



National Audit Office



# Measuring and reporting public sector greenhouse gas emissions

Department for Business, Energy  
& Industrial Strategy

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**REPORT**

**by the Comptroller  
and Auditor General**

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## Report by the Comptroller and Auditor General

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Commons in accordance with Section 9 of the Act

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**Gareth Davies**  
**Comptroller and Auditor General**  
**National Audit Office**

**1 June 2022**

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## Key facts

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**2050**

year by which the government has a statutory commitment to achieving 'net zero' greenhouse gas emissions

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**2%**

estimated proportion of UK total greenhouse gas emissions accounted for by direct greenhouse gas emissions from public sector buildings in 2019

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**75%**

target for reducing direct greenhouse gas emissions from public sector buildings to be achieved by 2037 measured against a 2017 baseline

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**50%**

reported reduction in greenhouse gas emissions achieved by 2019-20 under the Greening Government Commitments (GGCs), as measured against a 2009-10 baseline

**18**

departmental groups that achieved their 2020 GGCs decarbonisation target, of the 20 groups reported

**14%**

of departments with an emission reduction target under the 2021-2025 GGCs that did not fully meet any of the greenhouse gas emission elements of HM Treasury's mandatory sustainability reporting requirements in 2018-19

**43%**

of departments with an emission reduction target under the 2021-2025 GGCs that met all the greenhouse gas emission elements of HM Treasury's mandatory sustainability reporting requirements in 2018-19

# Summary

## Background

**1** In June 2019, Parliament passed an amendment to the Climate Change Act 2008 committing the UK to achieving 'net zero' greenhouse gas emissions (emissions) by 2050. This means reducing emissions (also known as 'decarbonisation') substantially from current levels, with residual emissions the UK still emits in 2050 being equal to or less than what is removed from the atmosphere by either the natural environment or carbon capture technologies, such as tree planting or engineered removals.

**2** The government estimates that emissions from public sector buildings account for around 2% of total UK emissions.<sup>1</sup> It has included the public sector in a series of broader strategies to decarbonise the UK economy:

- The government published its *Clean Growth Strategy* in 2017, setting out its ambitions for the public sector to be a leader in reducing its emissions and that it has a key role in demonstrating best practice, promoting transparency over emissions reporting and catalysing markets.
- In its 2021 *Net Zero Strategy*, the government restated its ambition that "the wider public sector will lead by example during the transition to net zero". In terms of transparent reporting, the strategy notes that public sector organisations "should report their progress so they can be held accountable" and that government will "legislate to enable us to require reporting of public sector emissions on a consistent and coherent basis if this is not done on a voluntary basis". To measure its performance against this ambition, the government restated a commitment to halve direct emissions from public sector buildings by 2032 and set a new target to reduce them by 75% by the end of 2037, both against a 2017 baseline. The government has established the Public Sector Decarbonisation Scheme to fund winning bids from public bodies – phase 3 of which will provide £1.425 billion over the three financial years beginning 2022-23.

<sup>1</sup> This measure is derived from estimates of the amounts of fuel burnt in public buildings, for example gas and oil. It does not include the public sector's wider scope 1, 2 and 3 emissions, for example emissions arising from owned vehicles or electricity consumed.

**3** Since 2010-11, the government has also agreed targets with central government (government departments and their partner organisations) to reduce their emissions as part of the Greening Government Commitments (GGCs). These set out actions that central government will take to reduce its impacts on the environment, of which reducing emissions is one component. The current targets are set by the Department for Business, Energy & Industrial Strategy (BEIS) through negotiation with individual departments to reduce their emissions by the end of 2024-25 compared with a 2017-18 baseline. Departments' targets range from achieving a 10% reduction to a 43% reduction in direct emissions and a 27% to 69% reduction in overall emissions.

**4** For reporting purposes, international standard setting bodies such as the Greenhouse Gas Protocol, drawn on by the UK government, divide emissions into three categories, known as 'scopes'. These reflect how much control or influence an organisation has over them and prevent the double counting of emissions by ensuring that two or more organisations do not account for emissions in the same scope:

- Scope 1 emissions are direct emissions that are released into the atmosphere from sources that are owned or controlled by the organisation. These include emissions from gas-fired heating systems, emissions from an organisation's vehicle fleet and 'fugitive emissions', which are leaks of greenhouse gases, such as fluoride gases leaking from refrigeration or air-conditioning units.
- Scope 2 emissions are indirect emissions from the generation of purchased energy, which for most organisations are primarily emissions released during the generation of the electricity it uses.
- Scope 3 emissions are all other indirect emissions that occur because of an organisation's activities but from sources not owned or controlled by the organisation. These include 'upstream' emissions, such as business travel undertaken by employees and goods and services purchased from external suppliers, and 'downstream' emissions, such as emissions from investments. Measuring scope 3 emissions poses a challenge because it requires organisations to collect a wide range of information, often held by other bodies, which means that there may be difficulties with data accessibility and quality. Scope 3 emissions can also be an organisation's largest source of emissions.



**5** No single department holds overall responsibility for the framework for measuring and reporting public sector emissions. Several government departments play an important role:

- BEIS has overall responsibility in government for achieving net zero, including setting the strategy for decarbonising the public sector, and leads on the emission reduction aspects of the GGC framework including the process for setting emission reduction targets for central government.
- The Department for Environment, Food and Rural Affairs (Defra) has overall responsibility for the GGC framework, which includes overall and departmental targets. It publishes reporting requirements to ensure that it receives consistent information from central government bodies for inclusion in the annual report on progress in meeting the GGC targets.
- HM Treasury has responsibility for setting annual reporting requirements in central government.<sup>2</sup> As part of this, it publishes the Sustainability Reporting Guidance, setting out what information central government bodies that are within scope of the GGCs have to disclose in their annual reports and accounts.

**6** Measuring and reporting emissions is essential to helping the public sector to reduce its greenhouse gas emissions, but this is an area where measurement standards and reporting requirements will continue to develop. Public sector organisations need adequate data to understand the impact of their operations on greenhouse gas emissions; enable their management teams and boards to monitor progress in delivering reductions; and enable external scrutiny of performance by stakeholders, including Parliament. Many organisations are still learning how best to measure and report on their emissions. Our examination drew upon our accumulated experience of examining performance reporting and measurement regimes across government.

**7** This report examines the extent to which the government measures and reports public sector emissions in line with its ambition for the public sector to be a leader in decarbonising its activities. It examines:

- the landscape of public sector emissions measurement and reporting (Part One);
- the completeness of current measurement and reporting requirements for public sector bodies and progress in improving the transparency of reporting across central government (Part Two); and
- whether government and public sector organisations are using emissions data to inform future planning (Part Three).

<sup>2</sup> HM Treasury only has the authority to set annual reporting requirements in central government. Other bodies set the equivalent reporting requirements for other areas of the public sector. Accounting officers at each reporting organisation have responsibility for complying with the relevant reporting requirements.

## Key findings

### Measuring and reporting greenhouse gas emissions

**8 By 2019-20, central government reported that it had reduced its emissions by 50% compared with 2009-10 and therefore had achieved its aggregate target.**

The GGCs, introduced in 2010-11, include a series of commitments to reduce central government's impact on the environment, including targets to reduce emissions. The aggregate targets for 2019-20, which were revised in 2018 to make them more stretching, were met a year earlier than planned. By 2019-20, the government reported achieving in aggregate a 50% reduction in emissions from departments and their partner organisations, exceeding its target to reduce emissions by a minimum of 43% from a 2009-10 baseline. The government attributed the improvement to improved management of the government estate and decarbonisation of the national grid. Eighteen departmental groups (of the 20 groups reported) achieved their 2019-20 GGCs decarbonisation target (paragraphs 1.9 and 2.2 to 2.4).

**9 The government's GGCs do not provide a complete picture of progress made by the public sector in reducing its emissions.**

They set out the actions central government will take to reduce its environmental impacts, with departments committing to targets to improve environmental performance and to report their progress. Through this framework, organisations report their emissions, which provides useful data on the progress that is being made, but the GGCs do not cover all public sector emissions.

- *Not all central government bodies report GGC data as expected under the GGC guidance.* In 2019-20, Defra received no GGC data for any of the partner organisations of the Department for Digital, Culture, Media and Sport and the Ministry of Housing, Communities & Local Government, although the parent departments reported their own core departmental figures.<sup>3</sup> We could find no evidence of Defra having granted exemptions to the partner organisations. Defra informed us that it is currently reviewing exemptions records to ensure that gaps in reporting coverage against the 2021–2025 targets are closed.
- *The GGCs do not apply to public sector organisations beyond central government departments and their immediate partner organisations.* Emissions from the wider public sector – for example, hospitals, schools and local authorities – are outside the scope of GGCs and there is no equivalent process in place.

3 The Ministry of Housing, Communities & Local Government is now called the Department for Levelling Up, Housing & Communities.

- *The GGC measures do not include all sources of emissions.* Departments and their partner organisations are required to report against a specific list of common emission sources. They are not required to report on emission sources not on the GGC list (mainly those falling under scope 3, such as the purchase of goods and services) even if they are significant. The reduction targets set under the GGC framework will therefore not encompass the full range of an organisation's emissions (paragraphs 1.9, 2.2, 2.5 to 2.6, and 2.11 to 2.12).

**10 The sustainability reporting requirements for departments set by HM Treasury are broadly consistent with those set for larger companies, but the government is encouraging the private sector to go further.** BEIS is responsible for setting the statutory requirements for private sector organisations and HM Treasury is responsible for setting the statutory reporting requirements for central government. Both central government departments and some private sector organisations are required to report their scope 1 and scope 2 emissions and one of the sources of scope 3 emissions (business travel).<sup>4</sup> The government is encouraging the private sector to go further by requiring companies bidding for government contracts over £5 million to report five of the 15 possible types of scope 3 emissions (paragraphs 2.8 to 2.10 and Figure 5).

**11 Most central government bodies are measuring some of their emissions but full compliance with the emissions elements of HM Treasury's Sustainability Reporting Requirements was low.** Our analysis found that in 2018-19, the last full financial year before reporting requirements were suspended during the COVID-19 pandemic, only nine (43%) of the 21 departments with an emission reduction target under the 2021 to 2025 GGCs fully met all the emissions elements of HM Treasury's mandatory sustainability reporting requirements in their annual report and accounts. Three (14%) did not fully meet any of the requirements. The scale of the measurement and reporting task varies significantly depending on the size of the organisation and the nature of its activities (paragraphs 2.14 to 2.17, 2.19).

<sup>4</sup> Requirements set by BEIS for private sector organisations are published in its 2018 Streamlined Energy and Carbon Reporting standards and apply to all quoted companies and large unquoted or limited liability partnerships complying with the Companies Act 2006. Bodies set up as companies that deliver public services, such as academy trusts, can be in scope.

**12 There are no mandatory emissions measurement and reporting requirements for the public sector as a whole.** The wider public sector includes local authorities, schools and hospitals. We noted last year, in our report on Local Authorities and Net Zero, that there is little consistency in local government reporting of emissions. Some authorities, however, have taken the initiative to promote carbon reporting within their sectors. For example, the NHS requires regional NHS bodies to report annually on their sustainability. BEIS has committed to issuing guidance for the public sector as a whole to support the accurate and consistent measurement and reporting of emissions, but it has not yet set a timetable for when it intends to develop and publish this guidance. At present, BEIS plans to track overall public sector progress against emissions reduction targets using data from the Greenhouse Gas Inventory. The chosen measure relates to direct emissions from public sector buildings and is part of the national statistics data-set. It does not allow for performance to be attributed to organisations or major public sector activities. BEIS does not draw on or use other available performance data – for example, the GGC data – that would enable it to track progress on a more frequent or granular basis to identify which parts of the sector are making slower progress (paragraphs 2.13, 3.10, 3.11 and 3.14).

**13 Some organisations have found it challenging to identify and understand the range of measurement and reporting guidance.** This partly reflects the rapid evolution of reporting practice in both the public and private sectors, making it difficult for organisations to keep abreast of change and understand what they need to do. The ability of public bodies to keep up to date with what is needed is complicated by the fact that several government departments publish guidance on measurement and reporting for differing purposes – including HM Treasury, BEIS, Defra and the Cabinet Office – creating a complex landscape for public sector bodies to navigate. The government has made efforts to align some of its guidance, but the multiplicity of guidance leaves public bodies having to cross-check guidance documents to ensure that nothing is missed. There is no single source bringing this information together in one place (paragraphs 2.12, 2.19 to 2.21 and Figure 7).

## Delivering progress against long-term goals

**14 Organisations in our case sample used the departmental GGC targets to guide their ambitions for decarbonisation, but BEIS does not yet know whether the GGC targets agreed for 2025 are sufficiently ambitious.** BEIS committed in its Net Zero Strategy that the updated 2021–2025 GGCs emission reduction targets would be consistent with a trajectory to achieve net zero. More broadly, all public bodies are expected to set targets to reduce their emissions. BEIS told us there is no expectation that the individual organisations should set themselves a net zero target. The emissions reduction targets for the 2021–2025 GGCs were set through negotiation between BEIS and individual departments. BEIS informed us that the starting point for the negotiation with each department was based on a simple linear trajectory to achieve the 2032 direct emissions target, which equates to a 25% emissions reduction by 2025. But the final targets set for each department range from a 10% to a 43% reduction in direct emissions. BEIS does not currently know whether these targets will, in aggregate, deliver the reduction required by 2025 (paragraphs 3.2 to 3.4).

**15 The organisations in our case study sample ranged from those only just beginning to measure their emissions to those that were using emissions data to assess the cost implications of their decarbonisation targets.** The nine organisations examined were at different stages of measuring, reporting and using their emissions data. Those that had only recently come within the scope of the GGC reporting requirements were taking steps to capture better basic data on their direct emissions. Other organisations we examined – National Highways and Defence Equipment & Support (DE&S) – had gone further and were taking steps to assess progress against longer-term goals and develop strategies to accelerate progress. Both organisations were taking steps to understand their emissions in greater detail, including making early efforts to understand their scope 3 emissions. Of the organisations we examined, DE&S and the Department for Work & Pensions had estimated the overall cost implications of decarbonising their operations. Some organisations had made plans to reduce the financial cost of decarbonisation by replacing assets with alternative solutions that have lower associated emissions, as part of their routine asset renewal cycle (paragraphs 3.4 to 3.6, Figures 8 and 9).

**16 The support and guidance provided by the centre of government is dispersed across a number of teams, creating a risk of inconsistency and duplication.** BEIS has overall responsibility for leading the decarbonisation of the public sector but needs to work closely with teams in HM Treasury and Defra. In addition, a range of other public bodies, and other entities working under contract to government, have taken on roles providing guidance and advice to other parts of the public sector. The Office for Government Property facilitates the sharing of good practice and has developed both a Net Zero Trajectory Tool to help bodies estimate the cost of decarbonising their estate and the Net Zero Estates Playbook that brings together decarbonisation guidance for estates teams. The Government Property Agency produces the Government Workplace Design Guide that includes guidance on setting emissions targets for buildings, and tracking and modelling energy consumption. Several of the central teams we interviewed told us resource constraints limited the work they were able to do. With responsibilities distributed in small teams across the central departments, there is a risk of inconsistencies in approach. As the reporting requirements develop, there is a risk that no single team will have the resources to take an effective lead on measurement and reporting issues and that some effort will be duplicated (paragraphs 2.8, 2.19 to 2.20, 3.8 to 3.9 and Figure 7).

## **Conclusion**

**17** Central government departments have reported notable progress in reducing their direct emissions over the past decade. The GGCs have provided a broadly stable framework within which departments can measure and report progress against targets. HM Treasury's Sustainability Reporting Guidance has begun to set expectations for what stakeholders, and Parliament, might expect to see in the annual reports of public bodies. However, there are inconsistencies in which bodies are and are not reporting within the GGC framework, patchy compliance with HM Treasury's reporting guidance and a lack of clarity about what is expected of the rest of the public sector.

**18** In part, the current inconsistencies mirror a lack of coherence in the oversight and support provided by the centre of government on the measurement and reporting of public sector emissions. All public sector bodies need to understand the likely costs of delivering their decarbonisation targets so that they can effectively prioritise action and investment. And with better, more consistent data, central government departments could improve cost estimation and inform priorities for reducing emissions. This will require active leadership from the centre of government to strengthen its management of the measurement and reporting regime.

## Recommendations

**19** We make the following recommendations:

- a** **The government should strengthen the coordination of work at the centre of government on the measurement and reporting of public sector emissions.** Several government departments issue guidance for measuring and reporting emissions but these efforts lack coherence and clarity. As the sector begins to tackle the challenges of decarbonisation, the government should ensure that there are clear lines of responsibility and accountability for coordinating efforts to improve the measurement and reporting of emissions across the public sector.
- b** **BEIS should ensure that appropriate emissions data are reported from the whole public sector.** Decarbonisation goals have been set for the entire public sector, but only central government is currently required to measure and report emissions under the GGC framework. BEIS should review the adequacy of current measurement and reporting practice beyond the current central government GGC boundary to ensure that appropriate data are being collated to demonstrate progress towards the decarbonisation goal.
- c** **BEIS, working with other departments, should ensure that the shorter-term GGC targets are sufficiently aligned with the longer-term decarbonisation goals.** Taken together, the GGC targets set over the shorter-term, should reflect a clear and sufficient trajectory for the public sector to deliver on the longer-term decarbonisation goals.
- d** **BEIS, Defra and HM Treasury should rationalise emissions measurement and reporting guidance.** The departments should agree a timeline for introducing its measurement and reporting framework that sets clear expectations for the public sector. Whenever possible, separate guidance documents should be consolidated. When this cannot be done, the departments should ensure that separate guidance is consistent and fully aligned with the government's strategic decarbonisation targets.

**20** At a time of rapid evolution in emission reporting practice in both the private and public sectors, we recognise that some of the changes may have an impact on the work we perform as the external auditor of central government. We stand ready to work with the government and Parliament on changes to the external assurance arrangements to ensure that they keep pace with developments in other sectors.

# Part One

## Background

**1.1** The Climate Change Act 2008 forms the legislative basis of the UK's efforts to reduce its greenhouse gas emissions (emissions) and limit climate change. The Act sets the UK legally binding targets to reduce emissions. In June 2019, Parliament passed an amendment to the Act committing the UK to achieving net zero emissions by 2050. This means reducing emissions (also known as 'decarbonisation') substantially from current levels, with residual emissions the UK still emits in 2050 being equal to, or less than, what is removed from the atmosphere by either the natural environment or carbon capture technologies, such as tree planting or engineered removals.

**1.2** The government measures progress towards its UK decarbonisation targets with reference to the Greenhouse Gas Inventory. The Inventory is a national statistics dataset published annually by the Department for Business, Energy & Industrial Strategy (BEIS). It fulfils national and international reporting requirements, including measuring progress against the Climate Change Act targets, and it includes a breakdown of emissions from individual sectors such as buildings, transport and power. BEIS also projects annually the effect of government policies on reducing future greenhouse gas emissions. These give the government a clear annual view of where the UK stands on the path to net zero. The Inventory measures emissions released in the UK of the seven greenhouse gases addressed by the Kyoto Protocol: carbon dioxide; methane; nitrous oxide; hydrofluorocarbons; perfluorocarbons; sulphur hexafluoride and nitrogen trifluoride.



**1.3** Organisations are being encouraged by the UK government and international institutions to measure and report their emissions and to take action to decarbonise their activities. For reporting purposes, international standard setting bodies such as the Greenhouse Gas Protocol, drawn on by the UK government, divide emissions into three categories, known as ‘scopes’. These reflect how much control or influence an organisation has over them and ensure that two or more organisations do not account for emissions in the same scope:

- Scope 1 emissions are direct emissions released into the atmosphere from sources that are owned or controlled by an organisation. These include emissions from gas-fired heating systems, emissions from an organisation’s vehicle fleet and ‘fugitive emissions’, which are leaks of greenhouse gases, such as fluoride gases leaking from refrigeration or air-conditioning units.
- Scope 2 emissions are indirect emissions from the generation of purchased energy. The main scope 2 source for government organisations is emissions released to generate the electricity used, but it also includes purchased heat as is used in buildings connected to a local heat network.
- Scope 3 emissions are all other indirect emissions not covered in scope 2 that occur because of an organisation’s activities but from sources not owned or controlled by the organisation. These include ‘upstream’ emissions such as business travel undertaken by employees, and goods and services purchased from external suppliers. It also includes ‘downstream’ emissions such as emissions from investments and from the use of any goods the organisation might produce. Measuring scope 3 emissions poses a challenge because it requires organisations to collect a wide range of information, often held by other bodies, which means there may be difficulties with data accessibility and quality. It can also be an organisation’s largest source of emissions.

## **Public Sector Emissions**

**1.4** The public sector is an important component of the UK’s economy and hence a contributor to UK emissions. Expenditure on central government (central government departments and their partner organisations) and the wider public sector including local government, the NHS, the emergency services and academy schools, represented 39.5% of the UK Gross Domestic Product in 2018-19. Approximately a third of this expenditure was on procuring goods and services. The public sector employs 17.6% of the UK workforce.

**1.5** There is no single reliable measure of the complete span of emissions from the public sector. Estimates compiled by BEIS using the Greenhouse Gas Inventory suggest that direct emissions from public sector buildings account for around 2% of total UK emissions.<sup>5</sup> This measure is derived from estimates of the amounts of fuel burnt in public buildings – for example gas and oil. It does not include the public sector’s wider scope 1, 2 and 3 emissions – for example, emissions arising from owned vehicles or electricity consumed. In the Greenhouse Gas Inventory, emissions from these sectors are measured under relevant sectors – for example emissions from road construction are measured under the industrial processes sector. The Greenhouse Gas Inventory also provides data allocating emissions from the energy supply sector to the energy user. On this measure, public sector emissions from buildings account for 3% of total UK emissions. When a wider range of emissions is included, such as emissions from goods purchased from organisations in the UK and other countries, experimental statistics published by the Department for Environment, Food & Rural Affairs (Defra) suggest that central and local government emissions could account for 8.4% of UK emissions in 2018.<sup>6</sup>

**1.6** A frequent source of emissions from public bodies will arise from the need to maintain and operate a portfolio of offices and other buildings. However, many public bodies are also undertaking activities that may be unique to them and are also potentially large sources of emissions. National Highways, for example, manages England’s strategic road network (motorways and major trunk roads) and therefore emissions associated with road lighting, running a vehicle fleet and road construction result from its activities. The Ministry of Defence procures and operates advanced equipment, and owns or leases approximately 1% of the UK land mass. The Pension Protection Fund has a range of investments in companies and assets that themselves have an emissions impact.

5 Public sector buildings covered by this estimate are those used for: public administration, compulsory social security services, public defence services, education services, human health services, residential care services, social work services without accommodation.

6 Only emissions emitted within the UK’s borders count towards the UK’s net zero target.

## Strategies and ambitions

**1.7** The government has included the public sector in a series of broader strategies to decarbonise the UK economy:

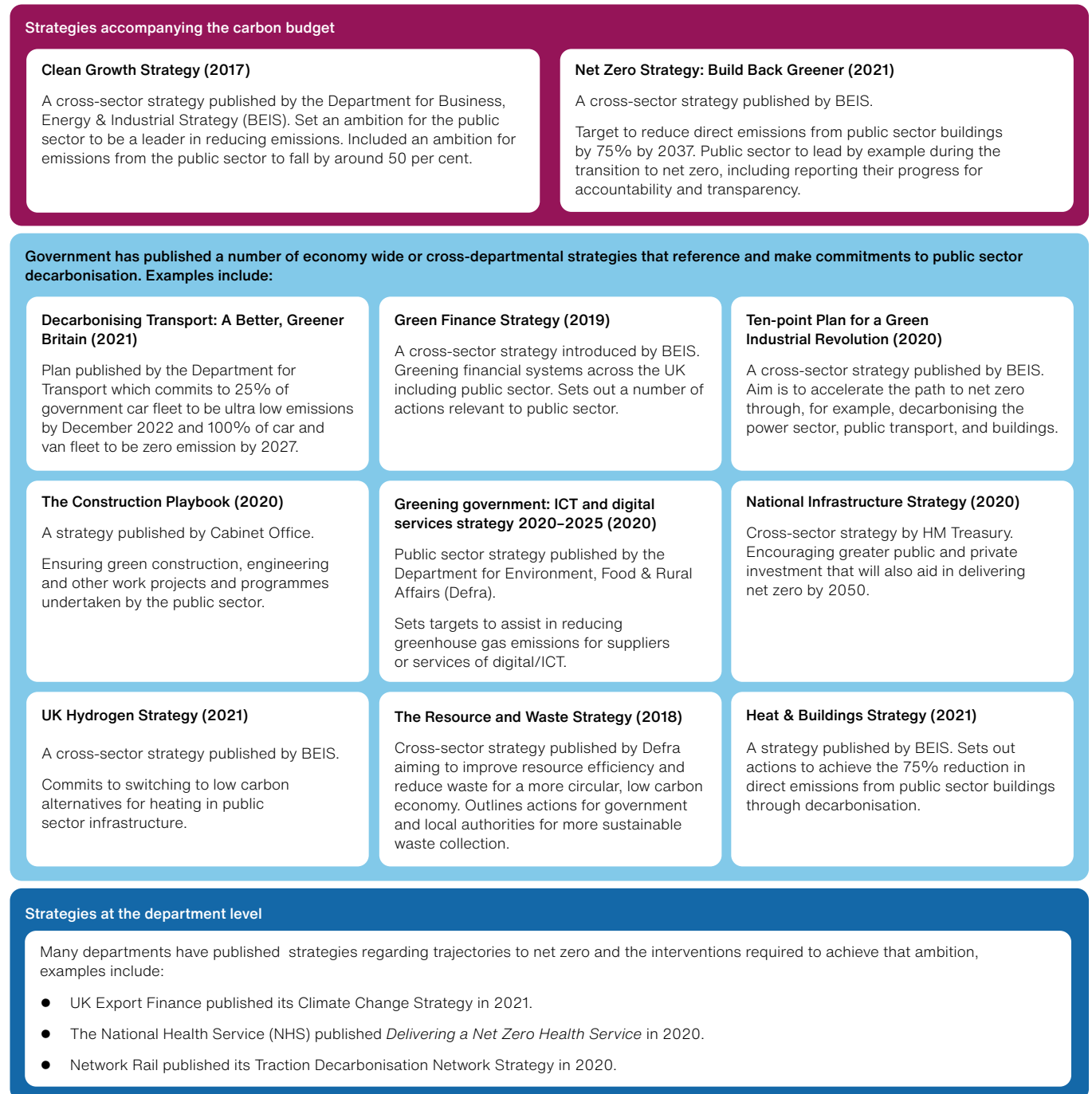
- It published its *Clean Growth Strategy* in 2017, setting out its plans to deliver its decarbonisation goals. It included ambitions for the public sector to be a leader in reducing emissions and that it has a key role in demonstrating best practice, promoting transparency over emissions reporting and catalysing markets. The strategy also included a commitment to “introduce a voluntary wider public sector and higher education sector target of 30% reduction in greenhouse gases by 2020-21, against a 2009-10 baseline”, with a more challenging, longer-term target to follow.
- In its 2021 *Net Zero Strategy*, the government restated its ambition that “the wider public sector will lead by example during the transition to net zero”. In terms of transparent reporting, the strategy notes that public sector organisations “should report their progress so they can be held accountable” and that the government will “legislate to enable us to require reporting of public sector emissions on a consistent and coherent basis if this is not done on a voluntary basis”.

**1.8** The government has also published more detailed plans that will have an impact on public sector decarbonisation (**Figure 1** overleaf). It published the *Heat and Buildings Strategy* in October 2021, which set out plans for decarbonising the UK’s buildings. It set an expectation that the public sector should reduce emissions from its heating systems over the next five years by: improving the insulation on its buildings; making buildings more energy efficient; switching to low-carbon heating sources when heating systems are due for replacement; and installing low-carbon heating in any new buildings to avoid the need for retrofitting.

**Figure 1**

Government strategies setting out commitments and targets related to public sector decarbonisation

The government has published numerous strategies that include commitments and targets relating to public sector decarbonisation



**Note**

1 This figure provides examples of government strategies that include commitments and targets related to public sector decarbonisation and is not a complete list.

Source: National Audit Office analysis of published government strategies

**1.9** Since 2010-11, the government has agreed targets with central government departments and their partner organisations to reduce their emissions as part of the Greening Government Commitments (GGCs). The GGCs are overseen by Defra and include a series of commitments to reduce government's impact on the environment – for example, by reducing waste and making more efficient use of water resources as well as reducing direct emissions. There have been three sets of commitments covering 2011–2015, 2016–2020 and the latest 2021–2025. The latest set, timed for delivery by the end of 2024-25 and measured against a 2017-18 baseline, includes:

- separate direct emissions reduction targets set for each departmental group, ranging from a 10% reduction to a 43% reduction in emissions;
- separate overall emissions reduction targets set for each departmental group, ranging from a 27% to a 69% reduction;<sup>7</sup>
- a target for all departmental groups to reduce emissions from domestic business flights by 30%; and
- a target for all departments to replace their entire vehicle fleets with zero-emission vehicles by 31 December 2027.

**1.10** As part of its *2021 Net Zero Strategy*, the government restated a commitment to halve direct emissions from public sector buildings by 2032 and set a new target to reduce them by a total of 75% by the end of 2037, both against a 2017 baseline. This target applies to central government and the wider public sector, including local government, the NHS, the emergency services and academy schools.

## Measuring and reporting carbon emissions

**1.11** The government has set an ambition for the UK to take the lead internationally in ensuring that private companies disclose and report how they have an impact on, and are themselves impacted by climate change. In November 2020, the Chancellor announced that the government intended to make the recommendations of the international Taskforce on Climate-related Financial Disclosures (TCFD) fully mandatory across the UK economy by 2025, with most of the mandatory requirements put in place by 2023. The TCFD, an industry-led group created in 2015, has developed recommendations for companies globally to disclose how they manage the financial risks and opportunities that climate change poses to their business.

<sup>7</sup> Overall emissions targets include all direct emissions, indirect emissions from the purchase of energy, and business travel emissions from transport not owned by the organisation. All other scope 3 emissions are not included.

**1.12** Since 2019, under requirements set by BEIS, large UK firms are already required to disclose their greenhouse gas emissions under scopes 1 and 2, with scope 3 highly recommended.<sup>8</sup> BEIS is considering whether to mandate scope 3 reporting for some companies in the future, either through the adoption of international standards or through other domestic legislation. Since 6 April 2022, over 1,300 of the largest UK-registered companies and financial institutions have been required to disclose climate-related financial information aligned with the TCFD recommendations, which require, for example, greater consideration given to scope 3 emissions.

**1.13** The public sector as a whole does not have mandatory reporting requirements for emissions. However, central government bodies must disclose some sources of emissions as part of their annual reporting in line with HM Treasury guidance.<sup>9</sup> Departments and their partner organisations are essentially required to report on their scopes 1 and 2 emissions plus emissions from business travel that fall under scope 3.

**1.14** International standards are evolving rapidly, and it is likely that the requirements set within the UK will change. At the 2021 United Nations Climate Change Conference (COP26), the International Financial Reporting Standards Foundation, which develops and publishes global accounting standards, announced the creation of a new standard-setting board – the International Sustainability Standards Board. This new board is expected to create a set of global standards for comparable reporting by companies on climate and other environmental, social and governance matters. It will build on the work of the TCFD and consolidate several existing reporting standards. The exposure draft issued by the board in March 2022 suggests mandating the disclosure of scopes 1, 2, and 3 in accordance with the Greenhouse Gas Protocol. The government has committed to creating a mechanism to adopt and endorse these international standards for use in the UK, subject to consultation.

<sup>8</sup> Requirements set by BEIS for private sector organisations are published in its 2018 Streamlined Energy and Carbon Reporting standards and apply to all quoted companies and large unquoted or limited liability partnerships complying with the Companies Act 2006. Bodies set up as companies that deliver public services, such as academy trusts, can be in scope.

<sup>9</sup> Requirements are set by HM Treasury in its annual Financial Reporting Manual and Sustainability Reporting guidance.

## Responsibilities and governance

**1.15** No single department holds overall responsibility for the framework for measuring and reporting public sector emissions. Several government departments play an important role:

- BEIS has overall responsibility in government for achieving net zero, including setting the strategy for decarbonising the public sector, and leads on the emission reduction aspects of the GGC framework including the process for setting emission reduction targets in the GGCs for central government.
- Defra has overall responsibility for the GGC framework, which sets out actions government departments and their partner organisations will take to reduce their impacts on the environment, including overall and departmental level emission reduction targets. It publishes reporting requirements under the GGCs to ensure that it receives consistent information from central government bodies for publication in the annual report on progress in meeting the GGC targets.
- HM Treasury has responsibility for setting annual reporting requirements in central government.<sup>10</sup> As part of this it publishes the Sustainability Reporting Guidance, setting out what information central government bodies that are within scope of the GGCs have to disclose in their annual reports and accounts.
- The Department for Transport (DfT) leads on negotiating transport and travel related targets within the GGCs.
- The Office for Government Property (OGP) leads the government property function, and provides policy and guidance on decarbonising the government estate.
- The Government Property Agency (GPA) owns, operates and monitors the central government general purpose estate. It publishes the Government Workplace Design Guide, which provides guidance to departments on how to decarbonise buildings and meet sustainability targets.

<sup>10</sup> HM Treasury only have the authority to set annual reporting requirements in central government. Other bodies set the equivalent reporting requirements for other areas of the public sector. Accounting officers at each reporting organisation have responsibility for complying with the relevant reporting requirements.

**1.16** Several government departments chair boards that cover issues related to public sector emissions and reporting:

- BEIS has established a Public Sector Decarbonisation Steering Board, attended by senior officials (deputy directors and below), which advises BEIS on the strategy for public sector decarbonisation. It is chaired by BEIS and attended by officials from nine key central government departments. The board has met twice since April 2021.
- Defra convenes a cross-government 25 Year Environment Plan Board to oversee, coordinate and drive forward action across government to implement the 25 Year Environment Plan and associated requirements set out in the Environment Act. This board was responsible for overseeing the development of GGC targets for the 2021–2025 framework.
- The OGP chairs a Property Sustainability Board, which meets every 6 to 8 weeks bringing together large landowning departments, the GPA and some public sector bodies such as the NHS. The OGP routinely reports its programme of work to the board, which also acts as a forum for bodies to share best practice and interpret wider developments for those in the property function.
- HM Treasury coordinates a Sustainability Sub-Committee of the Financial Reporting Advisory Board, which considers how annual reports and accounts across the different areas of the UK public sector can best reflect financial reporting matters concerning climate change, and provides advice and guidance on climate-related and sustainability reporting matters in the public sector. It was established in October 2021 and is attended by participants from a range of public sector bodies and institutions as well as auditors including those from devolved administrations.



## Scope of this report

**1.17** Measuring and reporting emissions is essential to helping the public sector to reduce its greenhouse gas emissions, but this is an area where measurement standards and reporting requirements will continue to develop. Public sector organisations need adequate data to understand the impact of their operations on greenhouse gas emissions; enable their management teams and boards to monitor progress in delivering reductions; and enable external scrutiny of performance by stakeholders, including Parliament. Many organisations are still learning how best to measure and report on their emissions. Our examination drew upon our accumulated experience of examining performance reporting and measurement regimes across government. This report examines the extent to which government measures and reports public sector emissions in England in line with its ambition for the public sector to be a leader in decarbonising its activities. It takes place at a time when international reporting practice is developing rapidly. In the following parts, we consider:

- Part Two – the completeness of current measurement and reporting requirements for public sector bodies and progress in improving the transparency of reporting across central government.
- Part Three – how government and public sector organisations are using emissions data to inform their future planning.

## Part Two

### Measuring and reporting public sector emissions

**2.1** This Part examines:

- the extent of progress in reducing public sector carbon emissions since 2009-10 under the Greening Government Commitments (GGCs);
- the completeness of current measurement and reporting requirements for public sector bodies; and
- compliance with the government's reporting requirements and the challenges faced by government bodies.

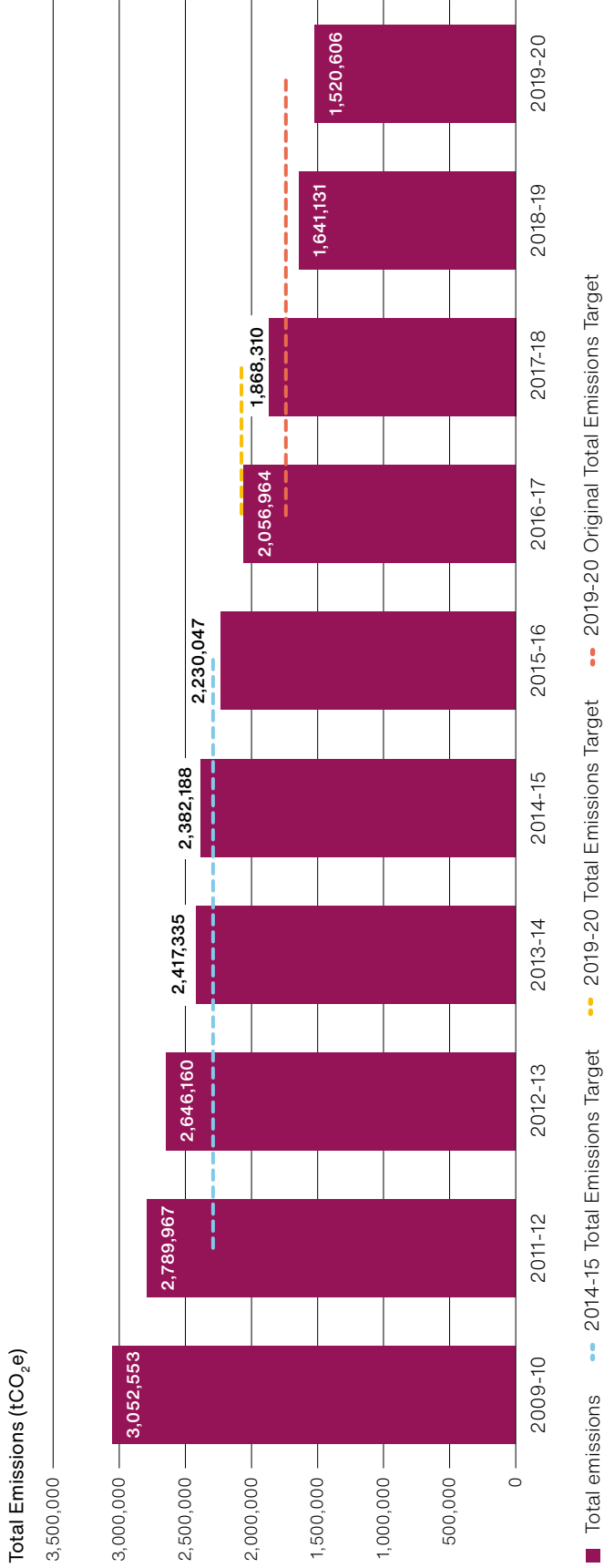
#### **Progress in reducing public sector emissions**

**2.2** The published data used to demonstrate progress in delivering the GGC targets is the only centrally collated data-set charting the performance of individual government organisations in reducing emissions. Since 2011-12, the data have allowed the performance of departments and their associated public bodies to be tracked in a broadly consistent way, allowing comparison between organisations and providing a picture of broad trends.

**2.3** The government's published data suggests that central government departments and their partner organisations (central government) have performed well against the emission reduction targets set out as part of the GGCs. The aggregate targets for 2019-20, which were revised in 2018 to make them more stretching, were met a year earlier than planned. By 2019-20, the government reported achieving in aggregate a 50% reduction in emissions from central government, exceeding its target to reduce emissions by a minimum of 43% from a 2009-10 baseline (**Figure 2**). The government attributed 31% of this reduction to improved management of the central government estate and the remaining 19% to the decarbonisation of the national grid. Over this same period direct emissions in the UK fell by 25%. We were able to reconcile the published GGCs to data submitted by departments, but we did not undertake a detailed audit of how individual departments compiled their data.

**Figure 2**  
Actual emissions compared to Greening Government Commitment (GGCs) targets between 2009-10 and 2019-20

Emissions from central government have reduced each year. Since 2016-17, reductions have exceeded the original target set for 2019-20



**Notes**

- 1 Total emissions as measured by the GGCs in the 2011-12 to 2014-15 period include carbon emissions from central government offices (direct emissions) and domestic business travel flights.
- 2 Total emissions as measured by the GGCs in the period 2016-17 to 2019-20 included all direct emissions, indirect emissions from the purchase of energy, and business travel emissions from transport not owned by the organisation. All other scope 3 emissions (all other indirect emissions produced from the organisation's activities) are not included in either of the GGCs, including emissions from waste or water usage.
- 3 The commitments apply to the office and non-office estate of central government departments and their Executive Agencies, Non-Ministerial Departments, and executive Non-Departmental Public Bodies, unless specifically exempted. Some organisations are exempt from the GGCs where they have been reviewed by the GGC Baseline Panel and were deemed to have met specific criteria defined by the Department for Environment, Food & Rural Affairs.
- 4 The target for the year 2010-11 was a one-off target to cut greenhouse gas emissions from central government office buildings by 10%. Due to the focus only on central government offices the data are not comparable to later GGCs which have the wider scope covering all buildings and a wider set of organisations as outlined in note 3.
- 5 All reductions were calculated using a 2009-10 baseline as published in the 2019-20 GGC annual report.
- 6 The 2014-15 target was set in 2011-12 and extended to cover the period up to 2015-16. The 2019-20 target was provisionally set in 2016-17, but then revised in 2018-19 to ensure a more ambitious target.
- 7 Emission totals for each year are as reported in the respective year's GGC annual report. For the 2009-10 emission total, there is not a respective GGC annual report and therefore the baseline is as reported in the 2019-20 annual report.

Source: National Audit Office analysis of the Department for Environment, Food & Rural Affairs' Greening Government Commitments Annual Reports from 2011-12 to 2019-20

**2.4** Defra has reported that most government departments and their partner organisations have met the individual GGC targets set for their departmental group (paragraph 1.9, **Figure 3** on pages 27 and 28). Eighteen of the 20 departmental groups that reported achieved their 2020 target, with 14 of these making reductions of 50% or more, compared with the baseline. Defra reported that the reductions achieved by some departmental groups in this period were attributable to site closures and on-going operational changes, such as consolidating IT and flexible working arrangements. The two departmental groups that did not achieve their targets (the Department for Digital, Culture, Media & Sport and Food Standards Agency) attributed this either to occupying buildings owned and operated by other government departments and therefore having limited ability to reduce emissions, or to an increase in the office space that they were occupying.

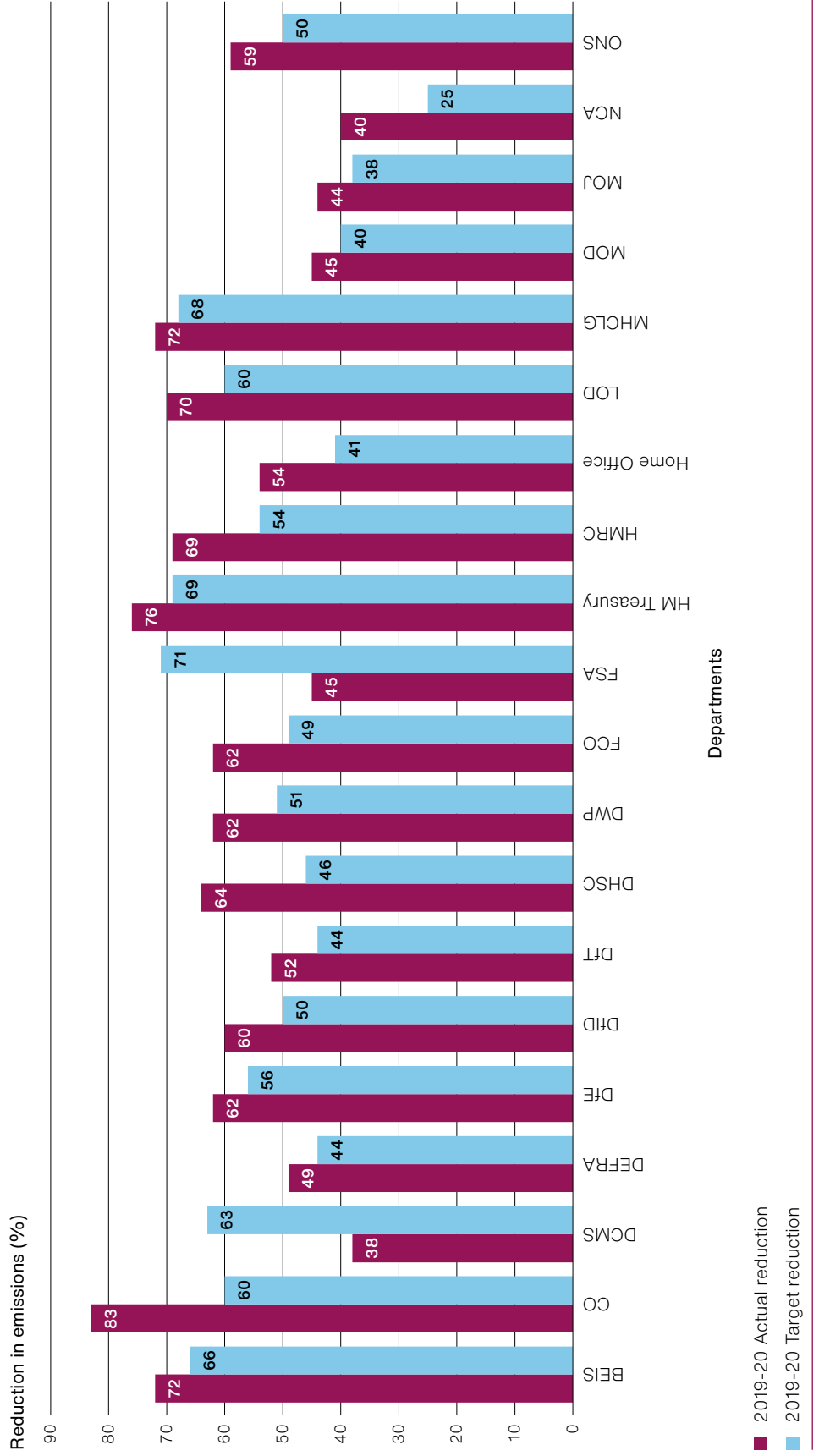
**2.5** The emissions recorded against the GGCs cover departments and larger partner organisations within the departmental groups. Emissions from the wider public sector – for example hospitals, schools and local authorities – are outside the scope of the GGCs and there is no equivalent process in place. The GGC targets have also excluded smaller entities within the departmental groups, although Defra has been tightening the exemption criteria to reduce the number of bodies eligible to be exempted. For instance, in the 2016–2020 GGCs, bodies could apply for an exemption if they occupied less than 1,000m<sup>2</sup> of office space or employed fewer than 250 people. The respective figures for 2021–2025 have been tightened to 500m<sup>2</sup> and 50 full-time equivalent staff.

**2.6** There are areas of central government that have not been granted exemptions by Defra and have not reported data for the GGCs. The latest GGC report shows Defra received no data for any of the partner organisations of the Department for Digital, Culture, Media & Sport and the Ministry of Housing, Communities & Local Government, although the parent departments reported their own core departmental figures.<sup>11</sup> We could find no evidence of Defra having granted exemptions to the partner organisations. Defra informed us that it is currently reviewing exemptions records to ensure that gaps in reporting coverage against the 2021–2025 targets are closed.

<sup>11</sup> The Ministry of Housing, Communities & Local Government is now called Department for Levelling Up, Housing & Communities.

**Figure 3** Percentage reduction in emissions by central government departmental groups against the Greening Government Commitment (GGCs) targets set for 2019-20

90% of departmental groups exceeded their individual emissions reduction targets set as part of the GGCs



■ 2019-20 Actual reduction  
 ■ 2019-20 Target reduction

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**Figure 3** *continued*

Percentage reduction in emissions by central government departmental groups against the GGC targets set for 2019-20

**Notes**

- 1 A central government departmental group is the parent department and the partner organisations in its group that are in scope of the GGCs. For example, the Department for Transport figure includes partner organisations such as National Highways (previously known as Highways England). This list includes non-ministerial departments that report separately against the GGCs, such as the Food Standards Agency and National Crime Agency.
- 2 Department for Business Energy & Industrial Strategy (BEIS), Cabinet Office (CO), Department for Digital, Culture, Media & Sport (DCMS), Department for Environment, Food & Rural Affairs (DEFRA), Department for Education (DfE), Department for International Development (DfID), Department for Transport (DfT), Department for Health & Social Care (DHSC), Department for Work & Pensions (DWP), Foreign & Commonwealth Office (FCO), Food Standards Agency (FSA), HM Treasury, HM Revenue & Customs (HMRC), Home Office, Law Officers' Department (LOD), Ministry of Housing Communities & Local Government (MHCLG), Ministry of Defence (MOD), Ministry of Justice (MOJ), National Crime Agency (NCA), Office for National Statistics (ONS).
- 3 MHCLG was the former name for the Department for Levelling up, Housing & Communities (DLUHC). FCO and DFID have merged and become one department called the Foreign, Commonwealth and Development Office (FCDO) since 2019-20.
- 4 Percentage reductions are calculated against a 2009-10 baseline.
- 5 The Department for International Trade emissions reduced by 10%, but the department did not have a GGC reduction target as the department was formed in 2016, after the 2016-2020 GGCs had been published.
- 6 We have excluded the Department for Exiting the European Union (DExEU), which existed from July 2016 to January 2020 from this analysis. DExEU only reported emissions from business travel for its GGC returns as its offices were hosted by other government departments, primarily Cabinet Office and MOD.
- 7 The target and reduction in emissions encompasses direct emissions from the estate, indirect emissions from the purchase of energy for the estate and indirect emissions from transport not owned by the organisations. It excludes other indirect emissions including emissions from waste or water usage.
- 8 The targets shown were updated in 2018 to be more stretching than targets originally set in 2016 as part of the 2016-2020 GGCs.

Source: National Audit Office analysis of Department for Environment, Food & Rural Affairs Greening Government Commitments Annual Report 2019-20

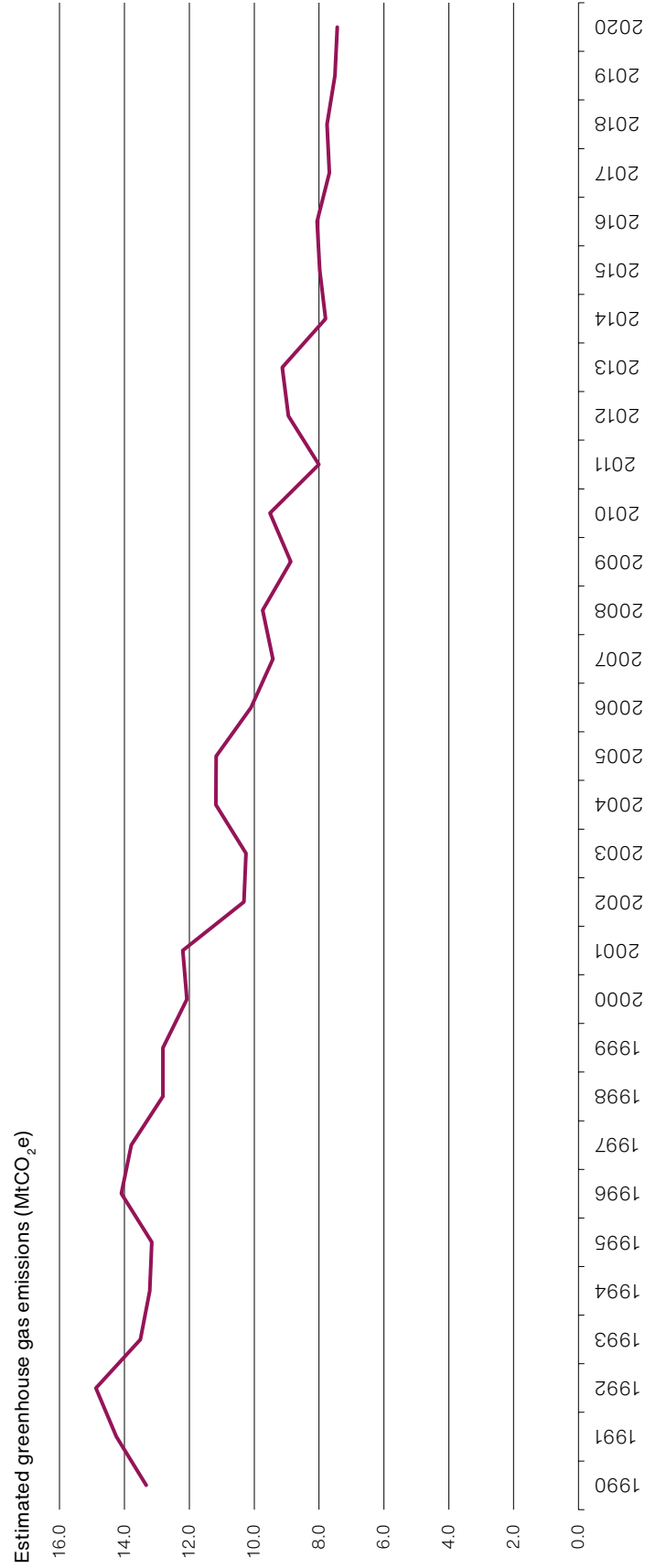
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**2.7** BEIS produces statistical estimates that seek to capture some elements of wider public sector emissions. These estimates point to marked reductions in emissions since 1990.

- In its 2021 *Net Zero Strategy*, BEIS reported that direct emissions from public sector buildings fell by around 40 per cent between 1990 and 2019 (see **Figure 4** overleaf).<sup>12</sup> This figure was compiled by estimating energy usage in public sector buildings as part of the Greenhouse Gas Inventory dataset (paragraph 1.2). The reduction was primarily due to a change in the fuel mix used for heating, with less use of coal and oil – which emit more carbon – and more use of natural gas. The estimate was not intended to include the public sector’s other scope 1, 2 and 3 emissions, which could be large.
- The Greenhouse Gas Inventory also provides data allocating emissions from the energy supply sector, such as electricity generation, to the energy user. On this measure, public sector emissions from buildings fell by 65% between 1990 and 2020, while UK emissions as a whole fell by 50% over the same period. This fall was largely driven by a fall in emissions from electricity generation due to a shift away from coal in power stations, resulting in a lower level of emission being reallocated to public sector buildings from the energy supply sector.
- Defra has published experimental statistics that attempt to estimate the emissions associated with the goods and services consumed in the UK wherever in the world the emissions arise. Based on these calculations, central government and local government total emissions (but excluding hospitals and schools) fell by 36% between 1990 and 2018 whereas UK emissions as a whole fell by 29% over the same period.

<sup>12</sup> This figure is an estimate so there is uncertainty in its calculation, in the 2021 publication of the Greenhouse Gas Inventory data the range of possible reductions is between 37% and 45% with 41% as the most likely number. In the 2022 publication of the Greenhouse Gas Inventory data, the fall in direct emissions from public sector buildings between 1990 and 2019 was revised to a most likely value of 44%.

**Figure 4**  
 Estimated reduction in emissions from public sector buildings between 1990 and 2020  
 The Department for Business, Energy & Industrial Strategy estimates that direct emissions from public sector buildings fell by 44.2% between 1990 and 2020



**Notes**

- 1 The emissions are estimations measured in million tonnes carbon dioxide equivalent (MtCO<sub>2</sub>e).
- 2 Estimates for public sector emissions are derived from fuel use in buildings from categories 84-88 of the Standard Industrial Classification (SIC) code system. The five categories are: Public Administration and Defence; Compulsory Social Security; Education; and Health and Social work. The SIC system is used to classify business establishments and other statistical units by the type of economic activity in which they are engaged.
- 3 In this context the public sector is taken to include central and local government, health, education, and emergency services.
- 4 The figure is based on the 2022 publication of the greenhouse gas inventory covering the years 1990-2020, which also revised the 2019 figure to show a greater fall in public sector emissions to a 44% fall between 1990 and 2019. The Net Zero Strategy used the greenhouse gas inventory published in 2021 covering the years 1990-2019 which at the time showed a 41% fall.

Source: National Audit Office analysis of Department for Business, Energy & Industrial Strategy's 2020 UK greenhouse gas emissions



## Completeness of public sector measurement and reporting

### Scope of reporting in annual reports and accounts

**2.8** The government has set statutory requirements for both central government and parts of the UK private sector to report on emissions within their annual report and accounts.

- BEIS is responsible for setting the statutory requirements for private sector organisations. New energy and carbon reporting requirements came into force on 1 April 2019. BEIS publish guidance on complying with requirements in the *Environmental Reporting Guidelines*.<sup>13</sup>
- HM Treasury is responsible for setting the statutory annual sustainability reporting requirements for central government departments that are published in its *Sustainability Reporting Guidance*. The guidance was first published in 2011-12 and is updated annually. Public bodies out of scope from reporting under the GGCs are also exempt from these statutory reporting requirements.

**2.9** We found the reporting requirements set for central government departments and their partner organisations to be broadly consistent with the requirements set for private sector organisations (**Figure 5** overleaf). Both central government departments and private sector organisations are required to report their scope 1 and scope 2 emissions and one of the 15 types of their scope 3 emissions (business travel) (**Figure 6** on page 33).<sup>14</sup> The government has announced its intention to require private sector organisations to publish plans for reaching net zero emissions by at least 2050 in line with the UK-wide target, but no equivalent expectations have been set for public sector organisations.

**2.10** BEIS is considering whether to mandate scope 3 reporting for some companies in the future, either through the adoption of international standards or through other domestic legislation, but there are no equivalent plans for the public sector. The government already requires companies bidding for government contracts over £5 million to report five of the 15 possible types of scope 3 emissions (Figure 6). Some private sector organisations are already undertaking voluntary reporting. According to BEIS, at least 1,087 UK businesses report as part of voluntary schemes encouraging organisations to report on their UK emissions including material scope 3 emissions.<sup>15</sup> BEIS expects that international standard-setting bodies, through the International Sustainability Disclosure Standards, will soon recommend disclosure of all material scope 3 emissions for the private sector (paragraph 1.13).

13 The new statutory energy and carbon reporting requirements for private sector organisations are outlined in the 2019 Streamlined Energy and Carbon Reporting (SECR) standards, which update chapter 2 of the 2013 Environment Reporting Guidelines. The requirements apply to all quoted companies and large unquoted companies or limited liability partnerships. Bodies set up as companies that deliver public services, such as academy trusts, can be in scope.

14 Mandatory reporting of emissions from business travel applies only to large unquoted companies and LLPs where they are responsible for purchasing the fuel.

15 These figures come from BEIS and we have not audited them.

**Figure 5**

## Summary comparison of statutory greenhouse gas emissions reporting requirements for the public and private sector

**The reporting requirements set for central government departments and their partner organisations (central government) are broadly consistent with the requirements set for private sector organisations**

	Mandated guidance for the private sector <sup>1</sup>	Mandated guidance for central government <sup>2</sup>
Scope 1	Yes <sup>3</sup>	Yes
Scope 2	Yes <sup>4</sup>	Yes
Scope 3	Official business travel only <sup>5</sup>	Official business travel only
Specified reporting metric	Yes – tCO <sub>2</sub> e and emissions intensity (emissions as a proportion of a key metric such as square meter of floor space)	Yes – tCO <sub>2</sub> e
Required to report measurement methodology	Yes	No
Specified methodology for determining organisational boundaries	Yes	Yes

**Notes**

- 1 The Environmental Reporting Guidance: Including Streamlined Energy and Carbon Reporting Guidance is published by the Department for Business, Energy & Industrial Strategy and provides statutory reporting guidance for all quoted companies, large unquoted companies, and large limited liability partnerships.
- 2 The Sustainability Reporting Guidance is published by HM Treasury and provides statutory reporting guidance for all government departments under the Greening Government Commitments. The commitments apply to the office and non-office estate of central government departments and their Executive Agencies, Non-Ministerial Departments and executive Non-Departmental Public Bodies, unless specifically exempted.
- 3 Reporting against global scope 1 emissions is mandatory for quoted companies. For unquoted companies and LLPs it is mandatory to report UK scope 1 emissions as they relate to their UK energy (as a minimum electricity, gas and transport fuels).
- 4 Reporting against global scope 2 emissions is mandatory for quoted companies. For unquoted companies and LLPs it is mandatory to report UK scope 2 emissions as far as they relate to their UK energy use (as a minimum grid-sourced electricity, gas and electricity consumption relating to transport).
- 5 Quoted companies are exempt from all scope 3 reporting requirements, yet it is strongly encouraged.
- 6 Scope 1 emissions are direct emissions released into the atmosphere from sources that are owned or controlled by an organisation. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all other indirect emissions not covered in scope 2 that occur because of an organisation's activities but from sources not owned or controlled by the organisation. These include 'upstream' emissions such as business travel undertaken by employees and emissions from an organisation's supply chain. It also includes 'downstream' emissions such as emissions from investments and from the use of any goods the organisation might produce.
- 7 Reporting of emissions is generally in tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e).
- 8 This table provides examples of the types of greenhouse gas emission reporting criteria for the private sector and central government, it is not intended as an exhaustive list of requirements either for the private sector or central government.

Source: National Audit Office analysis of the Environmental Reporting Guidance and the Sustainability Reporting Guidance

## Figure 6

### Scope 3 emissions categories

The Greenhouse Gas Protocol outlines 15 types of scope 3 emissions that must be reported separately

Scope 3 emission type	Description
1 Purchased goods and services	Extraction, production, and transportation of goods and services purchased or acquired not included in other categories.
2 Capital goods	Extraction, production, and transportation of capital goods purchased or acquired.
3 Fuel- and energy- related activities (not included in scope 1 or 2)	Extraction, production, and transportation of fuels and energy purchased or acquired not accounted for in other scopes e.g. gas extraction and piping.
4 Upstream transportation and distribution	Transportation and distribution of products purchased, and any transportation services paid for.
5 Waste generated in operations	Disposal and treatment of waste generated in facilities not owned by the organisation.
6 Business travel	Transportation of employees for business-related activities in vehicles not owned.
7 Employee commuting	Transportation of employees between their homes and their worksites in vehicles not owned.
8 Upstream leased assets	Operation of assets including buildings leased by the organisation.
9 Downstream transportation and distribution	Transportation and distribution of products sold in vehicles not owned.
10 Processing of sold products	Processing of sold products by buyer organisations.
11 Use of sold products	End use of goods and services.
12 End-of-life treatment of sold products	Waste disposal and treatment of products sold.
13 Downstream leased assets	Operation of assets owned and leased to other entities.
14 Franchises	Operation of franchises.
15 Investments	Operation of investments.

#### Notes

- 1 The Greenhouse Gas Protocol is a widely used way of measuring greenhouse gas emissions and was founded in 2001 by a partnership between the World Resources Institute and the World Business Council for Sustainable Development. It is an approach to greenhouse gas emissions measurement recommended by the UK government for the private sector.
- 2 The 15 types in this table are laid out in the Greenhouse Gas Protocol Corporate Value Chain (scope 3) Accounting and Reporting Standard published in 2011. It provides a methodology that can be used to account for and report scope 3 emissions from companies of all sectors, globally.
- 3 Scope 1 emissions are direct emissions released into the atmosphere from sources that are owned or controlled by an organisation. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all other indirect emissions not covered in scope 2 that occur because of an organisation's activities but from sources not owned or controlled by the organisation. These include 'upstream' emissions such as business travel undertaken by employees and emissions from an organisation's supply chain. It also includes 'downstream' emissions such as emissions from investments and from the use of any goods the organisation might produce.

Source: National Audit Office analysis of the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard

**2.11** The exclusion of most types of scope 3 emissions from the GGCs and HM Treasury's mandatory reporting requirements means that potentially large sources of emissions are not measured or reported by public sector organisations. Under the GGC targets, departments and their partner organisations are required to report against a specific list of common emission sources. They are not required to report on emission sources not on the GGC list (mainly those falling under scope 3 such as the purchase of goods and services) even if they are significant. The reduction targets set under the GGC framework will therefore not encompass the full range of an organisation's emissions. In Wales, the devolved government has estimated, for example, that procurement accounts for 60% of public sector emissions. The UK government has stated that scope 3 emissions can account for up to 80% of organisations' emissions, but it has not estimated what public sector scope 3 emissions are as a proportion of its total emissions. A more complete understanding of their emissions impact would allow public sector bodies to effectively prioritise action and investment to align with net zero, although it would need to balance what is ideal with what is possible, available and affordable. In some instances, public sector bodies already collect some of the required data – for example – central government departments covered by the GGCs already measure their water usage and waste generation and BEIS publishes guidance on how to calculate the associated emissions.

**2.12** The government has made efforts to align HM Treasury's Sustainability Reporting Guidance with the GGCs' reporting requirements. There are, however, inconsistencies between the data reported under the GGC framework and that required by HM Treasury for annual report purposes. HM Treasury's annual report requirements are intended to align with internationally recognised reporting standards – for example using the three categories of emissions (scopes 1, 2 and 3). The GGCs make no distinction between scopes, requiring bodies to measure and report against a specific list of common emission sources. Inconsistencies in coverage make it difficult to reconcile the two sets of reported data – for example the GGCs do not require the reporting of emissions from physical or chemical manufacturing and processing, which can cover some of the emissions released as a result of activities such as land management and agriculture, road building and waste treatment, and activities in health and defence laboratories. HM Treasury requirements do cover emissions from these sources under scope 1.

## Exemptions from reporting

**2.13** Some public sector organisations are not obliged to report in line with HM Treasury’s sustainability reporting requirements in their annual report and accounts. Some major areas of public sector activity are not within scope of the reporting requirements although individual organisations may choose to report their emissions voluntarily on an independent basis.

- HM Treasury’s annual report requirements only apply to central government organisations in scope of the GGCs, meaning that the same exemptions apply. When the GGCs were introduced, partner organisations could apply for an exemption if they were below a certain size or where there were no safe, technically feasible or environmentally friendly ways of meeting the commitments. For example, the Medical Research Council, Science and Technology Facilities Council, UK Atomic Energy Agency and Health and Safety Laboratory are all mentioned in Defra’s annual GGC report as exempt from targets because their laboratory work would be compromised by restrictions on their water and energy use. Defra grants full exemptions to the Civil Nuclear Police Authority on the grounds of national security. Emissions from military operations fall outside the scope of the GGCs but are reported in the Ministry of Defence Annual Report and Accounts. In 2021, Defra tightened some of the exemption criteria (see paragraph 2.5) to reduce the number of bodies eligible to be exempted.
- HM Treasury only has the remit to set statutory annual reporting requirements for central government and therefore the wider public sector is not required to report in line with its Sustainability Reporting Guidance. There are no equivalent mandatory emissions measuring and reporting guidelines for the public sector as a whole including schools and local authorities in England. We noted last year, in our report on local authorities and net zero, that there is little consistency in local government reporting of emissions, because there are no clear reporting standards.<sup>16</sup> Some authorities, however, have taken the initiative to promote carbon reporting within their sectors – for example, the NHS requires regional NHS bodies to report annually on their sustainability.

<sup>16</sup> Comptroller and Auditor General, *Local government and net zero in England*, Session 2021-22, HC 304, National Audit Office, July 2021.

## Implementing the measurement and reporting guidance

### Compliance with the Sustainability Reporting Guidance

**2.14** We examined the extent to which departments were complying with the reporting requirements set by HM Treasury. We analysed the annual report and accounts of the 21 ministerial and non-ministerial departments with an emission reduction target under the 2021–2025 Greening Government Commitments from 2018-19 to 2020-21, which included the last full financial year before the COVID-19 pandemic.<sup>17</sup> The assessment was complicated because departments were given the option by HM Treasury not to disclose sustainability information in their annual reports in 2019-20 and 2020-21 due to the COVID-19 pandemic. Three departments that had previously been reporting opted not to disclose in 2019-20 and 2020-21.<sup>18</sup> A number of organisations have at times produced sustainability reports separate from their annual report and accounts.

**2.15** Our analysis found that full compliance with HM Treasury’s reporting requirements was low. In 2018-19, the last full year of reporting requirements, only nine (43%) of the 21 departments with an emission reduction target under the 2021–2025 Greening Government Commitments fully met the emissions elements of HM Treasury’s mandatory sustainability reporting requirements. Eighteen (86%) of the 21 departments with an emission reduction target under the 2021–2025 Greening Government Commitments complied with at least one of the mandatory emissions reporting requirements and three (14%) did not fully meet any of the requirements. HM Treasury’s guidance also contains criteria for which reporting is voluntary and, while none of the departments had opted to follow all of them, all reported against at least one of these criteria. Our analysis echoed the findings of an internal check by HM Treasury in 2020 that looked at a sample of government departments and concluded that levels of compliance varied considerably between bodies.

**2.16** While the reporting guidelines require government bodies to disclose their emissions in the narrative section of their annual reports, they do not require bodies to seek external assurance of those disclosures. In the private sector, some organisations are seeking external assurance of their climate and greenhouse gas emissions disclosures.

<sup>17</sup> The GGCs contain 20 individual departmental emissions reduction targets including a joint target for HM Treasury and UK Export Finance. HM Treasury and UK Export Finance publish separate annual reports and accounts and we have included both in our analysis. Therefore, we analysed the annual report and accounts of 21 ministerial and non-ministerial departments to assess compliance.

<sup>18</sup> Cabinet Office, Department for Education, Department of Health & Social Care.

**2.17** International auditing standards do not require external auditors such as the National Audit Office to audit emissions disclosed in annual reports and accounts but only to check for potential inconsistencies with financial disclosures. This means that our statutory audit of financial accounts does not involve auditing emissions data reported by government bodies under the GGCs or HM Treasury's Sustainability Reporting Guidance. We recognise that some of the changes to carbon reporting practices in both the private and public sector may potentially have an impact on the work we perform as external auditors of central government. We stand ready to work with the government and Parliament on any changes to external assurance arrangements should they be requested.

### Understanding reporting requirements

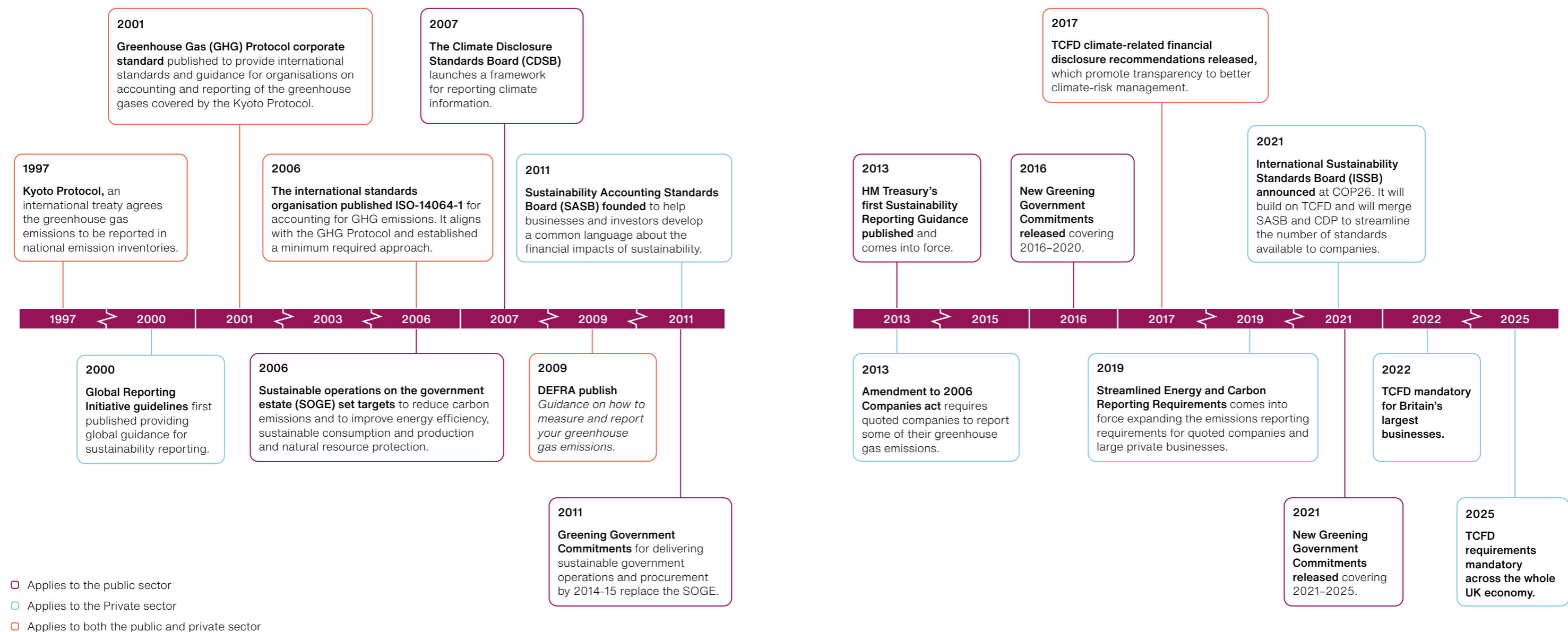
**2.18** The scale of the measurement and reporting task varies significantly depending on the size of the organisation and the nature of its activities. The organisations in central government that we examined as part of this study illustrated this variation. The larger organisations we examined, particularly the departments but also some of the partner organisations with more extensive or complex operations, told us they have dedicated sustainability teams charged with gathering data for the GGCs and developing strategies for reducing the organisation's environmental impact. Other organisations told us that emissions measurement and reporting sat within their estates teams, which have ready access to the utilities data needed to measure scope 1 and 2 emissions.

**2.19** Some of the central government bodies we examined reported difficulties understanding the full extent of the requirements they were expected to follow. Some organisations found it challenging to identify and understand the range of guidance published by central bodies advising on measuring and reporting emissions. This partly reflects the rapid evolution of reporting practice in both the public and private sectors, making it difficult for organisations to keep abreast of change and understand what they need to do (**Figure 7** on pages 38 and 39). These challenges may contribute to the patchy compliance with current reporting requirements covered in the section above (see paragraphs 2.14, 2.15).

**2.20** The support and guidance provided by the centre of government is fragmented and not easy to use. Several government departments publish guidance on measuring and reporting emissions for differing purposes, including HM Treasury, BEIS, Defra and the Cabinet Office, creating a complex landscape for public sector bodies to navigate. In terms of content, not all the guidance is consistent or easy to understand. For example, HM Treasury's guidance does not contain a checklist setting out the different mandatory and voluntary reporting elements, so organisations have to identify what they 'should' and 'must' report from the guidance. The complex array of guidance leaves public bodies having to cross-check multiple guidance documents to ensure that nothing is missed. There is no single source bringing this information together in one place.

**Figure 7**  
Timeline of emissions reporting standards, requirements and guidelines 1997 to 2025

Numerous standards, frameworks and guidelines have been published for both the private and public sectors. Best practice is evolving at pace with growing requirements for measurement and reporting



**Notes**

- 1 Some standards, requirements and guidance apply to parts but not the entirety of the sectors indicated in the key.
- 2 Some bodies may fall under both the private and public sector in relation to the frameworks, guidelines and requirements outlined in this timeline.
- 3 Many of these guidelines are voluntary and are not necessarily taken up by bodies in either the private or public sector.
- 4 It is the UK Government's intention to make TCFD mandatory across the whole economy by 2025.
- 5 This is not intended to be an exhaustive or complete timelines of guidance, frameworks and requirements related to emissions measurement and reporting since 1997. We have selected a number to provide examples and demonstrate the changing landscape.

Source: National Audit Office analysis of published government and international guidance and strategies relating to measuring and reporting greenhouse gas emissions



**2.21** Some public sector bodies comply with more than one set of emissions reporting requirements. For example, as part of our case study work on nine government organisations, we looked at the Pension Protection Fund (PPF). The PPF is a public corporation that compensates defined benefit pension scheme members when their employer becomes insolvent and the scheme cannot afford to pay its promised pensions. At 31 March 2021 it held net assets valued at over £38 billion. The PPF already complies with the Taskforce on Climate-related Financial Disclosures (TCFD) reporting guidance (see paragraph 1.11), which recommends that it calculates the carbon footprint of its equity and credit holdings (PPF's scope 3 emissions) due to their significance. The PPF will also now be reporting its own emissions under the GGCs, as data becomes available, owing to the updated eligibility criteria. This will require a different approach to emissions measurement because the PPF will have to calculate the carbon footprint of its business travel and office buildings. As TCFD and other sustainability reporting requirements are extended across the economy, a number of public sector bodies may be covered by several reporting regimes.

## Part Three

### Delivering progress against long-term goals

**3.1** This Part examines:

- whether organisations are using data to improve performance; and
- whether the departments at the centre of government are playing an effective role in improving the measurement, reporting and use of emissions data.

#### **Using data to manage carbon performance at organisation level**

**3.2** The government's overall commitment to meet net zero by 2050 applies to the UK economy as whole. The Department for Business, Energy & Industrial Strategy (BEIS) informed us that public bodies are expected to make progress in reducing their carbon emissions but that there is no explicit expectation that the individual organisations should set themselves a net zero target. Aside from the shorter-term Greening Government Commitments (GGCs), which normally set a target five years ahead, the primary targets for public sector decarbonisation are to achieve a 50% reduction in direct emissions by 2032 and a 75% reduction by 2037 compared with emissions in 2017.

**3.3** BEIS committed, in its Net Zero Strategy, that the updated GGC emissions reduction targets would be consistent with a trajectory to achieve net zero. More broadly, all public bodies are expected to set targets to reduce their emissions. BEIS told us there is no expectation that the individual organisations should set themselves a net zero target. The 2021–2025 GGC emissions targets are set by BEIS through negotiation with individual departments. BEIS informed us the starting point for the negotiations with each department was based on a simple linear trajectory to meet the 2032 direct emissions target, which equated to a 25% reduction by 2025. The final targets set for 2025 range by department from a 10% to a 43% reduction in direct emissions. The two highest emitting departments both have emissions reduction targets of less than 25%. BEIS is currently undertaking an exercise to establish what aggregate emissions reduction these targets will achieve. Until this work is complete, BEIS will not know whether its targets, at an aggregate level, are consistent with the 2032 target or a net zero trajectory.

**3.4** The nine organisations we examined as case studies were at different stages of measuring, reporting and using their emissions data. Those that had only recently come within the scope of the GGC reporting requirements were taking steps to capture better basic data on their direct emissions. Some organisations use the GGC targets to guide their ambitions for their decarbonisation work and as the main way to measure and report their performance. The GGC emissions targets focus on scope 1 and 2 emissions and therefore provide a useful framework for organisations whose main source of emissions is from their office estates. As an example, the Department for Work & Pensions (DWP) drew up its *Estates Carbon & Water Management Plan* in early 2021, setting out how it planned to meet its GGC emissions and water use targets for 2024-25. In addition to divesting itself of poor-quality buildings, DWP has been installing gas loggers at many of its offices to provide more timely and accurate data on its gas usage and, among other things, it is in the process of decarbonising the heating of its estate. For instance, it has made two successful applications to the Public Sector Decarbonisation Scheme, one to connect Quarry House in Leeds to a local heat network, and one to fund the replacement of a batch of gas boilers with heat pumps as they reach the end of their useful life.

**3.5** National Highways and Defence Equipment & Support (DE&S) , on their own volition, have gone further, taking steps to assess the adequacy of current progress against longer-term goals and using these assessments to frame their strategies and accelerate progress (**Figure 8** on page 44 and **Figure 9** on page 45). In both instances, the organisations are taking steps to understand their emissions in greater detail, including making early efforts to understand their scope 3 emissions. The work of both organisations is generating some important insights:

- DE&S has set itself a target of achieving net zero by 2040 and being carbon negative (i.e. its activities have the net effect of removing greenhouse gases from the atmosphere) by 2050 (Figure 8). In doing so, it has sought to establish a more robust estimate for its emissions, discovering that these were higher than previously thought. This illustrates the value of organisations with large operations making a bottom-up assessment of their emissions. DE&S found that reductions agreed through the GGCs were not consistent with the trajectory required for it to achieve net zero by 2040 and, as a result, it is considering a more ambitious trajectory.

- National Highways has identified itself as one of the UK's largest buyers of construction materials. The carbon footprint of these materials is much larger than the emissions that National Highways generates through its daily operations but, because they are classed as scope 3 emissions, it is not required to measure or report them. To allow it to minimise its environmental impact in an informed and effective way, it conducted an analysis of its use and the impact on emissions. It estimated that its construction work and materials generated 734,000 tonnes of carbon dioxide equivalent in 2020, the largest sources being cement and concrete, transporting building materials, and the use of on-site plant and machinery. When compared with 82,000 tonnes of carbon dioxide equivalent generated by its estate, vehicle fleet and use of electricity, this illustrates the importance of scope 3 emissions to the operations. National Highways has set itself the target to achieve net zero emissions in its maintenance and construction work by 2040.

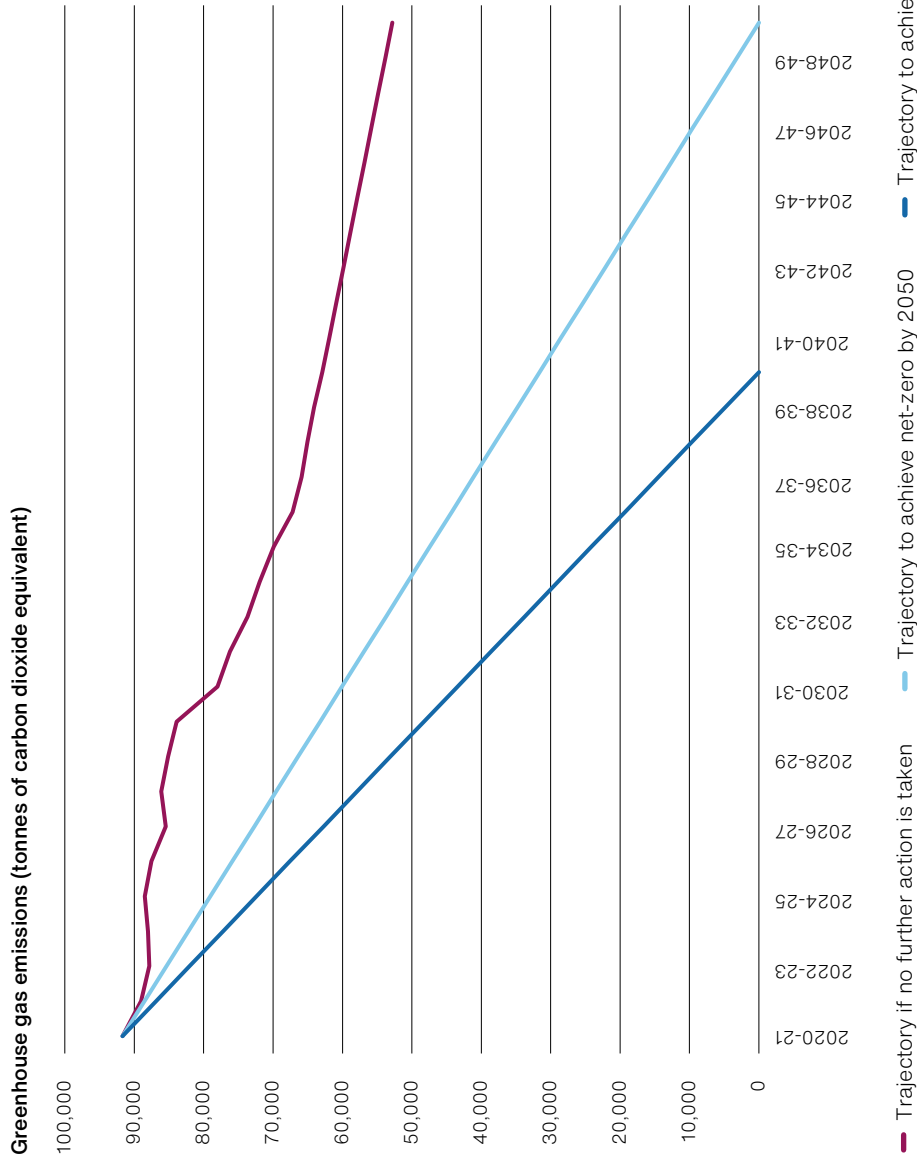
**3.6** Emissions data can help organisations to estimate the potential cost implications of fully decarbonising their operations. Organisations can reduce the financial cost of decarbonisation by replacing assets with alternative solutions that have lower associated emissions as part of their routine asset renewal cycle. For example, DWP plans to avoid like-for-like gas or oil-fired boiler replacements when its boilers reach the end of their useful lives, instead choosing low or zero carbon alternatives wherever possible. DWP had also used a range of tools, including the Office for Government Property's Net Zero Trajectory Tool, to estimate the cost of decarbonising its estate as £320 million by 2050, although this would be offset by £111 million of savings from lower energy consumption. Of the other organisations we examined, DE&S had also begun to estimate the total funding and cost implications of meeting longer-term net zero aims (Figure 8).

### **The role played by the centre of government in improving the measurement, reporting and use of emissions data**

**3.7** We examined the extent to which the teams working at the centre of government were:

- working together effectively to provide coherent leadership to the public sector on reporting and measurement; and
- using the data reported by public bodies to identify decarbonisation priorities and target investment.

**Figure 8**  
 Defence Equipment & Support plans to be carbon negative by 2050  
 Defence Equipment & Support has set out plans to be net zero by 2040 and carbon negative by 2050



Although not mandated by government, Defence Equipment & Support (DE&S) has set itself a target of achieving net zero by 2040 and being carbon negative (ie, its activities have the net effect of removing greenhouse gases from the atmosphere) by 2050. To inform its plans, DE&S reassessed its current scope 1 and 2 emissions.

**DE&S's emissions reduction trajectories**

The DE&S 2025 strategy has two core components. Its first priority is to minimise its emissions. DE&S also plans to simultaneously use its estate to sequester large amounts of carbon by 2050 and become carbon negative. It plans to restore peatlands and coastal ecosystems, preserve and extend wetlands, and plant trees on its estate. DE&S intends complete restoration work on these habitats by 2030 to maximise its carbon impact by 2050. It estimates that achieving these goals will cost £860 million over 20 years.

**Notes**

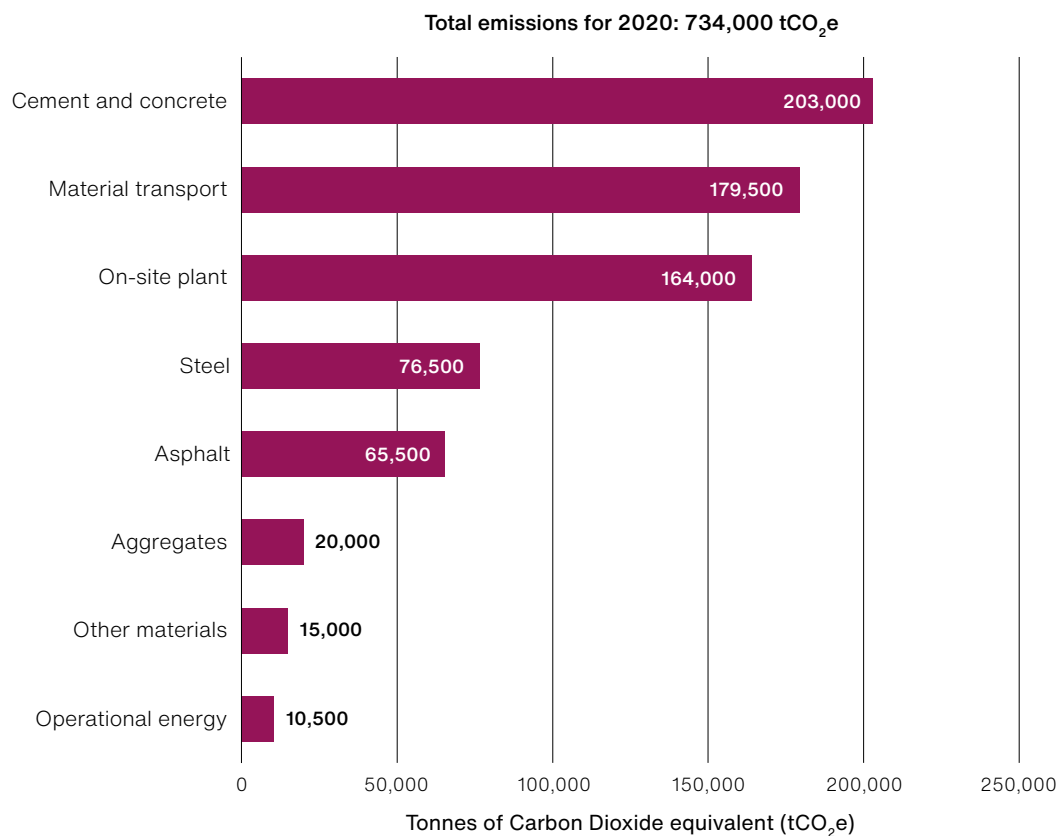
- 1 This information is provided to illustrate the sort of additional work that public sector bodies are undertaking to understand and address their emissions. We have not reviewed the methodology underlying DE&S's analysis, the quality of the data it used, nor the feasibility of its plans.
- 2 Scope 1 emissions are direct emissions released into the atmosphere from sources that are owned or controlled by an organisation. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all other indirect emissions not covered in scope 2 that occur because of an organisation's activities but from sources not owned or controlled by the organisation. These include 'upstream' emissions such as business travel undertaken by employees and emissions from an organisation's supply chain. It also includes 'downstream' emissions such as emissions from investments and from the use of any goods the organisation might produce.

Source: National Audit Office analysis of Defence Equipment & Support data

**Figure 9**  
National Highways' strategy for achieving net zero

**National Highways has assessed its main emissions so that it can plan how to reach net zero including its scope 3 emissions**

**Measuring and addressing emissions from construction and maintenance work**  
National Highways is one of the UK's largest buyers of construction material. Emissions including scope 3 emissions embedded in the construction materials that an organisation uses and from plant and machinery used by contractors fall under scope 3. Although it is not required to measure these emissions, National Highways completed the following analysis:



National Highways has set itself the target to achieve net zero emissions in its maintenance and construction work by 2040. To do this, National Highways plans to switch to zero emissions construction plant by 2030 and is investigating materials with a lower carbon footprint than those currently used.

**Notes**

- 1 This information is provided to illustrate the sort of additional work that public sector bodies are undertaking to understand and address their emissions. We have not reviewed the methodology underlying National Highways' analysis nor the quality of the data it used.
- 2 Scope 1 emissions are direct emissions released into the atmosphere from sources that are owned or controlled by an organisation. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all other indirect emissions not covered in scope 2 that occur because of an organisation's activities but from sources not owned or controlled by the organisation. These include 'upstream' emissions such as business travel undertaken by employees and emissions from an organisation's supply chain. It also includes 'downstream' emissions such as emissions from investments and from the use of any goods the organisation might produce.

## Leadership

**3.8** BEIS has overall responsibility for leading the decarbonisation of the public sector and needs to work closely with teams in HM Treasury and Defra. As discussed in paragraph 2.8, for example, HM Treasury takes the lead on issuing guidance to bodies within the scope of the GGCs on how they should report on their emissions performance in their annual reports while Defra is responsible for managing the GGC reporting and target-setting framework. A wide range of other public bodies, and other entities working under contract to government, have roles providing guidance and advice to certain parts of the public sector:

- The Office for Government Property facilitates a forum for departments to discuss issues relating to decarbonisation of public buildings and to share good practice. It also produces a Net Zero Trajectory Tool that provides central government bodies with cost estimates for decarbonising their estates to assist with their long-term planning, and the Net Zero Playbook that brings together decarbonisation guidance for estates teams.
- An external contractor to BEIS provides central government organisations with support and guidance on data collection, estimating missing data and understanding the GGC's requirements.
- The Government Property Agency produces the Government Workplace Design Guide, which includes guidance on setting emissions targets for buildings, and tracking and modelling energy consumption. It also convenes meetings with industry and academic experts to share best practice.
- Several departments contribute supplementary guidance to HM Treasury's Green Book, which sets out how public bodies should appraise policies, programmes and projects. BEIS provides guidance on the valuing of energy usage and greenhouse gas emissions, and Defra provides guidance on the valuing of natural capital and environmental impacts.

**3.9** Responsibilities for measuring and reporting emissions are distributed in small teams across departments, thereby creating a risk of inconsistencies and duplication of effort. Several of these central teams also told us that resource constraints limited the work they were able to do. As illustrated in paragraph 2.12 we found some inconsistencies in what organisations were being asked to do because of different requirements being issued at different times by different central teams. As the reporting requirements develop and gain in importance, there is a risk that no single team will have the resources to take an effective lead on measurement and reporting issues, and that some effort will be duplicated.

Using emissions data to guide the development of strategy and target investment

### **Measuring progress against the 2032 and 2037 targets**

**3.10** BEIS is using models to assess whether its high level 2032 and 2037 targets are likely to be met. By factoring in the roll-out rate of measures to reduce energy demand and to decarbonise heating through the Public Sector Decarbonisation Scheme – for example, the installation of heat pumps and thermal energy efficiency measures– the models can assess the likely impact on public sector emissions over time.

**3.11** BEIS plans to use data on direct emissions from public sector buildings from the Greenhouse Gas Inventory to track progress towards the targets. The chosen measure employs a broad definition for the public sector including, for example, health and education services, and is much broader than the organisations currently included under the GGCs. In terms of emissions, the measure covers emissions released on site from public sector buildings such as from gas and oil heating. The chosen measure does not allow for performance to be attributed to organisations or major public sector activities. BEIS does not draw on or use other performance indicators that would enable it to track progress on a more frequent or granular basis to identify which parts of the public sector are making slower progress, including other Greenhouse Gas Inventory data-sets and data collected through the GGCs.

### **Using the emissions data reported by public bodies to account for performance and target investment**

**3.12** To date, BEIS has made little use of the data reported by public bodies, whether from the GGC returns from departments or data reported in annual reports. We found, for example, no evidence that the emissions data produced by departments and their partner organisations, including the GGC data, were being considered formally by any of the Whitehall committees responsible for overseeing delivery of net zero. As a result, we could find no evidence of an internal mechanism for holding departments to account for their performance against emission targets. The GGC data are, however, published annually and therefore departmental performance is open to public and parliamentary scrutiny.



**3.13** Adequate data and performance metrics will be crucial for the government to effectively target investment for public sector decarbonisation. It has made funding available through the introduction of several grant schemes for which public bodies can submit bids for funding with the aim of reducing emissions. This includes £1.425 billion of funding through phase 3 of the Public Sector Decarbonisation Scheme and £4 billion of lending available to local authorities through the UK Infrastructure Bank to support net zero and economic growth. We have not audited these funding schemes, but adequate data and performance metrics will be crucial to help the government target investment and begin to understand the impact on budgets across sectors, as highlighted in our previous report, *Achieving net zero*.<sup>19</sup>

### **Future strategy**

**3.14** BEIS has set out in its 2021 Net Zero Strategy its ambitions and intentions in relation to decarbonising the public sector (paragraph 1.6). It set out three areas where it intends to act to ensure that the public sector is on track to achieve net zero:

- Investment – Phase 3 of the Public Sector Decarbonisation Scheme aims to reduce direct emissions from public sector buildings, with a particular focus on heating. It will allocate £1.425 billion of funding over a three-year period, from 2022-23 to 2024-25. At present the funding is allocated on a first-come-first-served basis, provided that applicants can meet the requirements of the scheme.
- Transparency – The government has committed to issuing guidance for the wider public sector to support the accurate and consistent measurement and reporting of emissions. BEIS has not yet set a timetable for when it intends to develop and publish this guidance.
- Capacity and capability – The government has initiated the Public Sector Low Carbon Skills Fund which provides complementary funding alongside the Public Sector Decarbonisation Scheme to enable public sector organisations to acquire expert skills in order to enable decarbonisation projects.

Defra is currently updating its GGC reporting guidance to support the new set of commitments that run until 2024–25. It has not yet set a publication date but has released the document to government departments to gather feedback and to support this year’s GGC reporting. It is likely to publish in summer 2022.

<sup>19</sup> Comptroller and Auditor General, *Achieving net zero*, Session 2019–2021, HC 1035, National Audit Office, December 2020.

# Appendix One

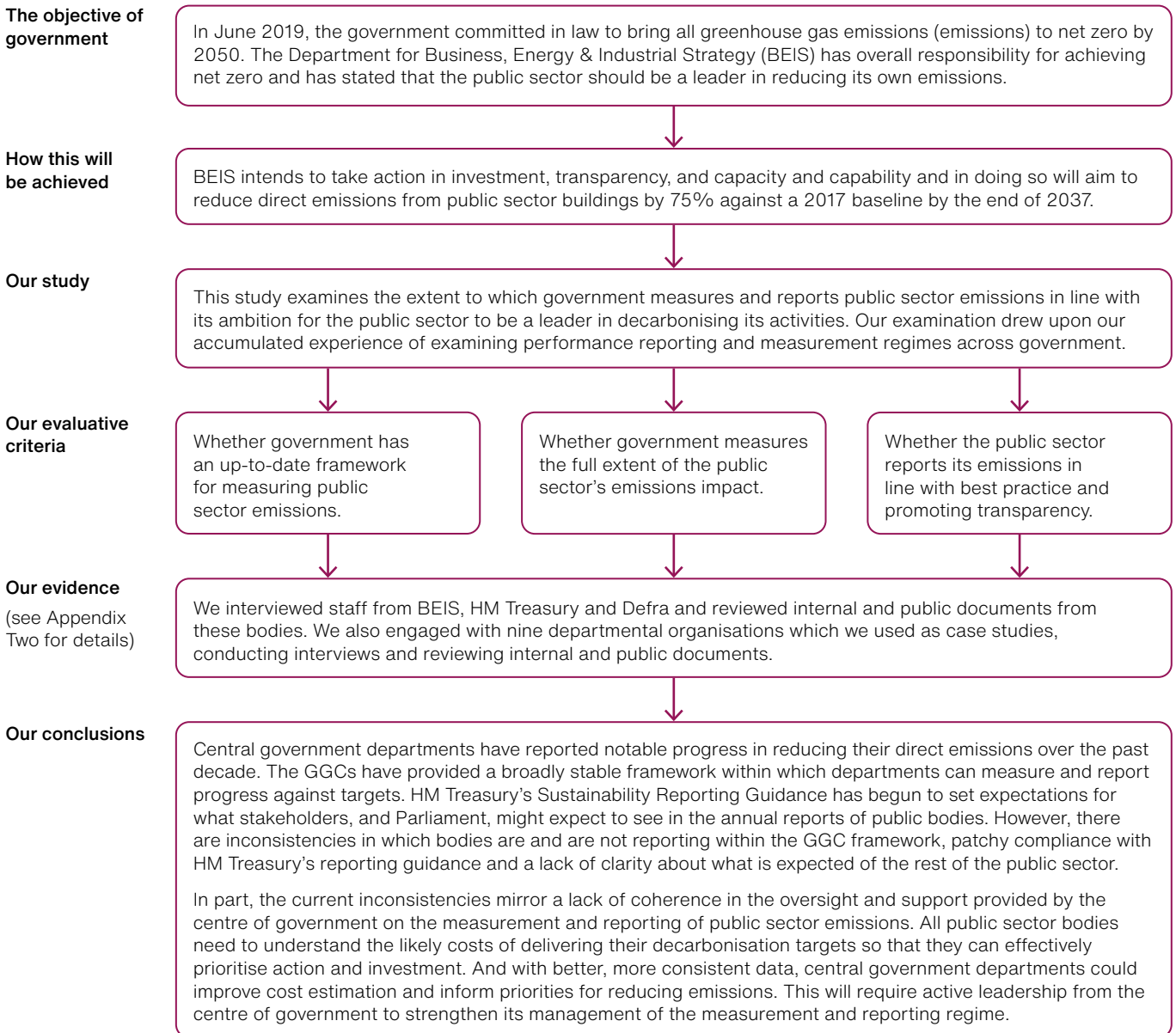
## Our audit approach

**1** This report examines the extent to which the public sector measures and reports its carbon emissions in line with the government’s ambition to be a leader in carbon reduction. Our report reviewed:

- the background of the study, including the wider net zero context, current public sector emissions, strategies and ambitions of government, and responsibilities of government in relation to measurement and reporting of emissions (Part One);
- the progress of central government in reducing their own emissions, the completeness of measurement and reporting of emissions in the public sector, and any implementation challenges (Part Two); and
- the progress at organisational level (using case studies to inform this), roles and responsibilities at the centre, including support offered to organisations and data collected, and future changes to the measurement and reporting landscape (Part Three).

**2** Our audit approach is summarised in **Figure 10** overleaf (Our Audit Approach) and our evidence base is described in Appendix Two.

**Figure 10**  
Our audit approach



## Appendix Two

### Our evidence base

- 1** Our independent conclusions on the measurement and reporting of public sector greenhouse gas emissions (emissions) were reached following an analysis of evidence collected between November 2021 and March 2022. Our audit approach is outlined in Appendix One. Our main methods are outlined below.
- 2** We used a range of study methods to reach our conclusion, described below.

#### **Interviews**

- 3** We conducted over 15 semi-structured interviews with officials at the Department for Business, Energy, & Industrial Strategy (BEIS), Department for Environment, Food & Rural Affairs (Defra) and HM Treasury. The interviewees covered a range of job grades and areas of responsibility, from the director of the Net Zero Strategy and the deputy director of Local Net Zero to project leads responsible for specific work areas.
- 4** We used the interviews to understand the centre's role in measuring and reporting public sector emissions, including the frameworks and support they provide to the public sector, the requirements and expectations of public sector bodies and oversight of progress against targets.
- 5** We conducted interviews with Audit Scotland and Audit Wales and officials in the Welsh Government. We used these interviews to understand approaches and challenges to measuring and reporting emissions in other public sector jurisdictions.

## **Analysis**

- 6** We completed a range of analysis to assess how far the main pieces of government emissions reporting guidance aligned with one another and with best practice drawn on by the government, and the extent to which government bodies complied with them. We:
- a** compared HM Treasury's Sustainability Reporting Guidance with Defra's Greening Government Commitments guidance to identify any inconsistencies;
  - b** compared both sets of guidance to the best practice criteria set out in the international Greenhouse Gas Protocol drawn on by government;
  - c** reviewed the Sustainability Reporting Guidance to identify which elements of reporting were mandatory and which were recommended or voluntary; with the agreement of HM Treasury, we identified 17 mandatory criteria and 19 voluntary criteria;
  - d** assessed the 2018-19 sustainability disclosures in the annual reports and accounts of the 21 ministerial and non-ministerial departments with an emission reduction target under the 2021 to 2025 Greening Government Commitments for compliance with HM Treasury's Sustainability Reporting Guidance. We assessed reporting against six of the mandatory criteria identified. To ensure fairness and comparability, we excluded criteria that were ambiguous or where it was not possible to identify whether the criteria were applicable to all departments. We also reviewed whether departments were reporting against at least one of the 19 voluntary reporting criteria; and
  - e** reviewed the 2019-20 and 2020-21 annual reports and accounts of departments to assess whether they had claimed the COVID-19 exemptions from HM Treasury's Sustainability Reporting Guidance.
- 7** We analysed a range of published data from the Greening Government Commitments (GGCs), including annual reports and guidance, to identify the major areas of government greenhouse gas emissions that were exempt, or were otherwise missing, from the GGC figures on greenhouse gas emissions. We also reconciled the published GGCs back to data submitted by departments although it was not in the scope of this review to undertake a detailed audit of how individual departments compiled their data.
- 8** We interviewed the contractor who collates the GGC data on behalf of government to understand what quality assurance checks the data were subject to.

## Case Studies

**9** We undertook case studies on nine central government organisations to understand how central guidance on measuring and reporting emissions was used in practice. We selected case studies on the basis of the following criteria: type of organisation (government departments and arm's-length bodies); size (small, medium and large); and nature of operations (policy or operational). The bodies we selected were:

- Department for Transport
- British Transport Police
- National Highways
- Department for Work & Pensions
- Pension Protection Fund
- Office for Nuclear Regulation
- Ministry of Defence
- Defence Equipment & Support
- Defence Infrastructure Organisation

**10** We conducted semi-structured interviews with the teams and officials at each organisation who played a role in emissions measurement and reporting. We used these interviews to understand the scope and granularity of emissions being measured and reported, the challenges that the organisations faced in accurately measuring their emissions, or any new or innovative approaches to measurement and reporting. We also discussed how the data was subsequently used to inform decision-making at each organisation. We also gathered and reviewed documents that set out any strategies they had in place to reduce their emissions, assess their current carbon footprints or specific grants they had applied for to implement emissions reduction measures.

## Document review

- To inform our review of emissions reporting in the public sector, we reviewed recent National Audit Office reports addressing the government's decarbonisation efforts, particularly *Achieving net zero* and *Local government and net zero in England*. We also reviewed a range of documents, both published and unpublished: the top-level government strategies for achieving net zero by 2050, particularly the sections focused on the public sector. This included *Net Zero Strategy: Build Back Greener* (October 2021), *The Ten Point Plan for a Green Industrial Revolution* (November 2020) and *Clean Growth Strategy* (October 2017).
- We also reviewed the most recent government strategies covering specific aspects of public sector decarbonisation, including *Heat and Building Strategy* (October 2021); *Delivering a 'Net Zero' National Health Service* (October 2020).
- Sustainability and Greenhouse Gas Emissions reporting guidance across the public and private sector, both in the UK and internationally.
- The governance structures across BEIS, Defra, and HM Treasury for reducing public sector emissions.
- Meeting minutes, papers and terms of reference from the Public Sector Decarbonisation Steering board, and Financial Reporting Advisory Board's Sustainability Working Group Board.
- Key business case submissions and supporting annexes concerning public sector decarbonisation.
- Reviewed public sector emissions reporting guidance for other jurisdictions such as Wales, Scotland and New Zealand.







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