Report 2023







Table of Contents

1.	Outline and scope	3
1.1.	Carbon footprint reporting approach	3
1.1.1.	Operational boundary	3
1.2.	Meter mapping	4
1.3.	Reporting requirements	4
2.	Methodology	6
2.1.	Data estimation	6
2.2.	Environmental Data Collection methodology	7
2.3.	GHG data collection methodology	8
2.3.1.	Scope 1	8
2.3.2.	Scope 2	9
2.3.3.	Scope 3	10
2.4.	Data management	15
2.5.	Data maintenance	16
2.6.	Data verification	16
2.7.	Data improvement	16



1. Outline and scope

Canary Wharf Group (CWG) is the parent company responsible for executive guidance and administrative support to operational companies including Canary Wharf Limited (CWL), Canary Wharf Management (CWM), Canary Wharf Contractors (CWC), Vertus, Canary Wharf Residential Management (CWRM) and Level39.

The CWG ESG Team reviews and manages environmental data from both the operational portfolio and development pipeline. This data includes energy, water, and waste data, which is used to calculate carbon emissions. The scope of this procedure includes identifying data sources, determining data collection methods, organising, and analysing the data, and reporting the results to stakeholders.

The reporting period for CWG's environmental data is from January 1st to December 31st. This is aligned with CWG's financial reporting period following best practice guidance.

1.1. Carbon footprint reporting approach

CWG's carbon footprint is prepared in line with the World Resource Institute's (WRI) internationally recognised Greenhouse Gas (GHG) Protocol – A Corporate Accounting and Reporting Standard (2015 revised edition).¹

The baseline year for CWG's carbon targets is 2017. Each year CWG will report its performance against this 2017 baseline. Recalculation of the baseline may be required for the following reasons:

- Structural changes to the organisational boundary (ie. merger, acquisition, demerger)
- Changes in calculation methodology
- Discovery of error

1.1.1. Operational boundary

CWG's carbon footprint is calculated using the operational control approach. Under this approach, all entities and associated assets over which CWG has 100% operational control are included under the organisation's scope 1 and 2 emission categories. All other assets or entities, over which Canary Wharf Group does not have complete operational control are included in the organisation's scope 3 emissions along with all other indirect emissions associated with the organisation.

An operational boundary defines the scope of direct and indirect emissions for operations that fall within a company's established organisational boundary. The operational boundary (scope 1, scope 2, scope 3) is decided at the corporate level after setting the organisational boundary. New facilities or premises are included within reporting from the date of acquisition. Any premises that are sold during the reporting period are removed from the CWG portfolio from the date they are sold. Canary Wharf Group have set out their operational boundary as follows:

¹Greenhouse Gas Protocol: <u>Corporate Standard | GHG Protocol</u>



Table 1. Overview of CWG operational boundary

Company	Description
CWL	CWL is the administrative arm of CWG and data for this includes CWG office areas in One Canada Square. This data is incorporated under CWM.
СШМ	 This covers the operational arm of CWG which covers both managed and non-managed buildings that are owned by CWG. These consist of: Office buildings Retail shopping centres and other retail areas on the estate Infrastructure and car parks
CWC	CWC data includes ongoing projects under construction.
CWRM	CWRM data includes residential buildings (landlord areas only).
Vertus	Vertus data covers the build to rent, intermediate rent and affordable housing buildings.
Level39	Level39 data includes all three floors which are managed by Level39, located in One Canada Square.

1.2. Meter mapping

CWG has an extensive metering network across its operations, covering the Canary Wharf estate, as well as Wood Wharf and Southbank Place. Metering is managed by Engie on behalf of CWG, and meter data feeds automatically from Engie's platform C3NTINEL into CWG's environmental data platform Envizi. Meters in landlord space, common areas and vacant space are tagged as 'Landlord' in Envizi and feed into CWG's Scope 1 and 2 emissions. Meters located in tenant spaces are tagged as 'Tenant' in Envizi and feed into CWG's Scope 3 emissions.

1.3. Reporting requirements

CWG's environmental performance data is prepared to meet the following mandatory and voluntary reporting requirements. Reporting requirements for environmental data are very rapidly changing, so these are continually reviewed and updated in line with legislation and best practice.



Table 2. CWG environmental data reporting requirements

Company		Description
Regulatory	Streamlined Energy and Carbon Reporting (SECR)	Reporting on annual energy consumption and emissions, including an emissions intensity ratio and a list of actions taken to improve energy efficiency.
	The Energy Savings Opportunity Scheme (ESOS) 2014	Energy efficiency audits to be completed every 4 years. Results to be submitted to the Environment Agency.
	UK Mandatory Climate Disclosures (MCD)	Requirement to disclose against the four pillars set out in the Task Force for Climate-Related Financial Disclosures (TCFD) recommendations: Governance, Strategy, Risk Management and Metrics & Targets.
Other external reporting frameworks	Science Based Targets (SBTs) ²	The SBTi – a partnership between the UN Global Compact, CDP, World Resources Institute and WWF – provides a consistent approach to setting SBTs, and validates companies targets for their alignment with the ambitions of the Paris Agreement.
	GRESB ³	The GRESB Real Estate Assessment underpins the investor-driven global ESG benchmark and reporting framework for listed property companies, private property funds, developers and investors that invest directly in real estate. CWG submit to both the standing assets and development benchmark.
	CDP 4	CDP is a voluntary reporting framework that used to disclose environmental information to stakeholders (investors, employees and customers). CWG respond to the climate change questionnaire.
	Real Estate Environmental Benchmark (REEB)	REEB is an operational benchmark of environmental performance for commercial property in the UK, administered by the Better Buildings Partnership (BBP).
	Better Buildings Partnership (BBP) Climate Commitment ⁵	Annual updates to CWG's Net Zero Carbon Pathway, included in the annual Sustainability Report, as well as a disclosure against TCFD recommendations.
Other self-led reporting	ESG Report	Annual ESG data and performance report, prepared in line with the European Public Real Estate (EPRA) Sustainability Best Practice Recommendations (sBPR).
	Investor reporting	Regular performance reporting to investors as requested.
	² <u>Science Based Targets</u> ³ <u>GRESB</u> ⁴ CDP	

⁵ Better Buildings Partnership Climate Commitment



2. Methodology

2.1. Data estimation

Wherever possible, actual and complete data is collected from primary sources, such as meter data or actual consumption data. Where this is not possible, secondary data (data that is one step removed from actual consumption data) or tertiary data (data two or more steps removed from actual consumption data) as well as extrapolations or interpolations where data is incomplete.

Data type	Estimation methodology
Natural gas	Consumption (kWh) estimated from average consumption of the building, or if no data available, a relevant CIBSE benchmark per floor area.
Other fuels	Consumption estimated from CWG's average kWh consumption.
Transportation fuels	Consumption estimated from CWG's average consumption.
Refrigerants	Estimated leakage from equipment register and based on the UK's Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance.
Electricity (purchased)	Consumption (kWh) estimated from average consumption of the building or meter, or if no data available, a relevant CIBSE benchmark per floor area.
Electricity (self-generated)	Generation (kWh) estimated from average output of the building, or if no data available, from historic generation of the same building.
District heating & cooling	Consumption (kWh) estimated from average consumption of the building, or if no data available, a relevant CIBSE benchmark per floor area.
Water	Consumption (m ³) estimated from CWG average.
Waste	Estimated from average weights from the project or asset, or from historic waste data. Waste data submitted by trade contractors may also be estimated using a methodology designated by the contractor.

Table 4. Data estimation methodology



2.2. Environmental Data Collection methodology

Table 5. Environmental data collection and calculation methodology

Data type	Calculation Methodology	Boundary
Natural Gas	Consumption is derived from meter data received into Envizi on a monthly basis. Natural gas consumption is collected by one meter for a whole asset.	In scope is all natural gas consumption on sites within CWG's operational boundary. This includes landlord areas and managed tenant areas CWG supplies natural gas to.
Stationary Combustion	CWML: Fuel usage is gathered by building managers and consumption is based on run hours of back-up generators. Fuel oil is not used on the estate. CWCL: Fuel consumption typically includes non-road mobile machinery (NRMM or plant), generators and the filling of fuel bowsers for further distribution. Fuel is typically procured by CWCL appointed trade contractors for use in their own or hired equipment. In the case of CWCL hired equipment, this would typically be procured by the appointed third-party logistics provider. Fuel delivery tickets for each live construction project are uploaded to Smartwaste by contractors, the volume and type of fuel is consolidated for each project by Smartwaste and extracted in a report.	In scope is all fuel consumed on sites within CWG's operational boundary.
Mobile Combustion	Mileage from each CWG owned vehicle is collected at the start of a calendar year and at the end of the calendar year by the infrastructure team. Mileage for the year can then be calculated as the difference from the start of the year to the end. This information is gathered for all vehicle types we own including diesel, petrol, petrol-hybrid and electric vehicles.	In scope is all mileage from cars owned or leased by CWG.
Refrigerants	Refrigerant registers listing refrigeration equipment are kept and updated by building managers and building service managers. Refrigerant type and equipment charge are recorded on the register. Leakage is estimated based on DEFRA Environmental Reporting Guidelines.	In scope are all refrigerant losses on sites within CWG's operational boundary.
Electricity	Half hourly meter data is loaded to Envizi directly from meters for both CWML and CWCL. In some instances, electricity consumption is derived from supplier invoices and loaded to Envizi.	In scope is all electricity consumption on sites within CWG's operational boundary. This includes landlord areas and managed tenant areas CWG supplies electricity to.



District heating and cooling	Meter readings from district heating and cooling meters are automatically loaded to the sitewide Building Management System. Individual asset data is exported in reports of cumulative meter reads and consumption is calculated from these.	In scope is district heating and cooling consumption purchased from CWG by a tenant within a managed, leased area.
Water	CWML: Water data is collected via meter data received into Envizi. Water discharge to sewer rates are calculated by the supplier upon connection of the supply and received from Engie annually. CWCL: Water data is captured by manual meter readings with photo evidence and collated on SmartWaste.	In scope is all water consumption on sites within CWG's operational boundary. This includes landlord areas and managed tenant areas CWG supplies water to.
Waste	CWML: Waste managed by CWG is separated and collected into different waste streams before being taken to their respective loading bay. The different waste streams from each asset are weighed and recorded before they are taken away via their given disposal route. CWCL: Waste on site is separated into its waste streams, the waste is then collected by contracted carriers and removed from site. Upon removal a waste transfer note is to be completed and loaded to a CWG software platform. This is either Qlflow, which reads the details of the tickets and collates the information onto the software, or Smartwaste, whereby contractors manually input the data from a ticket and upload photo evidence alongside. A waste report is then exported from Smartwaste defining the volumes of waste for each waste stream and their specific disposal route.	In scope is all waste created on sites within CWG's operational boundary. This includes landlord areas, managed tenant areas and waste generated by trade contractors appointed by CWCL. This does not include waste stored by CWG for non-managed tenants or any ad-hoc waste recovery arranged for by a tenant.

2.3. GHG data collection methodology

2.3.1. Scope 1

Scope 1 emissions are direct GHG emissions which occur from sources that are owned or controlled by the company. CWG's Scope 1 emissions are calculated using actual consumption data wherever possible (kWh of energy used or direct consumption units such as litres), which is multiplied by the relevant carbon emission factor.



Table 6. Scope 1 emissions calculation methodology

Data Type	Calculation Methodology	Calculation Boundary	Emission factor
Natural Gas	Consumption is derived from meter data received into Envizi. A process based emissions method, a DEFRA Emissions factor for the corresponding year is applied to the natural gas consumption within Envizi, this data is exported in an annual report to gain consumption per business area or per asset for reporting.	In scope are all emissions generated from natural gas consumption on sites within CWG's operational boundary.	Natural Gas in kWh (DEFRA) ⁶
Stationary Combustion	CWML: Generator run hours are used to calculate the consumption of purchased fuel for managed assets within the year. Consumption is then input into Envizi, where a DEFRA emission factor is applied to gain emissions. CWCL: Fuel consumption derived from delivery notes is input into Envizi for different fuel types. A DEFRA emission factor is applied to the consumption to gain emissions for fuel types.	In scope are all emissions from all fuel consumption on sites within CWG's operational boundary.	Diesel (DEFRA) Biodiesel HVO (DEFRA)
Mobile Combustion	Mileage for each fuel type is input into Envizi, where a DEFRA emission factor for the specific fuel type is applied to gain the emissions.	In scope are all emissions generated from cars owned or leased by CWG where CWG have operational control.	Passenger vehicles - dependent on vehicle type (DEFRA)
Refrigerants	Estimated refrigerants leakage rate is calculated in the CWG tool, a DEFRA emissions factor for the relevant refrigerant is then applied to the estimated leakage.	In scope are all refrigerant emissions on sites within CWG's operational boundary.	Refrigerant & other emissions - dependent on refrigerant type (DEFRA)

2.3.2. Scope 2

Scope 2 emissions account for GHG emissions from the generation of purchased electricity, heat, or steam. Scope 2 emissions from electricity can be reported on a location-based or market-based methodology. Location-based electricity is calculated based on the average emissions intensity of grids in which energy consumption occurs. The relevant carbon conversion factors are sourced from DEFRA. Market-based electricity is calculated using specific electricity conversion factors sourced directly from suppliers or energy attribute certificates reflecting the true emissions associated with the energy mix purchased. CWG disclose both location-based and market-based emissions annually.

⁶ UK Government GHG Conversion Factors for Company Reporting. <u>Greenhouse gas reporting:</u> <u>conversion factors 2023 - GOV.UK (www.gov.uk)</u>



Table 7. Scope 2 emissions calculation methodology

Data Type	Calculation Methodology	Calculation Boundary	Emission factor
Electricity	Meter data automatically loaded to Envizi, a DEFRA emission factor is applied to the consumption	In scope are all emissions generated from electricity consumption on sites within	Location-based: Electricity Generated kWh (DEFRA).
	to gain location-based emissions. As CWG purchased electricity is REGO backed the CWG supplier specific tariff can be applied manually to gain market-based emissions.	CWG's operational boundary.	Market-based: Supplier specific emissions factor.

2.3.3. Scope 3

Canary Wharf Group's scope 3 emissions are calculated in line with the WRI's Greenhouse Gas Protocol: Corporate Value Chain (scope 3) Accounting and Reporting Standard as well as the WRI's GHG Protocol Technical Guidance for Calculating Scope 3 emissions.

Canary Wharf Group uses a hybrid approach, using the following two methods:

- **Process-based method** using actual consumption data on a given activity and the associated carbon conversion factor (using DEFRA or IEA factors) to calculate the emissions.
- **Extended Environmental Input-Output (EEIO) model method** using spend data and EEIO models to quantify the emissions associated with spend in each sector of the economy in each geography.

Where actual consumption data is available, the process-based method is applied. This method is always prioritised as it is a more accurate method to estimate scope 3 emissions. However, in the absence of actual consumption data the EEIO model approach is followed.



Table 8. Scope 3 emissions calculation methodology

Scope 3 Category	Applicability	Calculation Methodology	Input Data	Emission Factor
Cat 1: Purchased goods and services Extraction, production and transportation of goods and services purchased or acquired by the reporting company in the reporting year, not otherwise included in Categories 2-8.	Relevant	Emissions are calculated by the spend-based method, by multiplying supplier spend by the US Environmentally- Extended Input-Output (USEEIO) emission factors based on the most suitable economic sector of spend. At present these emissions factors do not account for inflation.	Spend per supplier as recorded on Yardi.	USEEIO emissions factors.
Cat 2: Capital goods Extraction, production, and transportation of capital goods purchased or acquired by the reporting company in the reporting year.	Relevant	Covered under Cat 1: Purchased goods and services.	N/A	N/A
Cat 3: Fuel-and energy- related activities Extraction, production, and transportation of capital goods purchased or acquired by the reporting company in the reporting year.	Relevant	Fuel and energy related activities not included in scope 1 or scope 2 are calculated using the process-based method as follows. Consumption data for purchased fuel, natural gas and vehicles has the suitable DEFRA Well-To-Tank (WTT) emission factor applied. For electricity and heat, the suitable DEFRA Well-To-Tank (WTT) emission factor and Transmission & Distribution (T&D) emission factor is applied.	Primary energy data from CWG managed areas.	WTT – Fuels (DEFRA).
Cat 4: Upstream transportation and distribution Transportation and distribution services purchased by the reporting company in the reporting year, including inbound logistics, outbound logistics (e.g., of sold products), and transportation and distribution between a company's own facilities (in vehicles and facilities not owned or controlled by the reporting company)	Relevant	Deliveries transport data received via Datascope includes the distance travelled, in miles, for each delivery to a CWG construction site. For each delivery noted, the distance in miles is multiplied by an emissions factor based on vehicle type and fuel type.	Contractor delivery notes.	Freighting goods – scope 3 (DEFRA).



Cat 5: Waste generated in operations Disposal and treatment of waste generated in the reporting company's operations in the reporting year (in facilities owned or controlled by the reporting company).	Relevant	CWM: Waste streams are consolidated by asset and disposal route and an emissions factor is applied according to the waste type and disposal route. Water data is collected via metering into Envizi. Water discharge to sewer rates are calculated by the supplier upon connection of the supply and received from Engie annually. A GHG conversion factor for Water Supply is applied and a GHG conversion factor for water treatment is applied. CWCL: A waste report is exported from Smartwaste defining the volumes of waste for each waste stream and their specific disposal route. A GHG conversion factor is then applied, using the 'Waste disposal' conversion factors, to the waste type and its waste disposal route. Water consumption is obtained by metering and a GHG conversion factor for Water Supply is then applied. If there is any discharge to sewer within the reporting year, a water treatment emission factor will be applied.	Waste data (tonnes) from CWM waste management team. Waste data (tonnes) from Smartwaste.	Waste disposal – scope 3 (DEFRA). Water supply – scope 3 (DEFRA). Water Treatment – Scope 3 (DEFRA).
Cat 6: Business Travel Transportation of employees for business-related activities during the reporting year (in vehicles not owned or operated by the reporting company).	Under review	All of CWG's operations are located within London so business travel is negligible, however this is under review for inclusion in future reporting.	N/A	N/A
Cat 7: Employee commuting Transportation of employees between their homes and worksites during the reporting year (in vehicles not owned or operated by the reporting company).	Relevant	Employee commuting data is obtained from employee travel surveys, using postcode regions to estimate length of journey to work. Length of the journey is then multiplied by 2 to consider a return journey and by the number of working days within the reporting year and an appropriate emission factor for the mode of transport (bus, car, tube, etc.) At present, working from home is not considered in this category.	Employee travel surveys.	Business travel - dependent on mode of transport (DEFRA).



Cat 8: Upstream leased assets	Not relevant	CWG does not lease assets from other organisations.	N/A	N/A
Operation of assets leased by the reporting company (lessee) in the reporting year and not included in scope 1 and scope 2 – reported by lessee.				
Cat 9: Downstream transportation and distribution	Not relevant	CWG does not ship products.	N/A	N/A
Transportation and distribution of products sold by the reporting company in the reporting year between the reporting company's operations and the end consumer (if not paid for by the reporting company), including retail and storage (in vehicles and facilities not owned or controlled by the reporting company).				
Cat 10: Processing of sold products	Under review	This category has not yet been formally assessed but may be relevant.	TBC	TBC
Processing of intermediate products sold in the reporting year by downstream companies (e.g., manufacturers).				
Cat 11: Use of sold products	Under review	This category has not yet been	TBC	TBC
End use of goods and services sold by the reporting company in the reporting year.		relevant.		
Cat 12: End of life treatment of sold products	Under review	This category has not yet been formally assessed but may be relevant	TBC	TBC
Waste disposal and treatment of products sold by the reporting company (in the reporting year) at the end of their life.				



Cat 13: Downstream leased assets Operation of assets owned by the reporting company (lessor) and leased to other entities in the reporting year, not included in scope 1 and scope 2 – reported by lessor.	Relevant	In CWM managed buildings, meters for some tenant electricity data is accessible by CWG, and the data is fed automatically into the Envizi software. Any tenants without meters automatically feeding in is either requested directly from the tenant or estimated using the floor area and relevant CIBSE benchmark. An applicable emissions factor is applied and this is added to the metered data. Data requested from non-managed assets is included in scope 3 downstream leased assets. The data is input into the Envizi software and a relevant emission factor is applied.	Automatic meters. Tenant questionnaires.	Location Based: Electricity in kWh (DEFRA). Natural Gas in kWh (DEFRA). Heat and Steam in kWh (DEFRA). Market Based: Supplier- specific emissions factor Or Residual Mix Factors for EEA (RE-DISS).
Cat 14: Franchises	Not relevant	CWG does not have franchises.	N/A	N/A
reporting year, not included in scope 1 and scope 2 – reported by franchisor.				
Cat 15: Investments	Not relevant	CWG does not have investments	N/A	N/A
Operation of investment (including equity and debt investments and project finance) in the reporting year, not included in scope 1 or scope 2.		this category.		



2.4. Data management

CWG use a number of different tools to collect, manage and monitor environmental data. The main tool used for the calculation of CWG's carbon footprint is Envizi, however this is supplemented by a number of other systems across the organisation, as detailed in Table 9.

Table 9. Environmental data management tools

Tool	Description
Envizi	Envizi is the main tool CWG use to collect environmental data across the organisation. The automated process within the database streamlines the data required for reporting and auditing. Utility data is automatically fed into Envizi via live meter data (uploaded on a day+1 basis) or backlogged consumption from invoices (uploaded monthly). Non-automated data from consumption logs are stored on spreadsheets and saved in SharePoint before being manually uploaded to Envizi. Emission factors are saved within Envizi and automatically applied to the relevant data types.
Smartwaste	CWC waste, water, materials, electricity and fuel data is stored and consolidated in the SmartWaste database. This database provides monitoring and reporting for projects under construction. SmartWaste is managed by CWC and enables contractors to upload and access their data by project.
Carbon Tool	The Carbon Tool is used to collect and store actual data from suppliers by apportioning a percentage of their overall emissions to CWG. CWG aims to use the actual data from this database to better access the carbon emission impact from the supply chain.
Datascope	The Datascope system records all the deliveries that come to the CWC sites from the trade contractors. This enables the monitoring of emissions associated with trade contractors commuting and material deliveries. Datascope also captures Non-Road Mobile Machinery (NRMM) to ensure compliance with the Mayor of London Guidance for air quality.
C3ntinel	This is an energy management software that stores large volumes of data from utilities. The meters from CWG assets are connected to this platform to collect automated data. The consumption data from C3ntinel is automatically fed into Envizi.



2.5. Data maintenance

To ensure the effectiveness of the data management process, the Sustainability Analysts will work with other departments across the organisation, including Building Management and Construction, to update and maintain the data in Envizi. Reviews should be undertaken quarterly to ensure asset and data completeness and accuracy, update data sources, archive old data, and ensure that the data is kept secure.

The Senior Sustainability Report Manager will coordinate with other departments across the organisation including Company Secretary and Legal to review the Operational Boundary and fully document all entities/ business units. The asset list should be regularly reviewed to ensure that all operations are accounted for as well as the emission sources.

2.6. Data verification

Before data can be externally reported, CWG data goes through an annual verification process from an externally appointed consultant. All assurance meetings are attended by either the Senior Sustainability Report Manager or a Sustainability Analyst. Environmental data reported in the annual Sustainability Report, as well as GRESB and CDP disclosures, currently undergoes limited assurance in line with ISAE3000.

2.7. Data improvement

We constantly aim to improve the quality of our data by increasing both the frequency and accuracy of data collected. This includes a drive to increase the amount of primary data collected. The Sustainability team should work closely with the building management teams, and onsite construction teams, to continually identify opportunities for improvement and better communication of trends to the relevant internal and external stakeholders.



Canary Wharf Group plc One Canada Square, Canary Wharf, London E14 5AB +44 (0) 20 7418 2000 | pressoffice@canarywharf.com canarywharf.com | Instagram & TikTok @canarywharflondon