or energy suppliers will work, whether enabling legislation is required, and a timeline for implementation. It should also include details on how the Government will track whether the policy is driving the required market growth, and identify trigger points for further intervention (e.g. funding, regulation) if progress falls behind.</p>	<p>The Government set out plans and parameters for the market-based mechanism for low-carbon heat, which we will launch in 2024, in a Government Response to Consultation published in May 2022. As indicated there, we will be setting out and consulting on further plans for the scheme design and delivery detail in a second consultation. We are putting in place the enabling primary legislation for the scheme through the current Energy Bill, subject to which we will bring forward detailed scheme regulations. Monitoring and evaluation of the scheme and of the overall development of the heat pump market are being developed as a core part of plans. The Clean Heat Market Mechanism is one part of the overall policy framework contributing to supporting and expanding heat pump deployment; we will continue to keep the overall policy framework under review to ensure that it is commensurate to achieving the market transformation required.</p>

#	Recommendation	Response
16	Publish a response to the consultation on phasing out the installation of fossil fuel heating in homes off the gas grid, alongside the follow-up technical consultation, to ensure any required changes in legislation can be implemented ahead of 2026.	We have consulted on phasing out new and replacement fossil fuel heating systems for off gas grid properties and will respond to these consultations in due course.
17	Finalise and publish plans to phase out boiler replacements in off-grid non-residential buildings from 2024, and consult on introducing an earlier phase-out date for gas boilers in non-residential buildings.	We have consulted on phasing out new and replacement fossil fuel heating systems for off gas grid properties and will respond to these consultations in due course.
18	Publish a monitoring framework for tracking delivery of the Heat and Buildings Strategy, setting out how key indicators of progress will be tracked and published. Indicators should include forward tracking of supply chain build up in key areas, like heat pumps, heat networks and energy efficiency.	The Department for Energy Security and Net Zero has put in place and resourced a team to track the delivery of the <i>Heat and Buildings Strategy</i> and established monitoring tools for the Government's building decarbonisation policies. This includes regularly publishing a set of key metrics. Government tracks the number of TrustMark and MCS registered businesses, indicative of the supply chains available for our capital schemes, and construction industry data provides insight into the wider sector. We are undertaking other work to improve our supply chain data: Government has also commissioned the Heating & Cooling Installer Study to provide further data on the current workforce, and the extent to which they could upskill to install heat pumps; A market intelligence study to better understand the supply chains involved in our retrofit programmes; Research on heat networks supply chain, including baseline work already underway with the Heat Networks Industry Council to survey skills capacity; A social research study into energy efficiency installers.
19	Create a public energy advice service to provide households with guidance on decarbonising and adapting their homes to	On 29th July 2022, the Government launched a new digital service 'find ways to save energy in your home' on gov.uk.

#	Recommendation	Response
	<p>climate change by this summer, as committed in the Energy Security Strategy. This should include an online platform including high-level trusted information and advice (including on Government schemes), a link to local providers who can undertake assessments of home energy performance, and bespoke support for households wishing to undertake more complex retrofits.</p>	<p>The service provides impartial and tailored recommendations to consumers on how to improve their home energy efficiency and measures they can install to make their homes greener. The service has links to existing government retrofit schemes and installers. We are launching a national phonenumber service shortly to support those consumers that need more targeted help or who are digitally excluded. In addition, this year we will be launching regionalised pilots for in-person energy advice specific to the local areas.</p>
<p>20</p>	<p>Support the launch of the energy advice service with a widespread publicity campaign, to ensure awareness of the service reaches millions of households across the UK each year, including those who may not yet have thought about retrofitting their homes.</p>	<p>The gov.uk service is fully aligned with the Government's Help for Households Campaign, and the service links to and from, the campaign to offer consumers wider energy efficiency advice and financial support available.</p>
<p>21</p>	<p>Use the planned energy advice service and accompanying awareness campaign to drive demand for the Boiler Upgrade Scheme. Increase available funding as required so that everyone who wants a heat pump through the scheme can get one, as set out as an intention in the Energy Security Strategy.</p>	<p>The energy advice service supports the Boiler Upgrade Scheme (BUS) by signposting to information about the scheme throughout the service and by providing low-carbon heating recommendations, including heat pumps, to users to help raise awareness and drive demand. Government has launched a marketing campaign which is running until March 2023 to increase awareness of heat pumps and the support available through the BUS. The BUS also forms part of the wider government Help for Households campaign. The BUS has £450 million of funding committed between 2022 and 2025. Government has committed a further £6 billion from 2025 to 2028 as part of its' 15% energy reduction target by 2030. We want to continue to support households with this transition and therefore will be extending the Boiler Upgrade Scheme until to 2028.</p>

#	Recommendation	Response
22	Monitor and publish data on the reach and effectiveness of the proposed energy advice service, ensuring the information offer to households on required changes to their homes is continuously improved in line with these findings, and results in genuine carbon savings.	There is a monitoring and evaluation plan across all three strands of the consumer advice project. We are committed to continually improving the Gov.uk site, based on user needs and user feedback.
23	Clearly set out how plans to grow and upskill the workforce will support the Government's pathways for low-carbon heat and energy efficiency and fill the skills gap identified in the Heat and Buildings Strategy.	In September 2022 we launched the Home Decarbonisation Skills Training Competition. This provided £9.2 million in funding to a range of training providers to deliver accredited training at scale to the building retrofit, energy efficiency and heat pump sectors. We expect that this will provide over 9,000 training courses. This builds on £6 million invested previously, delivering around 6,000 training opportunities in 2021. We are developing further plans for skills support in 2023/24 and 2024/25 and will be able to announce more detail in due course. The new Low Carbon Heating Technician apprenticeship is expected to launch this year, with enrolments expected by summer 2023. We are continuing to expand Skills Bootcamps further following the announcement of up to £550 million additional funding across 2022-25 financial years, including up to £150 million in financial year 2022-23. At the Autumn Statement a new Energy Efficiency Taskforce was announced. The remit of this group can be found online ¹⁵ and we expect to work closely with the Task Force on key challenges to achieving our targets, such as supply chain.
24	Publish proposals for a minimum EPC in owner-occupied commercial buildings.	The Government has consulted on proposals for the private rented sector and will publish the Government response in due course. We will also consider how we can further

¹⁵ <https://www.gov.uk/government/publications/energy-efficiency-taskforce-terms-of-reference/energy-efficiency-taskforce-terms-of-reference>

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		support greater energy efficiency in owner-occupied commercial buildings.
25	Implement the performance-based rating scheme to offices and publish timelines for other building types, outlining how timelines correspond to the expected emissions reduction trajectory of commercial buildings in the 2020s.	At present the Government intends to pause the rollout of the operational energy rating pilot scheme. The Government remains interested in exploring how to incorporate operational energy use within government policy. However, prior to committing to a pilot the government is reviewing how this scheme would function within the policy landscape for commercial and industrial buildings.
26	Publish findings on SME energy efficiency from the new research mentioned in the Heat and Buildings Strategy, and outline plans to ensure SMEs are able to invest in retrofit and energy efficiency measures.	In 2021, Eunomia Research and Consulting ¹⁶ undertook a research project that examined international energy efficiency auctions to help inform policy design in a UK context. This report was published in October 2022. We will continue to explore other avenues to support SMEs to carry out energy efficiency upgrades and decarbonise their buildings.
27	Make the evidence on climate risks more usable for decision makers through co-design of research programmes with end users, where the user drives the research question from the beginning of the process.	Embedding co-development between end-users and researchers will be a central aim of the Fourth Climate Change Risk Assessment. We are working closely with the Climate Change Committee to discuss the best ways to achieve this in practice. Defra climate services are funding the UKCP18 Development and Knowledge Sharing Network, a group of external customers with a broad range of interests and expertise who have specified research, tools and guidance needs from UKCP18. The Fourth Climate Change Risk Assessment will also look to develop the economic analysis of climate risks to strengthen the

¹⁶ <https://www.eunomia.co.uk/reports-tools/designing-an-auction-to-install-energy-efficiency-measures-in-small-and-medium-sized-enterprises/>

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		evidence base around potential costs of climate change to inform value for money appraisal of adaptation spending.
28	BEIS should engage with utility companies to encourage standardised benchmarking and data sharing on climate risks to electricity networks, digital & ICT.	Standardised benchmarking and data sharing are important tools to protect consumers from avoidable shocks across different networks as well as providing consistent service across utilities and allowing for shared responses to climate risks. The Department for Energy Security and Net Zero has engaged with the UK Regulators Network who are currently capturing information on regulators' targets and reporting methodologies, to understand the overlaps and interdependencies. On adaptation, at Ofgem there are requirements for price controlled networked companies to provide reporting on resilience and adaptation to climate risks. We will continue exploring the scope for encouraging standardised benchmarking and data sharing on climate risks to electricity networks, digital and ICT and what this could look like.
29	Ensure that adaptation is integrated into major upcoming policies in the next two years related to the eight priority risks identified in the Committee's advice on the Third UK Climate Change Risk Assessment for which BEIS has lead responsibility, coordinating work with other relevant departments as necessary: Risks to people and the economy from climate-related failure of the power system.	Risks to offshore energy infrastructure are already well-managed, with regulators including the Health and Safety Executive requiring the regular assessment of safety, environmental and infrastructural risks. The <i>Heat and Buildings Strategy</i> sets out our plan to decarbonise buildings and commits to considering different climate scenarios when developing future policies, to future-proof them. It set out the principle of taking a 'whole-building' and whole-system approach, considering the interventions most appropriate for the whole building, as well as local and regional suitability, and how best to manage system-level impacts.

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		<p>The UK has a highly resilient electricity network. Industry works to continuously minimise and plan for the risk of unexpected outages. The National Grid Electricity System Operator has the tools needed to operate the electricity system reliably both now and in the future. We remain confident that electricity security can be maintained under a wide range of scenarios. Government regularly reviews risks and plans for these events to ensure appropriate risk action.</p>
<p>30</p>	<p>For the coming five-year period (2023-2028), BEIS should outline appropriate actions in the next National Adaptation Programme to address the adaptation gap identified for the other risks and opportunities in the Third Climate Change Risk Assessment for which it is the lead department (see 2021 Adaptation Progress Report annex).</p>	<p>The Department for Energy Security and Net Zero is involved in cross-government work to address risks to the built environment. Both the Department for Energy Security and Net Zero and Department for Levelling up, Communities and Housing Ministers attend the Net Zero Buildings Council, which brings together senior industry and third sector stakeholders. This provides real world insight into the impact and potential of policies and helps to identify further opportunities for greater efficiency and decarbonisation.</p> <p>A diverse electricity mix is one of the reasons why we have one of the most reliable electricity systems in the world. Proposals for an expert, impartial Future System Operator with responsibilities across both the electricity and gas systems will drive progress towards net zero while maintaining the resilience of the energy system in the face of a changing risk profile, including the impacts of climate change. Government works closely with network operators, electricity generators and the regulator on risk identification, building resilience and emergency preparedness.</p>

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31	Address the lack of research on impacts in 2°C and 4°C scenarios as an urgent priority ahead of the Fourth Climate Change Risk Assessment.	We are committed to a more ambitious Fourth Climate Change Risk Assessment with a greater research budget and focus on modelling rather than relying on synthesising available evidence. We are also working with the Climate Change Committee to develop an Evidence Standard to clarify which scenarios (both in terms of climate and socio-economic) the assessment will incorporate, in order to influence the wider research community.
32	Across all sectors, for planned regulations and incentives such as carbon pricing, ensure thorough consultation with the private sector throughout the policy development process. Signals of intent should be given well in advance so that the private sector by default moves in step with the UK transition to Net Zero.	Government consults, as a matter of course, with a variety of stakeholders during the policy development process. This includes stakeholders in the private sector, charities, associations, local government, public bodies, and members of the public. Consultation helps inform policymaking as well as give stakeholders sight of policy options being considered or proposed, ahead of confirming them. For instance, in the past year and related to net zero, some of the consultations run by government were on a sustainable aviation fuels (SAF) mandate, on ending the retail sale of peat in horticulture in England and Wales, and on the design of a business model for low carbon hydrogen.
33	Develop a document setting out Government's vision of how its Net Zero Strategy will be delivered. This should clarify roles and responsibilities across central and local government, devolved administrations, regulatory agencies and the wider public sector, and business, how approaches will be coordinated, and how Net Zero interacts with other Government priorities. This document will need to be flexible and some aspects will be uncertain, so it should be updated annually.	Existing well-functioning mechanisms and structures drive accountability for delivery of net zero. Keeping these under review ensures that roles and responsibilities are clearly understood across the system. At the heart of government is the Domestic and Economic Affairs (Energy, Climate and Net Zero) Cabinet Committee that ensures a coordinated approach to net zero across departments. There are also established frameworks for engaging bodies outside central government, such as the Interministerial Group, which brings together ministers from the devolved administrations and a Net Zero Business and Investment Group which

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		<p>convenes business and finance leaders. And, through the Local Net Zero Forum government is working with local authorities and their representative bodies to discuss their roles and responsibility in delivering net zero. We will update on roles and responsibilities as they continue to evolve, principally through the annual progress report.</p>
<p>34</p>	<p>Ensure that the Local Net Zero Forum addresses the question of what aspects of Net Zero central and local government are responsible for and how these will be coordinated. As well as sharing local best practice, this should lead to a clearer shared understanding of roles and responsibilities which can be communicated across local government.</p>	<p>Through the Local Net Zero Forum we are working with local government to develop a clearer shared understanding of how central government and local government can work together to deliver net zero. There is no 'one size fits all' answer to the role of local government in net zero because of the variety of different types of local authority and because they have significant autonomy in what they do.</p>
<p>35</p>	<p>Develop and begin to implement contingency plans to address the range of risks to meeting carbon budgets. These should broaden the set of emissions reductions pursued, in particular by including demand-side policies, and avoid increasing reliance on engineered removals.</p>	<p>The <i>Net Zero Strategy</i> sets out how the UK will deliver on its carbon budgets, and includes bold policies and proposals across every sector of the economy. It clearly sets out the role of engineered greenhouse gas removals as a complement to, rather than substitute for, ambitious action to decarbonise the economy. We have robust governance structures in place to monitor and address risks to meeting carbon budgets and ensure a whole-of-government approach to climate policy and delivery. We will continue to regularly review progress against our targets- and to adapt our approach or take further action if necessary. With regards to demand side policies: we don't believe in telling people how to live their lives, which is why our focus is on making it easier for people to shift towards a greener and more sustainable lifestyle whilst maintaining freedom of choice and fairness.</p>

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36	<p>Ensure that the Local Net Zero Forum also addresses the question of local government powers, capability/capacity, and funding to identify gaps and barriers that could hinder the ability of local government to deliver the roles and responsibilities for delivery of Net Zero that have been agreed with central government. This should aim to build a better understanding of the current landscape, so that Government will be able to develop an evidence-based plan for how to enable cost-effective delivery of the actions that are required from local government; and share the insights, lessons and next-steps that the Forum has identified with all relevant authorities.</p>	<p>Through the Local Net Zero Forum we are working with local government to discuss local net zero policy and delivery issues. Outputs from these discussions will help to inform future decisions on policy and delivery options to support the local delivery of net zero.</p>
37	<p>Develop an agreed, consistent approach to developing local area energy plans. Local authorities should be supported (financially and with appropriate skills and knowledge-sharing) to develop these credible delivery plans, and they should become a condition of receipt of UK Infrastructure Bank and other Net Zero funding.</p>	<p>The Department for Energy Security and Net Zero has work underway to consider the role of Local Area Energy Planning in delivering net zero and in supporting efficient network planning – including heat networks zoning policy. This includes engaging with Ofgem as part of its ongoing governance review into local energy institutions, as well as working closely with the Department for Levelling Up, Communities and Housing, UKRI, ESC, the devolved administrations and other key stakeholders.</p>
38	<p>Ensure all of the department's own policy decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.</p>	<p>HM Treasury's Green Book and Business Case Guidance is used to appraise spending and regulatory proposals, and includes guidance for how net zero and climate risk considerations should be included in appraisal. This is outlined in Green Book supplementary guidance. HM Treasury continues to work with departments to embed Green Book best practice.</p> <p>The Government has set out its intention to put the National Procurement Policy Statement (NPPS) on a statutory basis through the Procurement Bill. The NPPS sets out clear</p>

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		<p>principles that contracting authorities should follow - tackling climate change and achieving net zero is one of these. In addition, Procurement Policy Note 06/21 shows the government's commitment to achieving net zero. Under this measure, prospective suppliers bidding for major contracts must submit a Carbon Reduction Plan that details their emissions and their organisational commitment to net zero by 2050.</p> <p>Companies that fail to provide a Carbon Reduction Plan which meets these requirements risk deselection from the procurement. Between September 2021 and the start of February 2023, the measure was applied to 129 procurements, which are valued at c.£187.5 billion over their contractual term.</p>
39	<p>Ensure that public bodies with a role in delivering Net Zero have a clear duty to facilitate this and work together. This should apply, for example, to Ofgem and the new Future System Operator.</p>	<p>Public bodies have an important role to play in the transition to net zero, and there are examples where we have given such bodies clear duties. Ofgem has a statutory duty to protect consumers' interests in the reduction of greenhouse gases, and Government will give a further steer to Ofgem to focus on delivering net zero in the upcoming Strategy and Policy Statement (SPS), which we will consult on this Spring. We have also committed to proceed with the expert, impartial Future System Operator, who will have a legal duty to facilitate net zero while maintaining security of supply, and an efficient, coordinated and economical system. Another public body with a clear duty to facilitate the net zero transition is the North Sea Transition Authority, who have renewed their Strategy to integrate net zero and also included net zero as a key theme in benchmarking to drive performance improvement.</p>

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40	Increase transparency around Government's expected pathways to Net Zero. This should involve publishing more details on the assumptions that underpin these pathways and how the abatement set out in the Net Zero Strategy will be achieved by planned policies, setting out the quantified abatement expected to be achieved by each policy.	The <i>Net Zero Strategy</i> set out an indicative 'delivery pathway' of emissions reductions to meet our climate targets up to and including Carbon Budget 6. This delivery pathway can be broken down into indicative pathways for each sector of the economy - these are presented as ranges to reflect the inherent uncertainty in emissions projections, which are sensitive to underlying baseline emissions, future macroeconomic trends or changes in carbon accounting. The exact areas for emissions savings will also shift as our understanding increases, particularly given the interdependencies and interactions within and between sectors. The delivery pathway is therefore not an explicit prediction or target, but helps to drive change while we adapt our approach over time. The Government has published a Net Zero Growth Plan which includes a carbon budget delivery update - this sets out a snapshot of the current package of proposals and policies which can enable delivery of carbon budgets 4, 5 and 6.
41	Publish the Terms of Reference and membership list for the Local Net Zero Forum. This should include both broad representation from across local government and senior decision-makers from central Government.	We will publish the Terms of Reference and membership list in due course.
42	Develop mechanisms to ensure knowledge is built upon and not lost, in order to speed up innovation, as well as accelerate and learn from implementation. This should build on the Net Zero Research & Innovation Framework and lessons learned from the success of vaccines development during the COVID-19 pandemic.	As the Government's Net Zero R&I programmes develop over the coming years, knowledge sharing will become increasingly important. Alongside the <i>Net Zero Growth Plan</i> we have published a <i>Net Zero R&I Delivery Plan</i> which outlines the Government's net zero R&I programmes for the current Spending Review 2022-25, as a follow-up to the Net Zero Research & Innovation Framework. We will continue to work through the Net Zero Innovation Board to share knowledge and best practice across the R&I programmes

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		and with industry and academia. We will also continue to publish programme updates such as the Net Zero Innovation Portfolio Interim Reports.
43	Embed participatory and deliberative methods in the Net Zero policy-making process, where appropriate, as a means of improving the design of, the acceptability of, and public support for, new policies. Also embed key pillars of behavioural science to develop policies that make green choices easier. BEIS should take responsibility for ensuring these methods are coordinated across departments.	The <i>Net Zero Strategy</i> sets out our approach to public engagement, and principle 5, in the Green Choices chapter 'Motivate & build public acceptability for major changes' and recognises the need to listen to the public's view on how to reach net zero. We continue to invite the public to shape policies on net zero through consultations and deliberative dialogues. In 2022, we continued to commission public dialogues on net zero, including on biomass and bioenergy with carbon capture and storage to feed into the Biomass Strategy; the Government Office for Science commissioned a public dialogue to inform their Net Zero Society Foresight project; and Defra has commissioned a Strategic Qualitative Panel, involving 30 members of the public engaging with a variety of research topics, including net zero. The Department for Energy Security and Net Zero and Defra have also increased behavioural research capabilities by launching an Energy & Climate Behavioural Science Framework, a call-off contract that allows us to rapidly procure behavioural research, DfT will also be launching one too.
44	Publish a public engagement strategy that sets out a clear long-term vision of how to engage people and businesses in delivering Net Zero. This should be inclusive and representative of the UK's diverse communities. It should include public communications to inform key audiences about the critical changes required to deliver Net Zero, and to build understanding of the associated timelines, benefits and costs.	The government approach to public engagement for net zero was set out in the <i>Net Zero Strategy</i> . We agree with the conclusion of the report that the public will play a key role in the transition and will, in the coming months, set out further detail on how Government will (i) support public awareness of our actions through our digital platforms, (ii) develop a roadmap setting out plans and proposals under net zero and (iii) construct a guiding framework, in

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		<p>conjunction with partners and trusted messengers, to amplify net zero messaging. We continue to engage and support businesses to meet net zero commitments including through the SME Climate Hub, which is part of the global Race to Zero campaign, and gives businesses access to a suite of tools for measuring, reducing and reporting on their emissions. We have also established a Net Zero Business and Investment Group.</p>
45	<p>Publish a quantified breakdown of the emissions savings from policies and measures that make up the savings given in the Net Zero Strategy.</p>	<p>As part of this publication we have published a quantified breakdown of the emissions savings from an updated list of quantified policies and proposals, as well as details of unquantified policies and proposals, that will enable Carbon Budgets to be met.</p>
46	<p>Publish an Action Plan for Net Zero Skills that includes a comprehensive assessment of when, where, and in which sectors there will be skill gaps specific to Net Zero. This should include consideration of particular barriers to labour market entry into occupations needed for the transition and Government plans for action on the skill system to facilitate entry into these occupations.</p>	<p>In 2020, Ministers from the (then) Department for Business, Energy and Industrial Strategy and the Department for Education commissioned the independent Green Jobs Taskforce to assess skills needs for net zero. This informed the <i>Net Zero Strategy</i>, which set out the range of action the Government is taking to ensure the UK has the skilled workforce to deliver net zero. We then established the Green Jobs Delivery Group, as the central industry and government forum to drive forward this agenda.</p> <p>But we need to go further which is why government is committing to publishing a joint government-industry <i>Net Zero and Nature Workforce Action Plan</i> in the first half of 2024, representing the culmination of several sectoral assessments in the coming 12 months. We have published head start actions for a joint government-industry Net Zero Power and Networks Workforce Action Plan. We are beginning the process of developing dedicated</p>

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		assessments for other sectors. Further detail is coming later in the Spring.
47	Develop a strategy for engaging with small and medium-sized enterprises (SMES) on decarbonisation, particularly high-emission, low-engagement businesses. Introduce a package of measures within this, including a one-stop-shop for SMEs to get decarbonisation advice with a carbon foot-printing tool, develop a strengthened low-carbon advisor / auditor role for SMEs and develop an effective financing strategy to support SME decarbonisation.	<p>The Department for Energy Security and Net Zero's UK Business Climate Hub is a digital platform used to encourage SMEs to join the Race to Zero, and find practical advice on how to reduce emissions. It is connected to the international SME Climate Hub, which provides a range of resources for SMEs to measure, reduce and report on their emissions, including a free Carbon Calculator tool.</p> <p>Additionally, as outlined in the <i>British Energy Security Strategy</i> (2022), we will look to establish a dedicated energy advice offering for smaller businesses to provide trusted advice to help them reduce their energy use, costs and decarbonise, and we are working to deliver a dedicated service on gov.uk offering advice to businesses by the end of 2023. By the end of 2023, we will look to deliver a pilot energy advice service (one-stop-shop) for SME businesses that offers subsidised energy audits and potential grant funding to support improvements in awareness of energy management and take up of energy efficiency investments.</p>
48	Through the Review of Electricity Market Arrangements (REMA), develop a strategy as soon as possible on market design for the medium- to long-term for a fully decarbonised, resilient electricity system in the 2030s and onwards.	The REMA programme is developing a strategy to reform (non-retail) electricity markets to help deliver a cost-effective transition to a future net zero power sector, whilst maintaining a secure electricity supply and ensuring our decarbonisation ambitions are achieved in the medium to long-term. We ran our first consultation from July to October 2022 and published the summary of responses in March 2023. We aim to publish a second REMA consultation in Autumn 2023 and will take decisions on

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		shorter-term reforms more quickly where it is viable to do so throughout the REMA programme.
49	Publish a strategy to coordinate the development of interconnectors and connections for offshore wind farms to the onshore network, taking prompt action to ensure efficient implementation of the detailed regulatory and legislative changes necessary for their timely delivery.	<p>In 2020, the Department for Business, Energy and Industrial Strategy launched the Offshore Transmission Network Review in partnership with key stakeholders to deliver a more coordinated transmission network for offshore wind and interconnectors and accelerate deployment whilst minimising impacts on communities and environment and reducing consumer cost.</p> <p>The Holistic Network Design (HND), developed by National Grid ESO, was published in July 2022. This first of a kind design exercise details connections for ~20GW of offshore with a focus on sharing transmission infrastructure where possible. The Department for Energy Security and Net Zero is now consulting on: changes to the National Policy Statements which propose changing the presumption for Offshore wind connections from point-to-point to coordinated connections; community benefits; and publish recommendations for a future framework for delivery of offshore wind and interconnection. This will mark the end of the review phase and a shift to delivery.</p>
50	Publish a strategic framework identifying the network requirements for Net Zero, and the changes needed to ensure investments in resilient infrastructure are identified, planned, consented and built in sufficient time to accommodate increased demand and generation.	<p>In August 2022, we published the Electricity Networks Strategic Framework jointly with Ofgem. This set out our vision for the transformation of the electricity network to ensure it is an enabler for net zero, and included key actions on:</p> <ul style="list-style-type: none"> • Taking a more strategic and coordinated approach to network planning and development that takes account of the wider energy system.

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		<ul style="list-style-type: none"> • Accelerating network infrastructure delivery, ensuring the system is resilient, efficient and can transform at pace to meet Government targets for low carbon demand and generation. • Streamlining the planning and consenting process to ensure more efficient build of infrastructure, while accounting for community and environmental impacts. • Improving affordability of and reducing timescales for connections to the electricity network. • Developing a smart and digitalised network, with flexible solutions and markets complementing physical infrastructure. • Ensuring costs are kept as low as possible and charges are reflective of the changing system. • Ensuring that electricity networks contribute to building back greener, with benefits for the whole economy and the environment. <p>In addition, accompanying analysis showed the extent of network investment and network build required by 2050, as well as the expected benefits for jobs and the economy. The Strategic Framework complements the actions set out on electricity networks in the British Energy Security Strategy, and the appointment of Nick Winser as electricity networks commissioner to advise on how to achieve the aim of reducing the timeline for transmission infrastructure by 3 years, with an ambition to halve the end-to-end process.</p>
51	Publish a comprehensive long-term strategy for achieving 95% low-carbon electricity by 2030, on the path to full	We have published our strategy for decarbonising the power sector in the <i>Energy White Paper, Net Zero Strategy,</i>

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	<p>decarbonisation by 2035. Ensure this sets out how the low-carbon flexibility options required to replace unabated gas by 2035 will be delivered, and identifies contingencies for addressing key risks (e.g. nuclear, hydrogen, carbon capture and storage).</p>	<p><i>British Energy Security Strategy, and Powering Up Britain: Energy Security.</i> These documents set out an evolving picture of how we will develop and deliver the low carbon and flexibility options required to replicate the role unabated gas plays in our electricity system today and our adoption of a portfolio approach to mitigate the delivery risk of any individual project or technology.</p> <p>We need to retain the ability to adapt to changing circumstances and will continue to review our plans and set up processes to identify and manage system risks, drawing on advice from experts to test our approach and adjust our course to ensure that we remain on track to deliver a reliable, low-cost electricity system, which remains consistent with our net zero target.</p>
52	<p>Identify and address potential key supply chain bottlenecks for delivering up to 50 GW of offshore wind by 2030, including for investment in ports, adequate vessel capacity, manufacturing capability and floating wind. Take opportunities to link supply chain action to key decision points in offshore leasing and Contract for Difference auctions.</p>	<p>The Offshore Wind Acceleration Taskforce has been identifying actions to address barriers to investment in the supply chain, supporting energy security and the UK's deployment ambitions. The Floating Offshore Wind Manufacturing Investment Scheme will launch shortly and provide up to £160 million to incentivise investment in critical infrastructure projects needed to deliver our floating offshore wind ambitions and support manufacturing growth. We have updated the Contracts for Difference (CfD) Supply Chain Plan policy for Allocation Round 6 and are preparing work on whether and how to introduce non-price factors into the CfD in future rounds, in a bid to drive investment in a wider range of public goods such as supply chain development. We are also working collaboratively with the renewables industry and The Crown Estate to update their approaches to supply chains in the current global context.</p>

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53	Publish a proposal on the business model for deployment of large-scale (>1 MtCO ₂ /year) engineered removals.	On 5 July 2022, a consultation on potential business models for engineered greenhouse gas removals to unlock private investment was launched. The consultation also explored options for building a negative greenhouse gas emissions market in the UK and outlining our approach to Measurement, Reporting and Verification. The consultation closed on 27 September 2022. We intend to provide a response to the consultation and set out the next steps this year.
54	Clarify which bodies and departments hold responsibility for delivering at-scale deployment of engineered removals and whether any new bodies will be established.	The Department for Energy Security and Net Zero is responsible for policy to support at-scale deployment of engineered removals. At present, there are no plans to create new bodies.
55	Work with the Interministerial Group for Net Zero, Energy and Climate Change to publish a joint position on the contribution of engineered removals and CCS to meeting UK-wide and DA targets to 2030.	<p>Carbon capture usage and storage (CCUS) and engineered greenhouse gas removals have a role to play in decarbonising the industrial heartlands across the country and creating economic opportunities across the nations and regions of the UK.</p> <p>Through the Interministerial Group for Net Zero we engage closely with our partners across all Devolved Administrations. We will continue to use this forum to explore the role that engineered removals and CCUS can play in meeting both the UK-wide and devolved decarbonisation ambitions.</p>
56	Take legislative steps to allow for engineered removals to count towards achievement of UK carbon budgets.	A clause was included in the Energy Bill that seeks to broaden the definition of “removals” of greenhouse gases beyond nature-based greenhouse gas removals (GGRs) to include engineered GGRs. This will ensure that negative greenhouse gas emissions derived from engineered GGRs

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		can count towards our legislative carbon budgets. The Energy Bill is currently progressing through Parliament.
57	Publish plans for monitoring, reporting and verification systems for engineered removals, noting the recommendations of the 2021 Task & Finish Group report and responses to the consultation on business models.	Building on the work of the MRV Task and Finish Group, we consulted on aspects of MRV in our Greenhouse Gas Removal (GGR) Business Models consultation and considered some of the challenges and research gaps in this area. This included factors to define legitimacy of removals such as ensuring that more carbon is removed from the atmosphere than is generated in a GGR process (often referred to as 'net negativity'), the need to distinguish between avoided and removed greenhouse gas emissions, and ensuring that removed carbon is stored for an effective period of time (often referred to as 'permanence' or 'durability').
58	Publish targets for the roll-out from now until 2037 of heat pumps that do not use F-gases as a refrigerant and set out how the Government plans to meet these targets.	Hydrofluorocarbons (HFCs) – the most common type of fluorinated gases (F-gases) – are widely used as refrigerants in heat pumps. It is a government priority to phase down the use of HFCs over time in favour of lower global warming potential alternatives. Phasing down HFCs is achieved by setting progressively tougher quotas for those who place HFCs on the market for the first time. The UK Government has committed to phase down the use of HFCs by 79% by 2030 and 85% by 2036. A phasedown of 55% has already been achieved. In December 2022, we published an "Assessment of the F gas Regulation in Great Britain", which provided a forecast of the expected demand for HFCs and a review of the availability of technically feasible and cost-effective alternatives. We aim to publish a consultation in due course which will set out proposals for changes to F-gas legislation. The proposals will focus on

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		<p>pushing climate ambition in support of the Government's net zero commitments.</p>
<p>59</p>	<p>Clarify plans and responsibilities for electrification of oil and gas infrastructure through integration with the offshore wind planning process and/or onshore grid, so that by 2027 new oil and gas platforms can achieve zero emissions from operational energy use.</p>	<p>The North Sea Transition Authority (NSTA) is already applying its regulatory powers to require new platforms to include low carbon power such as being built 'electrification ready', or already electrified. The NSTA considers factors sometimes collectively referred to as an 'effective net zero test' when approving new field developments. The NSTA uses this process to ensure new developments build in carbon abatement and is continuously looking at strengthen interventions to prioritise electrification where technically feasible. Given the larger proportion of potential electrification projects will be in Scottish waters, the Scottish Government's Innovation and Targeted Oil and Gas (INTOG) sectoral marine planning and associated seabed leasing round, launched by Crown Estate Scotland, is playing an important role in the integration of offshore wind development and electrification of the oil and gas sector. INTOG leases are expected to be awarded in April 2023.</p>
<p>60</p>	<p>Develop minimum emissions-intensity standards for domestic oil and gas production by the next licensing round. In development, seek to ensure a consistent measurement approach with emerging international measurement standards.</p>	<p>The landmark North Sea Transition Deal between industry and government contains ambitious agreements to reduce emissions. Industry committed reduce its emissions 50% by 2030, ensuring a net zero basin by 2050 and supporting our goal of decarbonising the economy. This is a different way of measuring the carbon intensity of domestic oil and gas production to an emissions intensity standard. We do not propose to reopen this deal for negotiation.</p> <p>The North Sea Transition Authority already considers factors sometimes collectively referred to as an 'effective</p>

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		net zero test' when approving new field developments. The NSTA uses this process to ensure new developments build in carbon abatement and is continuously looking at strengthen interventions to prioritise electrification where technically feasible.
61	Make data on oil and gas production and emissions-intensity publicly available in a way that is consistent with the UK greenhouse gas inventory and differentiates between new and existing assets.	<p>The North Sea Transition Authority reports domestic production emission data via its annual Emissions Monitoring Report at an aggregated (basin-wide) level and has also recently published asset level domestic production emission information in publicly available dashboards¹⁷.</p> <p>The North Sea Transition Authority does not hold import emission data but presents a gas footprint analysis comparing imports and domestic production using third-party data which will be updated this year¹⁸.</p>
62	Establish funding mechanisms to support the development of 10 GW of low-carbon hydrogen production by 2030, ensuring these are designed to limit residual and upstream emissions, but also reflect hydrogen costs in a way that does not bias towards hydrogen where electrification is competitive.	<p>Government has established funding mechanisms to support the deployment of low-carbon hydrogen production at the earliest opportunity. We have published a Low Carbon Hydrogen Standard (LCHS) which sets a greenhouse gas emissions threshold that forms the basis of assessments for the receipt of government support and are consulting on the design of a Low Carbon Hydrogen Certification Scheme, planned to be introduced in 2025, which is intended to facilitate trade in verifiably low carbon hydrogen.</p> <p>We announced the successful applicants to the first round of Strands 1 and 2 of the Net Zero Hydrogen Fund in March 2023. We have launched the first electrolytic hydrogen</p>

¹⁷ <https://app.powerbi.com/view?r=eyJrljoiMWEwNTQ3ZWMtZjZiMC00NDRiLTg4MzAtN2M5N2I5MjhIMTYxliwidCI6ImU2ODFjNTIiKLTg2OGUtNDg4Ny04MGZhLWNIMzZmMWYyMWlwZiJ9>

¹⁸ <https://www.nstauthority.co.uk/the-move-to-net-zero/net-zero-benchmarking-and-analysis/natural-gas-carbon-footprint-analysis/>

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		<p>allocation round (offering joint Hydrogen Production Business Model and Net Zero Hydrogen Fund support) in July 2022 and have announced the shortlist of projects to take through to due diligence for this round. We have also announced that government will fund projects prior to the hydrogen levy being operationalised. Later in 2023 we expect to announce successful projects, to be awarded contracts, from this first electrolytic hydrogen allocation round and intend to launch the second electrolytic hydrogen allocation round. We aim to have up to 1GW of electrolytic hydrogen in construction or operational by end of 2025. We intend to move towards holding more price competitive allocation rounds from 2025, as soon as legislation and market conditions allow.</p>
63	<p>Continue to take a global lead on further developing and improving UK and international biomass governance and sustainability criteria.</p>	<p>Government has committed to publishing a <i>Biomass Strategy</i>, which is due in 2023. The Strategy will set out how sustainable biomass could be best utilised across the economy to help achieve the government's net zero and wider environmental commitments while also supporting energy security.</p> <p>The forthcoming <i>Biomass Strategy</i> will set out a series of recommendations for enhancing the UK's biomass sustainability criteria, these have been developed based on responses to the Biomass Call for Evidence and detailed stakeholder engagement. We also intend to set out options for implementing these recommendations in the future including the potential governance arrangements for these options. The UK Government already engages in an extensive range of activities that relate to biomass sustainability governance, and we intend to continue to engage in international platforms and bilateral discussions</p>

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		to share best practice and promote biomass sustainability requirements.
64	The Biomass Strategy needs to set out a best use hierarchy for biomass and address the sustainability of the biomass supply required to support the rapid and sustainable deployment of BECCS (for power and biofuels). The Strategy should consider reducing reliance on imports by increasing domestic biomass supply as part of wider land-use changes (including diet change).	<p>The <i>Biomass Policy Statement</i> set out key principles for biomass use across the economy focussing on how biomass can support the delivery of our net zero and wider environmental targets. We are developing a priority use framework for the <i>Biomass Strategy</i> which will assess the decarbonisation potential of biomass uses across sectors. The framework will also consider other factors, such as costs, environmental impacts and availability of sustainable biomass from domestic and international sources.</p> <p>Building on this framework and sustainable feedstock availability, we intend to outline the role of BECCS, potential routes for BECCS deployment, and the policy frameworks needed to enable BECCS projects to deploy at scale, which will apply the updated sustainability criteria recommendations. Domestic biomass production will be delivered as part of a strategic approach to land use, which considers the full range of Government land-use priorities. The Government has committed to publishing a Land Use Framework for England in 2023, which will set out land-use change principles to balance climate, food, and environment outcomes.</p>
65	The Government's 2030 Strategic Framework should set out how the international climate and environment capability built up during the UK's COP26 Presidency will be resourced, maintained and further developed to enable delivery of international climate goals. Particular focus should be given to plans for coordination and consistency across departments and	The Government is committed to accelerating international action to address climate change and biodiversity loss. The UK's Strategic Framework for International Climate and Nature Action will set out an integrated approach to tackling these crises, setting out UK commitments that build on our COP26 Presidency success and the Convention on

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	<p>the embedding of dedicated climate experts in areas such as trade, security and foreign policy.</p>	<p>Biological Diversity, resulting in the Kunming-Montreal Global Biodiversity Framework.</p> <p>Following our COP Presidency ends we will shift our focus towards implementation and ensuring effective mechanisms for continued Government coordination. Our diplomatic network, the fourth largest in the world, is key to delivery. We will build capability to recognise and promote expertise on climate and nature across the FCDO, including by building objectives into business planning and providing improved learning and development opportunities. The Framework, which has been developed by the Department for Energy Security and Net Zero, Defra and FCDO with input from across Government, will provide clear direction for delivering on our international climate and nature commitments.</p>
<p>66</p>	<p>Develop a UK negotiating position for COP27 that strives to secure integrity, transparency and accountability of the international climate system, promote high ambition on mitigation and adaptation and provide support and equitable outcomes for developing countries. Communicate the core principles of this position and align with negotiating blocs that share these values.</p>	<p>The UK's main objective for COP27 negotiations was to deliver on the commitments of the Glasgow Climate Pact, and drive further action. With our COP26 Presidency year ending at the start of COP27, the UK COP27 delegation championed the UK's national positions and worked constructively with other countries and negotiating groups to make progress across all agenda items. At COP27 the UK worked to preserve and accelerate the historic commitments in the Glasgow Climate Pact to keep 1.5°C alive, and to make progress on adaptation, on which countries agreed to develop a new framework for adoption at COP28. The UK worked to ensure that COP26 outcomes were taken forward at COP27 on loss and damage, including the crucial breakthrough agreed on funding arrangements, and to build on Glasgow's finance legacy, including advancing discussions on the post-2025 finance</p>

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		goal, and shifting the broader financial system towards a more sustainable pathway.
67	Update the technical annex (the Information to facilitate Clarity, Transparency and Understanding) of the enhanced 2030 NDC the UK resubmits in 2022 for COP27 to expand on the role of the Net Zero Strategy in meeting the 2030 target. If there is a policy gap to 2030, Government should bring forward more policy and address how the gap will be closed in the enhanced 2030 NDC. The enhanced 2030 NDC should also explain the UK's approach to the Just Transition, public engagement and participation, governance and reporting.	The UK has responded to the Glasgow Climate Pact by revisiting its 2030 Nationally Determined Contribution (NDC) and strengthening it with information on delivery of our target to reduce all greenhouse gas emissions by at least 68% by 2030 on 1990 levels. This was communicated on 23 September 2022 to the UNFCCC.
68	Conduct a comprehensive public engagement and consultation process on the target level and delivery of the NDC for emissions reductions to 2035 submitted in 2025.	The UK will continue to carry out a wide range of engagement on net zero policies with a cross-section of society including experts, industry, non-governmental organisations, trade bodies and the wider public, all stakeholders who will help shape plans and policies for reaching net zero emissions by 2050. The government's role to set out overall direction, priorities and narrative is established in the <i>Net Zero Strategy</i> where we set out principles on how we will engage the public and support them to make practical green choices.
69	Outline governance and accountability structures for tracking progress against the 2030 NDC target and future UK NDCs, noting that the UK NDC is not in scope of the Climate Change Act (2008) and the Carbon Budgets framework and is therefore not directly accountable to Parliament.	The greenhouse gas inventory (GHGI) provides annual estimates of UK emissions, produced using the best available data on activity and emission factors. The inventory is compiled according to Intergovernmental Panel on Climate Change (IPCC) guidelines and has evolved over more than 20 years. The GHGI is the primary mechanism by which the UK's progress towards national mitigation targets are measured including the Kyoto Protocol and the UK's Nationally Determined Contributions. Domestically,

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		<p>the GHGI is also the basis of the Annual Statement of Emissions to the UK Parliament (a requirement of the Climate Change Act). Outputs further inform efforts to meet the UK 2050 net-zero emissions target and assess legally binding Carbon Budgets.</p>
70	<p>The UK's enhanced 2030 NDC should include language recognising that Net Zero delivery is at risk from climate impacts and that emissions reduction targets cannot be met without actions on adaptation that respond to a warming climate, such as the future proofing of critical energy infrastructure.</p>	<p>The IPCC's latest Working Group III report makes clear that the window to keep 1.5°C alive is closing alarmingly fast. Current global policies put the world on track to reach average global warming of 3.2°C (between 2.2-3.5°C) by 2100, with irreversible and lasting impacts. The scale of the challenge is made clear in the latest UK-wide Climate Change Risk Assessment, CCRA3. We are working with the energy industry, regulators, and other stakeholders to continually improve and maintain the resilience of old and new energy infrastructure, networks and assets, to reduce vulnerabilities, and ensure an effective response to actual or potentially disruptive incidents- taking into account future system changes and climate change risks.</p>
71	<p>COP26 Sectoral Pledges signed by the UK should be detailed in the enhanced 2030 NDC the UK resubmits in 2022 for COP27 and UK domestic progress against them should be reported in Biennial Transparency Reports to the UNFCCC.</p>	<p>COP26 Sectoral Pledges signed by the UK have been set out in the revisited and strengthened Nationally Determined Contributions. We will track progress towards our commitments in the Biennial Transparency Reports under the Paris Agreement.</p>
72	<p>Set out plans for reducing domestic methane emissions in line with the collective aims of the Global Methane Pledge (a reduction in UK methane emissions of at least 30% from 2020 levels by 2030) and announce an intention to set a longer-term pathway for these emissions in 2023. These plans for</p>	<p>The UK signed up to the Global Methane Pledge (GMP) at COP26, and published the UK Methane Memorandum at COP27, and is working hard to progress these commitments. The GMP sets a collective global goal of reducing global methane emissions by at least 30% below 2020 levels by 2030. Between 1990 and 2020, the UK has reduced methane emissions by around 62%, more than any</p>

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	contributing to the Global Methane Pledge should be included in the enhanced 2030 NDC the UK resubmits in 2022 for COP27.	other OECD country, with the largest reductions coming from the waste and energy sectors. The UK's <i>Net Zero Strategy</i> will deliver further reductions by 2030 and beyond. In addition, through the North Sea Transition Deal the UK's oil and gas sector committed to accelerate compliance with the end World Bank's 'Zero Routine Flaring by 2030' initiative ahead of 2030. In its Methane Action Plan, UK industry has committed to a 50% reduction in methane emissions from upstream operations by 2030 against a 2018 baseline.
73	Set out the Government's approach to domestically achieving aims of priority sectoral COP26 Pledges before COP27.	<p>We have previously set out detail on the Government's approach to domestically achieving aims of priority sectoral pledges:</p> <p>Coal: we have committed to phase out unabated coal power generation completely by 2024 and to fully decarbonise the power system by 2035, subject to security of supply.</p> <p>Cars: we have committed to ending the sale of new petrol and diesel vehicles by 2030, and for all new cars and vans to be fully zero emission at the tailpipe by 2035 – and in April 2022 we published a technical consultation on the design of a zero emission vehicles mandate.</p> <p>Cash: we remain committed to spending at least £11.6 billion on International Climate Finance between the financial years 2021/22 and 2025/26, as was restated in the International Development Strategy published last year.</p> <p>Trees: We have set a legally binding target under the Environment Act 2021 to increase tree canopy and woodland cover to 16.5% of total land area in England by 2050.</p>

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74	<p>Consult on the policy design of demand-side policies (including product standards) for industrial products, following the commitment in the call for evidence: 'Towards a Market for Low Emissions Industrial Products'.</p>	<p>Government is currently consulting on how to support a market for low carbon products through product standards, labelling and procurement policies. Subject to the outcome of the consultation, these policies could build demand for low carbon products, supporting the business case for companies to invest in changes to decarbonise and mitigate future carbon leakage risk. If implemented, mandatory product standards would set upper limits on embodied emissions of industrial products that could be sold in the UK. This could operate either as a standalone measure or in addition to a carbon border adjustment mechanism. Voluntary product standards could sit in a ranking system so progressive manufacturers can distinguish their products as lower carbon. Both could be supported by new embodied emissions reporting. Government, as a buyer, can increase demand for lower carbon industrial products through its procurement decisions and incentivise private companies to do the same to grow the low carbon product market.</p>
75	<p>Ensure the policy package for decarbonising manufacturing addresses manufacturers' low appetite for investments with long payback times, either using grants or favourable loans. This could be achieved through a clear longer-term role for the Industrial Energy Transformation Fund.</p>	<p>As set out in the <i>Industrial Decarbonisation Strategy</i>, there is a strong role for government support in overcoming decarbonisation investment hurdles in the manufacturing sector, particularly in the early phases. The Industrial Energy Transformation Fund (IETF) is one such support mechanism. Case studies of investment to date through the IETF can be found on gov.uk. Government is building on this support with the development of business models for hydrogen and carbon capture, investment in clusters and support for dispersed sites through the Local Industrial Decarbonisation Plans Competition. We will continue to explore further policy support, including a Phase 3 of the</p>

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		IETF, and opportunities to work with the UK Infrastructure Bank on access to finance.
76	Review, invest in, and initiate reform of industrial decarbonisation data collection and annual reporting to enable effective monitoring and evaluation, and policy implementation. This will require additional data collection and reporting to allow for effective tracking of energy efficiency, material efficiency, fuel switching, CCS, including progress developing these measures, and more holistic measurement on a product or whole life cycle carbon basis. This reform should also be used as an opportunity to remove overlaps in reporting between existing schemes, which place an unnecessary burden on industry.	We are developing proposals for an emissions reporting and tracking system that will work both as the basis for potential carbon leakage mitigation policies such as a carbon border adjustment mechanism and mandatory product standards, and also help to build the market for low emissions products. These proposals will also form part of the upcoming consultation on carbon leakage.
77	Consult on a funding mechanism(s) to support the additional operational and capital costs of electrification in manufacturing. Support for electrification may be combined with reforms to electricity pricing. In combination, these should incentivise early deployment of new electrification. The mechanism should aim to allow hydrogen and electrification to compete on a level playing field in the medium term.	The electrification of industrial processes currently faces barriers (in particular upfront cost and operational costs) that are limiting uptake, which in the longer term could make it difficult to meet Carbon Budget 6. There is additional complexity because a range of policies that interact with this area, such as rebalancing and the review of electricity market arrangements (REMA). We are developing a Call for Evidence, for publication in 2023, to better understand the role and barriers of electrification, and then possible policy options to enable it.
78	Publish the Government's ambition for annual abatement from manufacturing energy efficiency underpinning its strategy, and finalise the policies to deliver this energy efficiency abatement from 2023-2027, including by delivering final decisions on the future of Climate Change Agreements and Energy Saving Opportunities Scheme (ESOS) and through new policies, such	The Climate Change Agreements scheme was announced in Budget to be extended by two years estimated to be worth a further £300 million a year to eligible businesses and new targets running to 31 December 2024 will be negotiated with the sectors in the current CCA Scheme in 2023. A consultation on both the extension and some further proposals for a potential future scheme beyond that

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	<p>as policy on energy management system adoption or products standards.</p>	<p>extension was published alongside the announcement and due to close on 10 May 2023. The Department for Energy Security and Net Zero aim to publish a response later in the year.</p> <p>The Department for Energy Security and Net Zero published the ESOS consultation outcome in July 2022, setting out decisions on changes in Phase 3 and future ESOS Phases. Government is also taking forward legislation to implement the proposed changes.</p> <p>The Department for Energy Security and Net Zero is continuing to explore policy development to support industrial energy efficiency. Existing measures have included the Industrial Energy Transformation Fund to provide grant funding support for energy efficiency projects and sponsoring 100,000 free copies of the BS ISO 50005 energy management standard for SMEs. As outlined in the British Energy Security Strategy (2022), we plan to launch a dedicated digital energy advice offering for smaller businesses to provide trusted advice to help them reduce their energy use, costs and decarbonise, and we are working to deliver a dedicated service on gov.uk offering advice to businesses by this winter. We will also be piloting a new audit and grant scheme this year enabling small businesses to move from insight to implementation of energy efficiency measures.</p>
79	<p>Resolve the distortive disincentive against electrification of sites within the UK ETS caused by the design of Climate Change Agreement targets.</p>	<p>The Department for Energy Security and Net Zero has considered the recommendation in its December 2021 'Climate Change Agreements (CCA): proposals for a future scheme' consultation, in that the adoption of some key carbon reduction technologies may influence performance on pure energy efficiency targets for eligible CCA facilities</p>

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		and we will engage with sectors on this area when agreeing targets. The recommendation will continue to be factored into our development of a future CCA scheme.
80	Continue to support innovation and demonstration of fuel switching and CCS technologies for end-use in manufacturing and construction, for example through the Net Zero Innovation Portfolio.	<p>We commit to supporting innovation for fuel switching and first-of-a-kind demonstration of CCUS in industry. The Net Zero Innovation Programmes cover switching to lower carbon fuels are Industrial Fuel Switching 2, Green Distilleries and Red Diesel Replacement. Brief details of programme status follow.</p> <p>Industrial Fuel Switching 2 (£55 million) - 21 phase 1 feasibility studies have been completed. A competition has been run for the phase 2 demonstration and the highest-scoring projects have been determined through the assessment and moderation process, these 13 projects are now progressing to contract.</p> <p>Green Distilleries (£11.3 million) - 4 phase 2 demonstration projects were awarded through competition in September 2021, one has been terminated and the three remaining projects continue in their demonstration activities.</p> <p>Red Diesel Replacement (£40 million) - 16 phase 1 feasibility projects are in the progress, 2 having been terminated early. The competition for the phase 2 demonstration phase was launched on 20-Jan-23, with grant funding available for a number of 21-month duration projects.</p> <p>The Carbon Capture Utilisation and Storage 2.0 (CCUS2) innovation programme (£20 million) Call 1 currently has 6 innovation projects ongoing, 2 having been terminated early. Call 2 is in the process of awarding grant funding to up to 11 projects.</p>

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		<p>The IETF also provides funding for fuel switching feasibility and engineering studies, and deployment projects.</p>
81	<p>Design industrial decarbonisation policies to support and create jobs, especially in regions with reliance on industrial jobs.</p>	<p>The government is committed to decarbonising industry in line with our net zero goals, while simultaneously transforming our industrial heartlands by attracting inward investment, future-proofing businesses, and securing high wage, high skill jobs. The Industrial Decarbonisation Scheme (IDS) recognises that the manufacturing sector is a crucial part of local economies across the UK, often providing well-paid jobs in areas where salaries fall below the UK average, and that it is vital that this sector thrives now and in the future. Actions 8.1-8.3 of the IDS set our commitment to support and create jobs in the sector. In March 2021, £171 million of the Industrial Decarbonisation Challenge (IDC) was awarded to nine projects located in five industrial clusters - Humberside, the North West, Teesside, Scotland and South Wales - to fund early stage design work to deploy technologies and infrastructure that will significantly reduce emissions in these industrial areas.</p>
82	<p>Set out a strategy for decarbonisation of off-road mobile machinery to set direction for the private sector. The strategy should include policy proposals, which could include the future of emissions standards, and a proposal for how best local authorities can bring off-road mobile machinery into their regulatory framework for construction within urban areas.</p>	<p>Government intends to publish a Non-Road Mobile Machinery (NRMM) Strategy which will set out how the sector can decarbonise in line with net zero while maintaining competitiveness, attracting investment and supporting growth. To deliver the strategy, government is developing its evidence base on NRMM decarbonisation options through ongoing external research and a Call for Evidence planned for later this year. Government has made support for NRMM decarbonisation available through schemes such as the £40 million Red Diesel Replacement competition, the Industrial Energy Transformation Fund</p>

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		(IETF), and the Renewable Transport Fuel Obligation (RTFO).
83	Finalise the Industrial Carbon Capture (ICC) business model and deliver the first industrial carbon capture contracts to enable final investment decisions on the first ICC projects in H1 2023, consistent with the Government's ambition to deploy carbon capture in at least two clusters by the mid-2020s.	Government is progressing business models for CCUS at pace. A series of publications since 2019 have provided updates on the development of the industrial carbon capture (ICC) business model and adaptations to the business model for waste management CCS projects. An update on the ICC business models was published on 16 December 2022, including a government response to the April consultation on the business model and latest contractual drafting for the ICC Contract, Waste ICC Contract and the CIF ICC Grant Funding Agreement, to enable the department to proceed with negotiations with Track-1 projects. Technical contractual drafting for the ICC business models will be finalised with updated contracts planned to be published in summer 2023. Primary legislative measures to enable the business models were introduced to Parliament on 6 July 2022 through the Energy Bill, which is progressing through Parliament.
84	Finalise and deliver the Transport and Storage Regulatory Investment business model in 2022, consistent with the Government's ambition to establish at least two CCS transport and storage clusters in the mid-2020s. This will require promptly beginning the process of awarding permits and construction of the necessary infrastructure, to ensure that it is ready in time for deployment.	Government is progressing business models across the whole CCUS chain at pace. Since 2019, government has provided updates on the development of the business model to incentivise CO2 transport and storage ¹⁹ . Updates were published in 2022 to prepare the business model ahead of negotiations with Track 1 projects. Government will be publishing further updates across the CCUS business models in 2023 in order to support negotiations with the Track 1 projects. Primary legislative measures to enable the business models were introduced

¹⁹ <https://www.gov.uk/government/publications/carbon-capture-usage-and-storage-ccus-business-models>

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		to Parliament on 6 July 2022 through the Energy Bill, which is progressing through Parliament.
85	De-risk the future Carbon Capture and Storage project pipeline by launching the next cluster selection process in 2022, consistent with the Government's ambition to enable final investment decisions on Track 2 projects from 2024.	<p>We have launched Track-2 of the CCUS Programme, alongside alongside <i>Powering Up Britain: Energy Security</i>, to identify at least two additional stores, contributing to our ambition to capture and store 20-30 Mt CO₂ per year across the economy by 2030.</p> <p>At this stage, we consider Acorn and Viking stores best placed to deliver our objectives for Track-2, subject to due diligence and value for money assessments. We will open a call for Expressions of Interest to provide an opportunity for other stores to come forward to demonstrate that they can meet Government's requirements. Stores must be able to demonstrate their plans include options for the delivery of non-pipeline transport projects from 2030.</p>
86	Publish a plan for distribution and storage of hydrogen and other low-carbon infrastructure outside of clusters.	<p>The <i>British Energy Security Strategy</i> (April 2022) made a commitment to design business models for hydrogen transport and storage (T&S) infrastructure by 2025. We published a consultation in August 2022 that sought stakeholder views on the high-level design options for these business models and the need for a strategic planning function for hydrogen T&S infrastructure rollout.</p> <p>T&S infrastructure will be central to achieving our ambitions for the growth of the UK hydrogen economy, both within the clusters and beyond. Strategic planning could be crucial to realise whole system benefits and unlock the potential of the future hydrogen economy.</p> <p>The Government response to the consultation is planned to be published by the end of June 2023, with any further</p>

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		<p>details on strategic planning to align with the production roadmap. To bring forward hydrogen T&S business models, we are aiming to introduce legislative measures when parliamentary time allows, which will be crucial to designing these new business models by 2025.</p>
87	<p>Publish a plan for CO2 transport from dispersed sites before the end of 2022.</p>	<p>Government continues to explore the development of pipeline and non-pipeline options for sites outside the CCUS Cluster Sequencing Track 1 locations and potential interactions with business model support. We are providing £5 million for local clusters to develop strategic, area-based plans to decarbonise, which is technology agnostic and could facilitate strategic thinking on dispersed CCUS networks in different locations around the UK. We will set out a vision for the UK CCUS sector in 2023 to raise confidence and improve visibility for investors.</p>
88	<p>Publish the Government's ambition for annual abatement from resource efficiency, by year, up to 2030, and clarify or set out the policies to deliver the ambition up until at least 2027.</p>	<p>In 2024, we will publish results from a joint Department for Energy Security and Net Zero and Defra research project that investigates resource efficiency measures from across 11 sectors. This will support the development of evidence-based resource efficiency policies to deliver industrial carbon savings from resource efficiency and the development of longer-term abatement pathways.</p>
89	<p>Consider how to avoid the extension of the UK Emissions Trading Scheme to shipping displacing activity to higher-carbon alternative modes (e.g. road freight).</p>	<p>We remain committed to exploring expanding the scope of the UK Emissions Trading Scheme (ETS) to cover domestic maritime. We see this as an opportunity to both reduce emissions across the sector and be an effective driver for the decarbonisation of domestic shipping.</p> <p>We are aware of the potential for modal shift and are considering this in our proposals. Within the Developing the</p>

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		<p>UK ETS consultation, which was published in 2022, the UK ETS Authority asked respondents for their views on this risk under our lead option and we are currently analysing these responses.</p> <p>As we develop the Government response to this consultation, we are giving careful consideration to fully understand the extent of this risk and design the inclusion of domestic maritime in the UK ETS in a way that minimises the risk of modal shift.</p>
90	<p>Consult on regulations requiring EV batteries sold in the UK to be recyclable. These should be coordinated with requirements in other markets to ensure that batteries can be reliably recycled across jurisdictions.</p>	<p>We committed in the <i>Resources and Waste Strategy</i> to review the current batteries regulations and plan to launch a consultation later this year exploring ways in which we can increase levels of collections of batteries for recycling and/or reuse. As part of this consultation, we plan to consider what steps the Government can take to support efficient end of life processes for Electric Vehicle batteries, including reuse, repurposing and recycling. This supports our aim to ensure the battery regulations are compatible with our circular economy objectives. Through collaboration with the devolved administrations, we will gather views in the consultation on how we can encourage better product design and more circular economy business models across the four nations.</p>
91	<p>Work with the UK car industry to ensure that, where viable, EV supply chains are localised within the UK. This should include support for gigafactories to scale up at the pace required for UK manufacturing capacity to meet the Faraday Institution's recommendation of 140 GWh per year by 2040.</p>	<p>The Automotive Transformation Fund (ATF) has been developed to support the creation of an internationally competitive, electric vehicle supply chain in the UK. Securing gigafactories is a priority as they are essential for anchoring vehicle manufacturing in the UK and securing investment in the production of battery materials. The ATF team are actively considering gigafactory proposals, which</p>

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		could help address the demand for electric vehicle battery production in the UK.
92	Confirm the position of the draft National Planning Statement for Renewables which states that further Energy from Waste plants should only be built where they can be demonstrated to be consistent with residual waste capacity needs and the waste hierarchy, and set out how these assessments will be made. Any new EfW plants (not currently under construction) should also be required to demonstrate readiness for carbon capture deployment.	<p>The current energy National Policy Statements set out the requirement that the applicant should demonstrate the conformity of the development of an energy from waste plant with the waste hierarchy. We are publishing for consultation the revised draft energy NPS, aligning to commitments made in the BESS, and have retained this requirement.</p> <p>In March 2023, we published our Decarbonisation Readiness consultation which proposes updates to Carbon Capture Readiness including bringing waste incineration plants into scope of the requirements. As this is still subject to consultation, it will not be mentioned in the NPS.</p>
93	Continue to develop plans for shifting towards an Energy from Waste fleet fitted with CCS from the end of this decade. As part of this set out an assessment of potential viability of existing and future Energy from Waste sites for CCS and implications for decarbonising the sector.	We are engaging with industry to encourage decarbonisation of the waste sector, including carbon capture technology for energy recovery facilities, and working across government to develop policies to enable this. Policies across government, for example the Plastic Packaging Tax, the Collection and Packaging Reforms, the statutory target to halve residual waste (excluding major mineral wastes) by 2042, and proposed inclusion of energy from waste in the UK emissions trading scheme, will all help to increase recycling and minimise fossil waste incineration. Reducing fossil wastes in the first place will reduce greenhouse gas emissions from energy from waste. Carbon capture technology has potential to address remaining emissions and government is supporting this through the published consultation on proposed updates to Decarbonisation Readiness requirements to include

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		<p>combustion energy from waste plants, and the eligibility of energy from waste CCUS projects for the ICC business model under Phase 2 of the CCUS Cluster Sequencing Programme.</p>
<p>94</p>	<p>Commit to targets for ore-based steelmaking and cement production in the UK to reach near-zero emissions by 2035 and 2040, respectively.</p>	<p>Cement: In the Industrial Decarbonisation Strategy, government committed to work with the cement sector to explore options to decarbonise sites in dispersed locations. To fulfil this commitment, the Department for Energy Security and Net Zero will undertake a period of structured engagement with the Mineral Products Association and cement companies, to understand overall sector and individual site plans to decarbonise and test the real-world impact of policy proposals including the potential for a near net zero target on cement production by 2040.</p> <p>Steel: We will continue to work with the sector to support its decarbonisation options and to consider the implications of this recommendation.</p> <p>Decarbonising blast furnace sites and the wider steel sector will be essential to the decarbonisation story of UK industry. In our modelled pathways, the iron and steel sector is largely decarbonised by 2035.</p>
<p>95</p>	<p>Finalise the design of the hydrogen business model and Industrial Decarbonisation and Hydrogen Revenue Scheme (IDHRS) in 2022 to deliver funding to the first hydrogen production projects in 2023, ensuring they can be compatible with electrification/other decarbonisation options in the medium term. In addition, ensure that any further barriers to enabling the first hydrogen-use within industry, are removed.</p>	<p>We published Heads of Terms for the Hydrogen Production Business Model (HPBM) in December 2022 and we intend to publish the final Low Carbon Hydrogen Agreement (LCHA) for initial projects from Q3 2023. Through the Energy Bill we are seeking to introduce hydrogen financial assistance powers and provisions for a hydrogen levy which is intended to fund revenue support payments made through the HPBM and related costs. HPBM payments for</p>

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		<p>projects awarded contracts through HAR1 will be funded by government until the hydrogen levy comes into effect.</p> <p>We continue to support strategically important investments by early movers in industry, including through the announcement of an extension to the Industrial Energy Transformation Fund. Subject to business case approval, the government plans to allocate a further £185 million to help industrial sites to adopt decarbonisation technologies.</p>
96	<p>Ensure that adaptation is integrated into major upcoming policies in the next two years related to the eight priority risks identified in the Committee's advice on the Third UK Climate Change Risk Assessment for which BEIS has lead responsibility, coordinating work with other relevant departments as necessary: Risks to the supply of food, goods and vital services due to climate-related collapse of supply chains and distribution networks (with Defra and DIT).</p>	<p>Government will publish its Third National Adaptation Programme in summer 2023, which will set out how it is addressing the risks and opportunities identified in its Third Climate Change Risk Assessment.</p> <p>Government understands that adaptation in this area is important, and actions will include cross-government working to encourage greater understanding amongst businesses and their supply chains, including the impact of climate change. Supporting businesses to strengthen their long-term resilience by incorporating climate risks into existing processes and taking appropriate mitigating actions where required.</p>
97	<p>To meet ambitious Government targets and show leadership in public sector buildings decarbonisation ensure public sector organisations, including those not captured by the Greening Government Commitments, have the information and support they need to: monitor their energy use, set targets and reduce emissions from their estate over the next five years. Establish proportionate mechanisms which could be put in place to review overall progress and recurring challenges.</p>	<p>In the <i>Net Zero Strategy</i>, we committed to provide guidance on emissions monitoring, reporting and target-setting, to enable the sector to do this consistently and coherently. This will ensure public sector organisations have the necessary information and incentives to decarbonise.</p> <p>This will build on existing actions to strengthen sectoral capacity and capability, through the Public Sector Low Carbon Skills Fund, which helps organisations identify and develop decarbonisation projects. Guidance to support</p>

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		<p>estate decarbonisation is also available through the Modern Energy Partners programme delivered by the Energy Systems Catapult and the Government Property Function's Net Zero Estate Playbook.</p> <p>The Greenhouse Gas Inventory provides robust evidence to track overall public sector progress. Other data sources are used to provide insights, including the Non-Domestic National Energy Efficiency Data-Framework and through monitoring and evaluating our Public Sector Decarbonisation Scheme, and we work with the sector to understand their views on progress and challenges.</p>
98	<p>Cabinet Office should ensure that adaptation is integrated into major upcoming policies in the next two years related to the priority Third Climate Change Risk Assessment risk for which it has lead responsibility, coordinating work with other relevant departments as necessary: Multiple risks to the UK from climate change impacts overseas.</p>	<p>The FCDO has taken ownership of five risk pathways, which outline the UK's efforts to adapt to international climate change risks identified by the UK Climate Risk Independent Assessment (CCRA3). These pathways will showcase the work the UK is undertaking to support international adaptation efforts and highlight where we need to take further action. The FCDO will work closely with Cabinet Office to ensure these risk pathways reflect ongoing cross government work and highlight gaps that need to be addressed. Currently Cabinet Office is not the primary responsible department for any of the international risks identified by CCRA3.</p>
99	<p>For the coming five-year period (2023-2028), Cabinet Office should outline appropriate actions in the next National Adaptation Programme to address the adaptation gap identified for the other risks and opportunities in the Third Climate Change Risk Assessment for which it is the lead department (see 2021 Adaptation Progress Report annex).</p>	<p>The Government recognises the risk of cascading failures, as highlighted by risks I1 and ID10 in the recent third Climate Change Risk Assessment (CCRA3). These risks will be addressed in the forthcoming third National Adaptation Programme (NAP3), which is due for publication in mid-2023.</p>

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100	<p>Cabinet Office should build a strong climate resilience capability for the UK, including making use of storyline or ‘what-if’ scenarios to assess risks, in addition to or instead of using ‘reasonable worst-case’ approaches. It should develop an early warning system for global climate shocks.</p>	<p>The National Situation Centre (SitCen), within the Cabinet Office, brings together data and analysis from across and beyond Government to inform crisis preparedness and response, providing some early warning capability. SitCen works closely with both the Met Office and ONS and is able to ingest climate change data from both organisations rapidly, drawing on their scientific and analytical expertise. The Cabinet Office also continues to work with the Met Office and ONS to ensure government departments and key infrastructure operators can find, access, understand and make effective use of weather and climate data and expertise in their operational and strategic planning, as well as on their adaptation and resilience decision-making.</p>
101	<p>Cabinet Office should consider how more allowance and flexibility can be built into policy making and policy implementation. This could include enhancing the ability of the Government to make fast decisions by bringing in technical advice and expertise quickly when needed, and both protecting, and enhancing, monitoring and surveillance systems to enable faster reactions as events unfold.</p>	<p>Cabinet Office continues to work with lead government departments and key partners to inform and drive policy making. The National Situation Centre (SitCen) supports the work of lead government departments, developing digital data capabilities to understand vulnerabilities, drive insights and support decision making. This includes routine monitoring of key performance indicators across resilience-related thematic areas. In the event of national emergencies, the Scientific Advisory Group for Emergencies can be convened to provide independent scientific advice to decision-makers.</p> <p>The UK Government Resilience Framework, published in December 2022, was informed by a significant body of evidence, with feedback and recommendations gathered through extensive engagement. The Framework ensures government and local actors have a common framework to be better able to anticipate, prepare, respond and recover in the long-term, including on climate change.</p>

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102	<p>Ensure all of the department's own policy decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.</p>	<p>HM Treasury's Green Book and Business Case Guidance is used to appraise spending and regulatory proposals, and includes guidance for how net zero and climate risk considerations should be included in appraisal. This is outlined in the Department for Energy Security and Net Zero and Defra Green Book supplementary guidance. HM Treasury continues to work with departments to embed Green Book best practice.</p> <p>The government has set out its intention to put the National Procurement Policy Statement (NPPS) on a statutory basis through the Procurement Bill. The NPPS sets out clear principles that contracting authorities should follow - tackling climate change and achieving net zero is one of these.</p> <p>In addition, Procurement Policy Note 06/21 shows the government's commitment to achieving net zero. Under this measure, prospective suppliers bidding for major contracts must submit a Carbon Reduction Plan that details their emissions and their organisational commitment to net zero by 2050.</p> <p>Companies that fail to provide a Carbon Reduction Plan which meets these requirements risk deselection from the procurement. Between September 2021 and the start of February 2023, the measure was applied to 129 procurements, which are valued at c.£187.5 billion over their contractual term.</p>
103	<p>Ensure that all policies, funding, and delivery mechanisms are properly aligned to the pace of transition required and work together constructively towards Net Zero, for example through introduction of a Net Zero Test.</p>	<p>To rise to the transformative and complex challenge of delivering net zero, we agree that government must continue to embed climate into its decision-making and policymaking processes.</p>

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		<p>In the past 18 months we have progressed action across a wide spectrum of activity, going further to embed climate in areas ranging from spending to governance, regulators to procurement.</p> <p>The Prime Minister has put net zero at the heart of the government's agenda and created the Department for Energy Security and Net Zero. This means there is a department whose primary focus, alongside energy security, is driving overall delivery of net zero and maximising the economic opportunity the transition presents.</p> <p>Elsewhere, we have published the Greening Government commitments, setting out the actions departments and their agencies will take to reduce their impacts on the environment.</p> <p>We have also published the Environmental Principles Policy Statement (EPPS), which will embed environmental considerations into the design and development of new and revised policy across government. We will continue to assess how we are organised, and orient our activities, actions, and processes to ensure we play our role in facilitating the transition towards net zero.</p>
104	Extend the delivery of climate skills training across the Civil Service and wider public sector. Consider what wider supporting skills (delivery, coordination, legal, financial) will be needed in the public sector to enable effective delivery of the transition to Net Zero.	<p>The <i>Net Zero Strategy</i> recognises the importance of the Civil Service having the right skills to deliver net zero. It sets out a series of measures – including a new training offer available to all civil servants which has already been developed.</p> <p>Other measures include expanding training for Fast Streamers on net zero and embedding net zero in the standards for the Policy Profession, for the first time</p>

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		<p>explicitly recognising that good policy making requires an understanding of the climate impacts of decisions.</p> <p>The Department for Energy Security and Net Zero have also paid for Carbon Literacy courses to be developed for the Public Sector more widely. The courses are now available for organisations from NHS, Local Government, Central Government, Blue Light services and Universities. Organisations need to pay for their accreditation and can tailor courses as they see fit.</p>
105	<p>Produce guidance on how departments are expected to reflect Net Zero when updating their Outcome Delivery Plans.</p>	<p>Cabinet Office and HM Treasury produced guidance for departments ahead of the 2022-23 planning round, which requested that all departments should reflect their contributions to the delivery of net zero in their Outcome Delivery Plans. In addition, net zero was agreed as a cross-cutting outcome, led by the Department for Energy Security and Net Zero (then BEIS) as part of SR21. Government will ensure guidance continues to encourage departments to demonstrate what the activities, deliverables, and milestones are for the delivery of net zero.</p>
106	<p>Review how effective existing mechanisms for coordinating delivery with the devolved administrations (including the Inter-Ministerial Group, the Nations Board, and departmental-level engagement) have been at securing input to the design of and buy-in to implementation of recent major strategies relating to Net Zero.</p>	<p>The Interministerial Group, Net Zero Nations Board and Net Zero working group provide important fora for sharing information and coordinating delivery across net zero priorities. The mechanisms are in line with the ways of working set out in the review of Intergovernmental Relations and are effective in facilitating discussion of shared net zero objectives and strategies. For example, over the last year they have discussed the <i>British Energy Security Strategy</i>, the Energy Bill and the UK's 2023 <i>Green Finance Strategy</i> update.</p>

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107	Use the remaining COP Presidency and the UK's diplomatic capability to ensure progress is made on developed country climate finance commitments including the delivery of the \$100 billion by 2023 at the latest and the doubling of adaptation finance on 2019 levels by 2025.	<p>The UK Government used the convening power of its COP26 Presidency to the fullest, to ensure continued commitment to the \$100 billion goal through the Delivery Plan. The Plan was published before COP26 and co-led by the Canadian and German governments. It provided the most transparent accounting of progress towards the goal so far.</p> <p>At COP26, 95% of the largest developed country climate finance providers made new commitments, and we secured the commitment to a doubling of adaptation finance by 2025. We continued this work throughout the COP26 Presidency year. We secured agreement to a Progress Report on the Delivery Plan work, which will provide detail on progress made on the Delivery Plan's ten key actions, including how the adaptation finance doubling commitment will be met. We are working with the Champions Group on Adaptation Finance to improve the quality, quantity and access to adaptation finance. We continue to emphasise in bilateral political engagement the importance of delivering on commitments made in Glasgow, alongside responses to other emerging global development priorities.</p>
108	Ensure all of the department's own policy decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.	<p>HM Treasury's Green Book and Business Case Guidance shows the government's commitment to achieving net zero. Under this measure, prospective suppliers bidding for major contracts must submit a Carbon Reduction Plan that details their emissions and their organisational commitment to net zero by 2050.</p> <p>Companies that fail to provide a Carbon Reduction Plan which meets these requirements risk deselection from the procurement. Between September 2021 and the start of February 2023, the measure was applied to 129</p>

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		procurements, which are valued at c.£187.5 billion over their contractual term.
109	DCMS should engage with utility companies to encourage standardised benchmarking and data sharing on climate risks to electricity networks, digital & ICT.	Telecoms is not classified as a utility, but DCMS works closely with the Telecoms Sector via the EC-RRG to share data on a range of risks, including climate risks. The EC-RRG, in partnership with DCMS, has established a Climate Change Risk Working Group, which has developed a work plan to address the risks identified in the Adaptation Report. Alongside this, the sector continues to proactively identify “at risk” sites based on these risks and is devising plans to either mitigate the risk, relocate, or reduce the reliance on these sites. DCMS, in partnership with the telecoms sector and Ofcom, has now published a Post-Incident Review of the recent severe storms, setting out a clear action to drive improvements across our networks in order to maximise connectivity during severe weather-related incidents in future. This action plan includes actions on how better to work with other essential services such as Energy firms.
110	Resilience standards for the digital sector must include requirements pertaining to climate change risks. In addressing the National Infrastructure Commission recommendations from the Resilience Study, Government should incorporate consideration of climate change risks and adaptation actions into any new standards being developed.	Work is ongoing to explore what standards could be put in place to build resilience in this area. Much of this work will be informed by the upcoming Resilience Strategy, which emphasises the importance of climate change throughout.
111	For the coming five-year period (2023-2028), outline appropriate actions in the next National Adaptation Programme to address the adaptation gap identified for the risks and opportunities in the Third Climate Change Risk Assessment for which it is the lead department (see 2021 Adaptation Progress Report annex).	DCMS continues to work across relevant critical infrastructure sectors – Cultural Heritage, Telecommunications and Data Infrastructure to articulate the risks to and actions required in order to improve their resilience to risks that could impact systems and services, including those risks that could arise from climate change.

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		<p>We are developing NAP3 Adaptation plans to identify and address the specific risks posed by flooding and rising temperatures.</p>
112	<p>Standards for digital infrastructure operators should include requirements to: assess climate risks under both 2°C and 4°C global climate scenarios; consider interdependencies with other critical infrastructure; and set out actions to reduce risk and monitor progress.</p>	<p>The Telecoms industry is already resilient to severe weather and has many contingency plans and mitigations in place to mitigate against the risks posed by climate change. Heat tolerance has increased to between 40 and 45°C for most telecoms equipment, and this resilience has also been aided by recent upgrades to cooling systems, such as adiabatic cooling units, which ensure that internal temperatures remain low. Beyond these improvements, work is ongoing to explore what standards could be put in place to build resilience in this area.</p>
113	<p>Ensure all of the department's own policy decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.</p>	<p>HM Treasury's Green Book and Business Case Guidance is used to appraise spending and regulatory proposals, and includes guidance for how net zero and climate risk considerations should be included in appraisal. This is outlined in the Department for Energy Security and Net Zero and Defra Green Book supplementary guidance. HM Treasury continues to work with departments to embed Green Book best practice.</p> <p>The government has set out its intention to put the National Procurement Policy Statement (NPPS) on a statutory basis through the Procurement Bill. The NPPS sets out clear principles that contracting authorities should follow - tackling climate change and achieving net zero is one of these.</p> <p>In addition, Procurement Policy Note 06/21 shows the government's commitment to achieving net zero. Under this measure, prospective suppliers bidding for major contracts</p>

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		<p>must submit a Carbon Reduction Plan that details their emissions and their organisational commitment to net zero by 2050.</p> <p>Companies that fail to provide a Carbon Reduction Plan which meets these requirements risk deselection from the procurement. Between September 2021 and the start of February 2023, the measure was applied to 129 procurements, which are valued at c.£187.5 billion over their contractual term.</p>
114	<p>Make long-term targets for biodiversity, set out under the Environment Bill, and associated timeframes outcome-based and linked directly to the goals set out in the Government's 25-Year Environment Plan.</p>	<p>Under the Environment Act we have set four statutory targets for biodiversity to:</p> <ul style="list-style-type: none"> • Halt the decline in species abundance by 2030; • Ensure that species abundance is greater in 2042 than in 2022, and at least 10% higher than in 2030; • Reduce the risk of species extinction by 2042; and • Restore or create in excess of 500,000 ha of wildlife-rich habitat by 2042, when compared to 2022 levels. <p>These targets will drive action to meet goals set out in the 25 Year Environment Plan as well as wider environmental policy ambitions. Where possible, our targets are outcome based. For our habitats target, given existing data we are not fully able to account for habitat lost and therefore this target is an action-based target.</p>
115	<p>Make interim targets for biodiversity statutory and link them clearly to the long-term targets set out in the Environment Bill.</p>	<p>Our Environmental Improvement Plan, published in January 2023, sets out three interim targets relating to biodiversity on land and freshwater:</p>

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		<ul style="list-style-type: none"> • To restore or create 140,000 ha of a range of wildlife rich habitats outside protected sites by 31 January 2028, compared to 2022 levels; • All SSSIs will have an up-to-date condition assessment by 31 January 2028; and • 50% of SSSIs to have actions on track to achieve favourable condition by 31 January 2028. <p>These interim targets will set the trajectory towards long-term targets and function as drivers of action and allow for ongoing assessment of progress.</p> <p>Our approach to setting legally binding targets is guided by long-term ambition. It would be unnecessary and detrimental to introduce legally binding interim targets. It would risk undermining the long-term nature of the targets framework, which is designed to look beyond the political cycle of any one government, avoiding action focused on short term quick wins.</p>
116	The commitment in the 25 Year Environment Plan to achieve 75% restoration for terrestrial and freshwater protected sites should be extended to include all priority habitat sites.	<p>As part of our commitment to reverse the decline of nature we want to improve the condition of all our priority sites. It's important, however, to focus resources where they will be most effective. Therefore, we are currently concentrating on statutory sites.</p> <p>40% of the area of priority habitats within England are accounted for within the designated site network of SSSIs and the majority of land for 18 of the 24 terrestrial and coastal priority habitats falls within protected areas. The largest priority habitat area not covered by the SSSI network is deciduous woodland, however the England Trees Action Plan outlines our plans to improve the condition of our existing woodlands. Our updated 'Keepers</p>

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		<p>of Time' policy document sets out our commitment to restoring Plantation Ancient Woodland Sites to native woodland priority habitat.</p> <p>Our statutory biodiversity targets will further drive activity to restore priority and other wildlife-rich habitats.</p>
117	<p>Set out a clear mechanism to account for the consequences of higher water temperatures and low flows (including drying up) in water bodies for freshwater habitats and species, and for meeting the Water Framework Directive (WFD) targets. This is lacking in current plans to revise the River Basin Management Plans (RBMPs).</p>	<p>River Basin Management Plans are the primary delivery mechanism to coordinate efforts across the range of stressors and pressures that affect freshwater habitats and species. Updated plans, covering the period 2021-27, were published in December 2022. The plans include a commentary on climate change and an explanation of actions that are being taken. Actions implemented through the plans is aligned to enhancing the resilience of water systems to a range of stressors, including those anticipated in the context of climate change.</p>
118	<p>Set out a Net Zero delivery strategy for the agriculture and land use sectors that brings together how land can deliver its multiple functions including: reducing emissions and sequestering carbon, adapting to climate change, food security, biodiversity, domestic biomass production and wider environmental goals. The strategy must clearly outline the relationships and interactions between the multiple action plans in development (e.g. including those for peat, trees, nature, plant biosecurity and biomass), be spatially and temporally targeted, and aligned with action in the devolved administrations.</p>	<p>We have set out detail on how farmers and land managers can contribute to government's statutory environmental and climate targets, including on net zero, in the Environmental Improvement Plan and through the Environmental Land Management Schemes update, both published in January 2023.</p> <p>To augment this, we have set out a full list of proposals and policies which will contribute towards net zero across the agriculture and land use sectors. We will continue to work with stakeholders to further refine these proposals and policies as we move forward with delivery.</p> <p>We have also committed to publishing a Land Use Framework in 2023. This is critical in setting out how we deliver a multifunctional landscape, resilient to our changing</p>

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		<p>climate, whilst meeting food production, environmental recovery and net zero. The scope of the framework is to be determined but we will work closely with the devolved administrations to ensure a cohesive approach to land use in the UK.</p> <p>Scotland's next Climate Change Plan (CCP) will set out our delivery strategy towards net zero across all sectors, including agriculture, LULUCF and bioenergy, taking into account environmental and other objectives for our land. The CCP will set out our climate policies on a sector by sector basis. Where there are interactions between the sectors, the policies in the CCP will be designed to support the multiple goals and interlinkages between these areas, including those between agriculture and land use.</p> <p>Details of the Northern Ireland policies and proposals for agriculture which contribute to achieving emissions reductions targets will be included within the agriculture input to 5-yearly Climate Action Plans.</p> <p>The Agriculture Wales Bill was introduced in Autumn 2022. The Bill will establish Sustainable Land Management (SLM) as the framework for future agricultural support. SLM will enable the delivery of future agricultural support in a way which ensures food is produced in a sustainable way and farmers are supported to in the fight against the challenges presented by climate change.</p>
119	Set incentives to support agroforestry and hedgerows on UK farms. Plant trees on 2% of farmland by 2025 while maintaining its primary use, rising to 5% by 2035, and extend hedgerows by 20% by 2035 and better manage existing hedgerows.	Defra are supporting dedicated schemes for the establishment and management of agroforestry systems and hedgerows under Environmental Land Management. These will support the planting of more trees on farmland,

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		<p>still use farmland to produce food, and meet England's statutory targets.</p> <p>We are developing an agroforestry standard within the Sustainable Farming Incentive (SFI), with roll-out expected in 2024. This will help us deliver our aim of having agroforestry planted on 10% of all arable land in England by 2050.</p> <p>A hedgerow SFI standard is being developed, for roll out in 2023. This standard is still being finalised, but farmers may be rewarded for carrying out management actions including maintaining hedgerow trees on their land. We are exploring the provision of capital grants for newly planted hedgerows.</p> <p>Over half of Scottish Forestry Grant Scheme applications are for woodlands under 20 ha, typically from existing agricultural businesses. The farmer-led Integrating Trees Network aims to encourage more tree planting.</p> <p>As part of DAERA's future agricultural policy programme, Northern Ireland will be seeking to incentivise agroforestry and hedgerows on Northern Ireland farms. No targets have been set at a Northern Ireland farmland level to do this.</p> <p>The Welsh Government's outline sustainable farming scheme (SFS) includes a proposal for 10% tree cover on all farms. A new Woodland Creation Grant and Small Grants schemes will fund woodland and hedgerow creation in the transition to the SFS.</p>
120	Put in place robust frameworks for monitoring, reporting and verification of post-CAP farm subsidies and agriculture environment schemes to assess their effectiveness in delivering	In England, the government is committed to ensuring the effectiveness of Environmental Land Management (ELM) schemes in delivering against all outcomes. Both scheme level and aggregate data is used to assess impacts on four strategic outcomes which include net zero. These are

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	<p>their environmental objectives, including for climate change mitigation and adaptation.</p>	<p>reported annually and monitored regularly, helping us identify the biggest decarbonisation opportunities.</p> <p>We have published a call for evidence exploring monitoring, reporting and verification of agriculture and land use emissions and will publish a government response in due course. Utilising these findings, we will develop a harmonised approach for measuring carbon emissions from farms. By 2024 we will set out how farmers will be supported to understand their emission sources through carbon audits and take further actions to decarbonise their businesses, including through ELM schemes.</p> <p>A Scottish Agriculture Bill will be introduced in 2023. Scotland have committed to at least 50% of direct payments being conditional by 2025.</p> <p>For Northern Ireland, robust frameworks for monitoring, reporting, and verifying DAERA's future agricultural policy programme are being developed.</p> <p>Future farm support in Wales will reward farmers who undertake actions to meet the challenges of climate change, alongside the sustainable production of food. Monitoring and evaluating the efficacy of the sustainable farming scheme forms part of the policy proposals and will form part of a formal consultation in 2023.</p>
121	<p>Set out how reform of agricultural subsidies in England under the new Environmental Land Management scheme will be targeted through the "public money for public goods" approach, both regionally and temporally, to incentivise land managers to adopt measures to reduce greenhouse gas emissions alongside delivery for food security, biodiversity and other environmental goals.</p>	<p>Over 2023 and 2024, we will evolve all our Environmental Land Management schemes, including the successful Countryside Stewardship. It will include:</p> <ul style="list-style-type: none"> Expanding and refining the scope of the scheme so that it pays for more targeted, specific actions at the right level of ambition to contribute to our

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		<p>environment and climate goals. The scheme will continue the offer currently available through the England Woodland Creation Offer.</p> <ul style="list-style-type: none"> Improving the service so by 2024 land managers can: apply quickly alongside SFI; manage agreements more flexibly; more easily access high quality advice; have greater flexibility over when they can apply; and get paid more regularly. We will improve access for tenants and expand acce
122	<p>Set out how the objective in the Government Food Strategy to ‘deliver a sustainable, nature positive, affordable food system’ will be achieved, including the mechanisms to address the interaction between food systems and other land use needs, climate, nature, and integrated alongside a public shift towards low-carbon diets.</p>	<p>The Government Food Strategy set out measures to deliver a more sustainable and affordable food system. As announced in the Strategy, a Land Use Framework will be published in 2023, setting out how we meet our net zero, environmental and agricultural objectives.</p> <p>The Food Data Transparency Partnership will develop defined and consistent methodologies to measure sustainability at a company level, focussed first on scope 3 GHG emissions, and standardise the provision of eco-information to consumers through the development of a mandatory methodology for those who wish to use eco-labels.</p> <p>The Government Food Strategy also set out measures to ease supply chain bottlenecks, reducing pressures on the cost of food. It included measures to support quality jobs around the country, and support families on low incomes to eat healthily. The government has committed to report on progress towards our actions under the Strategy alongside the next United Kingdom Food Security report by the end of 2024.</p>

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123	Take low-cost, low-regret actions to encourage a 20% shift away from all meat by 2030, rising to 35% by 2050, and a 20% shift from dairy products by 2030, demonstrating leadership in the public sector whilst improving health.	<p>The government is not proposing quantified reductions in meat or dairy consumption although there is increasing prevalence of consumers choosing to reduce meat-consumption and dairy, due to health, sustainability, and animal-welfare concerns. Current evidence does not establish a clear link between diet change and livestock numbers in the UK.</p> <p>Scottish Government supports consumers to move their usual diets towards the Eatwell Guide, which includes small amounts of meat and dairy products, as a more sustainable way of eating.</p> <p>Welsh Government will be appointing an external organisation to map the food system in Wales, helping to understand the complex environment and relationships from a cross range of areas including environment, food, public health, education, economy, skills, and climate change. This will help us to understand where there are potential key drivers and levers in the system.</p>
124	Introduce policy to support the reduction of food waste at the farm, supply chain and household level. Food waste reduction, and its implications, should also be integrated into the recommended Net Zero delivery strategy for the agriculture and land use sectors, as well as in plans for the waste sector.	<p>The government has implemented a range of policies to tackle food waste. We are committed to meeting the UN Sustainable Development Goal 12.3 target by 2030.</p> <p>Through powers laid out in the Agriculture Act 2020 we have the ability to clamp down on unfair business practices at point of first sale and will continue to work with the sector to address this. We also support the farm to fork Courtauld Commitment 2030 voluntary agreement with industry, and have provided £12 million of grant funding for the redistribution sector to prevent surplus food going to waste and fund consumer behaviour change campaigns such as Love Food Hate Waste. We have consulted on options to improve food waste reporting and we have powers in the</p>

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		<p>Environment Act 2021 to introduce obligations on food businesses to reduce food waste if progress towards our target stalls.</p> <p>Scottish Government is refreshing its Food Waste Reduction Action Plan as part of wider work to develop a Waste Route Map and is a signatory to the Courtauld 2030 Commitment.</p> <p>From Northern Ireland's perspective the current development of a Circular Economy Strategy for Northern Ireland will make valuable contribution against this recommendation.</p> <p>'Beyond Recycling – to make the circular economy in Wales a reality' sets the pathway to a zero waste, net zero carbon Wales that keeps resources in use and avoids waste.</p>
125	<p>Set out how public and private funding for agricultural and land-based measures will be aligned, how opportunities to attract increased private finance for habitat creation and restoration will be developed, and promote the use of existing verifiable standards (such as the Woodland Carbon Code and Peatland Code) whilst also considering the need to develop new ones.</p>	<p>We have now published our refreshed 2023 <i>Green Finance Strategy</i> alongside the <i>Net Zero Growth Plan</i>. As part of this strategy, we have also published a nature markets policy framework, setting out our approach to supporting their development. This covers principles for alignment between different public and private mechanisms, as well as arrangements to accelerate the development of a more comprehensive suite of standards for investment in carbon and other ecosystem services in the UK. The framework builds on the work of international initiatives that the Government has supported during and since its COP26 Presidency, such as the Integrity Council for Voluntary Carbon Markets and the Voluntary Carbon Markets Integrity Initiative, both of which are expected to launch their final best practice guidance later in 2023.</p>

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		<p>Scotland's Private Investment in Natural Capital public sector programme is progressing Scotland's commitment to develop a values-led, high-integrity market to encourage and blend responsible private investment in our natural capital.</p> <p>Future Agricultural Policy in Northern Ireland will incorporate measures to achieve synergy between public and private funding and encourage additional support from private finance where possible. Existing verifiable standards will be incorporated where appropriate.</p> <p>As part of the Welsh government's ongoing development of the policy proposals for the Sustainable Farming Scheme, public and private funding for agricultural and land based measures will be considered, recognising the opportunities both funding avenues provide.</p>
126	<p>Ensure all of the department's own policy decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.</p>	<p>HM Treasury's Green Book and Business Case Guidance is used to appraise spending and regulatory proposals, and includes guidance for how net zero and climate risk considerations should be included in appraisal. This is outlined in the Department for Energy Security and Net Zero and Defra Green Book supplementary guidance. HM Treasury continues to work with departments to embed Green Book best practice.</p> <p>The Government has set out its intention to put the National Procurement Policy Statement (NPPS) on a statutory basis through the Procurement Bill. The NPPS sets out clear principles that contracting authorities should follow - tackling climate change and achieving net zero is one of these.</p>

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		<p>In addition, Procurement Policy Note 06/21 shows the government's commitment to achieving net zero. Under this measure, prospective suppliers bidding for major contracts must submit a Carbon Reduction Plan that details their emissions and their organisational commitment to net zero by 2050.</p> <p>Companies that fail to provide a Carbon Reduction Plan which meets these requirements risk deselection from the procurement.</p> <p>Between September 2021 and the start of February 2023, the measure was applied to 129 procurements, which are valued at c.£187.5 billion over their contractual term.</p>
127	<p>As part of strengthening the regulatory baseline, extend coverage of Nitrate Vulnerable Zones across all of the UK in order to promote best practice in management of inorganic fertilisers and organic manure and slurry.</p>	<p>In the Environmental Improvement Plan, the government committed to review our agricultural pollution prevention regulations to ensure they are fit for purpose in meeting our ambitions. The government has expanded Catchment Sensitive Farming to cover all farmed land in England. The government have funded new Environment Agency regulatory inspection officers, with the target of conducting 4,000 inspections this fiscal year. We are also committed to improving our regulatory framework.</p> <p>The Water Environment (Controlled Activities) (Scotland) Regulations 2011 already sets mandatory requirements, regulated by SEPA, across all of Scotland for management of inorganic fertilisers and organic manure and slurry.</p> <p>Future Agricultural Policy in Northern Ireland will encourage low carbon emission farming practices to promote best practices in management of inorganic fertilisers and organic manures and slurry.</p>

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		<p>The Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021 will be fully implemented by 1 August 2024 and apply across the whole of Wales.</p>
128	<p>As part of strengthening the regulatory baseline, introduce regulations under the Clean Air Strategy to reduce enteric methane emissions, specifically under environmental permitting to the dairy and intensive beef sectors and mandating UK feed producers to incorporate methane inhibiting additives.</p>	<p>The Environmental Improvement Plan states that Government will consult on extending environmental permitting to dairy and intensive beef farms. The consultation is likely to be around the scope and design of a permitting regime for these sectors.</p> <p>Last year we launched a call for evidence on methane suppressing feed products. A summary of responses will be published later this year and we will explore the role of industry and government at pace, as well as the ambition to mandate the introduction of products with proven safety and efficacy in compound feeds for cattle as soon as practically possible.</p> <p>We anticipate entry of high efficacy methane suppressing products to the UK market from 2025 and will explore the role of industry and government to maximise uptake of such products for suitable cattle farm systems at pace, through a phased approach. This will include the ambition to mandate the introduction of products with proven safety and efficacy in compound feeds for cattle as soon as practically possible in England.</p> <p>An application for use of one of these products, 3-nitroxyproponol (3-NOP), is currently under consideration for use as a methane suppressing additive in dairy cows and cows for reproduction by the Food Standards Agency and Food Standards Scotland.</p> <p>We will explore suitable policy options to encourage uptake of these products with proven safety and efficacy.</p>

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129	Continue to support research and development into low-carbon farming practices, including behavioural, innovation and productivity measures. The risk of a high dependency on innovation and technology to meet GHG emission reductions should be assessed, and integrated with demand-side measures such as diet change and waste reduction.	<p>Defra focuses on innovation to reduce agricultural emissions given the current evidence base. We are supporting research and development for climate smart farming through Defra's £270M Farming Innovation Programme, significant UKRI investments, and international leadership on the post COP26 Glasgow Breakthrough Agenda and the Gilbert initiative. We continue to develop the evidence base underpinning our pathways by exploring varying reliance on innovation, recognising the potential mediating influence of consumption side trends on diets and food waste reduction. We will regulate where necessary and pay farmers and land managers to deliver carbon savings through our new farming schemes.</p> <p>Scottish Government continues to support research and development on low-carbon farming through ClimateXChange, the Knowledge Transfer and Innovation Fund, the Strategic Research Programme and grant funding of innovative projects.</p> <p>In Northern Ireland, DAERA continues to commission research into a low-carbon farming practices including innovative measures to enhance productivity and explore behaviours that influence low-carbon farming practice adoption.</p> <p>The Welsh Government continues to support low carbon farming through a Knowledge Transfer & Innovation programme (Farming Connect), Improvement Programmes, specific grants and other tools.</p>
130	Move beyond the voluntary nature of current CAP replacement schemes by setting a strong regulatory baseline that	We will use regulation, alongside other levers such as farming schemes, to prevent harms to our landscape and wildlife. Further information on the actions we will pay for

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	<p>strengthens rules such as those under cross compliance and retains them in UK legislation.</p>	<p>through farming schemes was published in the Agricultural Transition Plan Update.</p> <p>In England domestic legal requirements apply to all farmers beyond participation in CAP schemes. Most CAP rules reflect existing domestic legal requirements, with a few gaps. We have committed to replacing hedgerow protections that would be lost when cross compliance ends. We continuously review farming regulations to make sure they are effective at delivering our outcomes, where necessary we will raise regulatory standards to protect the environment.</p> <p>A Scottish Agriculture Bill will be introduced in 2023. We have committed to at least 50% of direct payments being conditional by 2025.</p> <p>In Northern Ireland, Cross Compliance is being replaced with Farm Sustainability Standards. Individual support measures will incorporate conditionality elements which will build on baseline standards and drive measure uptake.</p> <p>Welsh Government consulted on National Minimum Standards (NMS) in the Agriculture (Wales) White Paper in 2020/21. The NMS are intended to provide clarity about the existing law to ensure compliance.</p>
131	<p>Set in place action to overcome financial barriers that prevent take-up and innovation in low-carbon farming practices. This should include management incentives under the ELM scheme and approaches set by devolved administrations, grants for capital items and infrastructure, and support for research and development.</p>	<p>In England, Defra are designing payment rates to drive take-up of environmental land management (ELM) schemes, while also ensuring value for public money. SFI and CS will include actions to support agriculture in reducing its emissions, for example establishing and managing herbal leys. We have introduced a new SFI management payment of £20 per hectare, for up to the first 50 hectares of land entered in the scheme. This recognises</p>

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		<p>the cost of planning for and participating in the SFI. We are also spending over £270 million through our Farming Innovation Programme and supporting £120 million investment in research across the food system. We are also providing grants towards equipment and technology through our Farming Investment Fund. We will continue to co-design, test and evaluate actions which may be appropriate to become elements of future support. On 10 February 2023 a route map was announced with timescales to the industry.</p> <p>DAERA's Future Agricultural Policy Programme will seek to incentivise low carbon farming, through, e.g., its Investment Measure. DAERA will also continue to commission and provide support for Research and Development. A suite of transitional schemes have been developed and offered to farm businesses in 2022. These support farmers to enhance their technical, financial and environmental performance.</p>
132	<p>Extend the statutory requirements of marine plan policies to the decisions of public and private organisations. At present only public authorities are duty bound under law to apply the plan policies to their decisions meaning there is a significant gap in the protections they are designed to provide.</p>	<p>Public authorities use marine plans for authorisation decisions which ultimately impact the use of the marine area by private organisations. Defra do not agree that there is a gap in protection as a result of private sector organisations not being legally required to consider the marine plan policies.</p> <p>Under S58(1) of the Marine and Coastal Access Act 2009, public authorities must take authorisation or enforcement decisions in accordance with the appropriate marine policy document, unless relevant considerations indicate otherwise. For example, through the marine licensing process applicants must confirm they have taken account of marine plan policies. This information is considered by the MMO, including a more detailed consideration of</p>

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		<p>alignment with marine plan policies, when determining an application for a marine licence. Other public authorities have similar processes.</p> <p>Defra does not agree that legislative change is necessary, we are working to improve marine plan implementation and ensure plans are providing the necessary protections.</p>
133	<p>Develop understanding on how the transition to Net Zero in the agriculture and land will affect employment in these sectors, including a timeframe of change and the scale of impact. Set out how the change will be managed to be fair and equitable, ensuring new skills and training are widely available to both support communities, but also to facilitate the meeting of targets in these sectors.</p>	<p>In England, we do not expect significant changes in employment within the sector resulting from the agricultural transition. We are managing the transition so the sector has time to adapt and will keep our plans under review. We will continue to work with external partners and farmers and land managers to ensure an effective future advice offering and training support package. This will support farmers and land managers to enter and deliver on Defra schemes and services through the Agricultural Transition. We are contributing towards the establishment of a new professional body, the Institute for Agriculture and Horticulture, which will drive industry capability improvements.</p> <p>The Scottish Government is committed to producing a Just Transition plan for land and agriculture. We continue to provide high-quality advice through Farm advisory service (FAS) and share best practice through Farming for a Better Climate (FFBC).</p> <p>DAERA's Future Agricultural Policy Programme will seek to incentivise low carbon farming, through, e.g., its Investment Measure. DAERA will also continue to commission and provide support for Research and Development.</p> <p>The Welsh Government continues to support the transition to low carbon farming. The Knowledge Transfer &</p>

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		<p>Innovation programme (Farming Connect) contains a number of interventions including subsidised accredited training aimed at supporting the transition to net zero.</p>
134	<p>Provide support to tenant farmers to overcome contractual issues that restrict the long-term commitment and investment required to reduce emissions and sequester carbon on the land they manage.</p>	<p>We are designing our schemes to be accessible for all farmers, including tenants. We know that a vibrant tenanted sector is vital to the future of agriculture, and that tenants will play a key role in helping us to achieve our environmental goals. Defra welcomes the Rock Review report on supporting a vibrant tenanted sector. We are considering the recommendations in the Rock Review on tendencies and will provide a response shortly. We have already implemented many of the recommendations including designing the Sustainable Farming Incentive to be accessible to tenant farmers on short term agreements, making grants, available for both landlords and tenants and working with tenant and landlord organisations to enable more tenant farmers to contribute to England's tree-planting ambition.</p> <p>The Scottish Government will bring forward a Land Use Tenancy which will enable integrated land management whilst supporting our climate and biodiversity goals, other diverse land use opportunities, and food producers.</p> <p>Land tenure arrangements are different in Northern Ireland. This is, however, under consideration within the Farming with Nature Package.</p> <p>The new Agriculture (Wales) Bill aims to create a system of farm support that will reward farmers for taking actions to respond to climate change and nature emergencies, including tenant farmers. A Tenancy Working Group is</p>

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		being established to consider scheme access for all types of tenancy arrangements.
135	Set in place action to overcome non-financial barriers that prevent adoption of low-carbon farming measures and land-use change to deliver emission reduction and carbon benefits. These include streamlining application processes and providing support for skills, training, and knowledge exchange in order to provide confidence to farmers to take up new measures.	<p>In England we have a significant evidence base on the drivers of farmer engagement in certain activities, which is informing scheme design and delivery. Defra is also contributing towards the establishment of The Institute for Agriculture and Horticulture; a new professional body for farming, driving improvements in industry capability. We are working to make application processes simpler and more effective. This year we have made a number of changes to improve the Countryside Stewardships application process, for example, introducing an annual declaration in place of burdensome revenue claims.</p> <p>The Scottish Government supports the Farm Advisory Service which provides a first-rate advisory provision and Farming for a Better Climate which focuses on sharing good practice through peer-peer learning, and testing new methods through pilots.</p> <p>Provision of knowledge and innovation skills is a central component of DAERA's Future Agricultural Policy Programme.</p> <p>The Welsh Government continues to support low carbon farming. The Knowledge Transfer & Innovation programme (Farming Connect) contains a number of interventions including subsidised accredited training, advice and knowledge transfer.</p>
136	Ensure incentives are set at the correct level to set a trajectory to achieve 58% of peatland restored by 2035, and 79% under	In England, Natural England will be publishing a Peatland Restoration Roadmap in 2024 which will set out our trajectory to deliver approximately 280,000 hectares of peat

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	<p>restoration by 2050. All upland peat should be under restoration management by 2045.</p>	<p>restoration by 2050 (including all upland peat). Defra is developing the Landscape Recovery and Countryside Stewardship Plus schemes to provide the main delivery mechanism for peatland restoration after 2024-25, when the Nature for Climate Peatland Grant Scheme is due to close.</p> <p>In 2020 the Scottish Government set out plans to invest £250 million over ten years to restore 250,000 hectares of degraded peatlands, which represents around 15% of Scotland's degraded peatlands, by 2030. Restoration targets beyond 2030 will be considered in Scotland's next Climate Change Plan.</p> <p>DAERA are at the early exploratory stages of considering delivery mechanisms to help achieve this recommendation.</p> <p>Welsh Government aims to deliver peatland restoration and sustainable management through the National Peatland Action Programme, supplemented by the Sustainable Farming Scheme, Natural Flood Management, Nature Networks and LIFE projects.</p>
<p>137</p>	<p>Implement a comprehensive delivery mechanism to address degraded peatland and extend current restoration ambition set out by the UK government and the devolved administrations beyond existing timeframes. Peat restoration targets include the need to remove all low-productive trees (i.e. less than YC10) from peatland (equivalent to 16,000 hectares by 2025), and restore all peat extraction sites by 2035 (equivalent to 50,000 hectares by 2025).</p>	<p>Defra have already set out a greater ambition for peat restoration in England in the Net Zero Strategy of approximately 280,000 hectares by 2050 (including all upland peat). Natural England will be publishing a Peat Restoration Roadmap in 2024 which will set out a trajectory for peat restoration in England and how this will be achieved.</p> <p>The Scottish Government's Peatland Programme is driving comprehensive action to remove barriers to upscaling restoration and to build a robust project pipeline to 2030 and beyond. Restoration targets beyond 2030 will be</p>

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		<p>considered in Scotland's next Climate Change Plan. Restoration requirements for commercial peat extraction sites are agreed with the relevant planning authority. Scottish Forestry do not support the planting of trees on deep peat (over 50cm) and all woodland creation cases covering sensitive areas, such as deep peat, require full environmental assessment.</p> <p>The Welsh governments National Peatland Action Programme, supplemented by other projects, delivers peatland restoration. Afforested peatland is a priority theme. Peatland restoration targets have been tripled in line with 2050 Net Zero commitment.</p>
138	<p>Introduce baseline regulations to ensure lowland peat soils are not left bare by mandating the use of appropriate vegetation cover.</p>	<p>Whilst Defra agree it is important to protect our peat soils, literature reviews to date have not suggested that bare peat versus vegetation cover makes a significant difference on greenhouse gas emissions from peat. The main control on emissions is the water table depth and that is our focus in developing protection measures. However, we will continue to develop our evidence base on sustainable management of lowland peat to inform policy interventions. We also look forward to the recommendations of the independent Lowland Agricultural Peat Task Force.</p>
139	<p>Introduce policy to end rotational burning on peatland before the start of the 2022 burn season.</p>	<p>Defra is committed to protecting and restoring England's vulnerable peatlands. We introduced legislation in 2021 to prevent burning on protected peat sites. We will keep under review the environmental and economic case for extending the approach to additional areas of blanket bog after assessing how the new regime works in practice.</p> <p>As part of the response to the recommendations of the Werritty report, Scottish Government are proposing a</p>

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		<p>statutory ban on muirburn on peatland unless it is part of an approved habitat restoration programme, to protect public safety (e.g. reduce the risk of wildfire) or for the purpose of research.</p> <p>In Northern Ireland, it is envisaged that there are limited occasions of managed rotational burning of peatland.</p> <p>50% of Wales' peatlands are protected from unconsented rotational burning by designation. Pressure to undertake rotational burning is not a significant issue to Wales.</p>
140	<p>Introduce the proposed regulations to ban the retail sale of peat in horticulture in England and Wales by 2024. Use by the horticultural sector should also end in 2024, earlier than the currently proposed 2028. Government must work with the horticultural industry achieve this.</p>	<p>Defra has always been clear of the need to end the use of peat and peat containing products in horticulture in England and have announced our intention to introduce legislation to ban the retail sale of peat when parliamentary time allows. This will address over 60% of the peat sold. We are working with the horticultural industry to understand better the technical barriers to replacing peat based growing media with suitable alternatives within the professional sector.</p> <p>Welsh Government announced on 5 December 2022 the retail sale of peat in horticulture will end in Wales and is now working with the UK Government to implement the ban.</p>
141	<p>Set out clear timeframes to end domestic and industrial peat extraction across the UK. Provide a mechanism to ensure the peat extraction industries restore extraction sites to protect the peat resource.</p>	<p>Domestic peat extraction no longer takes place in England; we are investigating the state of former extraction sites and their restoration needs. Most of the remaining industrial peat extractions sites in England are found in Somerset. Defra are working with Somerset County Council to develop an approach to end peat extraction early. Restoration of extraction sites are a requirement of existing planning</p>

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		<p>permissions. It is envisaged that peat extraction will effectively end once the sale of peat and peat containing products has ended.</p> <p>In Scotland, NPF4 does not support new commercial peat extraction except for the whisky industry, which must minimise damage and restore peatlands. Ending domestic extraction has socio-economic impacts for crofters. Ending commercial peat extraction has significant financial implications.</p> <p>There are proposed actions in the Draft Northern Ireland Peatland Strategy to "conduct a review and publish a key issues paper on peat extraction and the use of peat and peat products by 2023 and take forward any recommendations".</p> <p>Welsh Government aims to coordinate peatland restoration and sustainable management through the National Peatland Action Programme, supplemented by the Sustainable Farming Scheme.</p>
142	Where peat soils remain under agricultural use, set out how they will be managed in a more sustainable way. This should include raising water levels on 8% of lowland grassland by 2025, reaching 25% by 2035, and 12% of arable crops by 2025, reaching 38% by 2035.	<p>In England, the independent Lowland Agricultural Peat Task Force is due to report shortly on how peat soils under agricultural use should be managed in a sustainable way. Defra will build on the recommendations of the Task Force, setting the foundations to rewet peat soils and change the way we farm on them. We will update on next steps in due course.</p> <p>Work towards Scotland's next Climate Change Plan is considering the contribution of rewetting peat soils under agricultural use to emissions reductions targets.</p> <p>DAERA launched the Soil Nutrient Management Scheme in 2022 which will support the management of soils on</p>

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		<p>Northern Irish farms in a more sustainable way. No targets have been set at a Northern Ireland farmland level to do this.</p> <p>Welsh Government aims to deliver peatland restoration and sustainable management through the National Peatland Action Programme, supplemented by the Sustainable Farming Scheme, Natural Flood Management, Nature Networks and LIFE projects.</p>
143	<p>Develop the option of applying minimum environmental standards to imports of selected agricultural products, either for application via due diligence or at the border.</p>	<p>The Government is committed to upholding the UK's high environmental standards through trade. We have been clear that we will never sign a trade deal that compromises the UK's high environmental protections. We agree that regulations and standards relating to domestic production and imports also have an important role to play. For example, we committed to implementing due diligence provisions for forest risk commodities in the Environment Act 2021.</p> <p>The UK has a wide-ranging programme of work underway to raise global ambition for sustainable agriculture. This means looking to our multilateral trade policy approach, bilateral free trade agreements, our diplomatic efforts and our trade promotion activity, all of which work in support of our environmental objectives. We will continue to meaningfully engage with a full range of interested groups, including business, non-governmental organisations and charities as we work closely with others on issues relating to trade and environment.</p>
144	<p>Implement Government's proposed policy on due diligence of forest-risk commodities and develop a further policy to remove</p>	<p>The UK Government introduced world-leading due diligence legislation through the Environment Act 2021 to help tackle illegal deforestation in UK supply chains. This</p>

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	<p>unsustainable legal deforestation from UK supply chains that avoids the risk of resource shuffling.</p>	<p>new law will make it illegal for larger businesses operating in the UK to use key forest risk commodities produced on land illegally occupied or used. The Government is committed to implementing these due diligence provisions at the earliest opportunity through secondary legislation.</p> <p>We also recognise there is an ongoing challenge to addressing unsustainable legal deforestation globally and we are committed to delivering a package of integrated measures aimed at reforming the international system to support sustainable production and sustainable global supply chains and reduce the UK's global deforestation footprint. As such, we are undertaking a series of domestic measures alongside international activities and collaborations, such as the Forest, Agriculture and Commodity Trade (FACT) Dialogue and engagement through other fora, including the G7 and the WTO, to promote international policies that protect forests and other vital ecosystems, while delivering sustainable trade and development.</p>
<p>145</p>	<p>Improve data collection and standardise methodologies for monitoring of, and reporting on, international land use emissions that arise from UK consumption, particularly from deforestation. The Government should aim to report on these international emissions from deforestation on an annual basis from 2023. This may build on the experimental statistic of the Joint Nature Conservation Committee.</p>	<p>The government acknowledges the importance of understanding UK consumption emissions from land-use change and deforestation. Extensive work is required before this can reliably be reported. Defra supports the work of the Joint Nature Conservation Committee and we will continue to work with them to understand how it can be improved.</p>
<p>146</p>	<p>Ensure that funding and incentives are set at the correct level to meet the UK Government afforestation target of 30,000 hectares per year by 2025, and illustrative Net Zero Strategy targets of 40,000 hectares and 50,000 hectares by 2030 and</p>	<p>A long-term target to increase tree canopy and woodland cover has now been legislated for, requiring that tree cover increases by around 250,000 hectares by 2050. Defra will maintain an attractive offer for woodland creation, having</p>

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	<p>2035 respectively. Further clarity is required regarding funding beyond 2025. This should also address wider objectives for land such as climate adaptation and nature conservation.</p>	<p>committed to transition the England Woodland Creation Offer (EWCO) as the primary tree planting scheme to the Countryside Stewardship Plus Scheme from 2025; this will provide the funding to achieve the interim target of an increase in tree and woodland cover of 0.26% by 2028. We will also be increasing private investment in woodland's benefits through the launch of investment vehicles and clarity of standards, as set out in the Environmental Improvement Plan, published on 31 January 2023.</p> <p>Grant schemes in support of woodland creation have been in place for decades and funding towards achieving Net Zero is being prioritised in the Scottish Government. This suggests a positive outcome for funding woodland creation post-2025 although budgets have not been agreed at this stage. The Scottish Government is also working to increase private sector investment through mechanisms such as the Woodland Carbon Code. The target of increasing the scale of the woodland carbon market by 50% in this Parliament has already been exceeded.</p> <p>In NI, funding is in place to increase rate of afforestation to 900 ha per year by 2025 under the Green Growth Capital Investment programme; funding sources to be established to meet further increased requirement for rate of afforestation in NI at 1400 ha per year by 2029, 1800 ha per year by 2034 and 2200 ha per year by 2038.</p> <p>The Welsh Government has begun work to create a National Forest for Wales, and has committed £32 million to supporting woodland creation over 3 years through its new Woodland Creation Grant and Small Grant schemes.</p>

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147	Work with the forestry sector and government agencies to support UK tree nurseries to increase domestic production of trees to meet the planting ambition and reduce reliance on imports, along with the associated risks of pests and disease.	<p>Defra is continuing to work to deliver a suite of interventions to help the domestic nursery sector improve the quality, quantity, diversity and biosecurity of planting stock, including targeted grant support for capital investments and innovation. Funding includes £1.2 million to enhance quantity, quality and diversity of tree seed sources through the Seed Sourcing Grant, which opened in September 2021.</p> <p>The Scottish Government is supporting tree nurseries and small forestry businesses via the Scottish Forestry's Harvesting and Processing Grant to enable them to plant more trees domestically. The Scottish Government is providing £20 million to further increase tree nursery capacity.</p> <p>Northern Ireland is engaging with the local tree growing sector on the increasing demand for trees as the afforestation programme progresses to facilitate the potential growth in local supply and commercial decision-making; also, on technical matters including requirements of forestry and plant health regulations.</p> <p>The Welsh Government has supported increased capacity in the tree nursery sector through our Forestry Industry Recovery Scheme and the Timber Business Investment Grant.</p>
148	The Biomass Strategy should set out the role that sustainable domestic production of perennial energy crops and short rotation coppice will play to contribute towards Net Zero. The strategy should align with the recommended development of a Government agriculture and land use strategy and outline how land for UK biomass and forestry will be freed up. This should	Defra recognise the potential for domestic cultivation of perennial energy crops, short rotation coppice (SRC) and short rotation forestry (SRF) to contribute towards our transition to net zero. Defra is working closely with the Department for Energy Security and Net Zero on development of the forthcoming Biomass Strategy. The

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	<p>include specific targets to increase the area growing energy crops across the UK to 6,000 hectares per year by 2025, and 30,000 hectares per year by 2035.</p>	<p>Strategy will set out the results of a review into the potential availability of a variety of sustainable biomass from domestic and international sources. With careful spatial planning, perennial energy crops, SRC and SRF have the potential to contribute to other wider environmental goals such as biodiversity and water quality.</p> <p>Domestic biomass production will be considered as part of a strategic approach to land use, which considers the full range of government land-use priorities. To that end, the government has committed to publishing a Land Use Framework for England in 2023, which will set out land-use change principles to balance climate, food, and environment outcomes.</p>
<p>149</p>	<p>Develop a comprehensive plan to increase the production and use of UK sourced timber and support the long-term economic viability of domestic woodlands.</p>	<p>Defra are working with stakeholders and across government to develop a policy roadmap to safely increase the use of timber in construction in England which is planned for publication in 2023.</p> <p>Industry are publishing their National Wood Strategy for England. The strategy will highlight the opportunities for innovation and growth in a sector that can contribute positively to net zero, biodiversity gain, housing. The NWSE is expected to outline the steps needed to increase the nation's wood production and utilisation.</p> <p>The Scottish Government is supporting growth in the production and use of UK sourced timber and has set stringent targets, with a target of 3 million cubic metres of Scottish produced sawn wood and panel boards used in construction by 2030.</p> <p>DAERA's supply arrangements of certified timber to industry will continue to provide the sector's key domestic</p>

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		<p>supply requirements and underpin confidence in the forestry sector necessary to encourage forest/landowners to commit to long-term and resilient forestry land use.</p> <p>In Wales the Timber Industrial Strategy will seek to identify priority interventions across the timber supply chain to develop a wood economy and encourage greater use of timber in construction.</p>
150	<p>Work with the Environment Agency to set out the measures being taken to improve the uptake of property-level flood resilience (PFR) following stakeholder responses to its PFR call for evidence and consultation. This should include improved data collection to monitor progress. Plans for the new national flood risk assessment and 2025 long-term investment scenarios must ensure that the evidence they provide can be used to identify the most effective locations for PFR, and smart targets for their installation with timescales.</p>	<p>Government has committed to set policy direction for Property Flood Resilience measures that supports consumer and industry confidence, and therefore take-up.</p> <p>The Environment Agency's (EA) 2025 long-term investment scenarios will include PFR and identify the optimum level of investment. It will also estimate the potential for PFR to reduce risk at a national scale. This evidence will inform policy. The EA's new national flood risk assessment will provide more accurate and richer flood risk information for England, which can be used, alongside local understanding, engagement, and appraisal, to identify candidate locations for PFR.</p>
151	<p>The Government should outline the UK's future ambitions on reducing consumption emissions.</p>	<p>The UK has set ambitious emissions targets on a territorial basis, in line with the agreed international approach for reporting greenhouse gas emissions.</p> <p>In addition, the government monitors the UK's consumption emissions and publishes its 'Carbon Footprint' report on an annual basis. Monitoring of these emissions informs and enables policy development to support global decarbonisation efforts.</p>

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		<p>Consumption emissions are best tackled at an international level and the government continues to work with international partners to drive down global emissions.</p>
152	<p>Ensure all of the department's own policy decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.</p>	<p>HM Treasury's Green Book and Business Case Guidance is used to appraise spending and regulatory proposals, and includes guidance for how net zero and climate risk considerations should be included in appraisal. This is outlined in Green Book supplementary guidance. HM Treasury continues to work with departments to embed Green Book best practice.</p> <p>The Government has set out its intention to put the National Procurement Policy Statement (NPPS) on a statutory basis through the Procurement Bill. The NPPS sets out clear principles that contracting authorities should follow - tackling climate change and achieving net zero is one of these.</p> <p>In addition, Procurement Policy Note 06/21 shows the government's commitment to achieving net zero. Under this measure, prospective suppliers bidding for major contracts must submit a Carbon Reduction Plan that details their emissions and their organisational commitment to net zero by 2050.</p> <p>Companies that fail to provide a Carbon Reduction Plan which meets these requirements risk deselection from the procurement.</p> <p>Between September 2021 and the start of February 2023, the measure was applied to 129 procurements, which are valued at c.£187.5 billion over their contractual term.</p>

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153	<p>The Government should increase investment in, and improve the collection and reporting of, consumption emissions data. This should include (a) establishing a short- and medium-term strategy to improve the underlying methodology to ensure it can capture key improvements in the carbon intensity of imports (b) ensuring the resource to enable annual emissions statistics to be produced promptly each year.</p>	<p>The government recognises the importance of consumption emissions and Defra has published the UK carbon footprint since 2008. Defra and other government departments have joint regular dialogue with data providers, the University of Leeds, and the Office for National Statistics, to explore how the methodology and statistics can develop, both in the short and long-term. Since 2022 the methodology has been regarded as sufficiently developed for these statistics to no longer be classified as ‘experimental’, although methodology continues to evolve.</p> <p>The government is exploring what resources are required to elevate the carbon footprint to National Statistics status, to demonstrate they have met the highest standards of quality, trustworthiness and public value. Discussions with the Office for Statistics Regulation on this are planned for first half of 2023.</p>
154	<p>For the review of the F-gas Regulation happening this year, match or exceed any increase in ambition in EU F-gas Regulation, which is currently being reviewed.</p>	<p>UK, Scottish and Welsh Governments are reviewing the F-gas Regulation. This is being done in two stages. The first stage was completed in December 2022 with the publication of an assessment report. The report looks primarily at the impact of the current regulation and current market circumstances. The second stage will involve launch of a public consultation on future policy proposals which will seek to identify F-gas measures that will help meet the UK’s net zero target.</p>
155	<p>Pass legislation to reduce hydrofluorocarbon consumption by 85% by 2036 relative to 2011-2013.</p>	<p>Defra will require primary powers to then lay secondary legislation to make necessary changes to the F-gas Regulation. The UK is nevertheless committed to meeting its obligations under the Kigali Amendment to the Montreal Protocol by reducing hydrofluorocarbon (HFC) consumption</p>

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		<p>by 85% by 2036. The UK's net zero objective means proposals in our planned consultation on changes to the F-gas Regulation will need to be ambitious, including considering going beyond the Kigali target.</p> <p>The existing F-gas Regulation will reduce HFC placed for the first time on the market by 79% by 2030, compared to a 2015-2019 baseline. The UK is currently ahead of the Kigali Amendment schedule, having already implemented a phasedown of HFCs by 55% compared to the current 10% phasedown required under the Kigali Amendment.</p>
156	<p>Publicly push for stronger international action on reducing F-gases under the Kigali Amendment to the Montreal Protocol, including making it compatible with reaching Net Zero greenhouse gas emissions, encouraging more countries to ratify the Protocol and the Amendment, improving international monitoring of emissions, supporting the development of more robust estimates of emission metrics, and supporting the reduction of inhaler emissions in other countries' health services.</p>	<p>The UK is publicly pushing for earlier Montreal Protocol action to phase down hydrofluorocarbons (HFCs), the main group of F-gases. We are also advocating to integrate action on energy efficiency for refrigeration and air-conditioning equipment, which could double the climate benefits of the Kigali Amendment in line with Paris Agreement and net zero commitments.</p> <p>To support these efforts, the UK aids developing countries, including for modelling of early action to reduce HFCs and projects promoting sustainable, efficient cooling and cold chains.</p> <p>The UK continues to call upon the international community to ratify and effectively implement the Kigali Amendment at every opportunity, including at the G7 and by seeking, where appropriate, to embed Montreal Protocol commitments into our new Free Trade Agreements.</p> <p>Moves by inhaler manufacturers in Europe to switch to climate friendly inhalers could lead to more of the global market taking similar action, thereby reducing emissions.</p>

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157	Publish the timber policy roadmap setting out the policies needed to substantially increase the use of wood in construction.	Defra is working with stakeholders and across government to develop a policy roadmap to safely increase the use of timber in construction in England. Government have held three working groups so far and are continuing to develop the roadmap for publication in 2023.
158	Set the 'Resource efficiency and waste reduction' target(s), enabled by the new Environment Act powers, in a way that drives the delivery of emissions abatement from resource efficiency set out in the Resources and Waste Strategy and the Net Zero Strategy. This should recognise the role that raw material extraction and the design, longevity and reuse of materials and products can play in reducing the impacts of new product demand, while realising potential co-benefits.	The Environment Act 2021 target to reduce residual waste (excluding major mineral wastes) kg per capita by 50% by 2042 from 2019 levels, can be achieved by waste prevention, resource efficiency and recycling of unavoidable waste. Our research to date has not identified a clear policy pathway for significantly reducing the effects of resource extraction and use on the natural environment, which we assessed through the lens of resource productivity. The research indicates, along with advice from our group of independent experts, that setting a legally binding target at this stage is premature. The consultation helped to explore the most appropriate approach to measure resource productivity and what policies might be most effective in the future. We will consider consultation recommendations and continue to investigate this. We are taking forward further research on policies to improve resource efficiency in collaboration with the Department for Energy Security and Net Zero.
159	Publish a detailed plan to decarbonise the waste sector (including Energy from Waste and wastewater) in line with meeting the Sixth Carbon Budget and Net Zero.	The Resources and Waste Strategy 2018 sets out the government's overall ambition and direction of travel to promote resource efficiency, move towards a circular economy and decarbonise the waste sector in England. The <i>Net Zero Strategy 2021</i> identified additional actions to decarbonise waste, including Energy from Waste (EfW) and wastewater. The <i>Environmental Improvement Plan 2023</i> set out in further detail how existing Defra policies within

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		<p>these strategies support the decarbonisation of the waste sector. To bring together the components of how the waste sector will contribute towards net zero, Defra will publish an addendum to the <i>Resources and Waste Strategy</i> in the summer, which will focus on net zero.</p> <p>The Scottish Government consulted on proposals to minimise the environmental impact of waste, including the carbon impacts of incineration. A final <i>Waste Route Map</i> will be published in 2023, taking into account recommendations of an independent review of incineration, which considered decarbonisation options.</p> <p>The Climate Change Act (NI) 2022 places an obligation on DAERA to develop a Climate Action Plan to deliver the 1st Carbon Budget. This contains policies and proposals to decarbonise the waste sector. It will be consulted on in 2023.</p> <p>Net Zero Wales sets out the actions Wales is taking to decarbonise the waste sector, including an aim to achieve the highest recycling rates in the world.</p>
160	Clarify OFWAT's mandate to enable efforts to decarbonise wastewater treatment in addition to scrutinising companies' business plans ahead of the 2024 Price Review.	<p>Defra published the Government's strategic priorities for Ofwat in February 2022. This set out that Water Companies should have regard for the policies and proposals set out in the Net Zero Strategy. It also states that Ofwat should scrutinise and challenge companies' business plans.</p> <p>In response to this direction Ofwat's PR24 methodology includes the introduction of two common operational greenhouse gas emission performance commitments. These commitments are designed to encourage greenhouse gas emission reductions linked to the provision of water and wastewater services.</p>

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161	Set out how industry will be supported in developing advanced technologies to reduce emissions from anaerobic digestion, composting and wastewater.	The <i>Resources and Waste Strategy</i> 2018 sets out the Government’s ambition and direction of travel to promote resource efficiency, move towards a circular economy and decarbonise the waste sector in England. The <i>Net Zero Strategy, 2021</i> , identified additional actions to decarbonise waste, including Energy from Waste (EfW) and wastewater. The <i>Environmental Improvement Plan 2023</i> set out in further detail how existing Defra policies within these strategies support the decarbonisation of the waste sector in line with meeting net zero in England and consider where we can go further. In addition, Ofwat's PR24 methodology sets out a net zero challenge bidding competition which makes additional funding available to Water Companies leading on the development of low carbon technologies.
162	Publish an assessment of residual waste treatment capacity needs through to 2050, consistent with meeting committed and prospective recycling and waste reduction targets, expected resource efficiency improvements and the stated goal to end the landfilling of biodegradable waste by 2028. The findings of this review should inform future incineration/EfW capacity decisions and consider the feasibility of phasing out waste exports by 2030.	Defra is developing a ‘Waste Infrastructure Roadmap’ in partnership with WRAP that will set out current and forecast waste infrastructure capacity and arisings to 2035. Analysis of residual waste capacity has also been undertaken. Both of these analyses will be published in due course and will provide clarity to investors as to where there is forecast to be over or under provision of waste infrastructure in response to the Collection and Packaging Reforms. These forecasts and analyses will form the foundation of future assessment that would take into account future policy development, including the legally binding Residual Waste Reduction Target, once details of these policies are known and forecasts can be made.
163	Review planning policies for waste infrastructure to ensure they enable delivery of recycling targets, support future residual waste needs and consider decarbonisation requirements. This	The National Planning Policy for Waste outlines the pivotal role planning plays in delivering our waste ambitions. This supports the delivery of recycling targets by driving waste management up the waste hierarchy. It outlines that waste

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	includes clarifying siting requirements for incinerators to enable CCS adoption.	<p>planning authorities should prepare Local Plans which identify sufficient opportunities to meet the identified needs of their area for the management of waste, thus supporting future residual waste needs. Waste planning authorities should also consider siting low carbon energy recovery facilities to enable the utilisation of the heat produced.</p> <p>Future updates to planning policy will provide an opportunity to reflect wider government policy around Carbon Capture, Usage and Storage and decarbonisation requirements.</p>
164	Formalise commitment to prevent key biodegradable waste streams (including municipal and non-municipal sources) from going to landfill by 2028 at the latest and clarify details of additional policies needed to achieve this.	As outlined in the <i>Net Zero Strategy</i> we are exploring policies to work towards the near elimination of biodegradable municipal waste to landfill from 2028. The <i>Resources and Waste Strategy 2018</i> sets out the government's overall ambition in the waste sector. We want to ensure any policies in this area reflect other commitments and are phased to best support the path to net zero. We will launch a call for evidence to support development of a plan to achieve this shortly.
165	Set an ambition to improve methane capture and oxidisation rates at landfill sites and review the incentives and broader support necessary to achieve that ambition.	Defra is working with the Environment Agency (EA) to investigate the potential for improved methane capture at open and recently closed landfill sites. The Environmental Services Association and their membership announced a commitment to improve their capture rates in their net zero strategy by 2030. The EA and Defra are exploring coordinated programmes to develop a fugitive landfill gas measurement system and methodology which could be drawn up as a standard. Research programmes to investigate interventions for improved landfill gas capture are in development. Once developed, any resulting robust

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		<p>and standardised fugitive gas measurement system would be used to underpin intervention and improvement cycles. The EA have begun initial engagement with the waste sector to discuss collaboration on improving key operational practises. Defra is investigating business pressures that act against further improvement and considering support in this area. The potential for planting woodland on closed landfills for improved oxidation will be explored.</p>
166	<p>Clarify details of how £295m capital funding for food waste collections announced in the Net Zero Strategy will be spent to prevent food waste from going to landfill.</p>	<p>Defra is currently developing a funding formula to distribute the capital funding to those authorities who will require additional capital investment to meet the requirements of the Environment Act 2021 to separately collect food waste weekly. Evidence to support this has been gathered through WRAP's local authority portal and engagement with local authorities. As this funding relates to New Burdens, we have engaged the Local Government Association (LGA) on proposals.</p>
167	<p>Publish a review of incentives across the waste sector to ensure they are appropriate for achieving dual aims of waste reduction and decarbonisation. This should consider pricing of waste management solutions as well as materials.</p>	<p>Government undertook a significant review of incentives across the waste sector in its Resources and Waste Strategy and made further commitments in the Net Zero Strategy. It reviewed and committed to significant interventions in the waste sector that will deliver waste reduction, higher recycling, and decarbonisation. It included the Collection and Packaging Reforms which will achieve significant greenhouse gas savings. It also considered interaction with fiscal levers, including introduction of the plastic packaging tax.</p> <p>Government is also undertaking a review of the Landfill Tax. Government has also announced a legal target to halve residual waste by 2042 (from 2019 levels) that</p>

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		incorporates a suite of committed policies and potential future pathways that include price-based interventions. Government has also announced a Waste Industrial Carbon Capture Business Model.
168	Finalise plans to introduce mandatory business food waste reporting so that it can be phased in from the beginning of 2024. Engage WRAP in providing or brokering consistent methods of measurement and associated data sets.	<p>The government consulted in 2022 on options to improve food waste reporting by large food businesses in England. The consultation considered different options to increase the number of businesses measuring and reporting their food waste. One of the options was for a regulatory approach and the proposed implementation for this was 2024. The government response will be published this spring.</p> <p>Defra has funded WRAP to develop guidance and methodologies for businesses to utilise when measuring and reporting food waste. These methods of measurement have been used under the Courtauld Commitment and Food Waste Reduction Roadmap voluntary approaches and the government consulted on the use of these methodologies if a regulatory approach were to be introduced. This ensures that data collected by industry is standardised and comparable.</p>
169	Formally set the proposed target for reducing residual waste (to landfill, incineration or export) by 50% by 2042.	The target to ensure that by 2042 the total mass of residual waste (excluding major mineral wastes) is no greater than 287 kg per capita has now been formally set. This is equivalent to a 50% reduction from 2019 levels. We thank the CCC for their response to the Environmental Target Consultation which closed on 27 June 2022.
170	Consider the findings of the Environment and Climate Change Lords Select Committee inquiry into mobilising action on climate	Defra provide grant funding to support WRAP to carry out behavioural change work on recycling & food waste

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	change and fund WRAP to undertake an assessment of the behaviour changes needed to achieve targets for food waste reduction, recycling and improved end user consumption'.	<p>prevention. If any additional social research and evidence is required to support the achievement of our targets, this will be procured through normal government procurement processes.</p> <p>We have recently begun an Evaluation of the Resources and Waste Strategy and the Waste Prevention Programme. We will use its findings to improve our understanding of behaviours, adapt our policy design and implementation, or provide additional input into the operating context, to make policies more effective in achieving our published targets.</p>
171	Finalise the Waste Prevention Programme, including by setting out details on additional policies needed to achieve committed recycling and waste reduction targets, including additional Extended Producer Responsibility schemes committed in the draft WPP.	'Maximising Resources, Minimising Waste', the new Waste Prevention Programme for England, is being finalised following consultation in 2021. We aim to publish the summary of responses alongside the new programme in the first part of 2023. The programme will set out priorities for action to manage resources and waste in accordance with the waste hierarchy. Some of the proposals are at an early stage and will be subject to further development. Following publication there will be engagement on individual policies, giving an additional opportunity for stakeholders to provide input.
172	Implement initial Extended Producer Responsibility, the Deposit Return Scheme and consistent collections of recycling and food waste without further delay. Complete an independent review of the impact of the schemes within 2 years of implementation (i.e. by 2026).	Defra is committed to delivering our Collections and Packaging Reforms as quickly and effectively as possible. We published the Government Response to the packaging Extended Producer Responsibility (EPR) consultation in March 2022, alongside the Devolved Administrations, announcing the introduction of EPR from 2024. We published the Government Response to introducing a Deposit Return Scheme (DRS) in England, Wales and Northern Ireland on 20 January 2023, announcing the

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		<p>scheme will commence in October 2025. We are currently finalising our response to the consistency in recycling consultation for households and businesses in England and intend to publish the Government response shortly.</p> <p>We are undertaking an evaluation of the Resources & Waste Strategy. This will be an independent impact and economic evaluation for the Strategy and a process evaluation for packaging EPR, DRS and Consistency. This will start six months after the schemes are implemented with final reporting in 2027.</p> <p>Scotland's Deposit Return Scheme will go live on 16 August 2023.</p> <p>We are working with the other UK administrations to bring in EPR across a range of materials; in particular, a scheme for packaging which will come in from 2024.</p> <p>A consultation on consistent collections for recycling and food waste will be launched in Northern Ireland in 2023.</p> <p>Welsh Government is working to implement the commitments in Net Zero Wales with the other Governments across the UK on EPR for plastic packaging, and with England and Northern Ireland on a DRS for drinks containers. In parallel, Welsh Government are undertaking the final consultation on the Business, Public and Third Sector recycling reforms which will align collection with the continuing successful roll-out of consistent household collections via our Blueprint best practice.</p>
173	Set ambitious post-2035 recycling targets alongside possible policy options for delivering such targets, including increasing investment to deliver long-term infrastructure needs.	Government has set a long-term, legally binding waste target to reduce residual waste (excluding major mineral waste) kg per capita by 50% by 2042 from 2019 levels. We

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		<p>have also set short-term interim targets, and future interims will be set in the next Environment Improvement Plan.</p> <p>We are also taking measures to ensure we recycle at least 65% of municipal waste by 2035. Within the Resources & Waste Strategy evaluation, a list of indicators will be reported against annually in the Monitoring Progress publication.</p> <p>We have taken significant action to drive progress. This includes introducing Extended Producer Responsibility to ensure producers cover the full net cost recovery for packaging; having greater consistency in what is collected for recycling in England, including collecting more materials like plastic film and separate food waste; and introducing a deposit return scheme for drinks containers. These reforms will provide clarity to investors and support infrastructure development.</p>
174	<p>Ensure that adaptation is integrated into major upcoming policies in the next two years related to the priority Third Climate Change Risk Assessment risks for which Defra has lead responsibility, coordinating work with other relevant departments as necessary: Risks to soil health from increased flooding and drought.</p>	<p>The <i>Environmental Improvement Plan</i> sets out our future approach for protecting and enhancing the health of our soil. This includes the commitment to bring at least 40% of England's agricultural soil into sustainable management by 2028 and increase that to 60% by 2030. Actions to deliver thriving plants and wildlife and clean and plentiful water, as well as mitigating and adapting to climate change, will also support healthy soils.</p> <p>Defra will incentivise farmers and land managers under agri-environment schemes to manage land in a way that improves and protects the overall health and structure of the soil. This includes the introduction of herbal leys and cover crops, which we are already paying for under the Sustainable Farming Incentive. These actions will help</p>

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		<p>increase soil organic matter, improve soil structure and provide resilience against the impacts of climate change such as flooding and drought.</p>
175	<p>Ensure that adaptation is integrated into major upcoming policies in the next two years related to the priority Third Climate Change Risk Assessment risks for which Defra has lead responsibility, coordinating work with other relevant departments as necessary: Risks to natural carbon stores and sequestration (trees, soils and wetlands) from multiple hazards.</p>	<p>We have published the UKFS guide on adapting forest and woodland management to the changing climate and will seek to support the Forestry and Climate Change Working Group in implementing its adaptation plan and develop a Woodland Resilience Implementation Plan.</p> <p>We are developing a healthy soil indicator, where soil carbon is considered as one of many key soil variables, and soil structure scheme aiming to help land managers and farmers track the health of their soil, including levels of SOM.</p> <p>Peat habitats in good condition are more resilient to climate change. We set a target in the <i>Net Zero Strategy</i> to restore approximately 280,000 ha of peatland in England by 2050 and Natural England will publish an implementation plan in 2024.</p> <p>We need to restore and protect coastal wetlands. The majority of the UK's saltmarsh habitats are within Marine Protected Areas, and our focus is now on ensuring these areas are effectively protected. We have also established the UK Blue Carbon Evidence Partnership to progress the evidence base on 'blue carbon'.</p>
176	<p>Ensure that adaptation is integrated into major upcoming policies in the next two years related to the priority Third Climate Change Risk Assessment risks for which Defra has lead responsibility, coordinating work with other relevant departments</p>	<p>Over the course of the Third National Adaptation programme, government policy will support climate change adaptation in order to maintain agricultural production and enhance resilience to extreme weather events.</p>

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	as necessary: Risks to crops, livestock, and commercial trees from multiple hazards.	<p>Through environmental land management schemes, regulatory reform, and funding for innovation and investment, Defra will support farmers to adopt practices which will enhance resilience in the face of a changing climate. The Defra-funded Genetic Improvement Networks are helping to identify genetic traits to improve the productivity, sustainability and resilience of crop varieties.</p> <p>Defra will seek to fill key evidence and analysis gaps, including through Defra's partnership with the Met Office Hadley Centre. Output from these research projects will inform the development of government policy.</p>
177	The next National Adaptation Programme, due in 2023, should include a detailed monitoring and evaluation framework, including which indicators will be used to monitor progress in reducing risk and showing the effectiveness of different adaptation responses for each risk in the Third Climate Change Risk Assessment.	The government understands the importance of indicators for evaluating the effectiveness of adaptation policies. For example, Defra has initiated an adaptation indicators programme, including collaborating with the Organisation for Economic Co-Operation & Development (OECD) on its project measuring progress in implementing national adaptation policies. The third National Adaptation Programme (NAP3) will have a clear set of objectives for adaptation, and a systematic and robust set of policies, programmes and investments to meet those objectives. Progress indicators, aligned to risks and opportunities set out in our risk assessment will be developed and published following the NAP3 document and will help the programme have a more targeted and effective approach to monitoring. The information collected will help to inform future decision making on climate risk management as we learn more about what works.
178	The next National Adaptation Programme, due in 2023, should report how departments have addressed the top eight priority	The government is working to develop a third National Adaptation Programme (NAP3) that addresses all 61 risks

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	<p>risks set out in the Third Climate Change Risk Assessment Advice Report for urgent action between 2021 and 2023.</p>	<p>and opportunities in its third Climate Change Risk Assessment (CCRA3), including the eight priority risk areas. In the meantime, government is taking action across the identified eight priority risk areas and further detail of recent progress in these areas can be found in the UNFCCC 8th National Communication. Examples of some of this work include addressing risks to people, communities and buildings from river and surface flooding by extending its flood and coastal erosion risk management plan, and addressing risks to health and wellbeing from high temperatures by introducing a new overheating mitigation requirement to ensure that new residential buildings are built for a warming climate. The government will build on this existing work and set out its full response to the eight priority risk areas with the publication of NAP3 in 2023.</p>
179	<p>The next National Adaptation Programme, due in 2023, should set out how adaptation is being integrated into policy, and the measurable actions by department for adaptation across each of the 61 risks and opportunities set out in the Third Climate Change Risk Assessment Technical Report for the period 2023-2028.</p>	<p>The government is working to produce a National Adaptation Programme that addresses all of the 61 risks and opportunities in its third Climate Change Risk Assessment (CCRA3). This will consider the risks that climate change poses to the successful delivery of government policies, programmes and investments to improve their success as our climate changes. Progress indicators, aligned to risks and opportunities set out in CCRA3 will be developed and published following the publication of NAP3 and will help the programme have a more targeted and effective approach to monitoring. The government has taken steps to strengthen its underpinning governance and mechanisms to support this approach and drive adaptation efforts. This includes updating the government's Green Book Supplementary Guidance on Accounting for the Effects of Climate Change to set out how</p>

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		government should embed consideration of climate change risks and opportunities in policy, programme and investment decisions, drawing on climate evidence.
180	The next National Adaptation Programme, due in 2023, should ensure the adaptation actions and the programme as a whole are framed around the principles for good adaptation outlined in the Third Climate Change Risk Assessment Advice Report.	The government recognises the ten principles for good adaptation set out by the CCC and will take account of these in the development of the third National Adaptation Programme, building on achievements made to date, and ensuring that climate risks are robustly addressed.
181	National Adaptation Programme actions to enhance arrangements for information sharing between local infrastructure operators and improve understanding of critical risks arising from interdependencies must be completed.	The Cabinet Office continues to work across critical infrastructure sectors to improve their resilience to risks that could impact systems and services, including those risks that could arise from climate change. We have developed a standardised approach to map interdependencies across and within different critical sectors, enhancing the information sharing of risks through the Lead Government Department model for Critical Infrastructure. The Civil Contingencies Act 2004 requires local responders, including utilities providers and transport operators, to co-operate and share information to effectively coordinate action to prepare for, and respond to, emergencies. The 2022 post-implementation review of the CCA 2004 carefully considered the effectiveness of these local information sharing arrangements. It made recommendations including requiring responders to report publicly on how they fulfil their duties under the Act (including information sharing) and appointing new Category 2 responders (Met Office and Coal Authority), therefore including them within the Act's formal information sharing duties.
182	The next National Adaptation Programme, due in 2023, should set out the Government's vision for a well-adapted UK,	The government is now preparing the third National Adaptation Programme (NAP3), to be published in mid-

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	<p>alongside the measurable outcomes that the Government is aiming to achieve by the end of the next National Adaptation Programme period (2023 – 2028).</p>	<p>2023, which will be based on shaping a society which makes timely, far-sighted and well-informed decisions to address the risks and opportunities posed by a changing climate. The government intends for NAP3 to include a clear set of objectives, and a robust and systematic set of actions, policies, programmes and investments to meet those objectives.</p>
<p>183</p>	<p>Ensure that adaptation is integrated into major upcoming policies in the next two years, related to the priority Third Climate Change Risk Assessment risks for which Defra has lead responsibility, coordinating work with other relevant departments as necessary: Risks to the viability and diversity of terrestrial and freshwater habitats and species from multiple hazards.</p>	<p>We are working to ensure adaptation is embedded across policy for the natural environment, scaling up action on ecosystem restoration; pursuing targeted actions for vulnerable species and habitats; supporting nature-friendly development and land management; and deploying nature-based solutions for climate change.</p> <p>Our biodiversity targets will drive action across government to address pressures on species and habitats, including those from climate change.</p> <p>Improving the condition of protected sites is at the heart of our approach. We aim to ensure they are managed adaptively in the face of climate change.</p> <p>River Basin Management Plans are the primary delivery mechanism to coordinate efforts across the range of stressors and pressures that affect freshwater habitats and species. Updated plans were published in December 2022 and include a commentary on climate change and an explanation of actions that are being taken and that are needed.</p> <p>Further measures will be set out in our third National Adaption Programme.</p>

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184	Implement a public engagement programme about national adaptation objectives, acceptable levels of risk, desired resilience standards, how to address inequalities, and responsibilities across society. The findings from the programme should feed into the vision and desired outcomes of the next National Adaptation Programme.	Climate change affects the whole of society. Adapting to climate change will require engagement and action from national and local government, the private sector, civil society and the public – as we all work together to strengthen the resilience of our nation. The government is committed to hearing and learning from the views of different groups on how climate change impacts them, and how it can improve policies accordingly. For example, a public dialogue, commissioned by Defra and in partnership with UK Research and Innovation's (UKRI's) ScienceWise Programme, Ipsos, and the University of Leeds, explored the public's perspectives of climate adaptation and how they think the government, businesses and civil society should address it.
185	Fund a programme of work to design and populate the appropriate new priority adaptation indicators for England. These should complement other environmental and social indicators collated by Government. The CCC could be tasked to coordinate this activity in partnership with other relevant organisations such as the Office for Environmental Protection and Environment Agency.	The government understands the importance of indicators for evaluating the effectiveness of adaptation policies and is supporting a range of work accordingly. For example, the Environment Agency has committed to developing an approach to monitoring and evaluating its adaptation interventions. A knowledge sharing group has been set up between the EA, Defra, the CCC, Office of National Statistics and others in the academic community who are working on this challenge. In addition, Defra has initiated an adaptation indicators programme, including collaborating with the Organisation for Economic Co-Operation & Development (OECD) on its project measuring progress in implementing national adaptation policies.
186	Make the next round of reporting under the Adaptation Reporting Power (ARP) mandatory.	Government is consulting on proposals for the fourth round of adaptation reporting. This includes questions on whether reporting should be made mandatory. The final strategy will

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		be published alongside the Third National Adaptation Programme in mid-2023.
187	Work with Port Operators and the British Ports Association to ensure the format of reporting under the Adaptation Reporting Power is appropriate for port operators and that the right operators are being asked to report, as well as to identify what further support could be offered to enable more comprehensive reporting on adaptation by the ports sector.	Government is consulting on proposals for the fourth round of adaptation reporting. This includes consideration of how the coverage of key sectors such as port operators could be improved, and which additional organisations could be targeted for reporting. The final strategy will be published alongside the third National Adaptation Programme in mid-2023.
188	For the coming five-year period (2023-2028), Defra should outline appropriate actions in the next National Adaptation Programme to address the adaptation gap identified for the other risks and opportunities in the Third Climate Change Risk Assessment for which it is the lead department (see 2021 Adaptation Progress Report annex).	Defra is working across government to develop a National Adaptation Programme that robustly addresses all 61 risks and opportunities in its third Climate Change Risk Assessment (CCRA3). Defra is the lead department for approximately half of these risks and opportunities and is developing policies and actions that will be taken in the coming five-year period to address the adaptation gap identified by the CCRA3.
189	Set the deadline for reporting under the Adaptation Reporting Power to allow sufficient time for consideration of all the reports in the Fourth UK Climate Change Risk Assessment, and the CCC's statutory assessment of progress on adaptation.	Government is consulting on proposals to make changes to the timing of the adaptation reporting cycle for round four, to better align it with other elements of the associated statutory framework for climate change. This will ensure that adaptation reports can be used to inform the Government's Climate Change Risk Assessments more effectively in future. To achieve this, we are proposing to bring forward the closing date for the next cycle of reporting to late 2024 (from 2026), after which reporting would return to its 5-yearly cycle. The final strategy will be published alongside the Third National Adaptation Programme in mid-2023.

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190	Expand the list of organisations reporting under the Adaptation Reporting Power (ARP) to ensure comprehensive coverage of critical infrastructure and services, such as canals and food supply chains, as recommended by the ARP3 consultation.	Government is consulting on proposals for the fourth round of adaptation reporting. This includes consideration of the following sectors for targeted scope expansion: canals and reservoirs, food supply chains, landowners and health and social care. The final strategy will be published alongside the Third National Adaptation Programme in mid-2023.
191	To provide structure, consistency and direction to Adaptation Communications, the UK Government should outline when UK Adaptation Communications will be published in the future and how their timing fits with domestic policy cycles to enable a high impact communication.	The UK published its Adaptation Communication to the UNFCCC in 2020, making us one of the first countries in the world to fulfil a key commitment of the Paris Agreement. The Communication, which was updated in 2021 ahead of COP26, sets out what the UK is doing to prepare for the effects of climate change at home, and support those facing impacts overseas. The government will consider when next to update the Communication in line with both the domestic policy cycle and international requirements and events.
192	The UK's next Adaptation Communication should include strengthened adaptation policies, backed by quantitative targets where possible, strong cross-government policy to respond to key climate risks and a robust approach to monitoring and evaluation.	In addition to the Adaptation Communications published in 2020 and 2021, the UK Government has published its 8th National Communication to the UNFCCC, a chapter of which sets out a UK-wide vulnerability assessment, climate change impact and adaptation measures. The next Adaptation Communication will be informed by and reflect ongoing domestic policy development on adaptation, which will include the work set out in the coming National Adaptation Programme published in mid-2023.
193	DfE should publish an assessment of the specific vulnerability of publicly-owned schools and other educational facilities to the effects of climate change, in particular overheating and flooding.	DfE will publish a risk framework in 2023 and will use this to assess and publish vulnerability by December 2023.
194	For the coming five-year period (2023-2028), DfE should outline appropriate actions in the next National Adaptation Programme	We have developed plans to address the risk to education services from climate change and these will be set out in

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	<p>to address the adaptation gap identified for the one risk in the Third Climate Change Risk Assessment for which it is the lead department (see 2021 Adaptation Progress Report annex).</p>	<p>the third National Adaptation Programme, published in Summer 2023. There is currently no secured funding between 2023 to 2028 to adapt education services or intervene where vulnerability is identified, beyond planned building condition improvements.</p>
<p>195</p>	<p>Ensure all of the department's own policy decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.</p>	<p>HM Treasury's Green Book and Business Case Guidance is used to appraise spending and regulatory proposals, and includes guidance for how net zero and climate risk considerations should be included in appraisal. This is outlined in the Department for Energy Security and Net Zero and Defra Green Book supplementary guidance. HM Treasury continues to work with departments to embed Green Book best practice.</p> <p>The Government has set out its intention to put the National Procurement Policy Statement (NPPS) on a statutory basis through the Procurement Bill. The NPPS sets out clear principles that contracting authorities should follow - tackling climate change and achieving net zero is one of these.</p> <p>In addition, Procurement Policy Note 06/21 shows the government's commitment to achieving net zero. Under this measure, prospective suppliers bidding for major contracts must submit a Carbon Reduction Plan that details their emissions and their organisational commitment to net zero by 2050.</p> <p>Companies that fail to provide a Carbon Reduction Plan which meets these requirements risk deselection from the procurement.</p>

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		Between September 2021 and the start of February 2023, the measure was applied to 129 procurements, which are valued at c.£187.5 billion over their contractual term.
196	Publish the full Jet Zero Strategy as soon as possible in Q3 2022 to provide a clear strategy for the sector to decarbonise and to provide certainty to airlines, airports, and supporting industries.	The <i>Jet Zero Strategy</i> was published in July 2022, and sets out our vision for the aviation sector to reach its goal of net zero CO ₂ emissions by 2050. The Strategy focuses on the rapid development of technologies in a way that maintains the benefits of air travel, whilst maximising the opportunities decarbonisation brings for the UK. Our strategic framework sets out three guiding 'principles': international leadership; delivered in partnership; and maximising opportunities. It also focuses on six core policy measures: systems efficiencies, sustainable aviation fuels, zero emission flight, markets and removals, influencing consumers, and addressing non-CO ₂ impacts. The Strategy introduced an in-sector CO ₂ emissions reduction trajectory, a world-first, which sees UK aviation emissions peak in 2019. We have also set an earlier target for UK domestic flights to reach net zero by 2040, and for airport operations in England to be zero emission by 2040.
197	Assess the Government's airport capacity strategy in the context of Net Zero, as part of the aviation strategy. There should be no net expansion of UK airport capacity unless the carbon-intensity of aviation is in line with or ahead of the Government's pathway and can accommodate the additional demand. A demand management framework will need to be developed by 2023 and be in place by the mid-2020s to annually assess and, if required, control sector GHG emissions and non-CO ₂ effects.	We remain committed to growth in the aviation sector where it is justified. Our analysis in the <i>Jet Zero Strategy</i> shows that the sector can achieve net zero carbon emissions from aviation without the government needing to intervene directly to limit aviation growth. Our scenarios show that we can achieve our targets by focusing on new fuels, technology, and carbon markets and removals with knock-on economic and social benefits. Our 'high ambition' scenario has residual emissions of 19 MtCO ₂ e in 2050,

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		<p>compared to 23 MtCO₂e residual emissions in the CCC's Balanced Pathway.</p> <p>Airport growth has a key role to play in boosting our global connectivity and levelling up in the UK. Our existing policy frameworks for airport planning provide a robust and balanced framework for airports to grow sustainably within our strict environmental criteria. We do not, therefore, consider restrictions on airport growth to be a necessary measure.</p>
198	<p>Commit to monitor seat occupancy in the next few years (3-4) during recovery from the COVID-19 pandemic to ensure that the sector either returns to prior occupancy levels or routes are adjusted to account for low occupancy rates. Consider regulating aircraft occupancy standards if the trends do not return to pre-pandemic levels in the next 12 months.</p>	<p>Through the <i>Jet Zero Strategy</i>, we have committed to ensuring maximum potential is made of all flights and to avoid unnecessary emissions from "ghost flights" that are empty or near empty when departing the UK. During the pandemic, we saw a decrease in average load factors across flights reflecting international travel restrictions and changes to passenger confidence to travel. There are many reasons why flights may need to operate with lower loads, and the usual rules requiring airlines to operate flights to retain their historic slots rights were waived in March 2020. As such, we do not believe that low volume flights were undertaken simply to retain slots during this time. As the sector recovers, we will seek further transparency on this issue, working with the CAA, which publishes regular data detailing load factors at UK airports each quarter, to meet the growing interest in this information.</p>
199	<p>Use the ICAO General Assembly to protect, strengthen and extend Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) such that all residual emissions in 2050 are covered by near-permanent, sustainable greenhouse gas removals. Commit to increasing the number of</p>	<p>At ICAO's 41st Assembly, the UK played a leading role in negotiating a new global goal for international aviation of net zero CO₂ emissions by 2050. Aligning with the Paris Agreement temperature goal, this will set direction for national and international policy, attract green investment,</p>

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	airlines opting in and, if strengthening it is not possible, push for an additional policy for countries willing and able to commit to a higher standard of carbon removal for aviation than exists through CORSIA.	<p>and create a platform for agreeing further international measures. We share the CCC's view that, by 2050, the sector's residual emissions should be compensated for by robust greenhouse gas removals. The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) provides an established mechanism through which this could be achieved.</p> <p>The UK also secured a new agreement on CORSIA, meaning airlines will begin offsetting emissions from flights between at least 118 countries from 2024. This bolsters global support whilst maintaining the environmental integrity of the scheme. We believe it is paramount to sustain momentum behind CORSIA and will use its Periodic Reviews to improve its operation and strengthen ambition over time.</p>
200	Continue innovation and funding for aircraft efficiency measures, hybrid, full electric and hydrogen aircraft development and airspace modernisation.	<p>As part of the Government's £20 billion annual investment in R&D we will continue to support industrial R&D through the Aerospace Technology Institute (ATI) Programme, informed by the UK Aerospace Technology Strategy. In March the Government announced a funding uplift for the ATI programme of £685 million over three years. This represents an increase of 50% on the previous 3 years.</p> <p>In addition, we provided up to £9.2 million of funding for the airspace modernisation programme as part of government's continued commitment to both supporting recovery in the aviation sector as we emerge from the pandemic and to our net zero targets. The refreshed Airspace Modernisation Strategy, published on 23 January 2023, introduces environmental sustainability as an overarching principle,</p>

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		<p>reaffirming the commitment to help the sector achieve its net zero targets by 2050.</p>
<p>201</p>	<p>Start monitoring non-CO2 effects of aviation (including through the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) for eligible aeroplane operators), set a minimum goal of no further warming after 2050 from non-CO2 effects, research mitigation options, and consider how best to tackle non-CO2 effects alongside UK climate targets without increasing CO2 emissions.</p>	<p>Through the <i>Jet Zero Strategy</i>, we committed to working closely with atmospheric scientists, other researchers, and industry, both domestically and internationally, to better understand the science and potential mitigations of non-CO2 impacts from aviation. We also confirmed that we will work with the CCC to explore its recommendation for no additional non-CO2 warming from aviation after 2050 and to develop a methodology to monitor the non-CO2 impacts from aviation on a regular basis. We are in the process of scoping a research programme to take forward these commitments.</p> <p>Following a call for evidence last year, we are also considering whether and how non-CO2 impacts could be included in the scope of the UK ETS. A government response will be published in due course.</p> <p>As the evidence base develops, we will support the consideration of appropriate international measures to address non-CO2 impacts working through the International Civil Aviation Organization.</p>
<p>202</p>	<p>Commit to a policy on the UK ETS/Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) interaction as soon as possible, ensuring it is sufficiently environmentally stringent and that no credits from CORSIA are used for flights currently covered by the UK ETS unless and until they can satisfy strict eligibility criteria (equivalence, additionality, permanence, sustainability). The interaction should avoid double-compliance.</p>	<p>Following our initial consultation on implementing CORSIA and the outcomes of the ICAO Assembly, we are carefully considering the approach to interaction between CORSIA and the UK ETS.</p> <p>In 2022 the UK ETS Authority consulted on future development of the UK ETS, including on aligning the cap with a net zero consistent trajectory. We believe it is right that responses to this consultation and UK ETS</p>

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		<p>development are appropriately considered when determining how CORSIA and the UK ETS should interact. We will consult on the details of our approach in due course, seeking to have all legislation for CORSIA and any necessary amendments to the UK ETS in force by the start of 2024.</p> <p>The UK fully supports ICAO's criteria for CORSIA Emissions Units and played a key role in their development and agreement. We will negotiate for and provide technical expertise to support improvements to the scheme.</p>
203	<p>Implement the Sustainable Aviation Fuel Mandate as soon as possible this year with a strong set of criteria for the fuels included in the mandate.</p>	<p>In our government response to the consultation on the SAF mandate we confirmed that we will implement a SAF mandate from 2025. This time scale is necessary to allow sufficient time to finalise the details of the scheme – including key elements such as the level of the SAF targets; introduce legislation; and for industry to prepare. Our target of at least 10% SAF by 2030 is one of the most ambitious targets globally and should allow industry to scale up their production while production capacity increases. A second consultation, needed to confirm targets pre- and post-2030, and the level of incentive available for SAF, as well as setting out details of how the scheme will operate, was published in March 2023.</p> <p>We also set out in our government response to the SAF mandate consultation comprehensive sustainability criteria that SAF feedstocks and fuels must meet to be eligible for support.</p>
204	<p>Continue innovation and show support for sustainable aviation fuel (SAF) technologies, including research into the non-CO2 effects. Also, estimate the impact of different sustainable</p>	<p>£180 million funding has been dedicated to promoting SAF commercialisation and innovation, including through the Advanced Fuels Fund, the UK Clearing House, and the Net</p>

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	<p>aviation fuel options on other countries' emissions and the opportunity costs for UK land use.</p>	<p>Zero Transatlantic Flight Fund. For the SAF mandate, we will place a cap on the amount of hydrotreated esters and fatty acid (HEFA) SAFs that can be incentivised to enable space for more advanced technologies and introduce a specific sub-target for power-to-liquid, recognising this more advanced fuel will need greater support.</p> <p>We will continue working with academia and industry to increase understanding of the non-CO2 impacts of SAF. We are exploring the possibility of doing this through trial flights, e.g. through our plan to deliver a net zero transatlantic flight using 100% SAF by the end of 2023. We will continue to use available bilateral and multilateral fora, including ICAO, ECAC and our relationship with the US, to understand and influence the international SAF policy landscape.</p>
<p>205</p>	<p>Without allowing it to delay the implementation of the Sustainable Aviation Fuel Mandate this year, consider the following criteria for the fuels permitted to be used in the mandate: i) Ensure that all fuels do not have a harmful non-CO2 impact relative to regular jet fuel, ii) that the life-cycle emissions savings from the fuels are significant relative to jet fuel.</p>	<p>As noted in the government's response to the SAF mandate consultation, we are committed to considering the emerging evidence on non-CO2 impacts and will consider developing criteria to address these and factor them into the design of the SAF mandate. A research programme on the non-CO2 impacts of aviation is currently being scoped, with SAF to form a key area of exploration.</p> <p>In the mandate government response, we have outlined that we are minded to set the minimum GHG savings threshold that SAF will need to meet at 50% compared to fossil kerosene. As the mandate is a GHG emissions scheme, the higher the GHG emissions savings from SAF supplied, the more credits a supplier will gain – which should incentivise SAF with higher emissions savings potential.</p>

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206	Without allowing it to delay the implementation of the Sustainable Aviation Fuel Mandate this year, consider whether including high-quality greenhouse gas removals into the SAF mandate could be a more effective way of reducing emissions for the industry, particularly in the short-term, i.e. 5-8 years up to 2030, before the most efficient forms of SAF (e.g. synthetic fuels) are widely commercially available.	<p>We recognise greenhouse gas removals (GGRs) are likely to be required for aviation to achieve net zero by 2050. We are exploring how CCUS can be incorporated into SAF production, including by designing the mandate as a GHG emissions scheme and reviewing the minimum GHG savings threshold. DfT will continue to work with the Department for Energy Security and Net Zero on GHG removals and CCUS interactions. Through the <i>Jet Zero Strategy</i>, we have committed to exploring what role the UK ETS could play in incentivising further investment in GGRs, and the “Developing the UK ETS” consultation explored the potential role of the UK ETS as a long-term market for GGR technologies.</p> <p>Government have invested £100 million in research and innovation for Direct Air Capture and committed to provide up to £20 billion funding for early deployment of CCUS in the 2023 Spring Budget.</p>
207	For the coming five-year period (2023-2028), DfT should outline appropriate actions in the next National Adaptation Programme to address the adaptation gap identified for the risks and opportunities in the Third Climate Change Risk Assessment for which it is the lead department (see 2021 Adaptation Progress Report annex).	<p>Along with our delivery bodies, we have plans underway to adapt to and mitigate the risks of climate change. For instance, National Highways continue to deliver a safety programme, as set out in the second Road Investment Strategy. This seeks to enhance all-weather resilience of the Strategic Road Network to minimise the risk of incidents and their impact for road users. Similarly, the Government’s 2021 Plan for Rail includes a priority for long-term investment in climate resilience supported by smarter forecasting, planning and technology.</p> <p>We will continue to work across government and industry to identify and support appropriate actions to address the adaptation gap and make progress towards tackling these significant challenges. We will provide an update in the third</p>

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		<p>National Adaptation Programme due to be published this summer.</p> <p>DfT is in the process of developing a Transport Adaptation Strategy to explore expectations, interdependencies, standards, and scenario planning.</p>
208	<p>Ensure all of the department's own policy decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.</p>	<p>HM Treasury's Green Book and Business Case Guidance is used to appraise spending and regulatory proposals, and includes guidance for how net zero and climate risk considerations should be included in appraisal. This is outlined in the Department for Energy Security and Net Zero and Defra Green Book supplementary guidance. HM Treasury continues to work with departments to embed Green Book best practice. The Government has set out its intention to put the National Procurement Policy Statement (NPPS) on a statutory basis through the Procurement Bill. The NPPS sets out clear principles that contracting authorities should follow - tackling climate change and achieving net zero is one of these.</p> <p>In addition, Procurement Policy Note 06/21 shows the government's commitment to achieving net zero. Under this measure, prospective suppliers bidding for major contracts must submit a Carbon Reduction Plan that details their emissions and their organisational commitment to net zero by 2050. Companies that fail to provide a Carbon Reduction Plan which meets these requirements risk deselection from the procurement.</p> <p>Between September 2021 and the start of February 2023, the measure was applied to 129 procurements, which are valued at c.£187.5 billion over their contractual term.</p>

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209	Build upon the proposals for the UK Emissions Trading Scheme and the UK MRV regulations to explore options for an activity-based measure of UK shipping emissions. This should include exploring the benefits of changing the emissions accounting approach for international shipping, to ensure that a fair share of emissions for voyages to and from the UK are captured within the UK's inventory even if vessels refuel in other jurisdictions.	<p>The consultation on the proposal to expand the UK Emissions Trading Scheme (UK ETS) to domestic maritime closed in June 2022. We are currently considering the responses and will publish our response in due course. We will keep the measurement approach to the UK's international shipping emissions under review and consider the appropriateness of fuel or activity-based measures.</p> <p>Regarding international emissions, in June 2021 the UK government committed to include the UK's share of international shipping emissions, as recommended by the CCC, into the Sixth Carbon Budget (covering 2033-37). With the Department for Energy Security and Net Zero, we will legislate for the inclusion of International Aviation and Shipping emissions in the Sixth Carbon Budget later this year, subject to parliamentary scheduling.</p>
210	Take a leadership role in pushing for inclusion of a Net Zero 2050 target within the 2023 update of the International Maritime Organisation's initial greenhouse gas strategy.	The UK hosts the International Maritime Organization (IMO) and is an influential player in negotiations underway to revise the IMO Initial Strategy on the reduction of Greenhouse Gas (GHG) emissions from ships in July 2023. We are working to build consensus to raise the level of ambition in the IMO's GHG Strategy and ensure we are consistent with a 1.5°C pathway. That is why we are championing a 2050 target of zero emissions for international shipping.
211	Publish the Course to Zero consultation. This should aim to set an ambitious trajectory to Net Zero for the domestic maritime sector.	The Course to Zero consultation was published on 14 July 2022, seeking views and evidence on the optimal pathway to net zero emissions in 2050, including where there is scope to accelerate decarbonisation across various domestic maritime sub-sectors. The consultation also gathered feedback on the remaining barriers to maritime

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		<p>decarbonisation and explored further technological, operational, and policy options which could be employed to address these barriers. We hope to publish a summary of responses soon.</p> <p>We will use evidence received during this consultation to help develop indicative decarbonisation targets for the domestic maritime sector and shape future government policy, to help and direct the sector to achieve a net zero target by no later than 2050. These targets and future policy interventions will be published as part of the updated Clean Maritime Plan in 2023.</p>
212	<p>Build upon the recent call for evidence to develop a plan for deploying shore power and electric recharging infrastructure at all of the UK's major ports. This should include identifying roles and responsibilities for delivery and providing support and incentives to drive investment.</p>	<p>We published a summary of responses to our call for evidence on shore power in July 2022. Using the evidence, we are considering the next steps. We are working within DfT and with other government departments to understand the possibilities and challenges in deploying shore power effectively; both in terms of the infrastructure and cost. We are also supporting innovative shore power projects through funding available in the Zero Emission Vessels & Infrastructure (ZEVI) competition, launched in February 2023, which will generate further information on how shore power can be enabled in the UK.</p>
213	<p>Commit to the UK's first clean maritime cluster(s) operating at commercial scale (supplying at least 2 TWh/year of zero-carbon fuels) by 2030 at the latest.</p>	<p>The UK Shipping Office for Reducing Emissions (UK SHORE) programme will fund R&D into clean maritime through a series of decarbonisation and technology interventions up to 2025. DfT commissioned a study on clean maritime clusters from UMAS and E4 Tech which was finalised in April 2020. This study included an assessment on the following technologies: shore power, ammonia from fossil sources plus carbon capture and</p>

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		storage, hydrogen from renewable electricity, electric propulsion, and fuel cell.
214	Embed the Course to Zero into the next update of the Clean Maritime Plan. This should present a credible plan for how the trajectory to Net Zero will be delivered.	<p>The Course to Zero consultation was published on 14 July 2022, seeking views and evidence on the optimal pathway to net zero emissions in 2050, including where there is scope to accelerate decarbonisation across various domestic maritime sub-sectors. The consultation also gathered feedback on the remaining barriers to maritime decarbonisation and explored the further technological, operational, and policy options which could be employed to address these barriers. We aim to publish a summary of responses soon.</p> <p>We will use evidence received during this consultation to help develop indicative decarbonisation targets for the domestic maritime sector and to shape future government policy to help and direct the sector to achieve a net zero target by no later than 2050. These targets and future policy interventions will be published as part of the updated Clean Maritime Plan in 2023.</p>
215	Provide support and incentives to drive private-sector investment in low-carbon maritime fuels, engine technologies, and storage facilities. These should enable zero-carbon fuels to expand to 33% of UK shipping fuel use by 2035.	UK SHORE is delivering the multi-year Clean Maritime Demonstration Competition – a series of funding rounds which allocate R&D funding for the development of clean maritime solutions, including low-carbon fuels, engine technologies, and storage facilities. CMDC1 allocated £12 million to 55 projects for feasibility studies and technology demonstrated between September 2021 – March 2022. CMDC2 allocated £12 million to 31 projects for feasibility studies and technology demonstrations between January – August 2023. CMDC3 has allocated £60 million for

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		<p>technology and system demonstrations between April 2023 – March 2025. Winners will be announced soon.</p> <p>UK SHORE has also announced the Zero Emission Vessels & Infrastructure (ZEVI) competition which will allocate £77 million funding to support close to commercial clean maritime solutions, including alternative, low-carbon fuels, engine technologies and storage facilities. The application window closes in April 2023 and successful projects will run from October 2023 to March 2028, with industry funding the demonstrations from March 2025 in different operational environments.</p>
216	<p>Report on progress in identifying green shipping corridors and the actions to implement them, as agreed within the Clydebank Declaration. This should be published ahead of COP28.</p>	<p>The UK SHORE programme will provide £206 million of R&D investment into clean maritime technologies and infrastructure. The Clean Maritime Demonstration Competition (CMDC) is part of this programme and is funding three feasibility studies into international Green Corridors from the UK as part of CMDC2. Future UK SHORE intervention considerations include the further development and operationalisation of UK Green Corridors.</p> <p>Additionally, the UK formed bilateral partnerships to support the establishment of green shipping corridors with the US, Norway, and the Netherlands as part of the Green Shipping Challenge at COP27. These partnerships will convene subnational and private-sector stakeholders to drive collaborative innovation and demonstration projects towards the establishment of Green Corridors between partner nations.</p> <p>DfT continues to engage internationally with other Clydebank signatories, notably through the Zero Emission Shipping Mission, to facilitate cross-border learnings. We</p>

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		will report on progress in progressing Green Corridors in the revised Clean Maritime Plan in 2023.
217	Publish findings from e-scooter trials and set out a role for these vehicles, alongside e-bikes and bike/scooter sharing schemes, in delivering sustainable local transport systems.	<p>Findings from the National Evaluation of E-scooter Trials, covering data up to December 2021, were published on 15 December 2022.</p> <p>The Government plans to introduce legislation for micromobility when parliamentary time allows and will consult on regulations before they are introduced.</p> <p>The Government intends to create a Low-speed Zero Emission Vehicle (LZEV) category that is independent from the cycle and motor vehicle categories.</p> <p>The first beneficiaries of this new system will be e-scooters, which we intend to legalise for private use in the future. This will require setting robust technical requirements and clear expectations on users.</p> <p>We also intend to introduce a rental framework which will allow local transport authorities to manage rental services of cycles, e-cycles and e-scooters, so that fleet sizes and parking can all be kept under local control.</p>
218	Set out, through Active Travel England, guidance for what actions local authorities should take to realise the Transport Decarbonisation Plan's commitment to half of all journeys in towns and cities being walked or cycled by 2030. This should be accompanied by the required funding.	On 6 July 2022, DfT published the second statutory Cycling and Walking Investment Strategy (CWIS 2) which covers the period between 2021 and 2025. The strategy includes new and updated objectives including increasing levels of walking and walking to school, doubling cycling, and increasing the proportion of journeys in towns and cities that are walked or cycled. It also outlined the funding projected to be invested in active travel over the period of the strategy: the Government currently projects that this will be around £3 billion. Active Travel England (ATE) became

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		<p>an Executive Agency in August 2022 and will oversee a step-change in how active travel programmes are delivered. ATE will ensure that local authorities invest in effective, high-quality schemes that support local active travel network plans that give people a genuine choice to walk, wheel and cycle local journeys to achieve the objectives in CWIS 2.</p>
219	<p>In further developing their thinking on Roads Investment Scheme 3, DfT and National Highways must rigorously assess the emissions impacts of these plans and thoroughly consider alternative approaches that could deliver similar benefits with lower emissions. The strategy should not aim to cater for unconstrained growth in road traffic and should be compatible with Net Zero.</p>	<p>Almost half of the Government's investment programme for England's strategic roads, often described as roadbuilding, is in fact for renewing, maintaining, and operating the existing network. It also includes funds to improve safety and biodiversity, deliver active travel schemes and tackle noise or air pollution. The vast majority of road enhancements are focused on improving existing roads rather than building new ones, and in all cases a range of alternative options are considered for delivering scheme benefits, as required by HM Treasury business guidance and as enacted through the options development stage in National Highway's Project Control Framework. It is important to look at the government's investment programme in the wider context, taking into consideration the plans for the decarbonisation of road vehicles, improvements to public transport and active travel, and the utilisation of low-carbon construction. Together, this is a balanced package consistent with net zero and the Transport Decarbonisation Plan.</p>
220	<p>Reform the Transport Appraisal Guidance to ensure that it enables practitioners to make decisions that are consistent with the Net Zero pathway. DfT should consider whether a "vision and validate" approach to the future transport system might be</p>	<p>The Transport Decarbonisation Plan recognised the need to move away from transport planning based on predicting future demand to provide capacity and committed to move towards a vision-led approach that sets an outcome communities want to achieve with transport solutions</p>

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	<p>more appropriate than a "predict and provide" one in this context.</p>	<p>capable of delivering those outcomes. We are identifying ways we can support and empower plan-makers and decision-takers to develop innovative sustainable transport policies. This includes aligning publications to create a mutually supportive policy framework in order to deliver on this commitment and facilitate better practice.</p> <p>The Transport Appraisal Guidance (TAG) already includes methods and values for the assessment of greenhouse gases impacts. We are improving presentation of carbon impacts and compiling guidance and common analytical scenarios that better enable carbon assessment and treatment to allow greater alignment with net zero. We will continue considering how TAG can support net zero objectives.</p>
221	<p>Set out measurable targets for the contribution that reducing car travel will play in delivering transport's Net Zero pathway.</p>	<p>The Government has some of the most ambitious targets in the world to decarbonise the UK's transport system. These already assume a level of car mileage, and so there are no plans currently to introduce specific targets to reduce car use.</p> <p>Rather than introduce targets, we are working closely with local authorities to support sustainable travel. Local authorities can tailor transport planning to better meet the needs of their residents and communities, as well as encourage economic growth. The Government will continue to work with local authorities to understand what works and how to share learning.</p>
222	<p>Introduce regulations to sit alongside the ZEV mandate to ensure that efficiencies of new conventional vehicles continue to improve and manufacturers reverse the trend towards larger vehicles. These need to be suitably ambitious to deliver the</p>	<p>Alongside the ZEV mandate, we are consulting on a regulatory approach to ensure new non-zero emission vehicles do not become less efficient.</p>

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	<p>efficiency improvements and share of hybrid sales that are required to realise the necessary emissions reductions from these segments of the market.</p>	
<p>223</p>	<p>Confirm the details of the ZEV mandate in regulation. As set out in the consultation, this should impose targets on manufacturers that are at least as ambitious as those in the Transport Decarbonisation Plan and should drive consistent growth in sales of EV cars and vans through the 2020s to meet the 2030 phase-out date.</p>	<p>Government is currently consulting on proposed ZEV mandate regulations, to apply from 2024, to support delivery of our commitments to phase out the sale of new non-zero emission cars and vans.</p>
<p>224</p>	<p>Continue to support widespread deployment of charging infrastructure, ensuring that deployment rates accelerate in line with the trajectory required to deliver a minimum of 300,000 public charge points by 2030.</p>	<p>We have published a landmark strategy setting out our plans to accelerate the rollout of a world-class charging network, and our commitments to make electric vehicle (EV) charging cheaper and more convenient than refuelling at a petrol station.</p> <p>Public charging devices have more than tripled in less than four years with the private sector investing hundreds of millions and government providing support where necessary. There are now over 37,500 publicly available charging devices including over 7,500 rapid devices.</p> <p>The Government expects private sector investment to continue to lead the expansion of the UK's charging network and will target its support where it is needed most. The Rapid Charging Fund will future-proof electrical capacity at strategic locations, and the Local EV Infrastructure (LEVI) Fund will support local authorities to work with industry to transform the availability of low powered, public charging for drivers without off-street parking.</p>

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		Following the LEVI Pilot, a further £381m in capital and resource funding has been made available through the launch of the full LEVI Fund. We have also committed an additional £15m under the On-Street Residential Chargepoint Scheme (ORCS) for 2023/24.
225	Enact legislation requiring better reliability, accessibility, interoperability and ease-of-use at public charge points, as committed to in the Government response to the consultation on the consumer experience at public charge points.	<p>To improve the experience of consumers accessing public charging infrastructure, we are regulating to mandate open data to ensure consumers can locate the right chargepoints for their needs, alongside mandating 99% reliability across each rapid charging network and a 24/7 helpline. In addition, we will mandate a minimum payment method and payment roaming, and mandate a pricing metric to ensure pricing transparency.</p> <p>We are also regulating to introduce contactless at new chargepoints 8kW and above and existing rapids 50kW and above within one year.</p> <p>DfT and Motability commissioned the British Standards Institute (BSI) to develop accessible EV charging standards. The final standards were published in October 2022 and we are continuing to work with local authorities, industry and Motability to ensure that chargepoints and the built environment are inclusively designed.</p>
226	Review and strengthen rapid charger rollout plans on the major road network out to 2035, to ensure that drivers have the confidence that they can find reliable, available charge points as EV uptake grows.	We are stepping up the delivery of high-powered chargers on the strategic road network for people making longer journeys. We aim to have at least six high powered, open access chargepoints at motorway service areas in England by the end of 2023 (6x2023), with some larger sites having many more. By 2035, we expect the number to increase to around 6,000 across the network. The Rapid Charging Fund will part-fund future-proofed electrical grid capacity at

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		<p>service areas in England, to ensure that there is a rapid charging network ready to meet the long-term consumer demand for EV chargepoints ahead of need.</p>
227	<p>Set out clear expectations and targets as to what local authorities should do to develop and implement local charging strategies, along with milestones for the rate at which charge point provision is expected to expand. Ensure that local authorities all have the capacity and capability to develop these strategies and implement the actions required.</p>	<p>Locally led chargepoint planning is crucial to ensure that the network of public chargepoints meets the diverse needs of EV drivers in different areas. Subject to consultation, we will make this a statutory duty for local authorities.</p> <p>We launched the Local Electric Vehicle Infrastructure Fund Pilot (LEVI) which provided £57m of public and private investment to 25 different local authorities across England. This will deliver almost 4,5400 chargepoints and gullies to scale up the delivery of local chargepoints and support drivers without off-street parking.</p> <p>The LEVI Fund builds on the existing On-Street Residential Chargepoint Scheme (ORCS.) £37m has been made available in 2022/23 and is open to local authorities across the UK and Northern Ireland. A further £165m is available in 2023/24. The scheme has already provided funding which will see more than 14,000 public chargepoints installed.</p>
228	<p>Work with the freight industry to design and implement pilot schemes to explore approaches to reducing van and HGV usage in urban locations.</p>	<p>In the Future of Freight Plan (2022) the Government committed to do the work necessary to identify a National Freight Network. This work will include building understanding of how freight operates as a system to support evidenced based policy making which could include ways to reduce van and HGV usage in urban locations.</p>
229	<p>Prioritise delivery of a new, transparent fare structure that offers more affordable and reliable travel, ensuring fairness in relation</p>	<p>On rail, the government is investing £360 million in fares, ticketing and retailing, delivering a major overhaul to the way in which rail travel is bought and paid for. The Plan for</p>

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	to more carbon-intensive choices, and a more interlinked public transport system between operators.	<p>Rail proposes the biggest shake-up of rail in a generation. We have already made progress on fares reforms, for example introducing flexible season tickets in 2021, committing to PAYG in urban areas across the country and to extending the single leg pricing trial on LNER to the rest of their network later this year.</p> <p>The National Bus Strategy explains how we will make buses more frequent, more reliable, easier to understand and use, better co-ordinated and cheaper. We are providing over £1 billion to help local transport authorities deliver their Bus Service Improvement Plans, including their plans and costs for implementing new fares and ticketing policies.</p>
230	Publish a comprehensive plan setting out how Government's target of removing diesel trains from the railway by 2040 and achieving a Net Zero rail network by 2050 or earlier will be achieved.	<p>We are committed to meeting our Transport Decarbonisation Plan targets and ambitions. Great British Railways Transition Team will be bringing forward costed options for funders as part of its long-term strategy for rail. Government will carefully consider the options including overall deliverability and affordability before any plan can be developed.</p> <p>Since 2010, more than 1,200 miles of electrification has been delivered in Great Britain. The Integrated Rail Plan (IRP) outlines the biggest ever single government investment in Britain's rail network, setting out £96 billion investment into the railways of the North and Midlands and includes electrification of the Transpennine Route and the Midland Main Line. We have also committed £78 million to electrify the Wigan-Bolton line.</p> <p>We are also supporting the innovation and deployment of new traction technologies on the UK network. The UK's first</p>

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		<p>battery-only train is due to enter scheduled passenger service on the Greenford Line this year.</p>
<p>231</p>	<p>Work with the public transport sector to run a coordinated campaign to welcome people back to public transport after the pandemic. Work with operators and local transport authorities to avoid detrimental reductions in service provision or increases in fares.</p>	<p>The pandemic has changed the way we live, work and travel and we have committed over £18 billion for passenger services across rail and buses to mitigate the impacts of the pandemic. While patronage has stabilised, it is still lower than pre-pandemic levels.</p> <p>We are delivering on the ambitions of the National Bus Strategy and the Plan for Rail to improve to public transport and encourage passengers to return. This includes providing more than £1 billion for Local Transport Authorities to deliver Bus Service Improvement Plans, and up to £60 million to help operators cap single bus fares in England outside London at £2 for a limited period. On rail, the industry launched the 'Let's Get Back on Track' marketing campaign in 2021 as part of the rail recovery programme. We also launched the Great British Rail Sale in 2022, which saw train operators offer significant discounts on over a million train tickets across Britain.</p>
<p>232</p>	<p>Develop a comprehensive policy package to deliver the phase-out dates for non-zero-emission buses, HGVs, and other road vehicles. This should build on the emerging findings from the Zero-Emission Road Freight trials, the rollout of zero-emission buses, and the feedback on the details of the ZEV mandate for cars and vans.</p>	<p>Analysis is being conducted on an appropriate end of sales date for non-zero emission buses, following a consultation and draft impact assessment in May 2022 and evidence from the Zero Emission Bus Regional Area funding schemes, where ZEBs are now in operational use.</p> <p>We have announced weight limit increases of two tonnes for certain zero emission HGVs, changed eligibility for the plug-in truck grant (PiTG) to target heavier HGVs and extended the PiTG grant until 2024/25. This supports the early market for zero emission HGVs and incentivises their adoption. We will consult with industry on the future</p>

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		regulatory framework which will enforce HGV phase out dates. We will convene industry stakeholders to develop a plan for zero emission HGV infrastructure rollout, building on data gathered through the Zero Emission Road Freight Demonstrator programme. This will set out the delivery of a public refuelling and recharging network.
233	Expand the current Zero-Emission Road Freight trials into full commercial-scale demonstrations of battery-electric, hydrogen, and electric road system technologies on UK roads.	The Zero Emission Road Freight Demonstrator (ZERFD) programme will demonstrate hundreds of zero emission heavy good vehicles on UK roads, alongside providing the relevant recharging/refuelling infrastructure to support the demonstrations. The programme will provide confidence to industry to invest in zero emission HGVs by creating an evidence base on which technology solution/mix is best for specific use cases. Industry partners are keen to expand on the demonstrations funded as part of ZERFD by increasing the use of zero emission HGVs within their own fleets. All vehicles and infrastructure plan to be deployed by March 2025. The Future of Freight Plan made a commitment to collectively assess the freight sector's future energy and fuel needs through a Freight Energy Forum. We will convene industry stakeholders to help shape the infrastructure plan. The department remains neutral on which technology or technology mix may be best to decarbonise the UK's road freight fleet.
234	Explore ways to reduce the cost of local public charging for drivers who do not access to private off-street parking to make it more comparable to charging at home. This could include reducing VAT on some public charging, requiring residential building owners to install charge points in shared car parks, or offering subsidised charging for local residents.	Local authorities will engage with residents and businesses to ensure that chargepoint provision stays ahead of need, without exacerbating parking constraints. The Government will require all local transport authorities in England to develop their own chargepoint strategies, subject to consultation.

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		<p>We have also amended our EV infrastructure grants so freeholders owning or leasing properties can apply. This includes social housing providers and private landlords, as well as support for residential car parks.</p> <p>In June 2022, regulations came into force requiring new residential and non-residential buildings and those undergoing major renovation with associated parking to have charging infrastructure installed at point of construction, this includes multi-occupancy dwellings. The Government is committed to keeping the transition to electric vehicles affordable for consumers. All taxes are kept under review.</p>
235	<p>DHSC should publish an assessment of the specific vulnerability of publicly-owned hospitals and other health and care facilities to the effects of climate change, in particular overheating and flooding.</p>	<p>The Third Health and Care Adaptation Report, published in December 2021 jointly by NHS England and the UK Health Security Agency (UKHSA), sets out the vulnerabilities to climate risks across the health system and the approach to assessing and responding to these risks. DHSC considers this report effective in highlighting these vulnerabilities and does not currently plan on publishing a separate assessment. Additionally, the climate resilience of hospital buildings is assessed in the third Climate Change Risk Assessment (CCRA3). DHSC is currently developing plans with stakeholders such as NHSEI, UKHSA and the Care Quality Commission to address the risks in the CCRA3 and improve the climate resilience of the health sector in the third National Adaptation Programme, in line with the UK's commitments under the COP26 Health Programme. This includes assessing climate resilience in the social care sector.</p>

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236	<p>Assess health sector vulnerability to existing and future climate risks, particularly for care homes and home-based care. Following this, develop a cross-sector approach to address risks. This cross-sector approach should include input from DHSC, CQC, PHE, NHS, MHCLG and local level public health bodies.</p>	<p>The third Climate Change Risk Assessment (CCRA3) assesses the health sector vulnerability to existing and future climate risks. The Department of Health and Social Care is currently leading the development of plans to improve the climate resilience of the health and social care sector in the third National Adaptation Programme. The NHS, UKHSA, and CQC work together to monitor the health sector vulnerability, including the impacts of climate change on health and service delivery. DHSC will work with the Care Quality Commission, social care providers and wider health system to assess climate risks in the social care sector as part of our NAP work. This engagement will expand our understanding of climate risks across social care to enable the development of informed policies to mitigate these risks and protect health in these settings.</p>
237	<p>Fund the strengthening and widening of vector and pathogen surveillance and early-warning mechanisms, due to the increasing risk of disease spread as a result of climate change and other factors.</p>	<p>To effectively detect, assess and respond to emerging vector-borne disease threats that are increasing with climate and environmental change, for example incursions of non-native invasive mosquitoes, survival of non-native ticks, emergence of new tick and mosquito-borne arboviruses (such as CCHFV, TBEV, Usutu, WNV), there needs to be considerable strengthening and widening of surveillance for vectors and the detection of VBD pathogens in vectors, animals and humans. Vector survival is acutely responsive to changes in climate and the emergence of pathogens responsive to a range of environmental changes. To build communities resilient to these climate-sensitive threats, enhanced surveillance is now paramount in order to enact rapid responses to control or mitigate risk. Demonstration of risk through surveillance</p>

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		<p>can also ensure that such climate sensitive risks are prioritised at a national, regional and local level.</p>
238	<p>For the coming five-year period (2023-2028), DHSC should outline appropriate actions in the next National Adaptation Programme to address the adaptation gap identified for the risks and opportunities in the Third Climate Change Risk Assessment for which it is the lead department (see 2021 Adaptation Progress Report annex).</p>	<p>DHSC is collaborating with partners across government to develop actions in the third National Adaptation Programme to address the risks and opportunities to health and social care from a changing climate, as identified in the Third Climate Change Risk Assessment. These actions include measures to protect the delivery of health and social care services from extreme weather, such as higher temperatures and flooding, and adapted to an increased threat from vector borne disease and from climate change risks overseas. The actions are currently being developed and aim to (i) improve adaptation infrastructure in the health system, (ii) expand policies, guidance, and our evidence base to build climate resilience and protect health from climate change, and (iii) improve international collaboration on climate adaptation and health.</p>
239	<p>Ensure all of the department's own policy decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.</p>	<p>HM Treasury's Green Book and Business Case Guidance is used to appraise spending and regulatory proposals, and includes guidance for how net zero and climate risk considerations should be included in appraisal. This is outlined in the Department for Energy Security and Net Zero and Defra Green Book supplementary guidance. HM Treasury continues to work with departments to embed Green Book best practice.</p> <p>The Government has set out its intention to put the National Procurement Policy Statement (NPPS) on a statutory basis through the Procurement Bill. The NPPS sets out clear principles that contracting authorities should follow -</p>

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		<p>tackling climate change and achieving net zero is one of these.</p> <p>In addition, Procurement Policy Note 06/21 shows the government's commitment to achieving net zero. Under this measure, prospective suppliers bidding for major contracts must submit a Carbon Reduction Plan that details their emissions and their organisational commitment to net zero by 2050.</p> <p>Companies that fail to provide a Carbon Reduction Plan which meets these requirements risk deselection from the procurement.</p> <p>Between September 2021 and the start of February 2023, the measure was applied to 129 procurements, which are valued at c.£187.5 billion over their contractual term.</p>
240	<p>Deliver climate policy that also has health benefits, such as active travel, access to green spaces, air quality, better buildings and healthier diets. This could be done by reviewing ways in which DHSC public guidelines could integrate messages that strengthen and make more evident the co-benefits of good nutrition and exercise for both health and for the environment.</p>	<p>The government agrees that many policies that are beneficial for the environment are also of benefit to human health and seeks opportunities to embed health benefits into wider environmental and climate policies across government. DHSC is taking a cross-government approach to ensure both health and climate considerations are factored into all policy development, working closely with other government departments such as Defra, DfT and DLUHC on important issues such as air quality, housing, active travel, access to green space and food policy, which are important considerations for both climate and health policy.</p>
241	<p>Publicly commit to providing additional, ringfenced funding to NHS England to fund the entirety of the delivery of its Net Zero plan.</p>	<p>The government is committed to supporting the NHS to achieve net zero. The NHS received £280 million in decarbonisation funding under phases 1 and 2 of the Public</p>

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		Sector Decarbonisation Scheme (PSDS.) A further £329 million had been allocated under phase 3a of the PSDS to projects across 36 NHS Trusts.
242	Publicly set targets to end the use of Metered Dose Inhalers (MDIs) for all patients where alternatives can be used, by the mid-2020s, for all NHS and private healthcare services across the four nations of the UK. For patients where MDIs are necessary, end the use of MDIs that use propellant gases with 100 year Global Warming Potentials above 200 times that of carbon dioxide. Publish a plan setting out how the Government will meet these targets.	<p>As set out in the July 2022 report, Delivering a Net Zero National Health Service, NHS England is committed to improving clinical outcomes for respiratory patients, in line with clinical guidelines and best practice observed around the world, while reducing carbon emissions from inhalers. The policy builds on four pillars:</p> <ul style="list-style-type: none"> • Encouraging adoption of best practice in respiratory disease management • Facilitating a move to lower carbon inhalers (either DPIs, SMIs, or lower carbon MDIs where DPIs and SMIs are not clinically appropriate) • Increasing greener disposal of inhalers • Supporting adoption and spread of innovation such as lower carbon propellants and alternatives <p>To support the implementation of this policy, NHS England has included four related indicators as part of its Primary Care Network Investment and Impact Fund scheme.</p>
243	For the coming five-year period (2023-2028), DIT should outline appropriate actions in the next National Adaptation Programme to address the adaptation gap identified for the risks and opportunities in the Third Climate Change Risk Assessment for which it is the lead department (see 2021 Adaptation Progress Report annex).	Government will publish its Third National Adaptation Programme in summer 2023, which will set out how it is addressing the risks and opportunities identified in its Third Climate Change Risk Assessment. The Department for Business and Trade (DBT) understands that adaptation in this area is important, and actions will include cross-government working to build greater understanding within government of the risks to critical supply chains, including the risks posed by climate change, so that we can work

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		with UK businesses and international partners to improve the long-term resilience of international supply chains.
244	DIT should enable BEIS, HMT and Defra to meet our recommended next steps on import policies including carbon border adjustment mechanisms, minimum standards and due diligence across manufactured products, energy, agricultural and forestry products.	<p>DBT works closely with a range of other departments, including HM Treasury, Department for Energy Security and Net Zero and DEFRA, on a variety of issues in order to ensure trade and domestic environmental policy are mutually reinforcing. Trade policy can play an important role in the net zero transition, in the UK and globally - for example, by removing barriers to trade and bringing costs down in important green services and goods like solar panels or electric cars. DBT is actively seeking to make progress on this area.</p> <p>In parallel, we are also working with other departments on the development of a range of domestic policy options in order to facilitate the greening of domestic consumption and production to reach net zero emissions targets by 2050. Adherence with international trade rules will be essential for the successful implementation of any such policy – to avoid formal international disputes or diplomatic issues, as well as ensure domestic measures can serve as the building blocks for future international action – and so DBT will support other departments to manage these risks and build towards net zero by 2050.</p>
245	Ensure that adaptation is integrated into major upcoming policies in the next two years related to the priority Third Climate Change Risk Assessment risks for which DLUHC has lead responsibility, coordinating work with other relevant departments as necessary: Risks to human health, wellbeing and productivity from increased exposure to heat in homes and buildings (with DHSC).	<p>DLUHC is working closely with Defra to develop the Third National Adaptation Programme (NAP3) in response to the Third Climate Change Risk Assessment (CCRA3).</p> <p>DLUHC has responsibility for new build and is exploring how building standards and the planning system can support climate resilience. This includes coordinating work with Defra, Department for Energy Security and Net Zero,</p>

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		<p>DHSC and others, where risks such as risks to health and wellbeing from increasing temperatures have impacts across multiple policy areas, allowing us to develop robust plans to mitigate their impacts on individuals, communities and the built environment.</p>
246	<p>Expand overheating requirement in building regulations to cover refurbishments of existing buildings and conversions of non-residential buildings to residential.</p>	<p>While there may be other buildings where the introduction of an overheating standard is beneficial, we currently do not have strong evidence about the prevalence of overheating risk for buildings in the existing residential stock.</p> <p>We intend to start two new research projects this year one on overheating in conversions, and another looking at holistic adaptation to overheating and wider climate impacts in the existing building stock. We will consider the findings once the research is complete.</p>
247	<p>Close loopholes allowing homes to be built which do not meet the current minimum standards for new dwellings. This includes provisions around the expiry of planning permission and permitted development rights relating to change of use. Make accurate performance testing and reporting widespread, committing developers to the standards they advertise.</p>	<p>Building standards are applied and enforced through Building Regulations. All new homes and buildings are required to meet current building regulations, regardless of whether they were permitted through a permitted development right or following an application for planning permission.</p> <p>The minimum standards set for new builds through the Building Regulations are not intended to apply to buildings which are undergoing a change of use. Separate standards for such buildings exist and compliance is ensured through the building control process.</p> <p>The Government introduced a number of measures as part of the 2021 uplift to the Building Regulations to address the inconsistency between the modelled and actual performance of buildings. For new homes, the</p>

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		comprehensive package of measures is set out in more detail in the Government response to The Future Homes Standard consultation of 2019.
248	Ensure that all types of current and future flood risk are included in policies to assess flood risk to new developments. Housing targets for local authorities should take account of flood risk, amongst other environmental issues.	<p>The National Planning Policy Framework (NPPF) was amended in July 2021 to ensure all sources of flood risk need to be considered, taking into account future flood risk, to ensure that any new development is safe for its lifetime without increasing the risk of flooding elsewhere. The NPPF is clear that areas at little to no risk of flooding from any source should always be developed in preference to areas at a higher risk of flooding.</p> <p>The NPPF as part of the presumption in favour of sustainable development states that strategic policies should, as a minimum, provide for objectively assessed needs for housing unless the application of policies in this Framework that protect areas (which includes areas at risk from flooding or coastal change, and other environmental designations) or assets of particular importance provides a strong reason for restricting the overall scale, type or distribution of development in the plan area.</p>
249	End the automatic right to connect to the public sewer; planning reforms should enact Schedule 3 of the Flood and Water Management Act (2010); and technical SuDS standards should be made mandatory and be updated to deliver SuDS that provide multiple economic, social and environmental benefits.	<p>The review and decision for making sustainable drainage systems mandatory in new developments was published on 10 January 2023. Government has accepted the review's recommendation to implement through Schedule 3 to the Flood and Water Management Act 2010.</p> <p>The Government will look at how best to implement this considering scope, threshold and process, while also being mindful of the cumulative impact of new regulatory burdens on the development sector. A public consultation will be</p>

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		<p>launched later this year with implementation expected during 2024.</p> <p>Schedule 3 will make the right to connect surface water to public sewers conditional on the drainage system being approved by the sustainable drainage system (SuDS) approving body as meeting the Statutory SuDS Standards, limiting volumes entering drainage networks which could overload them and increase the flood risk.</p>
250	<p>The consultation process for surface water flood risk must be improved. This should be done by adding statutory consultees for all development type and sizes. Consultees must have the appropriate skills to provide advice on surface water flood mitigation. Ensure that Local Authorities fully justify planning decisions where applications can proceed either without or going against formal flood risk mitigation advice.</p>	<p>Local planning authorities are already required to consider the views of statutory consultees in the decision-making process. This includes the Environment Agency (for non-minor development, in an area within Flood Zone 2 or Flood Zone 3, or in an area within Flood Zone 1 which has critical drainage problems, and which has been identified by the Environment Agency to the local planning authority) and lead local flood authorities for major development with surface water drainage.</p> <p>While we are supportive of the intent of the proposal, careful consideration needs to be given to adding new statutory consultees or expanding upon the remit of existing ones, as this can represent a considerable resource burden by having to respond to significant numbers of planning applications within 21-days. We have heard feedback that statutory consultees that are late to provide comments can cause delays to the decision-making process. We have to achieve the right balance between ensuring the appropriate people with expertise are engaged at the right time, against the adverse impacts on the public purse and impacts on local planning authority decision-making.</p>

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		As signalled in our current consultation on reforms to national policy (published December 2022), we will continue to work with Defra and the Environment Agency to keep flood risk policy under review and to ensure it is sufficiently robust to keep future development safe from flooding and to not increase risk elsewhere.
251	Assessments and management of flood risk in new developments must as a minimum include evidence that the development will be safe over its full lifetime and consider downstream interactions and impacts of new developments. Assessments must as a minimum: consider 2°C and 4°C climate scenarios, the risk of flooding to local infrastructure and include a consideration of better preparedness as set out in the Government's recent FCERM Policy Statement.	The NPPF is clear that development should be made safe for its lifetime without increasing flood risk elsewhere. The supporting Planning Practice Guidance on Flood risk and coastal change make it clear that the Strategic Flood Risk Assessment (SFRA) assesses flood risk from all sources, taking account of the impacts of climate change, and to assess the cumulative impact that land use changes and development in the area will have on flood risk. The Environment Agency have published guidance on preparing a Strategic Flood Risk Assessment (SFRA), Flood Risk Assessments (FRA), and climate change allowances.
252	Ensure there are properly funded and trained staff in local authorities to assess flood risk.	<p>To ensure that local planning authorities are well equipped and supported to deliver development, we are working alongside the sector to design a suite of targeted interventions to support the development of critical skills and to build capacity across local planning authorities. This includes engaging with the Environment Agency on flood risk.</p> <p>In addition, we are continuing to support local authorities through the development of new digital tools that will help to make planning processes more efficient, and we have published a consultation on the Planning Fees, Capacity and Performance, which closes on 25 April 2023. An increase to planning fees will help provide additional</p>

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		resources to support the delivery and improvement of planning services.
253	To help improve the information on Sustainable Drainage Systems (SuDS) and surface water flood risk, urgently begin collecting data on sewer capacity and SuDS location, type and capacity. This would bring the level of information in line with that for river and coastal flood risk defences.	<p>The Environment Agency is replacing its National Flood Risk Assessment tool. This will provide a new national assessment that will help places plan and adapt to future flood risk from rivers, the sea and surface water including developing and building flood defences. The tool will enable regular updates to the national flood risk assessment, allowing incorporation of improved data, including new or updated surface water modelling. Increasingly this will include sewer capacity information, providing a more robust analysis of risk from surface water.</p> <p>Alongside this, wider actions will contribute towards better understanding this flood risk including:</p> <ul style="list-style-type: none"> • investing £5.2 billion in flood defence schemes; • implementing Schedule 3 to the Flood and Water Management Act 2010, enabling more SuDS and reducing surface water in drainage systems; • development and implementation of water company Drainage and Wastewater Management Plans (DWMPs).
254	Implement improvements to the Energy Performance Certificate (EPC) and Standard Assessment Procedure (SAP) framework to ensure they drive deployment of the necessary energy efficiency and low-carbon heat measures and also address overheating, ventilation, and moisture-risk. This should be done in coordination with Devolved Administrations.	<p>The Government is currently working on proposals for improving EPCs through the EPC Action Plan and intends to consult on reforms to the Energy Performance of Buildings regime this year.</p> <p>We are overhauling the building physics model underpinning EPCs to make it fit for purpose to support net zero. We aim to consult on this new model later in 2023.</p>

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		We will work with the Devolved Administrations to ensure they are consulted on updates to the SAP methodology.
255	Publish plans to address enforcement issues for building standards and minimum EPC requirements, including consideration of additional measures to monitor compliance of qualified installers, approved inspectors and EPC assessors, and providing local areas with sufficient resource to undertake assessments.	The government is currently working on proposals for improving the enforcement of EPCs and the competency of EPC assessors through the EPC Action Plan, and intends to consult on reforms to the Energy Performance of Buildings regime this year.
256	Publish clear plans to move towards in-use performance metrics for buildings, with clear timescales and responsibilities. Consider the case for moving towards Green Buildings Passports.	The Government agrees that the metrics and information provided on energy performance certificates can be improved and is grateful for the Committee's recent report on this subject. ²⁰ The government is currently working on proposals for improving EPC metrics and intends to consult on these shortly. The Government is also investigating how data on actual energy use can help house holders and building owners better manage their use of energy. We are engaging with industry stakeholders to explore the delivery of Building Passports and are aware of projects delivering a passport or logbook package. We are supporting TrustMark in developing their new consumer-facing 'Property Hub' allowing homeowners to view past retrofit carried out through the government-endorsed TrustMark scheme.
257	To ensure that the Future Homes Standard will be fully implemented by 2025 and delivers homes with ultra-high energy efficiency standards, low-carbon heating and resilient to climate change impacts, consult on a full technical specification for the new standard in 2023 in order to allow legislation in 2024. Define clear transitional arrangements which will require any	Our intention is that homes built under the Future Homes Standard will be future proofed with low carbon heating and extremely high levels of energy efficiency. A full technical consultation on the Future Homes Standard is planned for 2023, prior to the necessary legislation being introduced in 2024 and implementation in 2025. As part of the

²⁰ <https://www.theccc.org.uk/publication/letter-reform-of-domestic-epc-rating-metrics-to-lee-rowley-mp/>

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	buildings which have not meaningfully commenced on site within a year of the implementation date to meet the new standards.	<p>consultation process, we will consider what transitional arrangements are appropriate.</p> <p>The 2021 uplift included far more restrictive transitional arrangements, which will prevent housebuilders building to previous standards over extended periods.</p>
258	Ensure that the Future Homes Standard requires low-carbon heating, and mitigation of overheating, in homes which are created through a material change of use to an existing building.	Our intention is for the Future Homes Standard to be a holistic, outcomes-focused standard for new-build dwellings. Elements such as thermal performance, building orientation and glazing proportion can all be designed to complement each other in new homes to achieve the required levels of performance. Applying only certain parts of the standard to existing buildings where many of these design parameters are fixed would be an inappropriate application of the standard. Homes created through a material change of use are currently subject to building regulations requirements, including energy efficiency standards. We plan to keep the application of these requirements under review.
259	Consult on a full technical specification for the Future Buildings Standard in 2023. Ensure that the new standards are implemented by 2025, and will deliver new buildings which are resilient to climate change impacts, with ultra-high energy efficiency standards and low-carbon heating.	Our intention is that the Future Buildings Standard will produce highly efficient non-domestic buildings which use low-carbon heat and have the best fabric standards possible, ensuring they are better for the environment and fit for the future. We intend to consult on the Future Buildings Standard in 2023, in advance of implementation from 2025.
260	Develop and implement plans to make all public sector buildings and vehicle fleets within the department's remit zero carbon in the long-term, switching to ultra-low emissions vehicles by 2030 and halving emissions from public buildings by 2032.	DLUHC has signed up to achieving an ambitious 44% reduction in its carbon emissions by 2025 when measured against a 2017 baseline as part of its Greening Government Commitments. This includes emission reductions from both

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		buildings and fleet vehicles. 20% of these emission reductions are to be direct emissions.
261	Introduce an urban greenspace target to reverse the decline and ensure towns and cities are adapted to more frequent heatwaves in the future and that the 25-Year Plan goals are met.	Planning plays a significant role in helping to manage the impact of human activity on the environment and improve people's daily lives through the provision of green spaces and safeguarding of land for nature to thrive. Natural England have published the Green Infrastructure Framework. This guidance will create nature-rich towns and cities, helping millions realise the benefits of accessing nature. The current DLUHC reforms to national planning policy consultation (published 22 December 2022) signals that as part of a wider review of the National Planning Policy Framework we intend to strengthen national planning policy including in relation to the natural environment and climate change adaptation.
262	For the coming five-year period (2023-2028), DLUHC should outline appropriate actions in the next National Adaptation Programme to address the adaptation gap identified for the risks and opportunities in the Third Climate Change Risk Assessment for which it is the lead department (see 2021 Adaptation Progress Report annex).	DLUHC has been working with the relevant other government departments to develop a robust response to the risks identified in the Third Climate Change Risk Assessment. DLUHC's actions recognise the role of buildings regulations and planning in responding to climate risks. We will provide more detail on the actions DLUHC will be undertaking to address the adaptation gaps identified as part of the NAP3 publication.
263	Ensure all of the department's own policy decisions, planning decisions and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.	DLUHC is considering how the planning system can further support our commitment to reaching net zero. As part of our programme of changes to the planning system we intend to review the National Planning Policy Framework to make sure it contributes to climate change mitigation and adaptation as fully as possible.

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		<p>HM Treasury's Green Book and Business Case Guidance is used to appraise spending and regulatory proposals, and includes guidance for how net zero and climate risk considerations should be included in appraisal. This is outlined in the Department for Energy Security and Net Zero and Defra Green Book supplementary guidance. HM Treasury continues to work with departments to embed Green Book best practice.</p> <p>The Government has set out its intention to put the National Procurement Policy Statement (NPPS) on a statutory basis through the Procurement Bill. The NPPS sets out clear principles that contracting authorities should follow - tackling climate change and achieving net zero is one of these.</p> <p>In addition, Procurement Policy Note 06/21 shows the government's commitment to achieving net zero. Under this measure, prospective suppliers bidding for major contracts must submit a Carbon Reduction Plan that details their emissions and their organisational commitment to net zero by 2050.</p> <p>Companies that fail to provide a Carbon Reduction Plan which meets these requirements risk deselection from the procurement.</p> <p>Between September 2021 and the start of February 2023, the measure was applied to 129 procurements, which are valued at c.£187.5 billion over their contractual term.</p> <p>The Environment Act 2021 introduces a new legal duty on ministers to consider the Environmental Principles in policymaking. DLUHC will ensure that new and revised policies will consider the Environmental Principles as</p>

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		appropriate to ensure that policy decisions take the environment into account.
264	Make clear the importance of ensuring that all developments consider how best to minimise lifetime emissions and adapt to climate change as part of the planning process. This should be achieved by embedding Net Zero alignment as a core requirement within the planning reforms in the upcoming Levelling Up and Regeneration Bill and the supporting frameworks and guidance documents.	<p>As committed to in the <i>Net Zero Strategy</i>, DLUHC will carry out a fuller review of the National Planning Policy Framework following Royal Assent of the Levelling-up and Regeneration Bill, to ensure it contribute to climate change mitigation and adaptation as fully as possible, including considering a form of carbon assessment in planning policy, which we recently consulted initial views on in the Levelling Up and Regeneration Bill: Reforms to National Planning Policy consultation.</p> <p>The Government has also announced our intention to consult in 2023 on our approach and interventions to mainstream measurement and reduction of embodied carbon.</p>
265	Set out a plan to make an assessment of whole-life carbon and material use of public and private construction projects mandatory by 2025, to enable minimum standards to be set. The whole life carbon assessment should be sought at the planning stage to enable efforts to reduce embodied carbon and materials.	<p>Adopting a whole-life carbon approach is key to managing carbon in buildings and infrastructure. The <i>Net Zero Strategy</i> sets out Government's ambitions to help the construction sector improve their reporting on embodied carbon in buildings and confirms we are exploring the potential of a maximum embodied carbon level for new buildings in the future. The Government accepts that we will need to resolve questions around embodied carbon, and we are currently reviewing our future approach to this issue. We intend to consult in 2023 on our approach to mainstream the measurement and reduction of embodied carbon in new buildings.</p> <p>As government works to tackle embodied carbon, we intend to consider all levers at our disposal, and intend to work with local authorities and industry in determining the most</p>

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		<p>appropriate mechanisms to assess and report on embodied carbon. Most recently, in the Levelling-up and Regeneration Bill: Reforms to National Planning Policy consultation, which closed on 2 March 2023, we have asked for views on a form of carbon assessment in the planning system.</p>
266	<p>Embed sustainable transport within the upcoming planning reforms in the upcoming Levelling Up and Regeneration Bill. This should recognise the role that place-shaping, active travel, public transport, and shared mobility can combine to play in reducing car dependence and realising a range of co-benefits. These factors should be required to be considered from the outset of all development planning.</p>	<p>The Levelling-Up and Regeneration Bill sets out changes to the planning system, to ensure local plans and design codes are in place more quickly and updated more often so that development is sustainable and accompanied by the infrastructure communities will benefit from. DLUHC is also considering how the planning system can further support our commitment to reaching net zero. As part of our programme of changes to the planning system we have committed to review the National Planning Policy Framework following Royal Assent of the Levelling-up and Regeneration Bill, to make sure it contributes to climate change mitigation and adaptation as fully as possible.</p> <p>The Government's Transport Decarbonisation Plan commits to consider the role planning can play in enabling the implementation of sustainable forms of transport. We will embed the principles of sustainable transport in spatial planning, ensuring development is located in the most sustainable locations that reduce the need to travel, have high levels of accessibility to active travel and public transport and provides the infrastructure needed to support the transition to alternative low carbon fuels. We are updating guidance on Local Transport Plans, shifting transport appraisal to adopt a vision led approach that prioritises sustainable transport modes. Active Travel England and the updated Manual for Streets will have a key role to play in ensuring these principles are routinely used</p>

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		in plan-making and decision taking to secure better outcomes for our streets and public realm.
267	Publish the completed carbon and water management plan and the sustainability management plan that is under development. The plan should include clear pathways for reaching Greening the Government Commitment targets, switching to ultra-low emissions vehicles by 2030 and halving emissions from public buildings by 2032.	DWP will publish a condensed version of its Carbon/Sustainability Management Plans in H1 2023. These set out our proposals to reduce DWP's environment impact to meet the 2024/25 Greening Government Commitments targets, and the longer-term Net Zero Carbon requirement.
268	Ensure all of the department's own policy decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.	<p>HM Treasury's Green Book and Business Case Guidance is used to appraise spending and regulatory proposals, and includes guidance for how net zero and climate risk considerations should be included in appraisal. This is outlined in the Department for Energy Security and Net Zero and Defra Green Book supplementary guidance. HM Treasury continues to work with departments to embed Green Book best practice.</p> <p>The Government has set out its intention to put the National Procurement Policy Statement (NPPS) on a statutory basis through the Procurement Bill. The NPPS sets out clear principles that contracting authorities should follow - tackling climate change and achieving net zero is one of these.</p> <p>In addition, Procurement Policy Note 06/21 shows the government's commitment to achieving net zero. Under this measure, prospective suppliers bidding for major contracts must submit a Carbon Reduction Plan that details their emissions and their organisational commitment to net zero by 2050.</p>

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		<p>Companies that fail to provide a Carbon Reduction Plan which meets these requirements risk deselection from the procurement.</p> <p>Between September 2021 and the start of February 2023, the measure was applied to 129 procurements, which are valued at c.£187.5 billion over their contractual term.</p>
269	<p>For the coming five-year period (2023-2028), FCDO should outline appropriate actions in the next National Adaptation Programme to address the adaptation gap identified for the risks in the Third Climate Change Risk Assessment for which it is the lead department (see 2021 Adaptation Progress Report annex).</p>	<p>The FCDO is committed to supporting Defra in the production of the UK's third national adaptation programme. We have taken ownership of five risk pathways, which will outline the UK's efforts to adapt to international climate impacts on migration, conflict, the legal system, Arctic trade routes and cascading risks, as set out in the Third Climate Change Risk Assessment. These pathways will showcase the work the UK is undertaking to support international adaptation efforts and highlight where we need to take further action.</p>
270	<p>Continue to deliver a broadly 50/50 split between adaptation and mitigation spend under UK International Climate Finance, looking for opportunities that advance both outcomes.</p>	<p>Government will continue to deliver a broadly 50/50 split between adaptation and mitigation spend under UK International Climate Finance and seek opportunities that advance both outcomes.</p>
271	<p>Demand mitigation measures should be used to address price imbalances between aviation and low-emission forms of surface transport (e.g. rail travel). Taxes should send clearer signals to consumers on the high emissions cost of flying (e.g. by reversing the 2021 cut in Air Passenger Duty). Fair funding mechanisms should be used to ensure alternatives are affordable (e.g. invest in low-emission alternatives for journeys where domestic flights are faster/cheaper than surface transport).</p>	<p>The <i>Jet Zero Strategy</i> sets out detail on how the aviation sector, even if returning to a pre COVID-19 demand trajectory, can achieve net zero without government needing to intervene directly to limit aviation growth. DfT analysis shows that in all modelled scenarios we can achieve our net zero targets by focusing on new fuels and technology, rather than capping demand, with knock-on economic and social benefits. Government has committed</p>

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		to reviewing its approach every five years in the <i>Jet Zero Strategy</i> to reflect the latest developments.
272	Fiscal policy should be used (e.g. taxation, quotas or a frequent flyer levy), alongside improvements in broadband, to embed positive behaviours that have arisen during the pandemic, replacing business travel with videoconferencing and online collaboration. The price of flying should be raised to the point that it acts as an effective signal to consumers that aviation has high emissions costs.	<p>Air Passenger Duty's primary objective is to ensure that airlines make a fair contribution to the public finances.</p> <p>More broadly, the <i>Jet Zero Strategy</i> sets out detail on how the aviation sector can achieve net zero without government intervening directly to limit aviation growth. DfT analysis shows that in all modelled scenarios we can achieve our net zero targets by focusing on new fuels and technology, rather than capping demand, with knock-on economic and social benefits.</p>
273	Outline a comprehensive vision to leverage private financing for the retrofit of UK homes and businesses. Plans should be designed to operate in tandem with the other enablers needed to unlock home retrofit at scale, such as better buildings data and public engagement. Financial levers to consider include green stamp duty, green mortgages, energy as a service, property-linked finance, and using the UKIB to de-risk retail investment into home retrofit.	<p>This presupposes that there is an inherent market failure that government needs to intervene on. We have already seen an impressive array of green mortgage products launched by lenders, and government is taking the steps to support this private sector innovation where the customer demand exists. There is a wide array of policy proposals listed, all of which require policy development and could be market moving.</p> <p>Department for Energy Security and Net Zero have consulted on proposals to mandate lenders to give transparent disclosure of their home portfolio, and agree to voluntary improvement targets, to further encourage their investment in this area.</p> <p>Government has also provided innovation funding for the development and piloting of new green finance products for homeowners. The Green Home Finance Innovation Fund (GHFIF), which was completed in March 2022, awarded £1.8 million to three projects to develop innovative green</p>

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		<p>mortgage and additional borrowing products to drive the installation of domestic energy efficiency improvements. GHFIF was followed by the £20 million Green Home Finance Accelerator (GHFA) competition which closed in December 2022. Through GHFA, Government will provide further support to the development of innovative green finance products and services that will diversify the green finance market and enable both owner-occupiers and private landlords to decarbonise their homes and improve thermal comfort.</p> <p>The UK Infrastructure Bank's first Strategic Plan highlights energy efficiency projects and technologies as investment opportunities pledges to explore financing local authority and private projects that will accelerate the deployment of energy efficiency measures.</p>
274	<p>Recognising that the transition needs to scale up over this decade and that stable funding provides certainty to households, businesses, and public bodies, strongly and credibly signal that the Boiler Upgrade Scheme, Home Upgrade Grant, Local Authority Delivery Scheme, Social Housing Decarbonisation Fund, Energy Company Obligation and public sector decarbonisation will continue to be fully funded as required beyond the spending review period.</p>	<p>As set out in HM Treasury's Net Zero Review, the most effective way to deliver the transition and support market growth is to target funding at early adopters and the most vulnerable. Over time, this will lower costs and develop products to enable the creation of a subsidy-free market. The Chancellor has already announced £6 billion for future funding in the next SR, but allocations by scheme are yet to be confirmed. No Parliament can bind the hand of future ones – and spending decision will always need to consider wider affordability and government priorities.</p>
275	<p>Increase the multi-year funding commitments for decarbonisation in public buildings up until 2025 to match the Government's ambition for public sector decarbonisation and commit to continuing similar levels of funding beyond 2025.</p>	<p>HM Treasury announced more than £1.4 billion for the Public Sector Decarbonisation Scheme (PSDS) at SR21, a larger commitment than previous settlements. The £6 billion for the next SR will be allocated by scheme shortly to provide greater certainty to the sector.</p>

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276	For the coming five-year period (2023-2028), outline appropriate actions in the next National Adaptation Programme to address the adaptation gap identified for the risks in the Third Climate Change Risk Assessment for which it is the lead department (see 2021 Adaptation Progress Report annex).	Defra is working with HM Treasury and across Government to develop an ambitious Third National Adaptation Programme (NAP3) – due to be published in 2023 – that addresses all 61 risks and opportunities in the third Climate Change Risk Assessment including the eight priority risk areas. Government recognises the ten principles for good adaptation set out by the CCC and will take account of these in the development of NAP3, building on achievements made to date, and ensuring climate risks are addressed.
277	Building on the Voluntary Carbon Markets Initiative (VCMI) consultation in summer 2022, the Government should develop concrete proposals for standardising and regulating the claims corporates can make relating to offsets, for ensuring the quality and additionality of offsets on the market, and for directing carbon offsets to the highest quality and impact projects.	<p>The UK Government recognises the potential role that voluntary carbon markets could play in the delivery of domestic and international net zero, noting that market integrity concerns need to be addressed to maximise this opportunity. We support work to improve the integrity of VCMs, including that of the Integrity Council on Voluntary Carbon Markets (IC-VCM) and Voluntary Carbon Markets Initiative (VCMI), both launched under the UK's COP26 Presidency to develop international best practice.</p> <p>We will consult on the specific steps and interventions needed to support the growth of high integrity voluntary markets and protect against greenwashing. This will position the UK to serve as a global hub for voluntary carbon trading.</p> <p>Our work with the British Standards Institution (BSI) will also develop nature market standards for investment in carbon and other ecosystem services, building on the international best practice such as the work of IC-VCM and VCMI, as well as the experience of the UK's Peatland and Woodland Carbon Codes.</p>

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278	<p>Do not delay in taking steps to legislate for listed UK companies and financial institutions to publish transition plans from 2023. Publish plans for a clear transition plan standard, based on a transparent consultative process with experts, practitioners and private sector actors, and building on lessons learnt from the Task Force on Climate-Related Financial Disclosures (TCFD). It will be important to ensure the metrics and requirements are sufficiently ambitious, and where possible allow businesses to communicate their holistic contribution to the Net Zero transition, beyond direct emissions reduction.</p>	<p>Currently the Financial Conduct Authority (FCA) requires listed companies, as well as large asset owners and managers to disclose transition plans on a 'comply or explain' basis. The Government commits to consulting on the introduction of requirements for the UK's largest companies to disclose their transition plans if they have them. To ensure parity between listed and private companies, as well as to ensure requirements are consistent and comparable across the economy, we expect to consult on the basis that these requirements could align closely with those of the FCA, including the 'comply or explain' basis. The government will also work with the FCA to ensure transition plan requirements are delivered across the financial services sector alongside requirements for listed and private companies.</p>
279	<p>In the updated Green Finance Strategy expected later this year, include plans for how financial flows can be meaningfully monitored in advance of 2023, setting out key incentives for investors to shift practices, and an overall strategy for how total capital costs of Net Zero will be met by public and private funding sources.</p>	<p>Recognising the challenges of monitoring finance flows into net zero sectors, the Government has commissioned external research being carried out by Frontier Economics to consider the available investment tracking data sources and methodologies used in the UK and internationally. Following this research, we will explore the feasibility of building a bespoke UK Landscape of Climate Finance model for tracking green investment flows in the UK.</p>
280	<p>In the first plan of the UK Investment Bank, due in summer 2022, give consideration for how to navigate the dual goals of the organisation (to tackle climate change and support economic growth), introduce a Net Zero test on all investments, and outline how to capture wider social and resilience benefits of investments beyond financial returns.</p>	<p>UKIB's first Strategic Plan sets out how they intend to deliver on against a triple bottom line: achieving policy objectives (tackling Climate Change and supporting Regional and Local Economic Growth), crowding-in private capital and generating a positive financial return.</p> <p>The UKIB Framework Document and Strategic plan sets out how, where an investment is primarily to support</p>

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		<p>economic growth, the Bank will ensure that it does not do significant harm against their climate objective.</p> <p>As UKIB are building their capacity, they are focussing on intervening where they can make the biggest impact. In October 2022, UKIB published details on their approach to measuring the additionality of UKIB investments, including measuring harm against their climate objective, which will draw on best practice.</p> <p>UKIB is developing an Environmental, Social, Resilience and Governance policy and framework. They will collect data from each investment to meet reporting standards such as the TCFD and forthcoming Sustainability Disclosure Requirements, which shall include Green Taxonomy reporting and any other relevant disclosures.</p>
281	<p>Ensure all of the department's own policy decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.</p>	<p>HM Treasury's Green Book and Business Case Guidance is used to appraise spending and regulatory proposals, and includes guidance for how net zero and climate risk considerations should be included in appraisal. This is outlined in the Department for Energy Security and Net Zero and Defra Green Book supplementary guidance. HM Treasury continues to work with departments to embed Green Book best practice.</p> <p>The Government has set out its intention to put the National Procurement Policy Statement (NPPS) on a statutory basis through the Procurement Bill. The NPPS sets out clear principles that contracting authorities should follow – tackling climate change and achieving net zero is one of these.</p> <p>In addition, Procurement Policy Note 06/21 shows the government's commitment to achieving net zero. Under this</p>

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		<p>measure, prospective suppliers bidding for major contracts must submit a Carbon Reduction Plan that details their emissions and their organisational commitment to net zero by 2050.</p> <p>Companies that fail to provide a Carbon Reduction Plan which meets these requirements risk deselection from the procurement.</p> <p>Between September 2021 and the start of February 2023, the measure was applied to 129 procurements, which are valued at c.£187.5 billion over their contractual term.</p>
282	<p>As part of reforms to electricity pricing, remove legacy policy costs associated with the historical deployment of less mature low-carbon electricity generation from electricity prices. These legacy costs create a market distortion.</p>	<p>The levies perform an important role in driving investment in renewables, energy efficiency and other measures. The cost of green levies is currently temporarily being met by taxpayer funding via the Energy Price Guarantee, as part of the Government's multi-pronged strategy to tackle the unprecedented cost of energy for consumers.</p> <p>We accept the Independent Review of Net Zero recommendation that Government should commit to outlining a clear approach to gas vs. electricity 'rebalancing' by the end of 2023/4 and should make significant progress affecting relative prices by the end of 2024.</p>
283	<p>Follow up on commitment to restore UK Official Development Assistance to 0.7% of Gross National Income once the underlying debt to GDP ratio will be falling and the UK will not be borrowing to finance day-to-day spending, now expected by the OBR in 2023/24. Do not introduce additional conditions relating to macroeconomic and fiscal uncertainty.</p>	<p>Government has committed to return to spending 0.7% of Gross National Income (GNI) on Official Developmental Assistance (ODA) when, on a sustainable basis, government is not borrowing for day-to-day spending and underlying debt is falling. In accordance with the International Development (Official Development Assistance Target) Act 2015, Government will continue to review and confirm each year whether a return to spending</p>

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		0.7% of GNI on ODA is possible against the latest fiscal forecast with spending assumed at around 0.5% of GNI until then.
284	In line with the Glasgow Climate Pact commitment to phase out inefficient fossil fuel subsidies, undertake a review of the role of tax policy in delivering Net Zero, building on the recent Net Zero Review to develop a systematic assessment of taxation and carbon pricing across the economy and addressing distortions from post-tax subsidies that stem from a disproportionately low carbon price.	HM Treasury and HMRC already consider climate change and environmental implications of relevant tax measures with an environmental impact, publishing assessments in the relevant Tax Information and Impact Notes (TIINs). On carbon pricing, the ETS Authority also launched a consultation on the development of the UK ETS in March last year, including on setting a cap for the scheme which is fully consistent with our ambitious carbon targets. The UK continues to support international efforts to reform inefficient fossil fuel subsidies and to promote greater transparency in this area, particularly at the G7, G20 and WTO. Government believes that inefficient fossil fuel subsidies encourage wasteful consumption, reduce our energy security, impede investment in clean energy sources and undermine efforts to deal with the threat of climate change.
285	Create a clear incentive for manufacturing facilities not currently covered by the UK ETS to switch to low-carbon energy sources by reforming the suite of energy and carbon policies, which could include changing the Climate Change Levy rates for electricity and gas.	The Climate Change Levy is a UK-wide tax on the use of energy that encourages energy efficiency to help meet the UK's climate targets. Since 2019 the Government has been amending CCL rates to reflect that electricity is becoming a cleaner form of energy than gas. At Autumn Statement 2022, the Chancellor announced that CCL main rates for electricity and gas will be set at a ratio of 1:1 in 2024-25.
286	The Government should consult on plans to implement, by 2030 or earlier, Carbon Border Adjustment Mechanisms and	Government is consulting on a range of domestic carbon leakage mitigation policies that could potentially mitigate future carbon leakage risk and ensure UK industry has the optimal policy environment to decarbonise. These include a

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	<p>mandatory minimum climate-related standards on imports of selected manufactured products and energy.</p>	<p>carbon border adjustment mechanism (CBAM), product standards, and policies which would help grow the market for low emission industrial products, as well as any emissions reporting requirement which might be needed to underpin new policies.</p>
<p>287</p>	<p>Scope and develop options for future fiscal policy to replace fuel duty, e.g. road pricing.</p>	<p>HM Treasury already uses the vehicle excise duty (VED) system to encourage the uptake of EVs.</p> <p>In April 2017, a reformed VED system was introduced for new cars. Under this system, zero emission models pay nothing on first registration, whilst the most polluting pay over £2,000. In subsequent years, most cars move to a standard rate, currently set at £165. The exceptions are zero emission cars which attract a £0 rate and hybrid vehicles which receive a £10 annual discount. EVs therefore pay no VED at all. From 2025 all new electric cars, vans and motorbikes will be subject to VED. This also applies retrospectively to all electric vehicles registered after 2017.</p>
<p>288</p>	<p>Develop plans for how targeted subsidies and taxation gradients will be used to support delivery of the ZEV mandate targets. These incentivise consumers to choose electric options and ensure that cost does not become a significant barrier to EV adoption.</p>	<p>There are now over a million plug-in vehicles on UK roads, the majority of which are exempt or pay minimal vehicle excise duty (VED). From 2025, electric vehicles will pay standard rates of VED but will still have preferential first year rates of VED in comparison to the most polluting vehicles.</p> <p>There are preferential rates of company car tax for electric vehicles out to April 2028. This will continue supporting the uptake of electric vehicles. From 2025, company car taxes for electric vehicles will increase 1 percentage point year on year to a total of 5% for battery electric vehicles by April 2028. By contrast the company car tax rate for petrol and</p>

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		diesel cars will increase by 1 percentage point in 2025-26 and then be maintained, with the most polluting cars subject to 37% rates by 2028.
289	Review the impact of the newly introduced plastics tax and consider opportunities to go further, including integrating an escalator on the price of the tax and the recycling threshold to which it applies.	Government will keep the level of the rate and threshold of the tax under review to ensure it is effective in increasing the use of recycled plastic. That is why we require all manufacturers and importers of over 10 tonnes of packaging within a 12-month period to register with HMRC and submit data on the recycled content of their plastic packaging. This will allow us to review trends in recycled content over time as part of any future evaluation of the tax. New environmental taxes are typically not introduced with significant escalators to allow time for the tax to be reviewed before this is decided. For example, the Landfill Tax was introduced in 1996 and an escalator to the tax was announced in 1999 following a review of the tax.
290	Building on findings from the Home Office's studies into net zero technologies and Electric Vehicle Charge Points, publish a net zero carbon strategy for the Home Office. The strategy should include clear pathways for reaching Greening the Government Commitment targets, switching to ultra-low emissions vehicles by 2030 and halving emissions from public buildings by 2032.	The Home Office's green strategy, which includes its net zero strategy and clear pathways for reaching Greening Government Commitments, switching to ultra-low emissions vehicles by 2030 and halving emissions from public buildings by 2032, was published in full internally in 2022. A public summary will be published in this year's Home Office outcome delivery plan.
291	Develop and implement plans to make all public sector buildings and vehicle fleets within the department's remit zero carbon in the long-term, switching to ultra-low emissions vehicles by 2030 and halving emissions from public buildings by 2032.	Our built estate is a critical enabler for Defence capability and outputs; it is where our people live, work and train, and from where we deploy. Therefore, it is important that MOD continues the good progress we have made to decarbonise our built estate and with white fleet transition to zero emission vehicles. Key is continued development and implementation of our Estate Sustainability Strategy to plot

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		<p>the route to decarbonise by revising our estate policy and building standards, exploiting innovation, ensuring we have the right skills, data and strong industrial partnerships. We will also need to draw on cross-government support and draw upon external funding sources.</p> <p>However, MOD does not just use energy in our buildings. Emissions are created from generating electricity to power ships alongside, air traffic and defence radars and a range of industrial processes. Therefore, the focus and pace at which defence can decarbonise is also linked to military capability and maintaining UK security.</p>
292	<p>Ensure all of the department's own policy decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.</p>	<p>HM Treasury's Green Book and Business Case Guidance is used to appraise spending and regulatory proposals, and includes guidance for how net zero and climate risk considerations should be included in appraisal. This is outlined in the Department for Energy Security and Net Zero and Defra Green Book supplementary guidance. HM Treasury continues to work with departments to embed Green Book best practice.</p> <p>The Government has set out its intention to put the National Procurement Policy Statement (NPPS) on a statutory basis through the Procurement Bill. The NPPS sets out clear principles that contracting authorities should follow - tackling climate change and achieving net zero is one of these.</p> <p>In addition, Procurement Policy Note 06/21 shows the government's commitment to achieving net zero. Under this measure, prospective suppliers bidding for major contracts must submit a Carbon Reduction Plan that details their</p>

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		<p>emissions and their organisational commitment to net zero by 2050.</p> <p>Companies that fail to provide a Carbon Reduction Plan which meets these requirements risk deselection from the procurement.</p> <p>Between September 2021 and the start of February 2023, the measure was applied to 129 procurements, which are valued at c.£187.5 billion over their contractual term.</p>
293	<p>Publish MoJ's Net Zero Carbon Strategy. The strategy should include clear pathways for reaching Greening the Government Commitment targets, switching to ultra-low emissions vehicles by 2030 and halving emissions from public buildings by 2032.</p>	<p>MoJ has developed a draft Net Zero Carbon Strategy that sets out what is required to deliver both its medium and long-term net zero targets focusing on scope 1 and scope 2 greenhouse gas emissions including transitioning to zero emission vehicle fleet. Subject to ministerial approval, the Strategy is due to be published in 2023/4.</p> <p>Although MoJ has already reduced its overall carbon emissions by 33% against a 2017/18 baseline, putting MoJ on course to meet its medium-term Greening Government Commitment carbon targets (by 2025) and long-term net zero carbon (by 2050) is a significant challenge due to the operational nature of the estate and level of investment required to decarbonise MoJ's estate.</p>
294	<p>For the coming five-year period (2023-2028), MoJ should outline appropriate actions in the next National Adaptation Programme to address the adaptation gap identified for the risks in the Third Climate Change Risk Assessment for which it is the lead department (see 2021 Adaptation Progress Report annex).</p>	<p>MoJ: For the period 2023-2028, MoJ has developed a comprehensive Adaptation Pathway to address the risk to prison services identified in the Third Climate Change Risk Assessment. The pathway, due to be published in summer 2023, will include detail of specific planned actions. This is part of a wider programme to build climate resilience across the MoJ, as set out in its Climate Change Adaptation Strategy.</p>

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295	<p>Ensure all of the department's own policy decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.</p>	<p>HM Treasury's Green Book and Business Case Guidance is used to appraise spending and regulatory proposals, and includes guidance for how net zero and climate risk considerations should be included in appraisal. This is outlined in the Department for Energy Security and Net Zero and Defra Green Book supplementary guidance. HM Treasury continues to work with departments to embed Green Book best practice.</p> <p>The Government has set out its intention to put the National Procurement Policy Statement (NPPS) on a statutory basis through the Procurement Bill. The NPPS sets out clear principles that contracting authorities should follow - tackling climate change and achieving net zero is one of these.</p> <p>In addition, Procurement Policy Note 06/21 shows the government's commitment to achieving net zero. Under this measure, prospective suppliers bidding for major contracts must submit a Carbon Reduction Plan that details their emissions and their organisational commitment to net zero by 2050.</p> <p>Companies that fail to provide a Carbon Reduction Plan which meets these requirements risk deselection from the procurement.</p> <p>Between September 2021 and the start of February 2023, the measure was applied to 129 procurements, which are valued at c.£187.5 billion over their contractual term.</p>
296	<p>Provide detail on how post-CAP agricultural subsidies and schemes in Northern Ireland will target incentives and delivery for climate mitigation alongside wider environmental goals such as climate change adaptation and biodiversity.</p>	<p>The Future Agricultural Policy Framework Portfolio for Northern Ireland sets out a framework for future policy around four key outcomes of increased productivity, environmental sustainability, improved resilience and an</p>

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		<p>effective, functioning supply chain. Following consultation, the then Minister announced 54 policy decisions on the direction of future agricultural policy in March 2022.</p> <p>The decisions included a series of actions aimed at reducing GHG emissions such as reducing numbers of older livestock; the use of feed additives to reduce enteric methane emissions; breeding cattle that are more environmentally efficient; use of urease inhibitor fertilisers; timing of fertiliser and slurry applications; the establishment of grassland swards with legumes and herbs; farming for carbon; peatland rewetting, and biomethane and hydrogen production from agricultural waste. The Soil Nutrient Health Scheme (SNHS) is providing landowners with a baseline assessment of the carbon stocks in their soils. A Farming with Nature Package will provide support for actions to increase biodiversity and environmental sustainability.</p>
297	<p>Long-haul air passenger duty, which is devolved to Northern Ireland, should be increased at least in line with UK-wide long-distance air passenger duty, to better reflect the climate change impact of flying.</p>	<p>As there are currently no scheduled direct long-haul flights currently departing from NI airports, the impact of such a change in NI would be minimal. A new low-cost-Airline, Fly Atlantic, may seek to run a transatlantic route from Summer 2024.</p> <p>Given our island location, NI is reliant on air connectivity for trade, tourism and investment. The Executive at the time committed to eliminate APD on direct long-haul flights from NI to maintain and develop connectivity to key markets.</p> <p>The Executive supported commitments to reach net zero emissions by 2050. However, due regard must be given to our unique circumstances, and where there is no equivalent APD on either short or long-haul flights in the South of Ireland.</p>

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		<p>In the context of the HM Treasury 2021 consultation on aviation tax reform, the Finance Minister wrote to the CST to set out the Executive's concerns about the impact of APD on our connectivity.</p>
298	<p>Publish the Decarbonising Heat Consultation and follow on with a coherent, long-term strategy for heat and energy efficiency in Northern Ireland's homes and other buildings; encompassing regulatory, policy and funding commitments to facilitate delivery.</p>	<p>A consultation will be published in 2023, to develop proposals for the future of low carbon heat support to assist the transition from fossil fuels to decarbonised forms of heating that will be required to meet emission reduction targets as set out in the Climate Change (NI) Act 2022.</p>
299	<p>Strengthen support for and provision of schemes to support walking, cycling and public transport to reduce Northern Ireland's high levels of car-dependence: (1) strengthen schemes to ensure access to local amenities without dependency on cars, (2) invest in infrastructure connectivity to lock in positive behavioural changes that reduce travel demand, e.g. home-working, and (3) support the public transport and shared mobility sectors to recover from the COVID-19 pandemic, including through recovery funding and positive communication and messaging.</p>	<p>In 2021/22 the Department for Infrastructure (DfI) spent £19.8 million on active travel schemes including greenways and place-making projects. A further £20 million was announced by the former Minister for active travel from the Blue Green Infrastructure Fund in 2022/23 which will be used to create safer routes for those walking, wheeling or cycling and for active travel projects, such as secure cycle parking, cycle repair stations and other carbon reduction measures.</p> <p>Northern Ireland Civil Service (NICS) has introduced hybrid working policy which recognises that the benefits of working from home and remote working are wide ranging, including better work-life balance for employees, increased productivity and environmental benefits. To support hybrid working, a number of regional Connect2 hubs opened in August 2022, enabling staff to work closer to home, reducing travel time and promoting regional economic balance. The NICS offers its employees a salary sacrifice scheme to hire and ultimately purchase a bicycle to cycle to work.</p>

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300	Resume collecting and publishing data on vehicle-kilometres travelled by mode in Northern Ireland. This will help identify which actions are effective in encouraging modal shift away from car travel.	<p>Planning for the Future of Transport – Time for Change was published on 3 June 2021 and describes how priorities for the future of transport in NI can be supported by the improved planning, management and development of the transport networks over the next 10 to 15 years. These priorities will be incorporated into our contribution to the development of the Northern Ireland Climate Action Plan as required by the Climate Change Act for NI. Research into modal shift has also been carried out, and we conduct the Travel Survey for Northern Ireland (TSNI), which collects information on how and why people travel within NI. Due to budget constraints the Vehicle Kilometres Travelled (VKT) data has not been published in Northern Ireland since 2014. However, we will develop robust data and undertake evaluation surveys to measure the impacts on emissions.</p>
301	Support the deployment of public charge points across Northern Ireland, to address the issue that Northern Ireland currently has the fewest EV charge points per capita of any of the UK nations.	<p>DfI support the EU INTERREG VA Funded FASTER electric vehicle network project which is expected to install 20-30 EV Rapid charging points at publicly accessible locations across Northern Ireland. DfI have provided support to local councils successful in securing funding through the On-street Residential Chargepoint Scheme (ORCS) which will be used to provide EV charging for those without access to a driveway.</p> <p>Currently the Electricity Supply Board (ESB) is the main provider of electric vehicle charge points in NI, but the market is also open to other providers. ESB has announced that it has been awarded £3.27 million from the Levelling Up Fund (LUF) to expand and enhance the EV charging network. An Electric Vehicle Infrastructure Task-Force was established to consider our EV Infrastructure requirements</p>

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		<p>and published its action plan in November 2022 to deliver a fit for purpose, modern EV charging network.</p> <p>The Department of Finance is working with clients to assist them with the provision of EV charging points. On the DoF owned estate work is ongoing where clients wish to install at their locations, currently nine chargers have been installed with others planned for future installation.</p>
302	<p>Publish an assessment of residual waste treatment capacity needs through to 2050, consistent with meeting committed and prospective recycling and waste reduction targets, expected resource efficiency improvements and ending the landfilling of biodegradable waste by 2028 at the latest. The findings of this review should inform future incineration/EfW capacity decisions and consider the feasibility of phasing out waste exports by 2030.</p>	<p>The Department of Agriculture, Environment and Rural Affairs will also be producing a new Waste strategy which will set out the department's policies in relation to waste in Northern Ireland over the next 6 years in accordance with waste circular economy package requirements set out in the NI 1997 Waste and Contaminated Land Order. This includes policies in relation to waste prevention, recycling, recovery and disposal. The Climate Change Act (Northern Ireland) 2022 includes a requirement to develop a number of sectoral plans, including a waste sector plan. The waste sector plan must also ensure that at least 70% of waste is recycled by 2030.</p> <p>The Waste sector plan will, amongst other policy initiatives, look at addressing residual waste treatment capacity needs through to 2050, consistent with meeting committed recycling and waste reduction targets, expected resource efficiency improvements, and the ending of landfilling of biodegradable waste by 2028 – recommended by the CCC 2022 Progress Report to Parliament.</p>
303	<p>Finalise the Green Growth Plan and Environment Strategy and ensure it includes targets for waste reduction and recycling out</p>	<p>The Green Growth Strategy consultation closed on 21 December 2021. The feedback from the consultation exercise in conjunction with the provisions of the Climate Change Act (Northern Ireland) 2022 which received Royal</p>

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	to 2030 and beyond that are more ambitious than existing targets.	Assent on 6th June 2022 have informed the revision of the Strategy which is now awaiting NI Executive approval. The consultation on the draft Environment Strategy closed in January 2022. The finalised Strategy requires Executive approval before it can be published. Under the Climate Change Act (Northern Ireland) 2022 the Department of Agriculture, Environment and Rural Affairs, through the Sectoral Plan for waste management, must ensure that at least 70% of waste is recycled by 2030.
304	Set out policies to deliver waste and circular economy objectives of the Green Growth Strategy and Environment Strategy.	The draft Circular Economy Strategy for Northern Ireland was launched for public consultation on 9 January 2023 and ran for 10 weeks up to 20 March 2023. It will inform upcoming economic, environmental, and social policy development, raise awareness across all sectors and can be used as a basis to set specific targets and actions to increase circularity across NI. It is expected that the strategy will be finalised by September 2023 (subject to Ministerial & Executive approval). Work is underway examining next steps delivery options on how to progress and support Northern Ireland transition to a circular economy. Modelling, completed by the Waste and Resources Action Programme, showed NI can achieve and surpass a municipal recycling rate of 65% ahead of the target date of 2035, with the non-household municipal sectors being the most influential in reaching this. Work is ongoing to establish how the new 70% by 2030 target set in the Climate Change Act (Northern Ireland) 2022 will be met. Non-Household Municipal Recycling policy is also being developed.

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305	Ensure all regulatory decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.	Ofgem is committed to helping deliver net zero at the lowest cost to consumers. For example, we are enabling investment in electricity networks, such as through the recently announced c.£20 billion programme of Accelerated Strategic Transmission Investment, in addition to transmission investments in the price controls. We have also developed new mechanisms to support expansion of local electricity networks to enable the connection of new generation assets, EVs and heat pumps. Our decision to reduce user contributions to the cost of network upgrades will also reduce barriers to connecting low carbon technologies. More fundamentally, to best meet the challenges of net zero, as well as climate resilience, we are reviewing of our framework for network regulation. We are also reviewing how we can best ensure appropriate action on climate resilience through our regulatory tools. Close work with the Department for Energy Security and Net Zero is also establishing new economic regulatory regimes for nuclear, CCUS and hydrogen, to facilitate billions of pounds of investment in these low carbon technologies.
306	Ensure all regulatory decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.	Ofwat's duties, as outlined in the Water Industry Act 1991, support our work on resilience against climate change. We also carry out our work in accordance with UK and Welsh governments' Strategic Policy Statements which provide steers relating to net zero and climate risks. Our net zero principles paper makes clear our expectations that water companies deliver net zero in line with national government targets, reduce operational and embedded emissions, with reductions in GHG emissions prioritised Our third climate change adaptation report demonstrates our understanding of climate change risks and how we manage them organisationally and how we are enabling the sector to

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		<p>respond. At PR24, we are introducing performance commitments to incentivise water companies to further deliver on net zero, with companies expected to deliver long-term delivery strategies using UKCP18 projections.</p> <p>We take account of HM Treasury's Green Book and Business Case Guidance in major spending and regulatory proposals, which includes guidance for how net zero and climate risk considerations should be included in appraisals. We have been working on our internal approach to net zero and intend to include further developments including as part of a refreshed procurement strategy. We are working to the principle that any new contracts are with suppliers who are committed to carbon reduction plans to achieve net zero emissions.</p>
307	<p>Require and facilitate water companies and industrial wastewater facilities to measure and report on emissions, including process emissions. Funding should be made available for monitoring and research to improve process emissions measurement and mitigation.</p>	<p>Since 2021-22, Ofwat has required water companies to report on their operational GHG emissions. Our approach requires companies to report on elements of scope 1 to 3 emissions as defined by the GHG Protocol, and as detailed in the sector's Carbon Accounting Workbook.</p> <p>We recognise the challenge facing water companies in improving process emissions measurement and mitigation, with our net zero principles paper making clear our expectation companies reduce their GHG emissions. We have provided funding for monitoring and research into process emissions via our innovation fund and our 'Green Recovery' decisions. For our next price review, PR24, we expect companies' plans to make substantial progress towards national government net zero targets, including by mitigating process emissions. We expect companies to deliver their net zero strategies, incentivising them through</p>

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		<p>our expenditure framework and the introduction of operational GHG emissions performance commitments.</p>
<p>308</p>	<p>Work with Government departments to fill the data gaps identified by CCC in the Monitoring Framework document accompanying this report.</p>	<p>The ONS welcomes the work the CCC has undertaken to highlight gaps where required data do not yet exist.</p> <p>We will look to prioritise among the gaps the ONS is the lead for. We will also use our strong bilateral links to support other government departments and bodies to help them to fill their priority gaps. Existing conversations are continuing, and new ones have begun following the Framework's publication. We can use the range of ONS tools, such as rapid and annual surveys, data science, administrative data and data linkage to support this.</p> <p>The cross-government Climate Change Project can also potentially play a useful role in collaborative closing of data gaps, including the UK Climate Change Statistics Portal (climate-change.gov.uk), which the ONS leads on, working with government stakeholders, for data and statistics dissemination. Work on DGI-3, the latest G20 Data Gaps Initiative, which ONS is engaging with, will also potentially contribute to this work.</p>
<p>309</p>	<p>Invest to progress the National Materials Datahub to track materials and products to share information on their quantity and quality for reuse and repurposing to retain materials at their highest value for as long as possible.</p>	<p>ONS led proposals for a National Materials Datahub (NMD) in 2018-2019, working with (then) BEIS, Defra, industry and academia. This identified data access/sharing at scale, standardisation and linkage across value chains as key challenges.</p> <p>While an initial £5 million bid was unsuccessful, a working group of cross-government stakeholders - DBT, the Department for Energy Security, Defra, Cabinet Office, UK</p>

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		<p>Research & Investment and the ONS - has been meeting regularly.</p> <p>The Working Group has commissioned a review of the materials data landscape, due to report in 2023 with recommended next steps, while supporting ongoing and related projects aiming to improve the availability, quality and accessibility of data on material flows, and environmental impacts, in the UK economy, e.g. the UKRI National Interdisciplinary Circular Economy Research (NICER) Data Observatory, the UK Critical Minerals Intelligence Centre, the DIT Supply Chain Intelligence project, Defra's Digital Waste Tracking System and Defra's Carbon Footprint data.</p>
310	Provide detail on how post-CAP agricultural subsidies and schemes in Scotland will target incentives and delivery for climate mitigation alongside wider environmental goals such as climate change adaptation and biodiversity.	We published a route map on 10 February 2023 setting out the timescales for information and interaction with the agricultural industry. This publication gives greater clarity and confidence to the agriculture industry on key dates, various measures being proposed, and what support will be available.
311	Seek to address price imbalances between aviation and surface transport, once aviation taxation is devolved to Scotland, encouraging the low-carbon alternative (e.g. rail) for journeys where one exists.	Scottish Government is working with the industry to reduce aviation's environmental impact and to reduce rail journey times. It has consistently supported high-speed rail to be extended 'further and faster' to reach Scotland. The Highlands and Islands exemption must be resolved before Air Departure Tax can be implemented.
312	Publish more detail on the modelled pathway for low-carbon heat, and planned breakdown of funding announced in the Scotland Heat in Buildings Strategy.	We will continue to develop the modelled pathway for low carbon heat as part of our wider update to the Climate Change Plan, which we expect to lay in draft later in 2023. We have also released further details on the breakdown of

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		funding announced in the Heat in Buildings Strategy, which includes at least £465 million through the Scottish Government's Warmer Homes Scotland and Area Based schemes, £300 million for Scotland's Heat Network Fund, £200 million Social Housing Net Zero Heat Fund and £200 million Scottish Green Public Sector Estate Scheme.
313	Scale up action to deliver targets across all sectors in line with the ambition set out in the recent Climate Change Plan update.	The Scottish Government is committed to a just transition to net-zero by 2045, with an ambitious interim 2030 target of a 75% reduction in emissions. Our emissions are down by over 50% (since the 1990 baseline), and we continue to outperform the UK as a whole in delivering long-term reductions. Our updated Climate Change Plan sets out a detailed and ambitious policy package; our focus is on delivering this. Achieving these further emissions reduction targets will involve some genuinely difficult decisions for Scotland, as it will for all countries, and we will work with others to ensure this happens.
314	Publish the analysis that supports the total and sectoral pathways set out in the Scotland's Climate Change Plan update.	The Scottish Government has one of the most rigorous legal frameworks globally in respect to emissions reductions and reporting. The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 set new requirements with regards to Climate Change Plans, including the need to publish the costs and benefits of policies within the Plan; in practice this means publishing the emissions reductions as well as other benefits and the costs of the plan's policies. The next statutory Climate Change Plan, the first that these regulations apply to, will be laid in draft in Parliament later in 2023.
315	Publish a strategy setting out how the Scottish Government will achieve a 20% reduction in car-kilometres by 2030 and deliver	A final version of the 20% reduction in car-kilometres route map will be published in the coming months, outlining our

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	20-minute neighbourhoods. This should be supported by: (1) continuing to strengthen schemes to support walking, cycling, and public transport, (2) investment in infrastructure connectivity to lock in positive behavioural changes that reduce travel demand (e.g. home-working), and (3) supporting the public transport and shared mobility sectors to recover from the COVID-19 pandemic, including through recovery funding and positive communication and messaging.	investment in more sustainable modes, including our commitment to increase the proportion of Transport Scotland's budget that is spent on active travel, so that by 2024-25 at least £320 million or 10 per cent of the total transport budget will be allocated to active travel, and a commitment to invest over £500 million in bus priority measures. The Scottish Government also recognises the need to reduce the attractiveness of driving, and we have commissioned research exploring equitable options for demand management to discourage car use, including pricing, which we will publish later this year.
316	Continue to support the expansion of Scotland's public EV charge point network, to ensure the EV transition works for all road users in Scotland.	Last year Scottish Government engaged with stakeholders to review and refine the vision for public charging in Scotland, expected to publish early in 2023 with proposed actions that will deliver the vision over the coming years. A key action will be delivery of our EV Infrastructure Fund, which aims to grow the public charging network in Scotland to over 6,000 public charge points by 2026.
317	Start reporting emissions from Energy from Waste as a separate source within the Scottish greenhouse gas inventory.	<p>Official statistics on Scottish GHG emissions are published annually and used to monitor progress towards Scotland's statutory emissions reduction targets. These statistics are based on a disaggregation of the UK GHG Inventory, which is overseen by the UK Government (Department of Energy Security and Net Zero) and compiled in line with international scientific guidance. Currently, the UK Inventory does not allow for the isolation of data for emissions from waste incineration plants as opposed to other energy sector emissions.</p> <p>Decisions around the UK Inventory are a matter for the Department of Energy Security and Net Zero and are</p>

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		<p>informed by the UK National Inventory Steering Committee, which includes representation from Scottish Government officials. We are working with Department of Energy Security and Net Zero and the UK National Inventory Steering Committee to explore the potential to break down our GHG inventory reporting to provide a separate Energy from Waste source within our future publications.</p>
<p>318</p>	<p>Legislate the Circular Economy Bill and set targets to reduce waste and improve recycling rates beyond 2025, ensuring these are more ambitious than existing targets.</p>	<p>In 2022 we consulted on both a Circular Economy Bill and Waste Route Map to 2025 and beyond. The Bill consultation included proposals to take powers to set statutory targets and the Bill will be brought forward before summer recess 2023. The Route Map consultation sets out the principles that should underpin new circular economy targets for the period to 2030 and will be published in 2023.</p>
<p>319</p>	<p>Provide detail on how post-CAP agricultural subsidies and schemes in Wales will target incentives and delivery for climate mitigation alongside wider environmental goals such as climate change adaptation and biodiversity.</p>	<p>From 2022 to 2025, Wales' rural investment schemes will provide £275 million of support across a range of low carbon farming measures, schemes supporting land use change alongside wider environmental goals, and sustainable food and farming supply chains aligned to the delivery of Net Zero Wales and the sustainable management of natural resources in the Environment (Wales) Act. These schemes also support the transition towards a new system of farming support in 2025. The Sustainable Farming Scheme proposals signify a further major change and will be key in supporting Welsh farmers to play a leading role in delivering a more resilient environment and a more resilient rural economy. The SFS will be the main source of funding for farmers in future and will be provided for the work farmers do to meet the</p>

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		challenges of the climate and nature emergencies alongside the sustainable production of food.
320	Drawing on the recommendations of the Auditor General for Wales, publish plans for future iterations of the Warm Homes Programme to tackle fuel poverty and decarbonise homes, addressing the scheme's reliance on fossil fuel heating and slow roll-out.	A successor to the Warm Homes programme is being developed following consultation in 2022. A response to the consultation will be published alongside a policy statement in early spring.
321	Building on the plans set out in Net Zero Wales Carbon Budget 2, publish a long-term strategy, setting out a pathway up until 2050 for decarbonising buildings with key policy milestones and targets for low-carbon heating and energy efficiency roll-out. This should include policies to support low-carbon heating across all of the building stock, including how Wales will transition away from fossil fuel heating and ensure local actors are able to conduct spatial planning for heat networks.	<p>The Welsh Government is clear that in terms of retrofit, there are few simple solutions and indeed no one size fits all in terms of the housing stock in Wales. We intend to develop a comprehensive delivery plan that incorporates decarbonisation work across all housing tenures. We are committed to that plan being rooted in evidence of what works in decarbonisation and based on learning from our Optimised Retrofit Programme and other schemes.</p> <p>We are currently developing both a heat strategy, which sits alongside our work on local and regional energy plans, and an integrated approach across all tenures and income levels to drive decarbonisation. Consultation and partnership working are fundamental to our approach, which will be developed over time as we develop our evidence base.</p>
322	Publish the analysis that supports the total and sectoral pathways set out in the Second Welsh Carbon Budget.	Welsh Government continues to develop its decarbonisation pathways and intends to publish more detail following the development and publication of our next statutory decarbonisation plan.

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323	<p>Deliver on the priorities set out in Llbwyr Newydd to reduce demand for higher-carbon travel. This includes: (1) delivering a better, more integrated, decarbonised bus system, (2) developing a network of connected local routes for walking and cycling, (3) investing in infrastructure connectivity to enable delivery of the ambition for 30% of the workforce to work remotely on a regular basis, and (4) supporting the public transport and shared mobility sectors to recover from the COVID-19 pandemic, including through recovery funding and positive communication and messaging.</p>	<p>1) A white paper consultation on the proposals for legislative bus reform closed on 24 June 2022 with the Bill anticipated for Autumn 2023.</p> <p>2) £49 million being delivered by local authorities through the Active Travel Fund Programme for 2021/2022. New maps from local authorities setting out plans for local routes for walking and cycling have been received, with 12 already approved.</p> <p>3) The £20 million Local Broadband Fund supported local authorities and social enterprises to provide broadband connectivity and the £56 million full fibre roll-out is continuing to provide gigabit capable broadband to premises. A network of over 25 pilot remote working hubs are operational and are being monitored</p> <p>4) A further support package worth £48 million to help the bus industry in Wales recover from the impact of the pandemic was announced in June 2022. Transport for Wales launched 'The Real Social Network', Wales's first multimodal sustainable public transport campaign.</p>
324	<p>Support delivery of a charging network that meets the ambition set out in the Electric Vehicle Charging Strategy, to ensure the EV transition works for all road users in Wales.</p>	<p>Total publicly available electric vehicle charging devices for Wales at the end of July 2022 was 1,218, an increase from 918 in July 2021. The Welsh Government has supported the expansion of the network through delivery of a Local Authority infrastructure grant scheme, funding of LA charging strategies, on-route rapid charging scheme (Transport for Wales), partnering with DNOs to attract Ofgem Green recovery funding schemes, delivered Taxi/PHV trials including rapid charging and funding of bus charging infrastructure.</p>

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325	Publish an assessment of residual waste treatment capacity needs through to 2050, consistent with meeting committed and prospective recycling and waste reduction targets, expected resource efficiency improvements and the stated goal to end the landfilling of biodegradable waste by 2025. The findings of this review should inform future incineration/EfW capacity decisions and consider the feasibility of phasing out waste exports by 2030.	A strategic assessment for the future need for energy from waste capacity in the regions of Wales was published by in March 2021. A moratorium on new large scale (above 10MW) energy from waste plants was introduced with immediate effect on 24 March 2021. As part of our commitment to reaching zero waste, we are committed to taking full responsibility for our waste here in Wales. The Collections Blueprint is a high quality recyclate collection methodology for Local Authorities that helps reduce the risk of the export of low quality recyclate, especially plastic. The trans-frontier shipment of waste is however a reserved issue and we are working with the UK Government to develop an electronic tracking system for waste movements.
326	Set ambitious recycling targets for 2030 and beyond, improving on the 70% target for 2025.	Work is being undertaken in partnership with the Local Authorities to develop the pathway for the targets for recycling post the 70% statutory minimum target which comes into place in 2024/25.
327	Set out and implement additional policies necessary to achieve waste reduction and recycling targets, as part of delivering the Beyond Recycling Strategy more broadly.	Work to implement the commitments within Beyond Recycling is being progressed, with for example the final consultation on the Business, Public and Third Sector recycling reforms currently underway. A go live date for a deposit return scheme for drink containers has now been set for 2025. Efforts to tackle packaging waste outside of the deposit return scheme are being progressed through Extended Producer Responsibility reforms, these are being introduced in a phased approach from 2024.

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