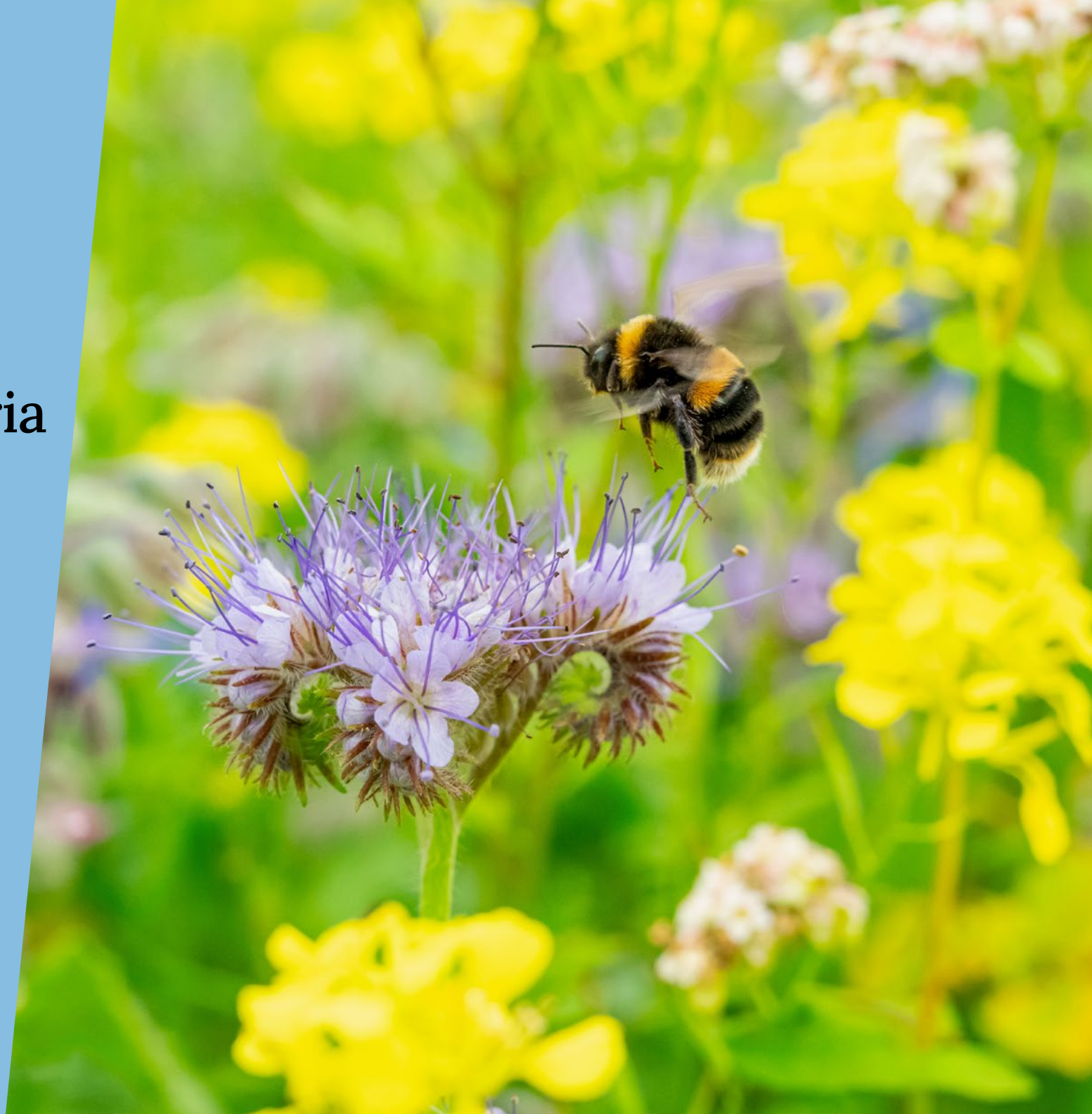
THE CROWN ESTATE

Environmental Reporting Criteria

to the Integrated Annual Report
and Accounts 2024/25



Contents

Introduction

This Environmental Reporting Criteria outlines the data collection approach and methodology for environmental data reported in The Crown Estate's Annual Report and Accounts 2024/25 and Sustainability Data Supplement 2024/25. It covers key environmental metrics, including:

- Energy consumption and efficiency (including renewable energy)
- Greenhouse gas emissions (Scope 1, 2 and 3)
- Water and waste management

The document applies to the reporting period from 1 April 2024 to 31 March 2025 and is updated annually to reflect improvements in data quality and methodology. Refer to the 2024/25 Annual Report and the 2024/25 Sustainability Data Supplement for 2024/25 data at thecrownestate.co.uk/annual-report.

In preparing this Criteria, we have followed the Greenhouse Gas (GHG) Protocol and the UK Government's Streamlined Energy and Carbon Reporting (SECR) requirements. We apply the following reporting principles in accordance with guidance from the GHG Protocol (ghgprotocol.org):

- Relevance: Reporting data on environmental and social issues that are material to our operations and commitments
- Transparency: Ensuring completeness in our reporting and outlining any assumptions used across all datasets
- Accuracy: Striving to report accurate data and highlighting areas with ongoing data quality improvement programs
- Consistency: Applying consistent boundaries where appropriate to ensure aligned reporting scope across all categories and assets

Where data is excluded, we provide rationale in the methodology tables for energy and emissions disclosures. As the UK sustainability reporting landscape evolves, we will continue to refine our approach in line with updated standards and frameworks.

Limited assurance Ⓐ

KPMG LLP has provided independent limited assurance over selected non-financial data, marked with Ⓐ in the Integrated Annual Report and Accounts 2024/25. The assurance engagement was planned and performed in accordance with the International Standard on Assurance Engagements (UK) 3000 Assurance Engagements Other Than Audits or Reviews of Historical Financial Information (ISAE (UK) 3000) and the International Standard on Assurance Engagements 3410 Assurance of Greenhouse Gas Statements (ISAE 3410). KPMG has issued an unqualified opinion over the selected data.

The list of data points subject to independent limited assurance can be found in the Assurance Report at thecrownestate.co.uk/assurance.

Overview

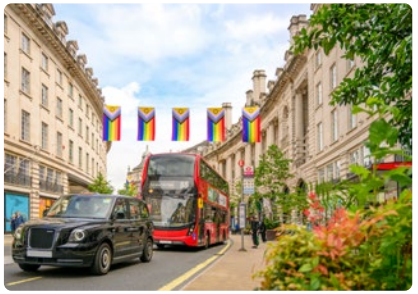
The Crown Estate operates in the long-term national interest, driven by the purpose of creating lasting and shared prosperity for the nation. We manage a diverse £13 billion investment portfolio of land, property and the seabed across England, Wales and Northern Ireland. Over the past decade, our profits, totalling more than £5 billion, have been returned to the Treasury for public spending.

Established by the Crown Estate Act 1961, as amended by the Crown Estate Act 2025[1], we function as an independent and commercial entity, positioned between the public and private sectors. Our activities and investments aim to grow the portfolio's value while positively impacting climate, nature and communities for current and future generations.

Guided by our purpose, our strategy addresses key national challenges where we can make a meaningful impact. We invest significantly in net zero and energy security, nature recovery and biodiversity, inclusive communities and economic growth, all the while generating financial returns for the UK.

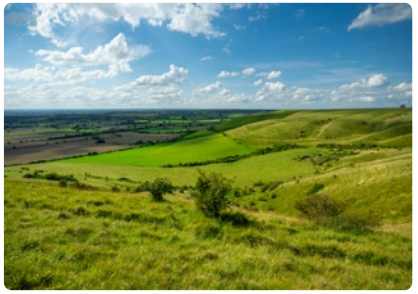
Our portfolios

Environmental reporting spans our diverse assets and activities across three main portfolios:



Urban (formerly London and Regional)

Our London assets cover approximately 10 million sq ft of mixed-use real estate, primarily around Regent Street and St James's. Our Regional assets cover approximately 7 million sq ft of mix-use space, including retail and leisure destinations and business parks.



Windsor & Rural[2]

Our Windsor & Rural business manages more than 200,000 acres of rural land, including extensive areas of farmland, uplands and the Windsor Estate. The Windsor Estate derives income from property, visitors, events, filming and forestry, as well as the Farms and Farm Shop.

Marine

We manage the seabed and much of the coastline around England, Wales, and Northern Ireland. This includes rights and leases for offshore wind, cables, pipelines, ports, marinas, and mineral extraction. We work closely with industry and stakeholders to balance competing demands for seabed use.

1. The amended Act has no impact on our sustainability reporting for 2024/25.
2. For the purpose of this document, we refer to our Windsor & Rural portfolio as separate business units for some criteria.

Reporting boundary and methodology

Overview

We report our energy and emissions data in accordance with the Greenhouse Gas (GHG) Protocol and the UK's Streamlined Energy and Carbon Reporting (SECR) requirements. Our reporting covers Scope 1, 2 and 3 emissions using the 'operational control' approach, which includes activities where we have direct control or areas of influence.

Scope 1: Direct GHG emissions that occur from sources that are owned or controlled by the company

Scope 2: Indirect GHG emissions from the generation of purchased energy consumed by the company

Scope 3: Other indirect emissions that are a consequence of company activities but occur from sources not owned or controlled by the company

A breakdown of key emission sources by each Scope is provided on pages 7-22.

GHG emissions reporting boundary

We apply the operational control boundary as defined by the GHG Protocol. In line with our net zero ambition and alignment to a 1.5°C pathway, we report full value chain emissions across all three Scopes.

Building on our long-standing focus on reducing environmental impact across our real estate assets (Urban (formerly London and Regional) and Windsor Estate) – and our existing reporting of Scope 1, Scope 2 and selected Scope 3 emissions – we expanded our reporting boundary in 2024/25 to include emissions from our Rural and Marine portfolios. These emissions primarily fall under Scope 3 and their inclusion means we are now reporting full value chain emissions for the first time.

The Rural and Marine emissions were estimated largely by applying industry recognised factors and methodologies to the activities carried out by The Crown Estate and its value chain in line with the GHG Protocol and latest industry standards.

We account for acquisitions and disposals by including emissions from the date of acquisition and excluding them from the date of sale, where data is available. Changes in operational control (eg tenant-to-landlord transitions) are reflected in our emissions attribution, in line with GHG Protocol guidance. Material shifts are disclosed with appropriate context.

Energy consumption and related emissions from assets held in joint ventures where The Crown Estate manages the assets are included within our reporting boundary.

Wider influence boundary

We exclude activities where we have lower levels of influence (eg coastal assets, long-lease real estate and Welsh Common land), but continue to monitor these for future inclusion.

Future alignment with FLAG guidance

As part of our commitment to comprehensive and transparent GHG reporting, we recognise the importance of aligning with the GHG Protocol's Forest, Land and Agriculture (FLAG) guidance. While we currently report emissions from agricultural activities across our Windsor & Rural portfolios, we are reviewing the methodologies required to incorporate FLAG-specific categories, including land use change, soil carbon fluxes, and biogenic emissions. We aim to integrate these elements into future reporting cycles as data availability and methodological clarity improve.
Scope 1 and 2 emissions

Information on the sources of Scope 1 and 2 emissions is provided below. Details of the methodology used for the calculations can be found on pages 7-14.

Urban and Windsor

The majority of our Scope 1 and 2 emissions arise from our Urban and Windsor assets. These emissions are primarily associated with: energy procured for our offices, communal areas and void properties; other fuels and biomass; emissions associated with Windsor Farms (see below).

Where energy is procured by The Crown Estate and recharged to tenants, it is excluded from Scope 1 and 2 totals and instead reported under Scope 3, Category 13: downstream leased assets (evidenced tenant energy).

Our contractors manage cooling units in our assets containing refrigerants. Fugitive emissions from refrigerant leaks in these systems are reported in Scope 1.

Following the acquisition of Windsor Farms in March 2024, new emission sources have been introduced to our Scope 1 and 2 reporting. Windsor Farms operate a mixed farming model involving both crop and livestock production. Scope 1 and 2 emissions from the farm includes fuel use from vehicles and machinery, as well as emissions associated with agricultural activities such as crop cultivation and livestock.

Rural and Marine

Relevant GHG emissions arising from the operational perspective of our Rural and Marine portfolios are included in our Scope 1 and 2 emissions. The Crown Estate is responsible for procuring energy in residential properties within the Rural portfolio during void periods. As the Marine portfolio does not involve any directly controlled buildings or energy use, no Scope 1 or 2 emissions are reported from it.

Reporting boundary and methodology continued

Scope 3 emissions

Information on the sources of Scope 3 emissions is provided below. Details of the methodology used for the calculations can be found on pages 15-22.

Urban and Windsor

The GHG Protocol stipulates that where the operational control approach is used, lessors should report GHG emissions associated with energy used by tenants as Scope 3 Category 13: downstream leased assets for both finance and operating leases.

Scope 3 emissions from tenant energy use are included in The Crown Estate's GHG inventory where assets fall under our operational control. An asset is considered under our operational control if it meets any of the following criteria:

- Energy is procured by The Crown Estate
- The lease term is less than 60 years (leases exceeding 60 years are considered long-lease and excluded, as The Crown Estate does not have authority to implement operating policies)
- The lease includes green lease clauses, enhancing The Crown Estate's ability to influence operational practices

In Urban and Windsor portfolios, Scope 3 Category 13: downstream leased assets consists of:

- Evidenced tenant energy: Energy procured by The Crown Estate and recharged to tenants
- Estimated tenant energy: For properties where tenants procure their own energy, emissions are estimated using a defined methodology

Other Scope 3 emission categories include Category 10: processing of sold products and Category 12: end-of-life treatment of sold products, arising from emissions associated with timber dispatched from the Windsor Estate.

Rural

The majority of Scope 3 emissions in the Rural portfolio fall under Category 13: downstream leased assets, including emissions from:

- Residential and commercial assets and activities
- Farmland (fuel and energy use, crop residue, fertiliser, pesticide, methane, waste management)
- Onshore minerals (energy use associated with mineral extraction)
- Downstream leased assets (estimated tenant energy)
- Fixed infrastructure (including telecoms masts, radio masts)
- Renewable generation

Marine

The majority of Scope 3 emissions associated with the Marine portfolio are reported under Category 13: downstream leased assets. This category captures GHG emissions from activities and infrastructure developed on seabed and foreshore areas leased by The Crown Estate.

Key emission sources within this category include:

- Emissions from offshore wind farms: emissions associated with fuel and energy use from operational activity and embodied carbon
- Marine minerals: emissions associated with fuel and energy use from dredging and mineral extraction
- Other sources: emissions from gas storage and subsea cables

Emissions arising from all our portfolios and other group operations

The following Scope 3 emissions are calculated across all our portfolios. These categories include:

- Category 1: purchased goods and services from emissions arising from our suppliers
- Category 2: capital goods from emissions arising from our suppliers
- Category 3: fuel-and energy-related activities (not included in Scope 1 or 2)
- Category 5: waste generated as a result of our direct activities or those of our customers where the disposal of waste is under our management
- Category 6: business travel
- Category 7: employee commuting arising from The Crown Estate's employees

Exclusions

We report Scope 1, 2 and 3 emissions for categories deemed material. Emission sources that are excluded from our reporting are those estimated to be immaterial (eg diesel used in back-up generators in the London portfolio and refrigerant gas used for air conditioning units owned by tenants). Our approach is reviewed annually to reflect improvements in data availability and relevance.

Reporting boundary and methodology continued

Base year

Working against a 2022/23 carbon base year, we have set a target of cutting our emissions by 42% by 2030, and by 90% by 2050, with the remaining 10% to be compensated through carbon removals and/or high-quality carbon offsets.

A separate internal target was set to reduce energy consumption by 18% from 2021/22 to 2024/25. More information on this can be found in our Annual Report 2024/25 at thecrownestate.co.uk/annual-report.

Estimations and assumptions

Carbon emissions reporting involves estimates with varying degrees of uncertainty. Scope 3 emissions, due to their nature, tend to have higher levels of uncertainty compared to Scope 1 and 2. We are working to reduce this uncertainty, prioritising material emission sources and those where we have the opportunity to reduce emissions, while considering the practical limitations of achieving more detailed data.

Information on the estimations and assumptions used throughout the GHG reporting is covered in the 'Estimations and assumptions' column for each GHG reporting category in the tables on pages 7-22.

Restatements

Where errors are identified, methodologies are improved, or more complete datasets are acquired - resulting in material changes to previously reported data - restatements will be made as part of the annual reporting cycle. In line with HM Government's Environmental Reporting Guidelines for limited assurance, we apply a materiality threshold, typically where changes exceed 5%, to guide our consideration of whether restatement is appropriate. This threshold is assessed across relevant aggregated emissions categories.

In determining, whether changes to previously reported data are considered material, qualitative factors are also considered. We continue to review our restatement policy as best practices evolve, we improve our reporting and to ensure alignment with any further targets we set in the future. This helps ensure our reporting remains consistent and meaningful.

Data Management

Overview

Data is collected across the organisation by The Crown Estate employees, and by third parties, such as Managing Agents. The responsibility for and nature of validation varies according to the type of data and the data source. Where new reported data points are identified third party consultancy advice is sought where appropriate to ensure methodologies remain appropriate and robust.

In 2024/25, The Crown Estate included for the first time in our GHG inventory emissions from both Rural and Marine portfolios. These emissions were estimated largely by applying industry recognised factors to the activities carried out by The Crown Estate and its value chain.

Data quality improvements

Recognising the importance of data, we have continued to make improvements to our data quality and emissions calculation methodology in the last reporting year. Below, we outline three areas that have benefited from these data quality improvements.

Energy data

During the reporting year, we have continued to review and improve the collection, analysis and reporting of our energy data across our real estate portfolio including, but not limited to, the areas of tenant energy recharges and green energy tagging. These improvements have not resulted in material changes to previously reported figures.

Scope 3 emissions – supplier emissions

We have continued to develop our approach to estimating emissions from Scope 3 Category 1: purchased goods and services. Previously, we used Standard Industrial Classification (SIC) codes and product types to identify emissions factors for spend categories, which were based either on a classification of the supplier or the product type. We worked with our key suppliers to obtain supplier-specific emission factors and obtained GHG emissions of other top suppliers from publicly available sustainability data. This significantly improved the granularity of our emissions data from purchased goods and services. As a result of this exercise, we are now applying emissions factors that apply to the specific supplier, rather than the generic product or SIC code for key suppliers.

Scope 3 emissions – supplier emissions from capital goods

We have improved our estimates of Scope 3 Category 2: capital goods emissions by incorporating the Whole Life Carbon Assessment emissions data of our major development projects in our calculations. The estimated embodied and whole carbon emissions account for A0-A5 RIBA stages of developments.

The embodied carbon and Whole Life Carbon emissions (kg CO_2e) data is divided by the expected total cost (£) of the development to derive a development specific GHG emissions factor. This development-specific emission factor is applied to construction phase spend associated with A0-A5 RIBA stages.

Data sources and hierarchy

Energy consumption underpins our Scope 1 and 2 emissions reporting. These emissions are the most directly measurable and controllable within our operations, making energy data an important foundation for our environmental performance tracking.

Energy consumption

Energy, gas and water data is received from a number of sources, Half hourly data (HHD) or automated meter readings (AMR) are considered the most reliable and are the preferred data source for reporting purposes. If such data is not available, other data sources are used, with a hierarchy applied to our energy, gas and water data. The energy and gas data is used to calculate Scope 1 emissions, Scope 2 emissions and intensity metrics. The hierarchy ranking is detailed in the table below.

Meter reads and invoices have a different position in the hierarchy for London/Windsor vs Regional, reflecting the varying levels of data reliability across the differing asset types. Where a particular data source appears to have incorrect data then the hierarchy may be overridden. In such cases an exception is logged and the reason is recorded.

Utility	Rank	Hierarchy ranking	Portfolio
Energy, gas and water	1	HHD/AMR	London/Windsor
	2	Meter reads	
	3	Invoices	
	4	Perse industry data[1]	
	5	Calculated estimate	
Energy, gas and water	1	HHD/AMR	Regional
	2	Invoices	
	3	Meter reads	
	4	Perse industry data[1]	
	5	Calculated estimate	

1. Perse is an industry data provider of energy consumption that uses the same data source and methodology as energy suppliers.

Detailed methodology GHG Emissions – Scope 1

Urban and Windsor

Scope 1 (direct emissions)		Activity data			Calculation
Category	**Description**	**Source**	**Data collection and validation process**	**Estimations and assumptions**	**Emissions calculation methodology**
Direct emissions from gas consumption	Consumption of natural gas used for space heating and hot water in our offices, communal areas of leased assets and void properties (Urban)	AMR, invoices, meter readings, Perse data	**AMR:** In the London portfolio data is received in a variance report from the source provider, which details validated monthly consumption by meter (in kWh) and data coverage. In the Regional portfolio, AMR data is received in a spreadsheet. In the Windsor portfolio, AMRs are included in the quarterly download of utility data. This data is checked for data coverage and validation internally. **Invoices:** Data for all portfolios is provided in a quarterly spreadsheet from the Energy Bureau's invoice management software. Meter-level gaps are analysed, and a variance report is run internally. These are shared with the source provider to validate data quality. **Meter readings:** For the London portfolio, a variance report is received detailing monthly consumption by meter (in kWh), which has been validated by the source provider. In the Regional and Windsor portfolios, a monthly meter spreadsheet is provided. **Perse data:** Where insufficient data exists, the meter number is sent to Perse via email. Perse responds via email with the data on its platform for that meter, if available. This data is then tagged as Perse data and used to fill gaps in other data sources where required.	Gaps identified in any of the data sources for gas consumption are filled using the following estimation approach. Gaps are identified as months where insufficient data is available. If the % completeness is less than 100% but above 25% then the incomplete data is gapfilled using data from the current month. If data completeness is below 25% then data from the equivalent month of the previous year is used (ie May 2025 can be gapfilled using May 2024). Gapfilling from the previous year is only used when there is not enough data from the current month to gapfill the rest of the current month. This accounts for seasonality. Previous year's data comes from the previous year's report unless the value from the previous year is estimated and an actual value is available elsewhere (this happens especially with March consumption).	Consumption is calculated by subtracting the previous month meter reading from the current month meter reading. Where the unit of measurement is not kWh, consumption figures are converted into kWh. Relevant UK Government conversion factors to emissions are then applied.

Detailed methodology GHG Emissions – Scope 1 continued

Urban and Windsor continued

Scope 1 (direct emissions)		Activity data			Calculation
Category	**Description**	**Source**	**Data collection and validation process**	**Estimations and assumptions**	**Emissions calculation methodology**
Gas consumption (Void residential Windsor Assets)	Consumption of gas in unoccupied residential assets in the Windsor portfolio	Estimates derived from data available	Primary energy consumption data is unavailable for unoccupied residential assets in the Windsor portfolio. The Windsor team provides an estimate on the number of assets that are vacant in year and the proportion of the year those assets remain vacant.	Gas consumption of residential assets is calculated using the UK Government National Energy Efficiency Data (NEED) Framework and mean gas consumption per year (kWh) by property type. Void assets are estimated to use 31.5% of energy compared to when the asset is tenanted, based on literature reviews. It is assumed that these specific properties are vacant on average 50% of the year.	The estimated gas consumption for unoccupied (vacant) residential assets is calculated using the number of unoccupied residential assets per year x mean gas consumption per year (kWh) x gas used by unoccupied property (%) x average time vacant (assumed 50% per year).] Estimated energy consumption is combined with the relevant UK Government conversion factors to estimate emissions.
Refrigerants	Release of refrigerant gas used for air conditioning in assets under The Crown Estate's operational control	Invoices, F-gas service records	**London and Regional portfolios:** Data on the loss of refrigerant gas from HVAC systems (in kg) is collected from invoices and F-gas service checks in each asset. The data is collated by third parties and shared with The Crown Estate every quarter. Data collected refers to the 'common parts area' of assets under The Crown Estate's operational control. Refrigerant losses in tenant owned HVAC systems (where applicable) are not covered by the data collection process by Managing Agents and are not estimated at this time. **Windsor portfolio:** Data on the loss of refrigerant is collected by the Windsor Sustainability team across all landlord controlled spaces quarterly from service records (in kg). The data across all portfolios is validated quarterly by the Group Sustainability Reporting team at The Crown Estate.	Refrigerant leaks are detected then serviced (refrigerant topped up). Until the unit is serviced, it is not possible to quantify the leak. The date the service of the unit is complete is used as the date the emissions took place. In certain cases where it is possible to reliably estimate the leakage prior to the unit being serviced, an estimate of the leak is reported.	Emissions for the refrigerant loss in common parts areas are as follows: total kg of refrigerant lost x the GWP of that refrigerant / 1,000 = tCO_2e.

Detailed methodology GHG Emissions – Scope 1 continued

Urban and Windsor continued

Scope 1 (direct emissions)		Activity data			Calculation
Category	**Description**	**Source**	**Data collection and validation process**	**Estimations and assumptions**	**Emissions calculation methodology**
Owned and leased vehicles and machinery	Consumption of fuel used by cars, commercial vehicles and machinery owned and leased by The Crown Estate	Windsor fuel database Fuel use report from Managing Agent	Fuel consumed (fleet, machinery, tools) at the Windsor Estate and Regional portfolios are managed and collected by the Windsor Sustainability team and Managing Agent respectively. The data is downloaded from the fuel management system after year end.	No estimations are applied.	The validated data for each category is totalled for the reporting period. Once the total figure is final the appropriate UK Government conversion factors are applied according to fuel type to calculate $kgCO_2e$. This figure is then divided by 1,000 to convert from kg to tonnes.
Biomass	Consumption of biomass used for district heating at Windsor	Woodchips delivered or purchased	The volume of woodchips delivered to the Windsor Estate for the district heating system is monitored by the Windsor management team. The team validates the amount delivered against receipts.	The volume of woodchips delivered is used as a proxy for woodchips used as fuel in the district heating system. This estimation is valid as woodchips are only delivered to be combusted as of when it is required.	The validated data for each category is totalled for the reporting period. Conversion factor for softwood sourced from Forest Research is used to convert from m^3 to tonnes. UK Government conversion factors are applied to calculate emissions in $kgCO_2e$. This figure is then divided by 1,000 to convert from kg to tonnes. Non-CO_2 GHG emissions are reported under Scope 1. CO_2 emissions are reported outside of Scope.
Emissions from non-mechanical sources, mechanical sources and land use change - Windsor Farms	Emissions from arable land, grass ley and livestock on Windsor Farms Consumption of fuel used by vehicles and machinery owned or leased by The Crown Estate and used on The Windsor Farms	Estimates derived from data available	Windsor team provide the makeup of the agricultural land (hectares) and number of livestock on Windsor Farms.	Land use per crop type, or land use, is used to estimate GHG emissions using literature emission factors and yield per crop type. Percentages of the total emissions per crop type is allocated to non-mechanical sources, mechanical sources and land use change using assumptions from literature sources.	The estimated emissions data for each crop type/ land use is totalled for the reporting period.

Detailed methodology GHG Emissions – Scope 1 continued

Rural

Scope 1 (direct emissions)		Activity data			Calculation
Category	**Description**	**Source**	**Data collection and validation process**	**Estimations and assumptions**	**Emissions calculation methodology**
Oil consumption (Void residential Rural assets}	Consumption of oil in unoccupied residential assets in the Rural portfolio	Rural portfolio assets list and estimated energy consumption from EPC ratings per property	Primary energy consumption data is unavailable for unoccupied residential assets in the Rural portfolio. The Rural team provides EPC ratings for each property, number of assets in void in year and estimated % of year these assets are void.	Estimated oil consumption from EPCs for each asset is used to estimate oil consumed by residential void assets. Void assets are estimated to use 31.5% of energy compared to when the asset is tenanted based on literature reviews.	The estimated oil consumption for unoccupied (vacant) residential assets is calculated using the number of unoccupied residential assets per year x mean oil consumption per year (kWh) x energy used by unoccupied property (%). Estimated energy consumption is combined with the relevant UK Government conversion factors to emissions.

Detailed methodology GHG emissions – Scope 2

Urban and Windsor

Scope 2 (indirect emissions)			Activity data			Calculation
Category	**Sub category**	**Description**	**Source**	**Data collection and validation process**	**Estimations and assumptions**	**Emissions calculation methodology**
Emissions from generated electricity use	Location- based	Emissions from electricity, heat, steam and cooling purchased by The Crown Estate used in our offices, communal areas of leased assets and void properties (Urban)	HHD, AMR, invoices, meter readings, Perse data	**HHD:** Data managers receive HHD from electricity meters on a daily basis (+1 day) via an automated file transfer protocol. Verification checks are completed internally using data gap analysis on a quarterly basis. Gaps are investigated in collaboration with the source provider. **AMR:** In the London portfolio, data is received in a variance report from the source provider, which details validated monthly consumption by meter (in kWh) and data coverage. Data is checked internally. In the Regional portfolio, AMR data is received in a spreadsheet, which is checked for data coverage and validation internally. In the Windsor portfolio, AMRs are included in the quarterly download of utility data. **Invoices:** Data for all portfolios is provided in a quarterly spreadsheet from the Energy Bureau's invoice management software. Data is checked and validated internally during the upload to the data management platform. Meter-level gaps are analysed and a variance report is run internally, which is shared with the source providers to validate data quality. **Meter readings:** For the London portfolio, a variance report is received detailing monthly consumption by meter in kWh, which has been validated by the source provider. In the Regional and Windsor portfolios, a monthly meter spreadsheet is provided. **Perse data:** Where insufficient data exists, the meter number is sent to Perse via email. Perse responds via email with the data on its platform for that meter, if available. This data is then tagged as Perse data and used to fill gaps in other data sources where required.	Gaps identified in any of the data sources for electricity consumption are filled using the following estimation approach. Gaps are identified as months where insufficient data (readings or invoice) is available. If there is consumption data within the same year available, the average consumption for the months prior to the gap is used to estimate. If there are still data gaps, then these are filled using the equivalent month from the previous year as an estimate. Remaining gaps are then filled where possible using industry data (Perse).	Consumption is calculated by subtracting the previous month meter reading from the current month meter reading. Relevant UK Government conversion factors to emissions are then applied.

Detailed methodology Greenhouse gas emissions – Scope 2 continued

Urban and Windsor continued

Scope 2 (indirect emissions)			Activity data			Calculation
Category	Sub category	Description	Source	Data collection and validation process	Estimations and assumptions	Emissions calculation methodology
Electricity consumption (Void residential Windsor assets)	Location-based	Consumption of electricity in unoccupied residential assets in the Windsor portfolio	Windsor portfolio assets list	Primary energy consumption data is unavailable for unoccupied residential assets in the Windsor portfolio. The Windsor team provides an estimate on the number of assets that are vacant in year and the proportion of the year those assets remain vacant.	Electricity consumption per vacant asset is estimated using a literature figure for electricity consumption by property. Electricity consumption of vacant residential assets is calculated using the UK Government National Energy Efficiency Data (NEED) Framework, mean electricity consumption per year (kWh) by property type, with an assumption that specific properties are vacant on average for 50% of the year. Void assets are estimated to use 31.5% of energy compared to when the asset is tenanted. This assumption is derived from literature studies.	The estimated electricity consumption for unoccupied (vacant) residential assets is calculated using the number of unoccupied residential assets per year x mean electricity consumption per year (kWh) x electricity used by unoccupied property (%) x average time vacant. Estimated energy consumption is combined with the relevant UK Government conversion factors to estimate emissions.

Detailed methodology Greenhouse gas emissions – Scope 2 continued

Urban and Windsor continued

Scope 2 (indirect emissions)			Activity data			Calculation
Category	**Sub category**	**Description**	**Source**	**Data collection and validation process**	**Estimations and assumptions**	**Emissions calculation methodology**
Emissions from generated electricity use	Market-based	Emissions from electricity, heat, steam and cooling purchased by The Crown Estate used in our offices, communal areas of leased assets and void properties	Supplier contracts, REGO certificates, supplier public disclosure and data validations through the energy bureau.	The Crown Estate engages with the Managing Agents and Energy Bureau of our assets to confirm the status of electricity contract tariffs. A combination of the data sources listed are used to confirm the status of tariffs. Manual validations via a third party platform have been performed for London high-consumption MPANs without contract documentation. When gaps are identified in the data provided, estimations and assumptions are made.	Where a specific contract start date within a quarter is unknown, the consumption for the month is allocated to brown tariffs. If the number of days the meter is on green tariff is higher than on a standard tariff, the consumption for the whole month is allocated to green. Where the contract tariff information is not available for the full reporting period: – If green status was confirmed for prior periods, green status is forward-filled for subsequent months where The Crown Estate continues to be responsible for the meter, otherwise the default assumption is that the meter is on a standard tariff. – For disposed assets where the data is not accessible, the tariff status as of 31 March 2024 is assumed to continue into 2024/25.	Emissions factors for renewable energy from energy suppliers (0) are applied to consumption values. For electricity on standard tariffs, emission factor of the residual mix in the UK, issued by the Association of Issuing Bodies is used.

Detailed methodology GHG emissions – Scope 2 continued

Rural

Scope 2 (indirect emissions)			Activity data			Calculation
Category	**Sub category**	**Description**	**Source**	**Data collection and validation process**	**Estimations and assumptions**	**Emissions calculation methodology**
Electricity consumption (Void residential Rural assets)	Location-based	Consumption of electricity in unoccupied residential assets in the Rural portfolio	Rural portfolio assets list and estimated energy consumption from EPC ratings per property, % of year and number assets that are in void for the year.	Primary energy consumption data is unavailable for unoccupied residential assets in the Rural portfolio. The Rural team provides EPC ratings for each property and number of assets in void in year.	Estimated electricity consumption from EPCs for each asset is used to estimate electricity consumed by residential void assets. Void assets are estimated to use 31.5% of energy compared to when the asset is tenanted. This assumption is derived from literature studies.	The estimated electricity consumption for unoccupied (vacant) residential assets is calculated using the number of unoccupied residential assets per year x mean electricity consumption per year (kWh) x electricity used by unoccupied property (%). Estimated energy consumption is combined with the relevant UK Government conversion factors to estimate emissions.

Detailed methodology GHG emissions – Scope 3

Emissions arising from all our portfolios

Scope 3			Activity data			Calculation
Category	**Sub category**	**Description**	**Source**	**Data collection and validation process**	**Estimations and assumptions**	**Emissions calculation methodology**
Category 3: fuel-and energy-related activities not included in Scope 1 or Scope 2		Transmission and distribution losses from electricity consumed by The Crown Estate and emissions from generation of purchased electricity sold to customers for EV charging	Calculation Electricity purchased by customers from our assets is provided by a third party organisation that manage EV charging points.	Same methodology as for total electricity consumption. Electricity purchased by customers for EV charging is provided by the Managing Agent.	No additional estimations applied.	UK Government conversion factors are applied to estimate emissions.
Category 6: business travel		Emissions from business-related travel by employees	Financial Database	Business travel data is provided quarterly by The Crown Estate Finance team. Travel expenses are exported from the central database every quarter; employees are responsible for inputting accurate data with respect to their travel. The data is categorised according to travel type (air, bus/coach, tube, rail, taxi, personal car). Travel categories include key journey details to enable carbon calculation: number of travellers, start location and end location, spend or fuel purchased.	Where journey details are missing, a spend-based emission factors have been used to estimate emissions based on the expenses claim value by travel type. For flight expenses, distance travelled is manually calculated using an online platform.	Mileage was converted to km using the following conversion rate (1 mile = 1.60934km). UK Government conversion factors are applied to the activity data. In 2023/24, the data was uplifted from the 2022/23 data previously reported for the FTE number in 2023/24.

Detailed methodology GHG emissions – Scope 3 continued

Emissions arising from all our portfolios continued

Scope 3			Activity data			Calculation
Category	**Sub category**	**Description**	**Source**	**Data collection and validation process**	**Estimations and assumptions**	**Emissions calculation methodology**
Category 13: downstream leased assets	Evidenced tenant energy	Emissions from the gas and electricity procured by The Crown Estate and recharged to tenants in our leased assets	Monthly/ quarterly tenant recharge	Managing Agents and The Crown Estate track and compile tenant recharged energy (in kWh) on an ongoing monthly or quarterly basis (this is energy which is recharged to tenants, either on a direct usage basis or via apportionment based on floor area or similar metrics). The energy recharged to tenants is treated as evidenced tenant energy and used to calculate a portion of emissions from Scope 3 downstream leased assets.	Any missing recharged consumption, primarily recharged consumption in the last quarter of the reporting year, is estimated using the historic average percentage recharged for the meter/s. This percentage is applied to the total energy consumed as per the meter readings and allocated to energy recharged to tenants.	The emissions calculation methodology applied is the same for gas and electricity. Electricity and gas procured by The Crown Estate and recharged to tenants is subtracted away from gas and electricity consumption figures used to calculate Scope 1 and 2 emissions and allocated to Scope 3.
Category 1: purchased goods and services		Emissions from the extraction, production and transportation of goods and services purchased	Purchase ledger	A download is provided from The Crown Estate financial database which details the spend (£) per supplier. Spend data is based on invoice received and not calculated using accrual accounting.	No estimations or assumptions were applied to the activity data. Exclusions are made for some spend items, including intercompany charges, void costs relating to energy utilities, salaries, bad debts and revenue. Exclusion categories are updated annually. Expenditure mapped to operating expenditure is allocated to this category.	Emissions are calculated using a blended spend-based approach. For top suppliers by spend (£) The Crown Estate applies supplier-specific emission factors. For the top 100 product codes by spend, emissions factors are chosen from emissions factor databases based on the suitability of the database. For the remaining product codes, Standard Industrial Classification code emission factor categorisation is used.

Detailed methodology GHG emissions – Scope 3 continued

Emissions arising from all our portfolios continued

Scope 3			Activity data			Calculation
Category	Sub category	Description	Source	Data collection and validation process	Estimations and assumptions	Emissions calculation methodology
Category 2: capital goods		Emissions from the extraction, production and transportation of capital goods purchased in the reporting year	Purchase ledger	A download is provided from The Crown Estate supplier system which details the spend (£) per supplier category that is assigned to the spend.	No estimations or assumptions were applied to the activity data. Exclusions are made for some spend items, including intercompany charges, void costs relating to energy utilities, salaries, bad debts and revenue. Exclusion categories are updated annually. Expenditure mapped to capital expenditure is allocated to this category.	A spend-based approach is used for spend on capital projects using a blended approach as explained above. Where Whole Life Carbon Assessment data (kg CO_2e), calculated by external consultants, is available for ongoing developments, this data is prioritised. GHG emissions for RIBA stages A0-A5 are divided by the expected total cost (£) of the development to derive a development specific GHG emissions factor and applied to the spend.
Category 5: waste generated in operations		Emissions from the disposal and treatment of waste generated in assets under our operational control	Waste record loader	Waste data for portfolios is recorded by the Managing Agents or internal teams within The Crown Estate, using the waste record loader. The data is extracted from the platform for reporting purposes.	Waste data is estimated where nine months of actual data is available. This will occur at the end of each financial year.	UK Government conversion factors are applied for total waste tonnes per disposal method.
Category 7: employee commuting		Emissions from the transportation of employees between their home and workplace	Employee commuting survey	The survey provides information on: how the employee travels to the office, their method of transport and the number of miles per transport method. This information is used to calculate the number of miles travelled per method of transport. Responses that appear erroneous are excluded from the final results.	Depending on the total survey responses, the output of the survey is uplifted to cover 100% of FTE.	UK Government conversion factors are applied to the total miles per transport method calculated from the uplifted survey results.

Detailed methodology GHG emissions – Scope 3 continued

Emissions arising from all our portfolios continued

Scope 3			Activity data			Calculation
Category	Sub category	Description	Source	Data collection and validation process	Estimations and assumptions	Emissions calculation methodology
Category 10: processing of sold products		Emissions from processing of timber sold in the Windsor Great Park	Windsor forestry team	Tonnes of timber dispatched.	Firewood was excluded as, on average, it accounts for less than 10% of dispatches.	Tonnes of timber dispatched is combined with emission factors relating to the processing lifecycle phase, provided by Timber Development UK.
Category 12: end-of-life treatment of sold products		Emissions from the end-of-life treatment of sold timber	Windsor forestry team	Tonnes of timber dispatched.	No additional estimations applied.	Tonnes of timber dispatched is combined with emissions factors relating to the waste processing and transport lifecycle phases, provided by Timber Development UK.
Category 13: downstream leased assets	Estimated tenant energy	Emissions from the estimated use of electricity and gas by tenants in our leased assets Energy used by events held by third parties on the Windsor Estate This estimation methodology is applied where tenant energy is not known, ie the tenant is solely responsible for the procurement of energy, not the landlord, ie indirectly managed assets – FRI	Assets database Number of events held on the Windsor Estate	Floor area of assets is held on our internal systems. Number of events held on the Windsor Estate.	Emissions intensity, as calculated by The Crown Estate for floor spaces where energy is procured by The Crown Estate is applied to tenant controlled spaces to estimate the emissions related to those spaces. Emissions related to events are estimated using literature emission factors provided by consultants.	Where tenant consumption is not known, it is estimated in line with UK-Green Building Council (UK-GBC) Scope 3 estimation of leased asset emissions. This includes Full Repairing and Insuring (FRI) assets and assets where tenants procure their own energy. Where actual data exists for equivalent sector types (ie we have an internally calculated carbon intensity), the calculated carbon intensities are applied to the floor area. Where no actual data exists for equivalent sector types an applicable Better Buildings Partnership's Real Estate Environmental Benchmark is applied to calculate the required carbon emissions (location-based approach). For hotels, the Chartered Institution of Building Services Engineers' TM46 benchmark for general accommodation is used, applying the illustrative typical total carbon benchmark.

Detailed methodology GHG emissions – Scope 3 continued

Marine and Rural

Marine

Scope 3 (indirect emissions)			Activity data			Calculation
Category	**Sub category**	**Description**	**Source**	**Data collection and validation process**	**Estimations and assumptions**	**Emissions calculation methodology**
Category 13: downstream leased assets	Offshore wind	Emissions from the operation and maintenance of offshore wind farms	Wind farm capacity	Data on size, capacity, make and model of existing wind farms. Industry data on yearly emissions based on electricity generation and size of wind farms	Approximate life cycle assessments (LCA) used for wind turbine type, based on closest available LCA.	Estimated emissions for operation and maintenance based on electricity generation and size of wind farm. The offshore wind farms have been categorised into small and large (wind farm capacity) and the appropriate operation and maintenance emissions factors applied using estimated yearly energy output for each wind farm. The estimated yearly energy output for each wind farm is calculated using capacity data supplied by The Crown Estate and load rates used in the Offshore Renewables Energy Catapult study. This yearly output is multiplied by the appropriate emission factor calculated in the study.
	Offshore wind	Emissions of the lessee including those from production, manufacturing, construction of wind farms and carbon savings from decommissioning	Wind farm size, capacity and LCAs where available	The Crown Estate collects data on the size, capacity, make and model of existing wind farms	Where possible, LCAs for specific turbine models have been used; if LCAs were not available, LCAs from similar models have been used based on the size of the turbine.	Size of wind farm multiplied by associated emissions factors from LCAs. Where LCAs did not include embodied carbon emissions of foundations of the wind turbines, an internal estimate was used. The internal estimate was also used to adjust LCAs that did include embodied carbon emissions of foundations.
Category 13: downstream leased assets	Minerals	Marine gas oil (MGO) consumption from dredging activity	Consumption of marine gas oil by vessels used to carry out dredging activity	Combination of public reporting of MGO use per tonne landed to British Marine Aggregate Producers Association (BMAPA) and total tonnes of aggregates dredged data collected by The Crown Estate's Marine team	Estimated consumption of MGO using total tonnes of aggregates landed for reporting years.	UK Government conversion factors for MGO applied to estimated consumption.

Detailed methodology GHG emissions – Scope 3 continued

Marine continued

Scope 3 (indirect emissions)			Activity data			Calculation
Category	**Sub category**	**Description**	**Source**	**Data collection and validation process**	**Estimations and assumptions**	**Emissions calculation methodology**
Category 13: downstream leased assets	Telecoms and power cables	Marine gas oil (MGO) consumption for maintenance, repair and installation for telecom cables and interconnectors	Total length of each cable type (telecom and power) installed under The Crown Estate's leases	Length and type of cable installed is collected by The Crown Estate's digital team. Academic study on MGO use during incidents of fault rates, usage for repairs, lifetime maintenance and installation.	MGO usage rates are based on a literature estimate. For each type of cable, the material composition and associated carbon was identified from academic sources.	UK Government conversion factors for MGO applied to estimated consumption. For each type of cable, the material composition and associated carbon was identified from academic sources and extrapolated for the total length of each type of cable installed under The Crown Estate's leases.
Category 13: downstream leased assets	Natural gas storage	Emissions from the operation of natural gas storage facility	Environmental statements from the Rough natural gas storage facility	Data sourced from the operator of the facilities.	Data extrapolated for 2023/24 and 2024/25 based on an average from 2021/22 and 2022/23.	Not applicable. Emissions used directly from data source.

Detailed methodology GHG emissions – Scope 3 continued

Rural

Scope 3 (indirect emissions)			Activity data			Calculation
Category	**Sub category**	**Description**	**Source**	**Data collection and validation process**	**Estimations and assumptions**	**Emissions calculation methodology**
Category 13: downstream leased assets	Commercial properties	Estimated tenant energy	Emissions from the estimated use of electricity and gas by tenants in our leased assets	Data on properties from The Crown Estate's Rural team.	Floor space and related energy use are estimated using average UK non-residential building data	Floor space was determined using average UK non residential buildings data. Electricity and other energy consumption was calculated using average energy intensity numbers and converted into emissions using the UK Government conversion factors.
Category 13: downstream leased assets	Residential properties	Estimated tenant energy	Emissions from the estimated use of electricity, gas and other fuels by tenants in our leased assets	EPCs for The Crown Estate's leased residential properties.	Energy use was estimated using EPC data. For properties where there was no EPC data available, the most common fuel type used and average consumption from other properties were used.	To calculate electricity consumption, total heating and hot water consumption was deducted from the primary energy consumption. Total estimated fuel and electricity consumption was combined with UK Government conversion factors.
Category 13: downstream leased assets	Farmland (fuel and energy use, crop residue, fertiliser, pesticide, methane and waste management)	Estimated farmland emissions	Emissions from the production of cereals, fruit and vegetables, and livestock (dairy and non-dairy)	Grazing density for sheep, total area of leased agricultural land, and number of cattle in farmlands.	Fruit and vegetables are grown on the best quality land and typically crop production is 2 in 7 years. In the remaining years, cereals are produced.	Defra averages were used to estimate production from agricultural lands growing cereals, and fruits and vegetables. UK Government conversion factors were used to calculate emissions. Emissions from dairy and non-dairy livestock farmland were estimated using UK grassland emissions intensity data, from the Office for National Statistics, uplifted with Food and Agricultural Organization data to account for additional commercial farming emissions. This adjusted emissions factor was then applied to respective land areas.
Category 13: downstream leased assets	Onshore minerals	Estimated emissions from the extraction of minerals	Emissions from the extraction of on-shore minerals in our leased assets	Quantity of minerals mined, provided by our tenants.	A combination of mining and quarrying emissions factor is used due to a lack of quarrying-specific data. Emissions intensity is assumed to remain constant. Land use change impacts were not considered.	Emissions intensity data for mining and quarrying is applied to the quantity of minerals extracted annually. This approach includes only the extraction phase, not downstream processing. Due to data limitations, quarrying-specific emissions factor was not used, and emissions intensity is held constant using 2021/22 figures.

Detailed methodology GHG emissions – Scope 3 continued

Rural continued

Scope 3 (indirect emissions)			Activity data			Calculation
Category	Sub category	Description	Source	Data collection and validation process	Estimations and assumptions	Emissions calculation methodology
Category 13: downstream leased assets	Fixed infrastructure (including telecoms, masts, radio masts)	Estimated electricity use by lessees in the Rural portfolio that operate telecoms/ radio masts	Average electricity use by a mobile base station from industry sources.	Streamlined energy reporting from telecoms companies.	Due to lack of robust data and academic studies on radio mast energy use, it is assumed that radio masts consume the same amount of electricity as telecoms masts. Emissions from repair of telecoms equipment and installation of new telecoms equipment are excluded on the basis of immateriality.	Estimated electricity consumption of telecoms and radio masts are combined with the relevant UK Government conversion factors to estimate emissions.
Category 13: downstream leased assets	Renewable generation	Estimated emissions from renewable energy generation	Estimated operational and maintenance emissions from solar and wind energy generation, and embodied emissions from solar PV installations on The Crown Estate's leased sites.	Energy capacity and renewable energy generated on The Crown Estate's leased assets.	Average lifecycle emission factors and load factors are used for operational emissions. A fixed percentage of lifecycle emissions is attributed to embodies emissions, using a standard solar panel lifetime. Installation timing is estimated for some solar plants. Offshore wind data informs onshore wind calculations.	Annual emissions from the operations and maintenance of existing leased solar and wind schemes are estimated by applying lifecycle emissions factors to generation capacity. Emissions are then discounted based on the proportion attributed to the operations and maintenance phase. External lifecycle emissions factors, were used to estimate embodied emissions (from manufacturing, installation, and end-of-life stages) of newly installed solar plants, allocated proportionally across financial years based on installation timing.

Energy reporting

Absolute energy consumption

Absolute energy consumption includes all energy used in properties where we have operational control and procure the energy (including energy recharged back to tenants), including those acquired or disposed of during the reporting year.

Like-for-like consumption

Like-for-like data excludes properties that were purchased or sold at any point during the 24 months reported. Meters where there is incomplete data (either through missing consumption data, or as procured by tenants for part of the year and therefore outside of data collection scope) in either reporting year are also excluded from the analysis.

Other energy-related data

Category	Description	Data source	Data collection	Estimations and assumptions
Total energy spend	Total spend on energy consumption for gas and electricity in all portfolios.	Database download	The London and Regional Energy Bureaus provide a monthly breakdown of invoicing annually. The invoice breakdown contains the value (£) excluding VAT of all energy invoices under contract. Energy costs from the Windsor portfolio is provided by the Windsor finance team.	No estimations are applied.
Energy savings	Narrative on energy savings applied during 2024/25.	Spreadsheet template	The Crown Estate collates information on energy improvements within the portfolio completed within the reporting year and energy savings associated with these improvements.	Energy savings from previous interventions (eg lighting and air conditioning unit upgrades) are estimated using actual reduction in energy use. We are improving our data on energy savings to enable the reporting of energy savings per intervention.
Onsite renewable generation	Photovoltaic (PV) sites are located at a number of assets across The Crown Estate's portfolios.	Meter readings	Onsite facilities management teams record monthly meter readings for onsite renewable generation. The meter readings are collated by the Managing Agents and/or The Crown Estate within a master spreadsheet for the respective portfolios.	No estimations are applied.
Electric vehicle (EV) charging consumption	EV charging sites are located at a number of The Crown Estate's assets. EV charging at the Windsor Estate is used for The Crown Estate's own consumption. The related emissions are included in Scope 2. On our Regional assets, electricity is paid for by customers (Scope 3).	Meter readings	Total EV consumption is collected by manual meter readings from Managing Agents and reported quarterly in a spreadsheet to The Crown Estate.	No estimations are applied.

Energy and emissions intensity

Methodology

Energy data has been normalised against floor area (square metres) and time (per annum) based denominator to identify an intensity ratio (in kWh for energy, in $kgCO_2e$ for emissions) for three asset classifications based on high-level Better Building Partnership's 2023 Real Estate Environmental Benchmarks (BBP 2023 REEB)[2] categories. Calculations are in line with best practise reporting from BBP.

Intensity analysis normalises GHG emissions data (from energy consumption) through the application of a floor area-based denominator (square metres of either Gross Internal Area for Office/Mixed assets, Common Parts Area for Enclosed Shopping Centres, or Exterior Area for Retail Parks).

Both energy and emission intensities are subject to independent limited assurance by KPMG.

Criteria for inclusion in intensity analysis

Passes all inclusion criteria

- Asset/data reviewed against criteria
- Annual kWh consumption confirmed

kWh/m^3

- Annual energy consumption divided by denominator (per sector type)
- Office/ Mixed Use
- Retail
- Enclosed Shopping Centre

$kgCO_2$

- Location-based carbon factors (Scope 1 and 2) are applied to confirmed annual consumption

$kgCO_2/m^3$

- Annual CO_2 divided by denominator (per sector type)
- Office/ Mixed Use
- Retail
- Enclosed Shopping Centre

Criteria for inclusion

Criteria	Inclusion
Owned for 12 months reported	**Include**
Complete electricity and gas data set for 12 months reported. All data gaps in the 2024/25 data set have been filled with estimations where possible. Electricity only can be used; limited to cases where other energy utilities (eg gas) are confirmed as not present at the property.	**Include**
Multiple meters for energy; complete data set for some but not all meters (electricity and gas) for 12 months reported. Data from a meter would be considered incomplete if meter goes outside of The Crown Estate's responsibility.	Exclude
Meter-level set-up and area coverage for electricity and gas are confirmed to represent 'whole building' for offices/mixed use, 'common part area' for shopping centres and 'exterior area' for retail parks.	**Include**
Meter-level set-up and area coverage for electricity and gas are a combination of 'common space', 'shared services' and 'tenant space' and are confirmed to represent the 'whole building' for offices/mixed use.	**Include**

2 betterbuildingspartnership.co.uk/our-priorities/measuring-reporting/real-estate-environmental-benchmark

Water and waste reporting

Water

For water reporting, we collect data across our London, Regional and Windsor Estate portfolios.

Category	Description	Data source	Data collection	Estimations and assumptions
Total water consumption Water from rain water harvesting	Total water consumed across London, Regional, and Windsor portfolios	Municipal supplies (AMR, invoices, meter readings, estimations)	**AMR:** In the London portfolio, data is received in a variance report from the source provider, which details validated monthly consumption by meter (in m^3) and data coverage. In the Regional portfolio, AMR data is received in a spreadsheet. In the Windsor portfolio, AMRs are included in the quarterly download of meter readings. **Invoices:** Data for all portfolios is provided in a quarterly spreadsheet from the Energy Bureau's invoice management software. Meter-level gaps and a variance is queried with the source providers to validate data quality. **Meter readings:** For the London portfolio, a variance report is received detailing monthly consumption by meter (in m^3), which has been validated by the source provider. In the Regional and Windsor portfolios, a monthly meter spreadsheet is provided.	Data gaps are estimated using the following methodology for quarterly and annual reporting. Where at least 28 days of consecutive, actual data is available to use as a baseline from which to estimate: average daily consumption is calculated (ensuring only actual consumption is used, and not previously estimated consumption). This daily consumption is then used to fill gaps. Where 28 days of consecutive data is unavailable to use as a baseline from which to estimate, these meters are excluded from the analysis.
Water abstraction from Windsor	Total water abstracted on the Windsor Estate	Meter readings	Supplied as quarterly or annually (depending on lake the water is abstracted from) by Windsor Sustainability team.	No estimations are applied.
Rainwater harvesting	Total water harvested in the London and Regional portfolios	Meter readings	Meter reads taken annually in the London and Regional portfolios by The Crown Estate and Managing Agent.	No estimations are applied.
Construction water	Total water consumed by our construction activities.	Database and contractor data	Construction water consumption is recorded for each development and capital works project.	No estimations are applied.

Water and waste reporting continued

Waste

For waste reporting, we collect data across our London, Regional and Windsor Estate portfolios.

Category	Description	Data source	Data collection	Estimations and assumptions
Operational waste	Total waste generated and contracted for collection by The Crown Estate at assets across London, Regional, and Windsor Portfolios	Contractor data	Contractor data is obtained through online portals, or via emailed spreadsheets/PDFs either direct from the contractor or via the Managing Agent.	No estimations are applied.
Construction waste	Total water consumed and waste generated by our construction activities.	Database and contractor data	Construction water consumption and waste generation are recorded for each development and capital works project and logged in an online portal or provided by contractors.	No estimations are applied.

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