Environmental Reporting Criteria

to the Integrated Annual Report and Accounts 2023/24

THE CROWN ESTATE

Introduction

This Environmental Reporting Criteria outlines the data collection approach and methodology used for all environmental data reported in the Annual Report and Accounts 2023/24 and Sustainability Data Supplement 2023/24.

The document is applicable for year-end reporting and is updated annually to reflect data quality and methodological improvements in the previous financial year.

The process and methodology presented in this document relate to the reporting period 1 April 2023 to 31 March 2024. Please refer to the 2023/24 Annual Report at: thecrownestate.co.uk/annual-report and 2023/24 Sustainability Data Supplement for 2023/24 data at: thecrownestate.co.uk/assurance

In the preparation of this Environmental Reporting Criteria, we have considered the following data reporting principles in accordance with guidance from the Greenhouse Gas (GHG) Protocol (ghgprotocol.org):

— Relevance: we report data on environmental and social issues that are material to our operations and commitments
— Transparency: we aim to be transparent in our reporting, which means we report on the completeness of our data and outline any assumptions used across all datasets
— Accuracy: we strive to report accurate data and highlight areas where there are ongoing data quality improvement programmes
— Consistency: we apply consistent boundaries where appropriate to ensure aligned reporting scope across all categories and assets

We exclude data where necessary and have included a rationale for this in the methodology tables for the London, Regional and Windsor Estate portfolios.

We report environmental data in accordance with the UK government's Streamlined Energy and Carbon Reporting (SECR) requirements. Our SECR statement is included in the 2023/24 Annual Report at: www.thecrownestate.co.uk/about-us/annual-report. We measure and report our carbon emissions in line with guidance from the GHG Protocol and most recent available guidance. As the reporting landscape in the UK evolves, we will continue to mature our approach to sustainability reporting by considering updated standards and frameworks.

Overview of boundaries for reporting

We adhere to the operational control boundary outlined by the GHG Protocol for our London, Regional and Windsor Estate assets. For these portfolios, the operational control boundary means that data collection is focused upon the directly managed operations at properties under The Crown Estate's operational control. For indirectly managed properties, including 'full repairing and insuring lease' (FRI) properties, an estimation technique has been applied in order to determine Scope 3 emissions associated with the operation of these properties to allow for full GHG reporting. These assets are included in Scope 3 Category 13 'Downstream Leased Assets'. During the quarterly reporting process, managing agents inform us about disposals and new assets. This includes details about meters that are no longer within our responsibility and have been removed from our portfolio (disposals), as well as new meters that they will begin to report on (acquisitions).

Baseline years for energy reporting

Our energy target baseline of 2021/22 remains unchanged and will continue to be used to monitor progress against energy reduction targets.

Limited assurance

KPMG LLP is appointed to perform independent limited assurance over selected information, marked with the symbol △, reported in the Integrated Annual Report and Accounts in accordance with the following assurance standards issued by the UK Financial Reporting Council and International Auditing and Assurance Standards Board:

— International Standard on Assurance Engagements (UK) 3000 – 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' (ISAE (UK) 3000); and
— International Standard on Assurance Engagements 3410 – 'Assurance Engagements on Greenhouse Gas Statements' (ISAE 3410).

Please see the 2023/24 Annual Report and Accounts for further detail over the most recent reporting year.

Environmental reporting overview

Data management

EVORA Global (EVORA) is the data guardian for our real estate portfolios. The company supports us in managing the collection, analysis and reporting of energy, carbon, waste and water data for 100% of the directly managed properties in the three portfolios. EVORA also supports the estimation of energy and carbon data for indirectly managed properties. All environmental data is managed using EVORA's in-house sustainability software platform, Siera.

Portfolio and stakeholders

In our environmental data reporting for the real estate portfolio, we include the assets and activities associated with the following portfolios, and liaise with the following stakeholders for data collection:

— London
    — Managing agent: JLL
    — Energy bureau: Carbonxgen (appointed by JLL)
— Regional
    — Managing agent: Savills
    — Energy bureau: Savills Energy
    — Data collector: Stark (automated transfer of data from meters)
— Windsor Estate
    — Directly managed by The Crown Estate

Utility data source hierarchy

The hierarchy ranking system below was reviewed and agreed by EVORA and the managing agents at the outset of the annual reporting period. The ranking is applied to the data collection and analysis process for Scope 1 emissions, Scope 2 emissions, energy reporting, water reporting and intensity metrics. Perse data has been introduced in the 2023/24 reporting year. Perse provides industry source consumption data for meters upon request, using the same data and estimation methodology as energy suppliers.

Utility	Rank	Hierarchy ranking	Portfolio
Energy, gas and water	1	Half hourly data (HHD)/Automated meter readings (AMR)	Regional
	2	Invoices	
	3	Meter reads	
	4	Perse data	
	5	Calculated estimate	
Energy, gas and water	1	HHD/AMR	London/Windsor
	2	Meter reads	
	3	Invoices	
	4	Perse data	
	5	Calculated estimate	

Environmental reporting overview continued

GHG reporting methodology

Estimations and assumptions

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 4-12. Emissions associated with the operation of FRI properties are estimated using the techniques outlined in Scope 3 Downstream Leased Assets in the table on pages 11-12. Estimation methodology is agreed between the managing agents, EVORA and the relevant teams in The Crown Estate. The methodology is reviewed and updated annually, where necessary, and comments on these updates are included in the table below, and in commentary throughout this document and the Sustainability Data Supplement at: thecrownestate.co.uk/assurance.

GHG reporting scope for London, Regional, and Windsor Estate portfolios

We report against Scope 1 emissions, Scope 2 emissions and partial Scope 3 emissions for activities associated with our real estate portfolios. For transparency, the Scope 3 emissions categories excluded from reporting are those related to upstream and downstream transportation and distribution, processing of sold products, use of sold products, end-of-life treatment of sold products, franchises and investments. We review our approach to reporting against additional scopes annually.

Restatement

Where we identify errors, improve methodologies or acquire a more complete data set that results in a change to previously reported data that is considered to be material, that data will be restated annually. Typically, changes larger than 5% are considered material. However, the restatement threshold may be lower in scenarios where this is considered appropriate, such as when reported data impacts remuneration targets. Where material errors are identified, restatements will not be disclosed until the sufficient level of evidence for the emissions generating activity is acquired for the reporting year(s) in question.

Greenhouse gas emissions - Scope 1

Scope 1 (direct emissions)		Activity data			Calculation
Category	Description	Source	Data collection and validation process	Estimations and assumptions	Emissions calculation methodology
Gas consumption	Consumption of natural gas used for space heating and hot water in assets under The Crown Estate's operational control	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. Data is checked by a consultant. In the Regional portfolio, AMR data is received in a spreadsheet, which is checked for data coverage and validation by a consultant. 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 by a consultant during the upload to the data management platform. Meter-level gaps are analysed, and a variance report is run by a consultant, which is 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 no 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 estimations. Where at least 28 days of consecutive actual data is available to use as a baseline, data is used from the same month of the previous year that the gap falls within in the current year. This accounts for seasonality, applying the daily consumption logic. Where the same month of the previous year is unavailable, the best equivalent month is used (Jan/Dec, Feb/Nov, Mar/Oct, Apr/Sep, May/Aug, Jun/Jul). Where neither of these options is available, the same logic used for electricity consumption (detailed below) is applied. Where 28 days of consecutive data is unavailable, and Perse data is unavailable, this meter is excluded from the analysis.	Consumption is calculated by subtracting the previous month meter reading from the current month meter reading. Unit measurement is indicated in a separate column. Where gas data is not in kWh, the following conversion rates are used: Imperial calculation (100s of ft^3): unit used X 2.83 to convert to cubic metres X 1.02264 X 39.2 calorific value / 3.6. Metric calculation: unit used X 1.02264 X 39.2 calorific value / 3.6. These align with UK government guidance. Relevant Defra emissions factors are then applied.

Greenhouse gas emissions - Scope 1 continued

Scope 1 (direct emissions)		Activity data			Calculation
Category	Description	Source	Data collection and validation process	Estimations and assumptions	Emissions calculation methodology
Owned vehicles and machinery	Consumption of fuel used by cars and commercial vehicles and machinery owned by The Crown Estate	Windsor fuel database	Fuel consumed (fleet, machinery, tools) at the Windsor Estate portfolio is managed and collected by the Windsor management team. The data is downloaded from the fuel management system after year end. The Windsor management team splits the data into the appropriate categories (fleet, machinery, tools) and fuel type (diesel, unleaded petrol, gasoil/red diesel) as well as whether the items are owned or not (to determine the split between Scopes 1 and 3 emissions). The final downloaded spreadsheet is checked and validated by the Windsor management team. On receipt of the data EVORA reviews and confirms any data queries with the Windsor management team.	No estimations are applied.	The validated data for each category is totalled for the reporting period. Once the total figure is final the appropriate Defra carbon factor is applied according to fuel type to calculate kgCO_2e. This figure is then divided by 1,000 to convert from kg to tonnes.
Other fuels	Consumption of other fuels used for space heating and hot water	Meter readings	Data for other fuels consumed at assets is collected by the portfolio managing agents. This includes minimal usage for oil boiler and heating at one asset and exterior cleaning plant at another. This data set is issued to EVORA annually at financial year end.	No estimations are applied.	Emissions are calculated by applying Defra emissions factors.

Greenhouse gas emissions - Scope 1 continued

Scope 1 (direct emissions)		Activity data		Calculation
Category	Description	Source	Data collection and validation process	Estimations and assumptions	Emissions calculation methodology
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 is collected from invoices and F-gas service checks in each asset. Managing agents collect this data and send it to The Crown Estate at year end for annual consolidation. Data collected refers to the 'common parts area' of assets under The Crown Estate's operational control. Refrigerant losses in tenant space 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 annually from service records (in kg). All data across all portfolios is validated annually by the Group Reporting team at The Crown Estate and checked with facilities managers in the assets to confirm completeness of service records across all portfolios.	No estimations are applied.	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.

Greenhouse gas emissions - Scope 2

Scope 2 (indirect emissions)			Activity data			Calculation
Category	Sub category	Description	Source	Data collection and validation process	Estimations and assumptions	Emissions calculation methodology
Electricity use	Location-based	Emissions from electricity, heat, steam and cooling purchased by The Crown Estate for operationally controlled assets	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 by a consultant using data gap analysis reporting 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 by a consultant. In the Regional portfolio, AMR data is received in a spreadsheet, which is checked for data coverage and validation by a consultant. 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 by a consultant during the upload to the data management platform. Meter-level gaps are analysed and a variance report is run by a consultant, 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 no 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 estimations. Where at least 28 days of consecutive actual data is available to use as a baseline, average daily consumption is calculated (to ensure that only actuals are used, and not any previous estimations). Where 28 days of consecutive data is unavailable, and Perse data is unavailable, this meter is excluded from the analysis.	Consumption is calculated by subtracting the previous month meter reading from the current month meter reading. Unit measurement is indicated in a separate column. Relevant Defra emissions factors are then applied.

Greenhouse gas emissions - Scope 2 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 use	Market-based	As above	Supplier contracts, REGO certificates, supplier public disclosure	EVORA engages with the managing agents of our assets to confirm the status of electricity contract tariffs. A combination of the data sources listed is used to confirm the status of tariffs. EVORA works closely with the managing agents to confirm tariffs at a contract level and ensure correct assignment at the meter level.	Where a specific contract start date within a quarter is unknown, changes are applied to the full quarter.	Defra emissions factors for renewable energy are applied to consumption values.

Greenhouse gas emissions - Scope 3

Scope 3			Activity data			Calculation
Category	Sub category	Description	Source	Data collection and validation process	Estimations and assumptions	Emissions calculation methodology
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 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.	Emissions were calculated using a revised spend-based approach, and emissions factors were chosen for each product code in a pilot study supported by an external partner in 2023/24 based on the 2022/23 top 100 product codes by spend. Product codes were grouped into products/services, and then further grouped into categories of activities. A scan of emissions factor databases was run to identify the most suitable databases for each category. These were ranked, and then emissions factors were chosen at a category level from the highest ranked database. Each was assigned a confidence code. Low-confidence product codes were reviewed by external partners and The Crown Estate teams. The methodology was run for 2023/24, 2022/23 and 2021/22 using a blend of the above with previous SIC code emission factor categorisation for the remaining product codes. In the previous SIC code methodology, Defra SIC code emissions factors were applied to the total spend for each SIC code. The output was divided by 1,000 to convert from kg to tonnes of CO_2e. See page 18 for excluded spend.
Capital goods		Emissions from the extraction, production and transportation of capital goods purchased and used 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.	A spend-based approach was used for spend in capital projects using a blended approach as explained above. Capital goods were not included in the initial review by an external partner; however, the methodology included product codes that were reclassified from purchased goods and services to capital goods. See page 18 for excluded spend.
Electricity and transmission distribution losses		Emissions from the extraction, production and transportation of energy purchased by The Crown Estate.	Calculation	Same methodology as for total energy consumption.	No additional estimations applied.	Defra emissions factors applied.

Greenhouse gas emissions - Scope 3 continued

Scope 3			Activity data			Calculation
Category	Sub category	Description	Source	Data collection and validation process	Estimations and assumptions	Emissions calculation methodology
Waste	Operational	Emissions from the disposal and treatment of waste generated in our operational controlled assets	Waste record loader	Waste data is issued by the managing agents of all portfolios using the waste record loader, which is directly uploaded to the data management platform. EVORA works with the managing agents to align waste destinations using a drop-down of selected items. Where a destination is unclear, a comments section has been included to ensure an understanding of the data between both parties. Variances are noted and cross-referenced with managing agents if higher/lower than +/-10%.	Waste data is estimated where nine months of actual data is available. This will occur at the end of each financial year.	Defra emissions factors are applied for total waste tonnes per disposal method.
Business travel		Emissions from the transportation of employees for business-related travel.	Database	Business travel data is provided annually by The Crown Estate Finance team. Travel expenses are exported from the central database at year end; 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.	Where journey details are missing, a Defra spend-based tool has been used to estimate emissions based on the expenses claim value by travel type.	This information is used to calculate the distance travelled. The following site was used to calculate distance: airmilescalculator.combing.com/maps Mileage was converted to km using the following conversion rate (1mile = 1.60934km). For personal car use the expenses information includes actual mileage data, which is used to calculate associated carbon. In 2023/24, the data was uplifted from the 2022/23 data previously reported for the FTE number in 2023/24.

Greenhouse gas emissions - Scope 3 continued

Scope 3			Activity data			Calculation
Category	Sub category	Description	Source	Data collection and validation process	Estimations and assumptions	Emissions calculation methodology
Employee commuting	Emissions from the transportation of employees between their home and workplace.		Commuting survey	A download of survey responses is provided by The Crown Estate which contains information on: how long the employee has been employed by The Crown Estate, how often they travel 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.	Depending on the total survey respondents, the output of the survey is uplifted to cover 100% of FTE.	Defra carbon conversion factors are applied to the total miles per transport method calculated from the uplifted survey results.
Leased vehicles and machinery	Emissions from the use of vehicles and machinery leased by The Crown Estate during the reporting year.		Windsor fuel dashboard	See Scope 1 'owned vehicles and machinery' for data collection.	No estimations applied.	See Scope 1 'owned vehicles and machinery' for emissions calculation methodology.
Downstream leased assets	Evidenced tenant energy	Emissions from the use of electricity and gas by tenants in our leased assets	Monthly tenant recharge	Managing agents track and compile tenant recharged energy (in kWh) on an ongoing monthly basis (this is energy which is sub-metered directly to the tenant). At year end the spreadsheet is validated and finalised by the managing agents and issued to EVORA. The energy recharged to tenants is treated at evidenced tenant energy and used to calculate a portion of Scope 3 indirect emissions.	Gaps are filled using the same methodology as above for electricity.	The emissions calculation methodology applied is the same as for gas and electricity.

Greenhouse gas emissions - Scope 3 continued

Scope 3			Activity data			Calculation
Category	Sub category	Description	Source	Data collection and validation process	Estimations and assumptions	Emissions calculation methodology
Downstream leased assets	Estimated tenant energy	Emissions from the estimated use of electricity and gas by tenants in our leased assets.	Estimation only	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.	All data is estimated for this emissions category.	Where tenant consumption is not known, this is estimated in line with UK-Green Building Council (UK-GBC) Scope 3 estimation of leased asset emissions via the following methodology: Floor areas assumed to be tenant controlled are FRI assets and remaining tenant space not addressed through evidenced tenant energy or landlord-controlled consumption. Where actual data exists for equivalent sector types, the calculated carbon intensities are applied to the floor area. Where no actual data exists for equivalent sector types an applicable BBP REEB energy benchmark is applied and associated split between electricity and gas applied to calculate the required carbon emissions (location-based approach). For hotels, the CIBSE TM46 benchmark for general accommodation is used, applying the illustrative typical total carbon benchmark.

Streamlined energy and carbon reporting

Energy reporting is in line with SECR requirements.

Absolute data

Absolute data includes all consumption for properties where we have operational control, and that were purchased or sold during the reporting year.

Like-for-like data

Like-for-like data excludes properties that were purchased, sold or under major refurbishment at any point during the 24 months reported. Assets where there is incomplete data in either reporting year are also excluded from the analysis. Major refurbishments are defined according to the GRESB definition: alterations that affect more than 50% of the total building floor area or cause relocation of more than 50% of regular building occupants.

Energy reporting methodology

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	At the end of each quarter London and Regional energy bureaus provide a monthly breakdown of invoicing for the previous three months. The invoice breakdown contains the value (£) excluding VAT of all energy invoices under contract.	No estimations are applied.
SECR data	Narrative on energy savings applied during 2023/24.	Spreadsheet template	At the end of each year the managing agents are asked to confirm spend on energy improvements within the portfolio completed within the reporting year and energy savings associated with these improvements.	If some information is not available (ie energy savings is not but spend on improvements is), an estimation will be applied which will depend on the improvement initiative in question. Any assumptions such as this would be detailed specifically within the narrative of the report for clarity.
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 sites. The meter readings are collated by the managing agents within a master spreadsheet for the respective portfolios. EVORA receives this data annually.	No estimations are applied.
Electric vehicle (EV) charging consumption	EV charging sites are at a number of The Crown Estate's assets.	Meter readings	Total EV consumption is collected by manual meter readings from managing agents and reported annually in a spreadsheet to EVORA.	No estimations are applied.

Water and waste reporting

For water reporting, we collect data on the total water consumed across all directly managed assets, and the water saved through collection processes. For construction waste reporting, we collect data on the construction process across our London, Regional and Windsor Estate portfolios. Information about our operational waste can be found on page 10.

Water and waste reporting methodology

Category	Description	Data source	Data collection	Estimations and assumptions
Total water consumption	Total water consumed across London, Regional, and Windsor portfolios.	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 kWh) and data coverage. Data is checked by a consultant. In the Regional portfolio, AMR data is received in a spreadsheet, which is checked for data coverage and validation by a consultant. 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. Data is checked and validated by a consultant during the upload to the data management platform. Meter-level gaps are analysed and a variance report is run by a consultant, 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 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 by a consultant 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.
Construction waste	Total kg of waste generated by our construction activities.	Database	Construction energy consumption (electricity/gas), water consumption and waste generation are recorded for each development and capital works project and maintained on a central database by The Crown Estate. EVORA receive this data annually.	No estimations are applied.

Energy and emissions intensity

Methodology

Energy and carbon data has been normalised against a floor area-based denominator (square metres) to identify an intensity ratio. Floor areas are stored in our internal property management database, and updated through valuation surveys across each portfolio. These updates are checked quarterly and consolidated annually. The data and denominator (square metres) applied is dependent on two broad sector categories: Office/Mixed Use and Retail (1. Shopping Centre and 2. Retail Park):

— Office/Mixed Use
  — Square metre of gross internal area
— Retail
  — Shopping Centre: square metre or common parts area
  — Retail Park: square metre exterior lighted area (based upon number of car park spaces X $25m^2$ as per BBP Real Estate Environmental Benchmark methodology

Note that if an asset such as an office or shopping centre benefits from a car park, the area of the car park is not counted within the floor space. The use of car park space numbers/average size per space is purely for retail park intensities where electricity consumption is primarily for car park lighting, with no other energy demands (unlike offices/shopping centres). This aligns with BBP REEB methodology[1].

We review the asset intensity against expected range from REEB to understand variances, and those with erroneous intensities are reviewed. This method is more refined than previous years' reporting as we are able to review intensities at an asset level before collating a portfolio-wide intensity metric.

Typically, intensity analysis is normalised to remove the impact of external factors on consumption. Normalisation for external factors commonly includes occupancy changes and weather patterns (and therefore heat and cooling demand). The 2023/24 intensity analysis was not normalised for external factors.

Criteria for inclusion in intensity analysis

Pass all inclusion criteria	kWh/m^3	kgCO$_2$	kgCO$_2$/m^3
— Asset/data reviewed against criteria — Annual kWh consumption confirmed	— Annual energy consumption divided by denominator (per sector type) — Office/ Mixed Use — Retail — Enclosed Shopping Centre	— Location-based carbon factors (Sector 1 and Scope 2) are applied to confirmed annual consumption	— Annual CO$_2$ divided by denomination (per sector type) — Office/ Mixed Use — Retail — Enclosed Shopping Centre

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

Energy and emissions intensity continued

Criteria for inclusion in intensity analysis continued
Below are the criteria applied to data sets when determining which assets are included in the energy and carbon intensity metrics. Where an asset does not meet the following inclusion criteria, the corresponding consumption and floor area is excluded from the intensity calculation.

Criteria	Inclusion
Owned for 12 months reported (in both previous/baseline and current year)	**Include**
Major refurbishment during 12 months reported (GRESB definition). GRESB refurbishment: alterations that affect more than 50% of the total building floor area or cause relocation of more than 50% of regular building occupants.	Exclude
Complete energy electricity and gas data set for 12 months reported. All data gaps in the 2023/24 data set have been filled with estimations. 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.	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' are confirmed to represent the 'whole building' for offices/mixed use.	**Include**
Assumptions about meter-level set-up and area coverage for 'whole building' were made.	Exclude
Assumptions about meter-level set-up and area coverage for 'common space', 'shared services' and 'tenant space' were made.	Exclude
Number of meters and area coverage for 'tenant space' is based on assumption.	Exclude

Data quality improvements

Recognising the importance of data, we have made significant 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

Over the past 18 months we have conducted a significant review of the collection, analysis and reporting of our energy data across our real estate portfolio. As a result of this data reconciliation work, new meters were identified that had previously been incorrectly excluded from reporting for both 2021/22 and 2022/23. Additionally, we have increased coverage of our tenancy data relating to meters, meaning we improved our allocation of emissions between Scopes 1 and 2 to Scope 3. During this data alignment work, we have also improved our ability to determine the tagging of meters as green/standard energy, which has in turn improved our calculation of market-based emissions.

We now have a far more accurate and representative picture of our energy data across the London and Regional portfolios, and thus more confidence in our data. We will continue to work towards further improvements in the next reporting year.

Scope 1 emissions - refrigerants data

In previous reporting years, we were not able to collect actual data on fugitive losses at our real estate assets, and instead used estimates based on floor area and an estimated refrigerant loss value. In 2023/24, we worked alongside managing agents and our site managers to collect and analyse actual refrigerant loss across all our directly managed properties in our London, Regional and Windsor Estate portfolios. We are now able to report fugitive emissions based on actual refrigerant loss data.

Scope 3 emissions - supplier emissions

We worked alongside an external partner in 2023/24 to review our approach to Purchased Goods and Services reporting for our real estate and corporate emissions. Previously, we used SIC codes to identify emissions factors for spend categories, which were therefore based on a classification of the supplier, not the product that was bought. We worked with an external partner to identify an appropriate list of emissions factors per product code. Our external partner created a methodology with us based on the top 100 product codes by spend in 2022/23, and our internal team applied this to the remaining 2022/23 data set, alongside the 2021/22 and 2023/24 data sets. This significantly improves the granularity of our emissions data from purchased goods and services, as we are now applying emissions factors that apply to the product bought, rather than the supplier. Our internal team also applied the improved methodology to enhance capital goods emissions data. See page 9 for more detail on the methodology.

Appendix

1. List of exclusions from supplier emissions calculations

Exclusions are made for some spend items, including intercompany charges, marine, rural, tenant, void costs relating to energy utilities, salaries, bad debts and revenue. Exclusion categories are updated annually.

2. Glossary

EVORA calculated KPIs
Like-for-like electricity (direct managed) (London, Regional and Windsor)
Absolute electricity (direct managed) (London, Regional and Windsor)
Like-for-like fuel (direct managed) (London, Regional and Windsor)
Absolute fuel (direct managed) (London, Regional and Windsor)
Energy intensity (kWh/m^2) (direct managed) (London, Regional and Windsor)
% renewables (electricity) (direct managed) (London, Regional and Windsor)
Onsite generation (electricity)
Energy spend (£) (London, Regional and Windsor)
Heating of buildings
Fleet (petrol and diesel)
Machinery and fuels (Windsor)
Emissions from electricity (direct managed) (London and Regional)
Emissions from electricity (Windsor)
Business travel (tube, train, bus, flight, taxi, car hire, personal car)
Indirect emissions – evidenced customer purchased energy
Indirect emissions – estimated tenant energy
Indirect emissions – electricity transmission and distribution losses (London, Regional and Windsor)
Total carbon (CO$_2$e)
Emissions intensity (CO$_2$e/m^2)
Like-for-like water (directly managed) (London, Regional and Windsor)
Absolute water (directly managed) (London, Regional and Windsor)
Water from municipal supplies
Water from harvesting

EVORA calculated KPIs
Water abstraction from Windsor (m^3) (indirect use)
Waste generated from buildings (tonnes)
Landfill (%)
Incineration WER (%)
Recycled (%)
Anaerobic (%)
Reuse (%)
Landfill diversion (%)
Commuting
Capital goods and services
Fugitive emissions from air condition systems (refrigerants)
Construction waste (tonnes)
Water from construction projects (m^3)

Appendix

3. EVORA calculated environmental KPIs

Term	Definition
Scope 1 (GHG emissions)	Direct greenhouse gas (GHG) emissions from sources that are owned or controlled by the company, for example emissions from combustion in owned or controlled boilers, furnaces, vehicles and machinery.
Scope 2 (GHG emissions)	Indirect GHG emissions from the generation of purchased electricity that is consumed in its owned or controlled equipment or operations. Location-based: A method to quantify Scope 2 GHG emissions based on average energy generation emission factors for defined geographical locations, including national boundaries. Market-based: A method to quantify the Scope 2 GHG emissions based on GHG emissions emitted by the generators from which the electricity was procured.
Scope 3 (GHG emissions)	Scope 3 emissions are a consequence of the activities of the company, but occur from sources not owned or controlled by the company.
Carbon dioxide equivalent	Carbon dioxide equivalent (CO_2e) is a measure of the overall global warming potential (GWP) of multiple GHGs, expressed in terms of the GWP of one or more units of carbon dioxide.
Like-for-like	Like-for-like data excludes assets that were purchased, sold or under major refurbishment at any point during the 24 months reported.
Energy intensity	Intensity analysis normalises electricity and gas consumption data through the application of a floor area-based denominator (square metres of either gross internal area, common parts area or car park area).
GHG carbon intensity	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, common parts area or car park area).

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