Cabinet Office

CARBON REDUCTION PLAN GUIDANCE

Notes for Completion

Where an In-Scope Organisation has determined that the measure applies to the procurement, suppliers wishing to bid for that contract are required at the selection stage to submit a Carbon Reduction Plan which details their organisational carbon footprint and confirms their commitment to achieving Net Zero by 2050.

Carbon Reduction Plans are to be completed by the bidding supplier entity and must meet the reporting requirements set out in supporting guidance, and include the supplier's current carbon footprint and its commitment to reducing emissions to achieve Net Zero emissions by 2050.

The Carbon Reduction Plan should be updated regularly (at least annually) and published and clearly signposted on the supplier's UK website. It should be approved by a director (or equivalent senior leadership) within the supplier's organisation to demonstrate a clear commitment to emissions reduction at the highest level. Suppliers may wish to adopt the key objectives of the Carbon Reduction Plan within their strategic plans.

A template for the Carbon Reduction Plan is set out below. Please complete and publish your Carbon Reduction Plan in accordance with the reporting standard published alongside this PPN.

Carbon Reduction Plan

Supplier name: BRE Group (Building Research Establishment)

Publication date: 5th October 2022

Commitment to achieving Net Zero

BRE Group (Building Research Establishment) is committed to achieving Net Zero emissions by 2050.

Baseline Emissions Footprint

Baseline emissions are a record of the greenhouse gases that have been produced in the past and were produced prior to the introduction of any strategies to reduce emissions. Baseline emissions are the reference point against which emissions reduction can be measured.

Baseline Year: 2020-21
Additional Details relating to the Baseline Emissions calculations.
BRE Group's main use of energy is electricity and natural gas used in buildings across the BRE Estate. There are 48 buildings across the estate, and these are supplied with electricity and gas via 2no main electricity incomers and 6no main gas incomers. Energy consumption data for electricity and gas was collated from monthly supplier invoices from EDF (electricity) and Corona Energy (natural gas). Within the BRE estate there are several buildings which are sub-let to other organisations, who are then recharged for their individual electricity and gas consumption based on a combination of sub-metering and floor area apportionment of common utilities costs. The energy which is recharged to these occupiers is considered outside of the scope of this report, and so the tenant recharges have been used to deduct these amounts from the invoice totals. Emissions generated from the burning of natural gas on site are considered Scope 1 (Direct combustion), while emissions generated off-site from the provision of grid electricity are considered Scope 2 (Indirect energy from generating electricity) and Scope 3 (Transmission and Distribution losses associated with delivering electricity through the grid). Reporting of Emissions resulting from the use of grid electricity and natural gas were calculated using the UK Government GHG Conversion Factors for Company Reporting. In addition to the energy used in the buildings across the estate, BRE Group uses a significant amount of energy for transport fuel. This is used both for business travel in hired or private employee-owned vehicles and employee commuting (Scope 3 indirect emissions). Fuel consumption data for business travel was calculated from a combination of staff expenses claims for fuel purchased (with receipts) and for miles travelled (using standard £/mile factors).

Fuel expenses figures are converted into energy and carbon by applying average UK petrol cost figures for the year to work out the volume (in litres) of fuel purchased, and then this this figure is converted into carbon using the 2021 UK Government GHG Conversion Factor for kgCO2e/litre (average biofuel blend). The total miles travelled based on mileage expense claims are converted into energy and carbon using the UK Government GHG Conversion Factor for kgCO2e/mile (based on an 'Executive' car type). These are then converted into kWh using the kgCO2e/kWh (Gross CV) factor from the UK Government GHG Conversion Factors.

Annual energy consumption and associated carbon emissions for BRE Group over the period April 2021 to March 2022 are the most recent data. Reporting of Scope 3 emissions is included within this report (fuel consumption in private or hired vehicles, and transmission and distribution losses from the use of grid electricity). Other Scope 3 emissions have been calculated (employee commuting and waste generated in operations) and there are plans to expand our data capture to improve the accuracy of our Scope 3 emissions reporting in future such as conducting a 2023 staff commuting survey.

Our baseline year 2019-20 emissions are contrasted with a significant decrease in our 2020-21 emissions due to the impact of the Covid-19 pandemic lockdown with office staff working from home and significantly reduced business travel activity. In 2021-22 our Watford campus underwent significant refurbishment to reflect a reconfiguration of our needs in our Estate including a majority of staff adopting a flexi-hybrid work pattern.

Sources:

Annual Energy and Carbon Report BRE Group May 2020 V1.1 Ref: 29717EJK T. Prudden, Focus FM.
Annual Energy and Carbon Report BRE Group June 2021 V1.0 Ref: 30182TP E. Kent, Focus FM.
Streamlined Energy and Carbon Report 2021/22 BRE Group (v1 23/6/2022) Concept Energy Solutions Limited

Baseline year emissions: 2019-20 (April to March)

EMISSIONS	**TOTAL (tCO_2e)**
Scope 1	**726.2**
Scope 2	**1,012.4**
Scope 3	**705.0**

Category	tCO2e	Note
Upstream transportation and distribution	86	Losses from delivery of electricity through the grid
Waste generated in operations	24	Calculated from our S-Plan waste data and Gov emissions factors 2020.
Business travel	172	Hired or employee vehicles. Note 2.3tCO_2e of Scope 1 reported above is business travel company vehicles.
Employee commuting	423	Calculated from our staff travel survey 2014 and Gov emission factors 2020.
Downstream transportation and distribution	0	We do not transport and distribute products

Total Emissions	**2,443.6**

<table>
<tr><th colspan="2">Current Emissions Reporting year: 2021-22 (April to March)</th></tr>
<tr><td>EMISSIONS</td><td>TOTAL (tCO_2e)</td></tr>
<tr><td>Scope 1</td><td>1210.2</td></tr>
<tr><td>Scope 2</td><td>922.7</td></tr>
<tr><td>Scope 3</td><td>280.1
<table>
<tr><th>Category</th><th>tCO2e</th><th>Note</th></tr>
<tr><td>Upstream transportation and distribution</td><td>81.7</td><td>Losses from delivery of electricity through the grid</td></tr>
<tr><td>Waste generated in operations</td><td>7.9</td><td>Calculated from our S-Plan waste data and Gov emissions factors 2021.</td></tr>
<tr><td>Business travel</td><td>54.5</td><td>Hired or employee vehicles.</td></tr>
<tr><td>Employee commuting</td><td>136</td><td>Calculated from our staff travel survey 2014 and Gov emission factors 2021.</td></tr>
<tr><td>Downstream transportation and distribution</td><td>0</td><td>We do not transport and distribute products</td></tr>
</table></td></tr>
<tr><td>Total Emissions</td><td>2,413.0</td></tr>
</table>

Emissions reduction targets

In order to continue our progress to achieving Net Zero, we have adopted the following carbon reduction targets.

We project that carbon emissions will decrease over the next five years to **1820** tCO_2e by 20**27-28**. This is a reduction of **25**% from baseline.

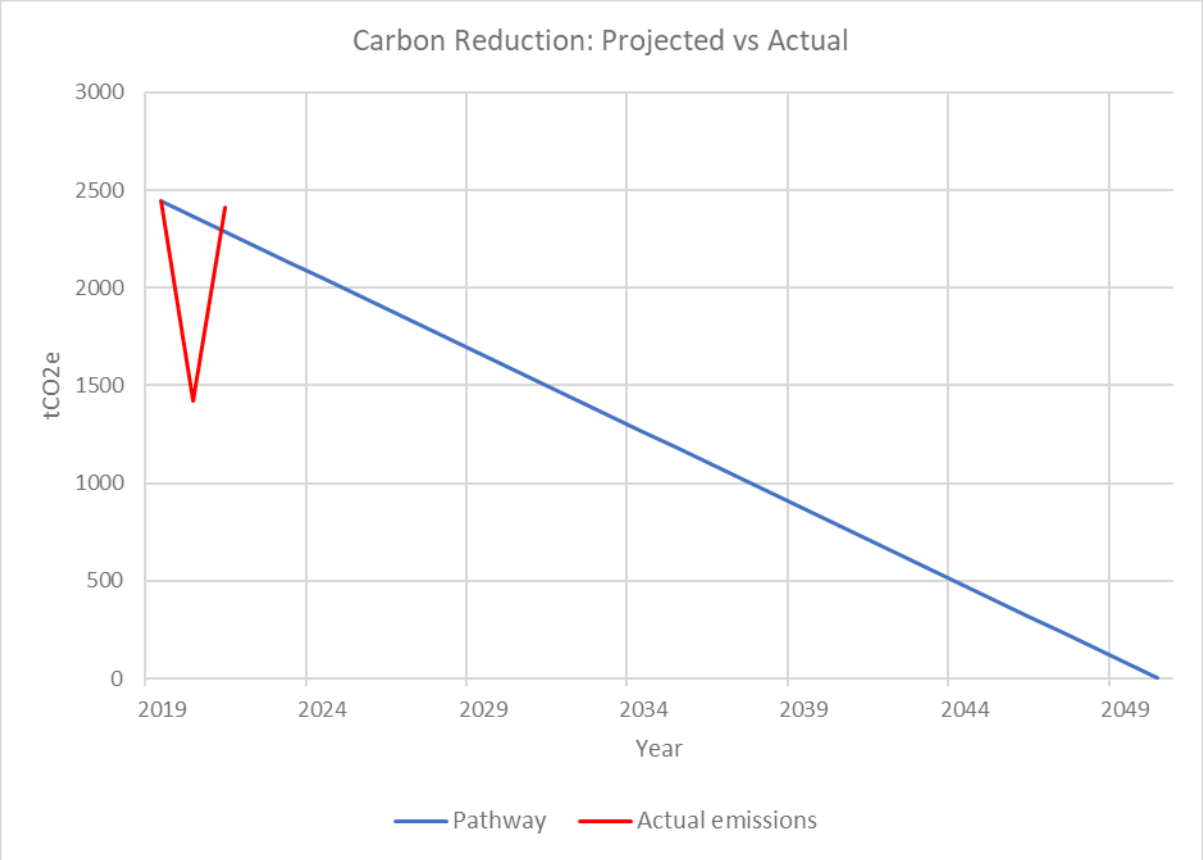
Intensity ratio

Intensity ratios allow comparison of overall emissions data which we believe will help assist in focus on reduction. The BRE estate consists of 48no buildings of various sizes and uses at the Watford Science Park and small sites at Middlesbrough and Glasgow. The overall BRE Group floor area of 31,214m^2.

Using the total emissions figures the Emissions Intensity Ratio (EmIR) for the 2021/22 reporting year is 72.7 $kgCO2/m^2$.

Source: Streamlined Energy and Carbon Report 2021/22 BRE Group (v1 23/6/2022) Concept Energy Solutions Limited

Progress against these targets can be seen in the graph below:



Carbon Reduction Projects

Completed Carbon Reduction Initiatives

A wide range of environmental management measures and projects have been completed or implemented since the 2019-20 baseline. Most of these focus on reducing electricity consumption or reducing gas consumption. The carbon emission reduction achieved by these schemes is estimated to equate to **89** tCO_2e, a **4**% reduction against the 2019-20 baseline and the measures are in effect. NOTE our 2020-21 figures are significantly impacted by the pandemic with office staff working from home and reduced corporate travel so this 4% reduction associated with these measures is an estimate. NOTE our 2021-22 figures show a significant increase in emissions due to gas consumption (+67.8%) when compared to 2019/20. At this stage, this high increase cannot be explained and is under investigation.

Over the past year there have been many energy efficiency projects implemented across the estate, and these have been summarised below.

Facility and Building	Project	Goals
Watford B5.4	LED lighting upgrade landing areas	Reduce electricity consumption

Watford B5.4	Boiler (1) replacement	Reduce gas consumption
Watford B15	Roof replacement and insulation upgrade	Reduce heat loss / gain
Watford B15	Boiler replacement	Reduce gas consumption
Watford B15	LED lighting upgrade Concrete Mixing area	Reduce electricity consumption
Watford B16	LED lighting installation	Reduce electricity consumption
Watford B16	Boiler replacement	Reduce gas consumption
Watford B20.2	LED lighting upgrade	Reduce electricity consumption
Watford B23	Corridor and loft space LED upgrade	Reduce electricity consumption
Watford B23	Air conditioning replacement	Reduce electricity consumption
Watford B24	LED lighting upgrade Goods In area	Reduce electricity consumption
Watford B24.1	LED lighting upgrade 1st Floor	Reduce electricity consumption
Watford B26	LED lighting Vintec area	Reduce electricity consumption
Watford B35	LED lighting upgrade 1st Floor	Reduce electricity consumption
Watford B74	Boiler replacement	Reduce gas consumption
Watford Lecture Theatre	LED lighting installation	Reduce electricity consumption
Watford Conference Room	LED lighting installation	Reduce electricity consumption

In the future we will implement further measures. BRE Group carry out world-leading research and development into energy efficient buildings for example and we want to get better at how we use this wealth of knowledge and expertise to be part of our carbon reduction plan. Actions underway are:

- Empowering colleagues to support environmental management measures including certification schemes like ISO14001
- We are reviewing B-Corp framework and the SBTi measures and how they could be used to support and accelerate our carbon reduction plan
- We are conducting a root and branch review of our policies and procedures with a focus on their touchpoint with sustainability and how changes to policy can result in a reduction in carbon emissions, e.g. our company travel policy
- We are piloting carbon reduction personal apps for staff members to support better choices and accounting for personal contributions to our emissions reduction
- We are conducting a staff survey on commuting transport methods and days working on site (Watford) and working from home.

Declaration and Sign Off

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard[1] and uses the appropriate Government emission conversion factors for greenhouse gas company reporting[2].

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard[3].

This Carbon Reduction Plan has been reviewed and signed off by the board of directors (or equivalent management body).

Signed on behalf of the Supplier:

Jane Goddard, Director Corporate Affairs

Date: 5th October 2022

[1] https://ghgprotocol.org/corporate-standard
[2] https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting
[3] https://ghgprotocol.org/standards/scope-3-standard