

Carbon reporting

Carbon footprint assessment and reduction plan

Financial Year 2020/21



Contents

1. Summary 1
2. Assessment..... 3
3. Targets and actions 8

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.

To the best of our knowledge, emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard and uses the appropriate Government emission conversion factors for greenhouse gas company reporting. 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.

This Carbon Reduction Plan has been reviewed and signed off by SQW’s Management Board.



Signed:
.....

Date: 25/01/2022

1. Summary

Commitment to net zero and being carbon neutral

- 1.1 SQW is committed to being a net zero company by 2030**, which means that we will reduce our emissions as far as is practical and offset the remaining emissions. This report sets out a baseline assessment of carbon emissions for 2020/21 and the actions that we will implement going forward.
- 1.2 SQW was carbon neutral for 2020/21** by offsetting our carbon emissions. The year 2020/21 was an unusual year, with very limited business travel and commuting, though a high level of homeworking. We will therefore continue to monitor our emissions as new working patterns evolve. Inherently, SQW is a relatively low emissions consultancy business.

Baseline and latest emissions

- 1.3** Table 1-1 summarises the carbon emissions for 2020/21, representing both our baseline and latest carbon footprint. This shows **total emissions of 35.4 tCO₂e** (tonnes of carbon dioxide emissions) across SQW's operations, equating to 0.8 tCO₂e per employee. We have paid to offset these emissions, and so **for 2020/21 we were carbon neutral**. Given the unusual context of 2020/21, we expect emissions to fluctuate in the short-term as new working arrangements are established.

Table 1-1: SQW carbon emissions for 2020/21 (baseline reporting)

Emissions categories and what is included	Emissions, tCO ₂ e														
Scope 1: <ul style="list-style-type: none"> We lease our office space and have no control of heating. We have no company cars. Therefore, there are no emissions associated with Scope 1 	0.0														
Scope 2: <ul style="list-style-type: none"> Purchase of electricity and heating for offices 	8.3														
Scope 3: <table border="1"> <tbody> <tr> <td>Purchases, incl. the upstream transportation and distribution</td> <td>2.8</td> </tr> <tr> <td>Transmission/distribution losses from purchase of electricity</td> <td>0.4</td> </tr> <tr> <td>Waste generated in operations</td> <td>0.0*</td> </tr> <tr> <td>Business travel (incl. hotel stays)</td> <td>0.1</td> </tr> <tr> <td>Employee commuting</td> <td>0.1</td> </tr> <tr> <td>Homeworking</td> <td>23.6</td> </tr> <tr> <td>Downstream transportation and distribution</td> <td>0.0**</td> </tr> </tbody> </table>	Purchases, incl. the upstream transportation and distribution	2.8	Transmission/distribution losses from purchase of electricity	0.4	Waste generated in operations	0.0*	Business travel (incl. hotel stays)	0.1	Employee commuting	0.1	Homeworking	23.6	Downstream transportation and distribution	0.0**	27.1
Purchases, incl. the upstream transportation and distribution	2.8														
Transmission/distribution losses from purchase of electricity	0.4														
Waste generated in operations	0.0*														
Business travel (incl. hotel stays)	0.1														
Employee commuting	0.1														
Homeworking	23.6														
Downstream transportation and distribution	0.0**														
Total for 2020/21	35.4														
Intensity ratio: carbon emissions per FTE	0.8														

Source: SQW. Notes: *Very small levels of waste-related emissions mean that this is rounded to zero. **Given that we sell knowledge through consultancy services, rather than a physical product, there is no downstream transportation and distribution. Therefore, the emissions associated with this category of Scope 3 are zero. No. of FTEs uses the average across the year, which was 45.4.

Emissions reductions targets

- 1.4** In setting emissions reductions targets we have been mindful of those areas where we have some degree of control and influence, and also where we have a clear current understanding of our emissions and options to reduce them. As noted above, 2020/21 was an unusual year for SQW's operations, with almost no business travel or commuting and significant homeworking. The former resulted in low emissions, whilst the latter increased our emissions. Therefore, our reported baseline, while accurate, does not reflect a typical year. We therefore expect emissions to fluctuate, and possibly increase, in the short-term as new working arrangements are established. We hope to be in a better position to set targets on these Scope 3 emissions in the future when we have a better reflection of 'steady state' activity, but at this stage we are not able to do so in a sensible way.
- 1.5** The area where we can set emissions targets is in relation to Scope 2, the purchase of electricity and heating for our offices. We know that one of our three offices uses renewable energy. We intend to ensure that all of our offices use renewable energy by 2030, with the result that our Scope 1 and 2 emissions are zero. As an interim target, we intend to reduce Scope 2 emissions by around 50% from the baseline level by 2027 (i.e. by five years from the time of this report). This means that one further office will use renewable energy by 2027 (and that any additional offices also use renewable energy). This will be achieved through influence of our landlords and/or in the role of energy sources in future office move/lease decisions – alongside other factors such as specific location, price, market availability etc.
- 1.6** If achieved, **this change to Scope 2 emissions would reduce our baseline position by around 12% by 2027 and by 23% by 2030.**

Actions

- 1.7** A full set of actions are set out in section 3. Priority actions for the coming period are to:
- undertake a more in-depth analysis of emissions associated with homeworking and commuting – this will help us better understand how hybrid working may affect our emissions and what appropriate targets and actions might be
 - where practical and in line with business needs embed low emissions that have been achieved from reduced travel due to the pandemic through online meetings
 - build environmental impacts into office infrastructure decisions and discussions (including with landlords), in particular in relation to energy tariffs, with the ultimate objective that we have zero emissions associated with the electricity and heating of offices by 2030.

2. Assessment

Scope 2: heating and powering our offices

- 2.1** SQW has three physical offices, in Edinburgh, London and Manchester. Two employees are also based in the office of one of our sister divisions, in Oxford. The Edinburgh office has a mix of gas and electricity, whilst the London and Manchester offices have only electricity. We know from our landlord of our Manchester office that the electricity is from a 100% renewable energy tariff, and so the emissions from electricity usage are zero. We have been unable to ascertain from landlords in Edinburgh and London the electricity tariffs, and so we have drawn on emissions conversion factors provided in Government guidance¹ for the average of electricity generation. Emissions for the employees based in Oxford are attributable to our sister divisions and so are zero for the purposes of SQW's carbon reporting.
- 2.2** Table 2-1 summarises gas and electricity usage across the offices, together the carbon emissions associated with these. This shows **total emissions of 8,277 kg CO₂e, which are split evenly across the Edinburgh and London offices.**

Table 2-1: Usage and emissions associated with electricity and gas for SQW offices

	Avge FTEs for 2020/21	Gas usage (kWh)	Elec usage (kWh)	Emissions from gas (kg CO ₂ e)	Emissions from elec (kg CO ₂ e)	Total emissions (kg CO ₂ e)
Edinburgh	7.7	17,937	4,092	3,285	869	4,154
London	18.6	N/A	19,417	-	4,123	4,123
Manchester	16.6	N/A	17,271	-	-	-
Oxford	1.7	N/A	N/A	0	0	0
Total	44.7	17,937	40,780	3,285	4,992	8,277

Source: SQW analysis

Notes: Gas and electricity usage for Edinburgh are estimated based on the costs due to us provided by the property's landlords. The London office usage is estimated based on breakdowns provided by the landlords that do not match to our own April-March reporting cycle. Manchester electricity usage is estimated based on actual use data per FTE from London. The Manchester office is on a 100% green tariff, and so emissions are zero. Oxford's emissions are excluded as the office is included within our sister divisions. Emissions are calculated based on usage and the emissions conversion factors provided in Government guidance for natural gas (gross CV factor is 0.18 kgCO₂e per kWh) and electricity generated (factor is 0.21 kgCO₂e per kWh) from <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021>

Scope 3

- 2.3** For Scope 3 we have identified the following sources of emissions as being the main ones associated with our operations and supplies:
- Purchases of ICT equipment & running of servers and other office purchases (including the upstream transportation and distribution)

¹ See <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021>

- Transmission and distribution loss from the purchase of electricity for our offices
- Waste generated in operations
- Business travel, including hotel stays
- Employee commuting
- Homeworking (i.e. emissions associated with additional power and heating used by staff in the course of working from home).

2.4 Given that we sell knowledge through consultancy services, rather than a physical product, there is no downstream transportation and distribution. Therefore, the emissions associated with this category of Scope 3 are zero. Indeed, the transport/distribution component of consultancy is through business travel.

Purchases of ICT equipment & running of servers and other office purchases (including the upstream transportation and distribution)

2.5 The purchases of ICT equipment and the running of key hardware off site (i.e. our servers, which are based in specialist datacentres) are important sources of our carbon emissions.

2.6 We have four servers off site, and we share these with our sister divisions. Data from Dell indicates that the carbon emissions of the full lifecycle of these servers (including manufacture, transportation and distribution, operations and end of life) are 31,790 kg CO₂e. Based on an assumed lifespan of four years and the fact that 30% of the emissions are attributable to SQW (with the remaining 70% attributable to our sister divisions), **we estimate a single year of emissions for these servers to be 2,398 kg CO₂e.**

2.7 Our ICT purchases in 2020/21 were for five laptops and 13 other items (e.g. headsets, keyboards, webcams). Based on the estimated weight of these items (18kg) and conversion factors for the supply of ICT related equipment including transportation and distribution (24.865kg CO₂e per kg of ICT equipment²), **we estimate emissions for these ICT items to be 448 kg CO₂e.**

2.8 Other office purchases principally related to stationery suppliers. In 2020/21, these were negligible due to the COVID-19 pandemic – we monitor our purchase of paper as an indication of this, and no paper supplies were purchased at all. We have therefore assumed zero emissions for other office purchases.

2.9 **Therefore, the total emissions for purchases, including upstream transportation and distribution, are 2,845 kg CO₂e.**

² Government emissions conversion factors indicate 24,865 kg CO₂e per tonne of ICT equipment.

Transmission and distribution loss from electricity

2.10 In purchasing electricity to power our offices, there are losses in its transmission and distribution – i.e. more electricity needs to be generated than we actually use. These losses are associated with further emissions.

2.11 Based on the electricity usage of our Edinburgh and London offices (Manchester is excluded given that it is on a 100% renewable tariff), **we estimate the carbon emissions associated with these losses to be 442 kg CO₂e** (0.019 kgCO₂e multiplied by 23,509 kWh electricity purchased³).

Waste generated in operations

2.12 Based on nominal assumptions for recycling and waste in our offices (at 50kg of each), **we estimate emissions from office waste to be 24 kg CO₂e⁴:**

- 50kg of waste at 0.467 kgCO₂e per kg = 1 kgCO₂e
- 50kg of recycling at 0.021 kgCO₂e per kg = 23 kgCO₂e.

Business travel

2.13 In 2020/21 there was very limited business travel as a result of the COVID-19 pandemic. As a result, the associated carbon emissions were very low compared to a ‘normal’ year. Table 2-2 shows the mileage by mode of travel and the carbon emissions associated with these. This shows total **carbon emissions associated with business travel at 148.6 kg CO₂e**.

2.14 There were no hotel stays during the year.

Table 2-2: Carbon emissions associated with business travel

Mode	Mileage	kg CO ₂ e per mile	kg CO ₂ e
Rail	502	0.06	28.7
Taxis	8	0.34	2.7
Own car	425	0.28	117.3
Flights	0	0.25	0.0
Total			148.6

Source: SQW analysis

Notes: The assumptions for emissions per mile have been derived from Government guidance using assumptions for “national rail”, “regular taxi”, “average/unknown” vehicle type for car, and “short haul to/from UK” for flights - see <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021>

³ The calculation uses the appropriate Government emissions conversion factors.

⁴ The coefficients used below are from Government emissions conversion factors for general refuse and paper/cardboard recycling

Employee commuting

- 2.15** There was minimal office occupancy in 2020/21 due to the COVID-19 pandemic, and so commuting was very low. A calendar log was kept for the London office in response to the pandemic, and from this we know that there were 54 person days in the office for 2020/21. We have used cautious assumptions of a 15km commute (there and back) for this occupancy using the London underground⁵. Based on conversion factors in Government guidance⁶, this results in **23 kg CO₂e associated with commuting to/from the London office** (810km multiplied by 0.028 kg CO₂e/km).
- 2.16** We do not have data on occupancy in our Edinburgh and Manchester offices for 2020/21, though we know that there was most 'demand' for office space for London-based staff during the pandemic. Therefore, we have assumed that London commuting made up half of all commuting across the firm. For the other half, we have assumed travel by national rail, reflecting that many staff travel by public transport⁷. Using conversion factors from Government guidance this results in estimated emissions of **29 kg CO₂e associated with commuting to/from the Edinburgh and Manchester offices** (810km multiplied by 0.035 kg CO₂e/km).
- 2.17** In future years we will collect more specific data on employee commuting.

Homeworking

- 2.18** There was considerable homeworking during 2020/21, with an estimated 99% of working days carried out at home. Based on the number of FTEs, working days and an assumption of eight hours per day, this results in 81,843 working hours spent at home (45 FTEs for 228 working days * 99%).
- 2.19** We have used assumptions to estimate what this means in terms of additional usage of electricity and energy for home heating, and Table 2-3 summarises the calculations. This indicates **carbon emissions of 2,607 kg CO₂e from the use of electricity** and **carbon emissions of 21,024 kg CO₂e from additional heating of homes**. The assumptions we have used may be on the cautious side, as we have not taken account of green energy tariffs. We will undertake research with staff in future years to undertake a more specific assessment.

⁵ In practice, some of those commuting walk or cycle, and so the actual emissions are likely to be lower.

⁶ <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021>

⁷ In practice, it may be a combination of rail, light rail and bus.

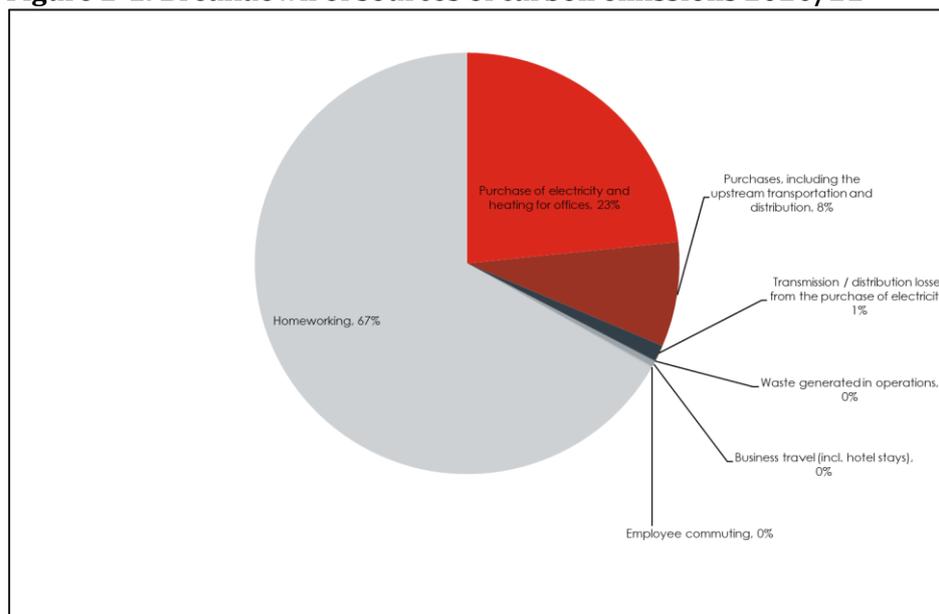
Table 2-3: Calculation of carbon emissions from homeworking

Source	Calculation
Electricity for ICT and lighting	<p>Electricity use per hour = 0.15 kW (source: Ecoact, 2020, Homeworking emissions White Paper)</p> <p>Total electricity usage = 12,276 kWh (i.e. 81,843 hours * 0.15 kW)</p> <p>Carbon emissions = 2,607 kg CO₂e (using conversion factors for electricity generation from Government guidance)</p>
Energy use from heating	<p>% additional people heating their home = 85% (i.e. for 15% there would be heating for other occupiers anyway)</p> <p>% extra time heating = 66% of working hours (i.e. to take account of residual heat from morning/evening heating anyway)</p> <p>% of the year using heating = 50% (i.e. Oct-March)</p> <p>Energy use per working hour with extra heating = 5 kW (source: Ecoact, 2020)</p> <p>Total energy usage = 114,784 kWh (i.e. 81,843 hours * 85% * 66% * 50% * 5 kW)</p> <p>Carbon emissions = 21,024 kg CO₂e (assumes all gas, and uses conversion factors from Government guidance for natural gas)</p>

Source: SQW analysis

Breakdown of emissions sources

2.20 Figure 2-1 sets out the breakdown of carbon emissions by source. This shows that the majority (65%) of our emissions for 2020/21 were due to homeworking, followed by 25% from the heating and power for offices, and 8% from ICT purchases/operations. Business travel and commuting made up around 1% in total, though would be expected to be larger in a 'normal' year. In light of the context around 2020/21, this is not very surprising – for 99% of working hours, staff were working from home. We expect that this breakdown will change in future years as new working arrangements become established, with the expectation of more commuting and business travel. It also indicates the usefulness of understanding more about the emissions associated with homeworking.

Figure 2-1: Breakdown of sources of carbon emissions 2020/21

3. Targets and actions

- 3.1** As noted in the first section, 2020/21 was an unusual year for our operations, and so we will monitor our emissions closely. That said, if the emissions remain around the level seen in 2020/21 (or increase only modestly as we begin to travel more – which we are expecting) **we will continue to pay to offset our residual emissions in order to continue to be carbon neutral**. Achieving net zero, whereby we reduce our emissions as far as is practical, will need to take account of the following areas:
- reducing emissions associated with office heating and power
 - determining where we can reduce emissions associated with our purchases and running of ICT equipment
 - actions that we can implement that can minimise our indirect emissions through business travel, employee commuting and homeworking.
- 3.2** At this stage we have set a target to ensure that all of our offices use renewable energy by 2030, with the result that our Scope 1 and 2 emissions are zero. As an interim target, we intend to reduce Scope 2 emissions by around 50% from the baseline level by 2027 (i.e. by five years from the time of this report). This means that one further office will use renewable energy by 2027 (and that any additional offices also use renewable energy). This will be achieved through influence of our landlords and/or in the role of energy sources in future office move/lease decisions – alongside other factors such as specific location, price, market availability etc.
- 3.3** If achieved, **this change to Scope 2 emissions would reduce our baseline position by around 12% by 2027 and by 23% by 2030.**
- 3.4** Targets in relation to Scope 3 emissions will be set when we have more data on our emissions once new working arrangements are established.

Key actions for 2021 and 2022

- 3.5** The priority actions for us for the coming period are to:
- undertake a more in-depth analysis of emissions associated with homeworking and commuting
 - where practical and in line with business needs embed low emissions that have been achieved from reduced travel due to the pandemic through online meetings
 - build environmental impacts into office infrastructure decisions and discussions (including with landlords), in particular in relation to energy tariffs (with the ultimate objective that we have zero emissions associated with the electricity and heating of offices by 2030).

Medium and longer-term actions and considerations

3.6 The assessment points to two further considerations:

- Our central servers and ICT equipment may be key sources of carbon emissions. This raises issues around the potential reductions that could be achieved through moving to cloud based ICT solutions, and potential more marginal savings from seeking to lengthen the life of ICT equipment (within business requirements).
- Hybrid working may have implications for our carbon footprint, and so better understanding of the sources of emissions will be useful in identifying further actions.

Ongoing actions

3.7 SQW has an Environment Policy, and this includes a series of ongoing actions that we take to minimise our impact on the environment. These are summarised as follows:

Minimise energy use and carbon impact

3.8 Within the practical constraints that our offices are in multi-tenant buildings managed by external parties, we will:

- use low power consumption electrical devices wherever feasible
- encourage all staff to take responsibility for switching off lighting, computers, screens and other electrical equipment when not in use
- ensure that all light bulbs that need replacing are replaced with energy-efficient bulbs wherever feasible so to do.

Commuting

3.9 The company is committed to reducing air pollution and energy use by minimising the need for car usage by its staff in commuting. We will:

- continue to use office locations that are very well served by public transport
- offer interest-free rail travel season ticket loans to all permanent employees
- encourage cycling to work where possible, through participation in the government's Cycle to Work scheme.

Travel for project and corporate reasons

3.10 In relation to travel and meetings, for both clients and internally, we will:

- encourage clients to use online meetings rather than face to face meetings where appropriate, recognising that at times face to face meetings will be required
- encourage staff to walk, cycle or use public transport as far as practical when travel is required on a project (as opposed to travelling by car or aeroplane)
- pay a mileage allowance for business travel on bicycles (except commuting) and an enhanced car mileage allowance where two or more employees travel in a car on business (except commuting).

Reduce material waste and maximise recycling

3.11 We procure a range of goods and services for use in our business activities, particularly stationery and printing consumables. We will:

- encourage staff to recycle paper and cardboard waste through provision of recycling bins
- recycle 100% of our printer and photocopying toner cartridges
- ensure that all redundant furniture is re-used or recycled where possible, by selling it on, giving it away, or recycling it
- ensure that redundant ICT equipment has any data securely wiped, and is re-used where possible within the wider SQW Group, or otherwise disposed of in accordance with the Waste Electrical and Electronic Equipment Directive
- minimise use of paper by encouraging staff to move towards predominantly electronic file storage and use
- where paper is used, minimise printing requirements by encouraging double-sided and two-pages-per-sheet printing where appropriate and continuing to move towards predominantly electronic file storage
- avoid using single use plastics as part of office supplies as far as possible (e.g. plastic drinks bottles; individually wrapped food products; and plastic straws and cutlery) by identifying these and making specific requests to suppliers or seeking alternative suppliers where this is practical
- aim to recycle a wider range of waste products from office life each year, as far as is practical (e.g. cans, plastic bottles, etc.) through local refuse collections.

SQW

Contact

For more information:

Graham Thom

Managing Director, SQW

E: gthom@sqw.co.uk

48 Melville St
Edinburgh
EH3 7HF

www.sqw.co.uk

About us

SQW Group

SQW and Oxford Innovation are part of SQW Group.

www.sqwgroup.com

SQW

SQW is a leading provider of research, analysis and advice on sustainable economic and social development for public, private and voluntary sector organisations across the UK and internationally. Core services include appraisal, economic impact assessment, and evaluation; demand assessment, feasibility and business planning; economic, social and environmental research and analysis; organisation and partnership development; policy development, strategy, and action planning. In 2019, BBP Regeneration became part of SQW, bringing to the business a RICS-accredited land and property team.

www.sqw.co.uk

Oxford Innovation

Oxford Innovation is a leading operator of business and innovation centres that provide office and laboratory space to companies throughout the UK. The company also provides innovation services to entrepreneurs, including business planning advice, coaching and mentoring. Oxford Innovation also manages investment networks that link investors with entrepreneurs seeking funding from £20,000 to £2m.

www.oxin.co.uk