Financial Year **2019-2020**

Environmental Management Report

February 2021



BDP.

Foreword



Over the last financial year, we have demonstrated our commitment to respond to the climate emergency with revisions to our practice Sustainability Policy and joining forces with industry partners through the RIBA Climate Challenge, Architects and Engineers Declare, and the UKGBC Climate Commitment Platform. Here we have shared our objectives to set Science Based Targets by 2022 and achieve net zero operational carbon for all UK and Ireland studios by 2025. Through communicating our aspirations and performance publicly, we aim to maintain openness and transparency and hope this will positively influence others to consider how they work and behave.

This Environmental Management Report FY 2019-2020, illustrates that our energy, water and waste consumption, alongside carbon emissions, have fallen to an all-time low since we began recording our environmental impact in 2010, with a 60% reduction in scope 1 and 2 emission per capita from our 2013 baseline. This has been achieved through the continued work across our studios from our environmental champions and all staff, to minimise our impact, in addition to improvements to our systems and processes to increase efficiencies. However, we also recognise that the big shift to working from home, following the beginning of the COVID-19 pandemic, with studios being largely vacated for the last 3 months of FY 2019-2020, has had a major role to play in the reduced environmental impact measured.

In light of this, we will be working to further explore how our individual carbon footprints are changing and have been reviewing our practices to promote health and wellbeing and the way in which we work to ensure we minimise resource consumption while maintaining business continuity.



Philip Gray
Head of Sustainability

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Summary of Performance

Committed to setting Science Based Targets by 2022 and achieving net zero operational carbon for all UK and Ireland studios by 2025

Reduced our energy consumption by 11% and scope 1 and 2 CO_2 emissions by 18% per capita against FY 2018 - 2019

Reduced CO_2 emissions from business travel by 48% from FY 2018-2019, to 366 $kgCO_2$/capita

Reduced our water consumption by 22% per capita against FY 2018-2019, down to 6.67 m3/capita

We now record waste recycling data for all studios and have reduced general waste by 25%/capita

Studio Environmental headlines 2019-2020

Summarised below are some of the initiatives undertaken in our UK and Ireland studios throughout 2019-2020 that have contributed to our improved environmental performance:

Studio	Initiatives undertaken in FY 2019-2020
Birmingham	• Office move to a premises with electricity sub-metering, sensors on bathroom taps and increased cycle storage with improved cycle facilities • Volume of general waste is now recorded and monitored • Samples sent to Scrap Store (for schools etc) for reuse instead during office move
Bristol	• Waste streams, labelling and communications around waste have been improved
Dublin	• Volume of recycling is now recorded and monitored. All taps including those that leaked upgraded
Glasgow	• Air handling units in café upgraded
London	• Installation of new more efficient chillers • Signage has been provided to accompany pod cooling to encourage users against tampering with settings and it being left on • Triple bins with composting now installed on all floors • Waterless urinals trialled • Installation of wall rack for Brompton to increase visibility and continual promotion of Brompton and cycle hire fob
Manchester	• Further upgrades of light fittings to LED • Installation of new more efficient chillers • New Carbon Action group set up to continue to spread knowledge and engage studio in new initiatives • No single use plastics purchased since January 2019 • New boilers fitted Summer 2019
Sheffield	• The temperature in the Sheffield server room has been raised from 17 °C to 19 °C • Clear bags are now used for recycling to better identify and ensure items are recycled correctly • Recalibration of building systems from summer 2019 and changes in management and maintenance personnel, has also led to systems being more efficiently controlled and a significant reduction in consumption from the district heat network
All	• We have increased our number of environmental champions and launched a digital platform for sharing and collaboration • We have developed a new Sustainability Policy outlining our commitments to continually improve our environmental performance

Longer Term Targets

In 2020 we made significant updates to our Sustainability Policy to protect and enhance the five capitals (natural, social, human, manufactured and financial) across all aspects of our operation. This includes integrating minimum environmental performance standards for our projects for healthy materials, embodied carbon, operational carbon, and biodiversity net-gain and setting Science Based Targets for our business operations.

Due to the consolidation of our Dublin studio in 2017, relocation of our Sheffield studio in 2018 and Birmingham studio in 2020, we will establish a new baseline for all studios following FY 2020-2021. This will form the baseline for our Science Based Targets, which we have committed to setting by 2022. Over the proceeding year we will continue to put in place measures to enable the implementation of SBTs, including monitoring:

- **Employee commuting (subject to change due to COVID-19)**
- **Spend on goods and services**
- **Mileage data from suppliers, and**
- **Investments**

Headline Performance Figures FY 2019-2020

Throughout this Environmental Management Report we compare performance against the previous reporting year – FY 2018-2019. This enables us to measure and benchmark progress.

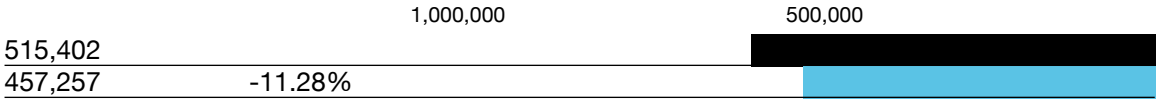
2018-2019

2019-2020

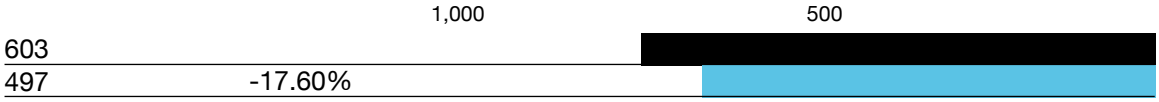
Total energy consumption (kWh)



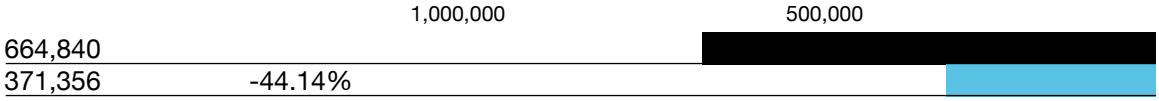
Total Scope 1 and 2 emissions (kgCO2e)



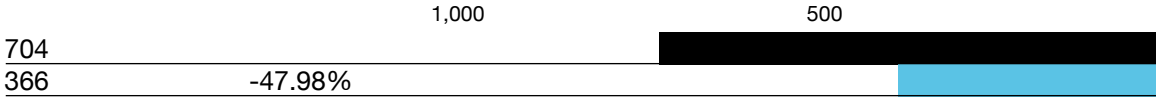
Total Scope 1 and 2 emissions per capita (kgCO2e/person)



Total business travel emissions (kgCO2e)



Business travel emissions per capita (kgCO2e/person)



Total water use (m3)



Water usage per capita (m3/person)



1. Introduction

This report provides a comprehensive review and analysis of our environmental performance across all of our UK and Ireland studios during FY 2019-2020, in line with our environmental ambitions detailed in our new BDP Sustainability Policy and ISO 14001 and 50001 certification commitments. It describes progress against targets and aspirations established in our previous Annual Environmental Report (FY 2018-2019).

Now in our seventh year of public reporting, we continue to record and evaluate performance trends and report on progress against our targets. This Annual Environmental Statement covers the financial year from July 2019 to June 2020 (inclusive).

Our Environmental Report FY 2017-2018 concluded the five year reporting period from our 2013 baseline. Having met these targets, we have started on our journey to set a science based target to ensure we're fulfilling our national and global responsibility. Whilst we collate the data we need to support the SBT, we have set interim targets to ensure we keep momentum. These are detailed in the Targets and Summary of Performance section.

In FY 2019-2020 we have maintained both ISO 14001 and 50001 certification, transitioning to ISO 15001:2018 in April 2020, demonstrating our commitment to the continual improvement of our energy management system.

2. Our Studios

All of our studios range in size and vary in style – some in historic surroundings, others in new BDP-designed buildings.

The number of staff employed by BDP has increased year on year since 2013 with the an average of 1023 FTE staff in financial year 2019-2020, 102 of which are co-located on project sites. In Summer - Autumn 2019 we opened new studios in Cardiff, Leeds and Liverpool. We will begin to monitor our emissions from these studios when we have more than 1 FTE present in each.



Birmingham

Our Birmingham studio is located at 1 Edmund Gardens, a newly refurbished mixed use commercial building situated within the Colmore Row, a conservation area in the centre of the city. The studio accommodates a team of over 26.
Studio Manager: Collene Turner
Tenure: Multi-tenanted, occupying 325m2 of 1 floor since February 2020

Bristol

Our Bristol studio, built in 1964, is situated close to College Green, in the heart of this historic city. It has a gross area of 563m2 and an average staff number of 72.
Studio Manager: Jamie Lloyd
Tenure: Multi-tenanted, occupied since 2003

Cardiff

Combining BDP's international expertise with local knowledge and experience in Wales. Our five person shared studio space is located in Cardiff's vibrant creative quarter.
Tenure: Multi-tenanted, occupied since 2019

Dublin

Our Dublin studio is situated in the Old Stone Building at Blackhall Green, just off Prussia Street. This area was previously known as the gateway to the city. The building has three floors and an overall gross area of 792m2. BDP now occupies all three floors. The Dublin studio has an average of 55 members of staff.
Studio Manager: Frank Fleming
Tenure: Sole occupants since December 2017

Glasgow

Our Glasgow studio has developed a reputation as a leading practice in Scotland and is situated in the heart of the city's main shopping area, Buchanan Street. The studio has around 62 staff and has a floor area of 1216m2.
Studio Manager: Laura Clark
Tenure: Multi-tenanted, occupied 2nd and 3rd floors since 2004.

Leeds

Our Leeds studio is a four person shared office space in Bruntwood's building 'Platform' adjacent to the train station.
Tenure: Multi-tenanted, occupied since 2019

Liverpool

Our Liverpool studio is set on the historic Pier Head and adjacent to the world famous three graces.
Tenure: Multi-tenanted, occupied since 2019

London

Our London studio is in a converted brewery in Clerkenwell. This is the largest UK and Ireland studio, with a gross floor area of over 4,000m2. It has an average of 427 staff. There are a further 102 members of staff associated with our London studio based at project sites (therefore are not included in our per capita calculations for the studio).
Studio Manager: Paul Hobbs
Tenure: 4 floors plus basement, main occupants since 2003, with area of basement let to tenants

Manchester

The exemplary Manchester studio overlooks the Piccadilly Canal Basin, centrally located adjacent to Manchester's vibrant Northern Quarter. The naturally ventilated building designed by BDP is our second largest studio with a GIFA of 3,075m2 and an average of 213 staff.
Studio Manager: Kevin Sutton
Tenure: Main occupants since building opened in 2008, 4th floor let to tenants

Sheffield

The Sheffield studio, accommodating approximately 56 staff, relocated to new premises in January 2018, to occupy the entire 760m2 of the sixth floor at 3 St Paul's Place. The new BREEAM Excellent building is connected to the local District Heating System.
Studio Manager: Susan Brookes
Tenure: Multi-tenanted, occupy 6th floor since 2018

3. Staff Numbers

To account for fluctuations in staff numbers over time, and between studios of different sizes, we set and report performance per FTE (Full-Time Equivalent staff). The tables below outline our staff numbers for FY 2018-2019 and 2019-2020, demonstrating the fluctuation and overall increase in staff numbers over our reporting years.

Scope 1 and 2 emissions and water consumption per capita figures are based on the total number of staff present in each studio. Business travel emissions account for all BDP (UK and Ireland) staff, with our central executive and support staff reported separately.

FY 2018-2019

Table 1

	Studio Staff	Central Staff	Other	Total
Birmingham	25.6	0	0	25.6
Bristol	64.3	0	0	64.3
Dublin	53.9	0	0	53.9
Glasgow	63.2	3.0	0	66.2
London *2	372.1	13.3	12.1	397.5
Manchester	161.4	36.0	0	197.4
Sheffield	48.2	2.0	0	50.2
				843

FY 2019-2020

Table 2

	Studio Staff	Central Staff	Other	Total
Birmingham	26.6	0	0	26.6
Bristol	72.0	0	0	72.0
Dublin	55.1	0	0	55.1
Glasgow	59.7	2.8	0	62.5
London *3	411.0	16.1	8.8	435.9
Manchester	175.4	37.2	0	212.6
Sheffield	54.1	2.0	0	56.1
				843

2* An average additional 101 members of staff associated with our London office (not included within the figures above) were based on project sites in FY 2018-2019 and contribute to our business travel emissions. We encourage environmentally conscious practices among all staff, including those based on site.

*3 An average additional 102 members of staff associated with our London office (not included within the figures above) were based on project sites in FY 2019-2020 and contribute to our business travel emissions. An average FTE of 9 co-workers working with us on certain projects share BDP floor area and contribute to our Scope 1 and 2 emissions and water consumption, but are not included in our staff numbers.

4. ISO 14001 and 50001

All of our UK and Ireland studios have been certified under ISO 14001 since 2011 and were recertified against ISO 14001:2015 in March 2019.

Following transition to ISO 50001:2018 in April, BDP's energy management system for our studios remains in compliance with the standard and therefore the Energy Savings Opportunity Scheme (ESOS).

The following opportunities for improvement were raised during our 2020 audits:

- **Refresh communications strategy**
- **Develop a minimum specification for new office spaces**
- **Move from hard copy maintenance records to electronic**
- **Review procedures around waste management with waste contractors**

This annual statement demonstrates that BDP as an organisation is committed to managing our environmental impact. It serves as an important communication tool to engage our staff and stakeholders and demonstrate our continual improvement, as well as confidently justifying our position as an environmentally conscious design practice.

5. Detailed Performance FY 2019-2020

The following section summarises our environmental performance during FY 2019-2020, based on improvements on our previous reporting year FY 2018-2019.

Despite some improvements in metering, greater granularity in data is required to enable more effective interventions, thereby enabling efficiency improvements and consequential utility cost savings. Sub-metering and the provision of accurate and available data now forms a key consideration in agreeing new studio lease agreements.

Energy Use and Carbon Emissions

Tables 3 and 4 below provide a summary of our 2018-2019 energy consumption and carbon emissions against the previous reporting year (FY 2017-2018).

Total Energy Consumption Table 3

	2018-2019	2019-2020	% Change
Scope 1 (kWh)	672,259	672,1278	-0.02
Scope 2 (kWh)	1,513,353	1,418,676	-6.26
Total kWh	2,185,611	2,090,803	-4.34
Scope 1 (kWh)/capita	786	730	-7.14
Scope 2 (kWh)/capita	1,770	1,541	-12.93
Total (kWh)/capita	2,556	2,271	-11.15

Total Scope Emissions Table 4

	2018-2019	2019-2020	% Change
Scope 1 (kgCO2e)	118,609	119,910	+1.10
Scope 2 (kgCO2e)	396,792	337,347	-14.98
Total kWh	515,401	457,257	-11.28
Scope 1 (kgCO2e)/capita	139	130	-6.10
Scope 2 (kgCO2e)/capita	464	366	-21.04
Total (kgCO2e)/capita	603	497	-17.60

Overall, both energy consumption and resulting Scope 1 and 2 emissions have decreased relative to FY 2018-2019, with carbon emissions falling to 497 kgCO2e/capita in 2019-2020.

Heating

There has been a negligible 0.02% reduction in gas consumption in FY 2019 - 2020. As illustrated on page X, the number of heating degree days increased from FY 2018–2019 to FY 2019–2020 for all studio locations, which typically results in a higher heating demand.

Despite this, a reduction in gas consumption has been made in our Dublin, Manchester and Sheffield studios, which is predominantly a result of heating systems being switched off or turned down throughout April and May due the move to home working. The apparent increase in gas consumption in Birmingham is due to the previous year's faulty meter readings and the increase in floor area of the new studio.

There is only one gas meter for the building that accommodates our Bristol studio, with consumption pro-rated by floor area. Gas consumption in Bristol has increased by 16% this year, likely due to neighbouring tenants occupying one of the new meeting rooms created as a permanent in-use office space from September 2019, with a gas powered heater that had to be repaired in December 2019.

Recalibration of building systems in our Sheffield studio from summer 2019 and changes in the management and maintenance personnel has led to systems being more efficiently controlled, resulting in a reduction in consumption from the local district heating network. The installation of more efficient boilers in our Manchester studio has also contributed to a reduction in gas consumption in Manchester.

Our studios have seen an increase in Scope 1 emissions per capita of 1% relative to FY 2018-2019, despite a reduction in gas consumption, due to an increase in the carbon factor of natural gas, as reported by BEIS (table 12).

Electricity

A 21% reduction in Scope 2 emissions per capita has been made against the previous year. While a major factor in this has been the decarbonisation of grid electricity, as demonstrated in table 12, this is also a product of studio upgrades as well as the move to home-working from March 2020, which has meant a reduction in electricity consumption of over 6% (13% per capita).

Interventions

Investment in studio upgrades over the 2019-2020 period comprises:

- The move of the Birmingham studio to an office space with energy sub-metering, and more efficient features including LED lighting
- Upgrades to air handling units in the Glasgow café,
- The Sheffield server room (cooling) temperature was raised from 17°C to 19°C
- Communication on more effective use of the pod cooling in London and upgrades of light fittings to LED
- The installation of new more efficient chillers in Manchester and London.
- The installation of new boilers in our Manchester studio

The 2% increase in electricity consumption from our Dublin studio is attributed to extensive maintenance works carried out between April and June 2020, and faulty stairwell lighting that meant it could not be turned off for a number of days.

100% of our UK and Ireland consumed electricity (kWh) is procured through REGO or GoO renewable energy tariffs accredited by Ofgem.

The fluctuation in scope 1 and 2 emissions is also partly a result of increased staff numbers. While electricity consumption from small power items increases relative to the number of staff, the relative demand on building systems decreases as our studios operate closer to full capacity.

A copy of the BDP studio environmental action plan for each studio, including planned interventions for continued improvement, is provided in at the back of this report.

The following graphs summarise energy consumption and associated carbon emissions for each of our UK and Ireland studios in comparison to the previous two reporting years FY 2017-2018 and FY 2018-2019.

Energy Consumption (kWh) Per Studio

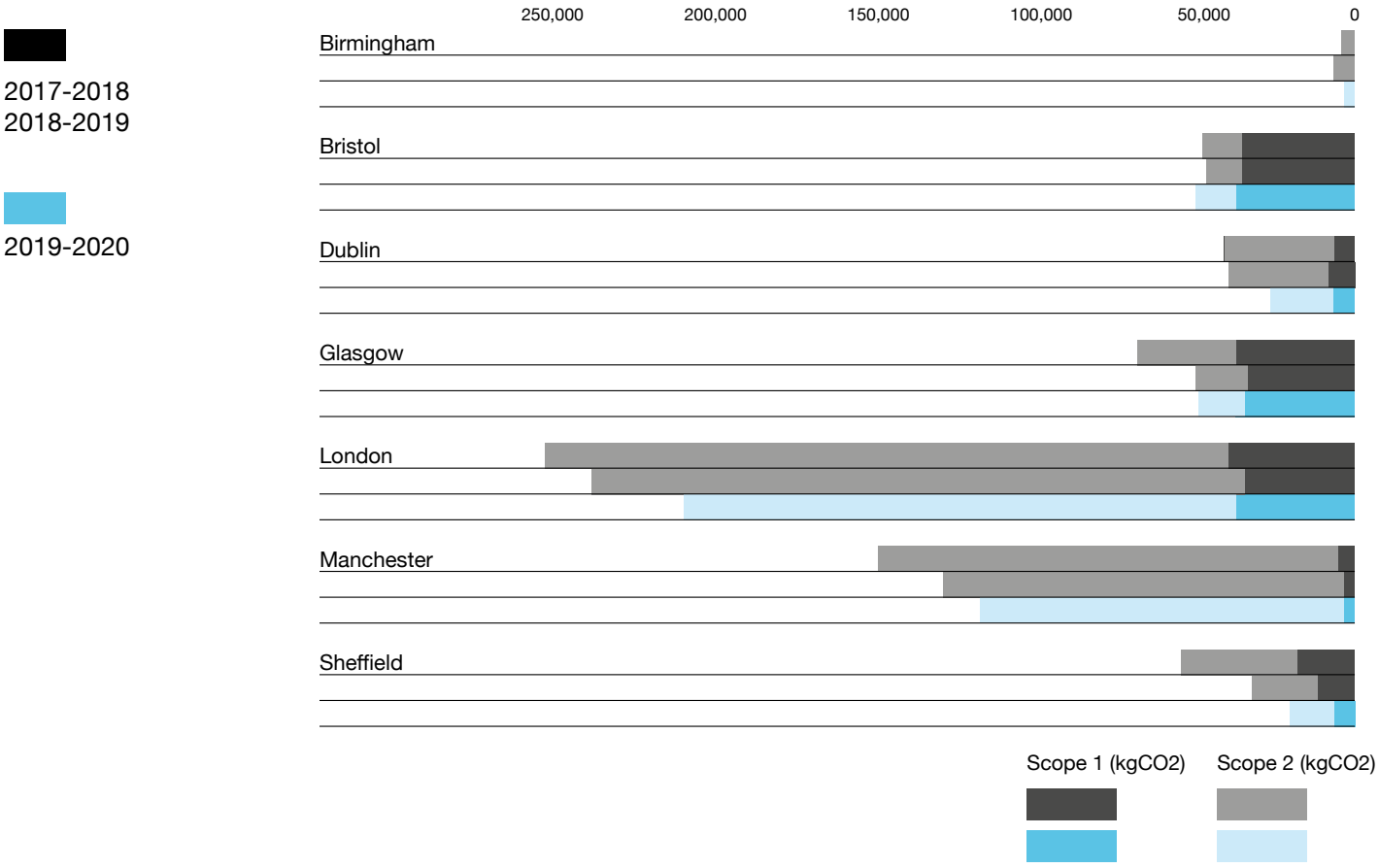
Figure 1



NB: FY 2016 ran from January to December

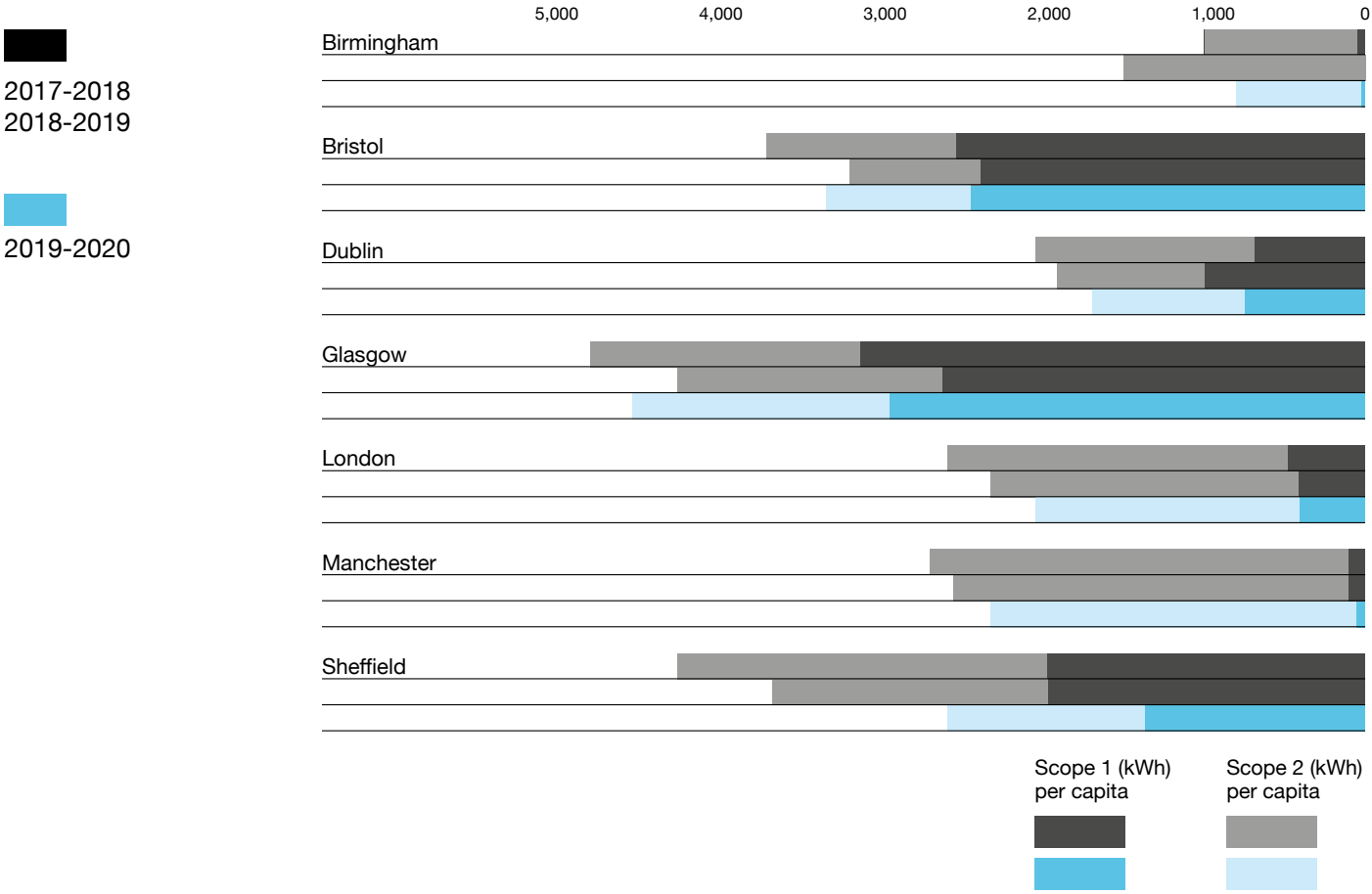
Carbon emissions (CO2e) per studio

Figure 3



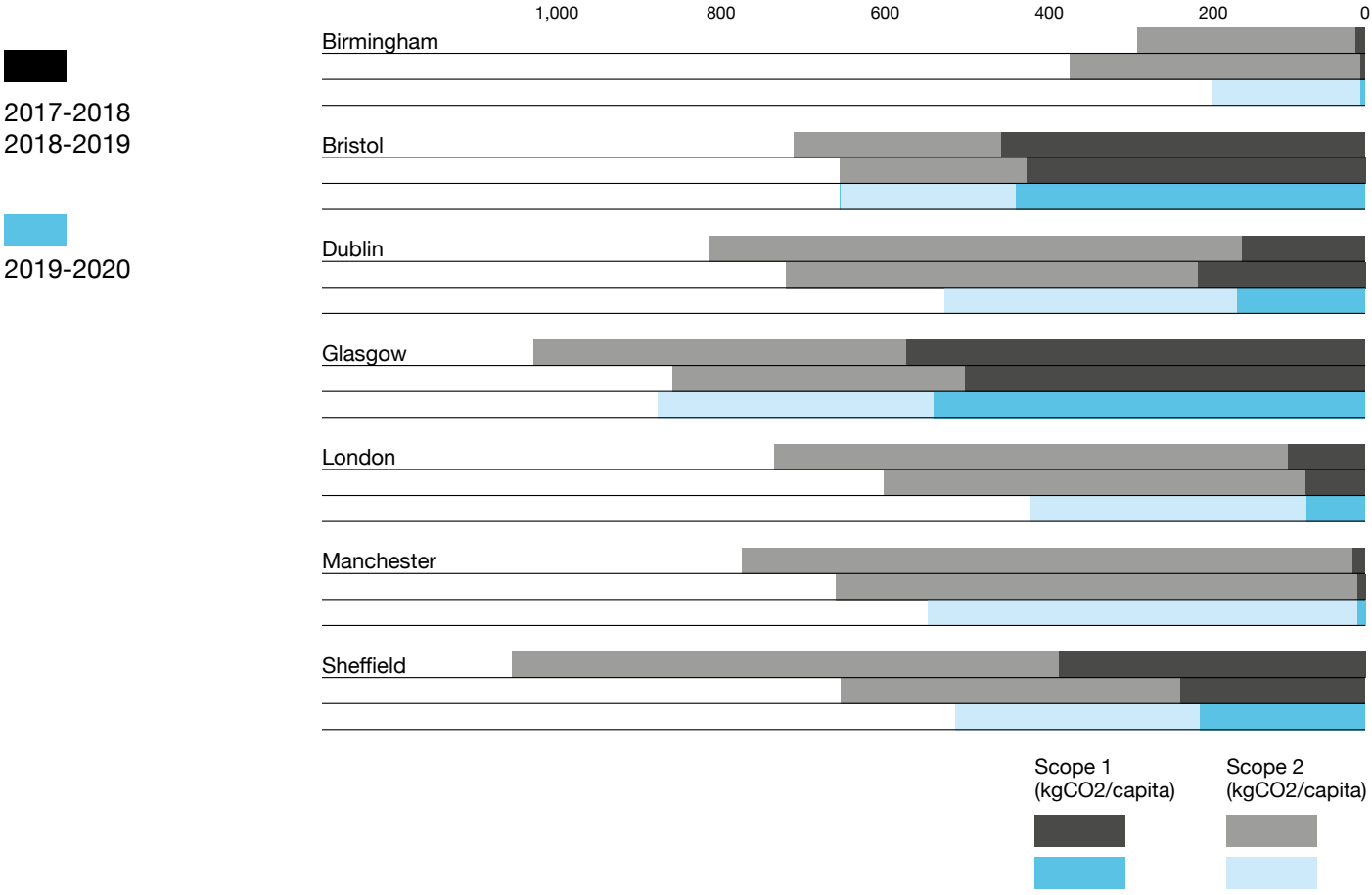
Energy consumption per capita (kWh/capita) by studio

Figure 2



Carbon emissions per capita (CO2e/capita) by studio

Figure 4



Carbon Conversion Factors

We have calculated our carbon emissions using carbon conversion factors provided by The Department for Business, Energy and Industrial Strategy (BEIS). BEIS revise the UK carbon conversion factors annually, reflecting changes to the UK's energy mix as a result of the different sources of energy generated by UK power stations and the proportion of gas, electricity and fuel imported from abroad. Carbon factors can vary considerably each year due to the influence of the price of coal and natural gas, fluctuations in peak demand and production of renewable energy. Vehicle emission factors are influenced by advances in automotive fuel efficiency.

Table 12 shows the carbon conversion factors used to calculate our emissions in each reporting year.

BEIS Conversion factors (Scope 1, 2 and travel) Table 5

	Units	**2018**	**2019**	**2020**
Scope 1 (natural gas)	kgCO2e/kWh	0.18396	0.18385	0.18387
Scope 2 (grid supplied electricity)	kgCO2e/kWh	0.28307	0.2556	0.23314
Car emissions (average car)	kgCO2e/km	0.17753	0.17337	0.16844
National rail	kgCO2e/km	0.04424	0.04115	0.03694
Domestic flight	kgCO2e/km	0.29832	0.25493	0.2443
Short-haul flight	kgCO2e/km	0.16236	0.15832	0.15553
Long-haul flight	kgCO2e/km	0.21256	0.19562	0.19085

Our Sheffield office is supplied by the local Veolia District Heat network with a carbon factor of approximately 0.12 kgCO2e/kWh.

Carbon factors for grid electricity and natural gas in Ireland are higher than those in the UK, at approximately 0.34804 and 0.2047 kgCO2e/kWh respectively.

As set out at the beginning of the report under Summary of Performance, we are putting in place processes to enable us to gather detail of our scope 3 emissions and set a Science Based Target. As set out at the beginning of the report under Targets and Summary of Performance, we are putting in place processes to enable us to further monitor our scope 3 emissions and set Science Based Targets.

Weather Normalisation

Heating degree days (HDDs) are a measurement designed to quantify the demand for energy needed to heat a building on the basis of outside air temperature.

Whereas in previous years an increase in HDD has correlated to an increase in gas consumption, gas consumption in FY 2019-2020 has been lower than the previous year. This is predominantly a result of gas being switched off or down in our studios throughout April and May 2020 due to the move to home working.

Gas consumption was lower in Dublin prior to January 2018 due to the use of an electrical heating system.

Figure 5

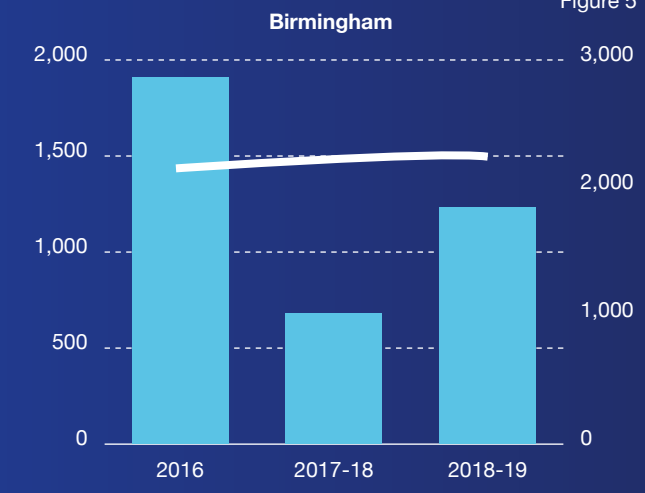


Figure 6

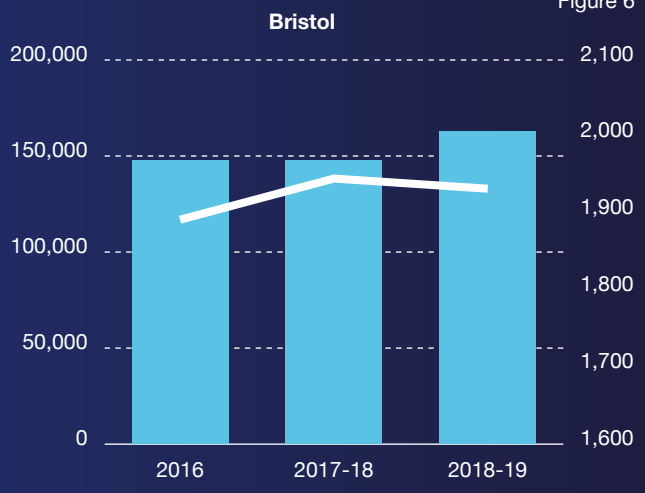


Figure 7

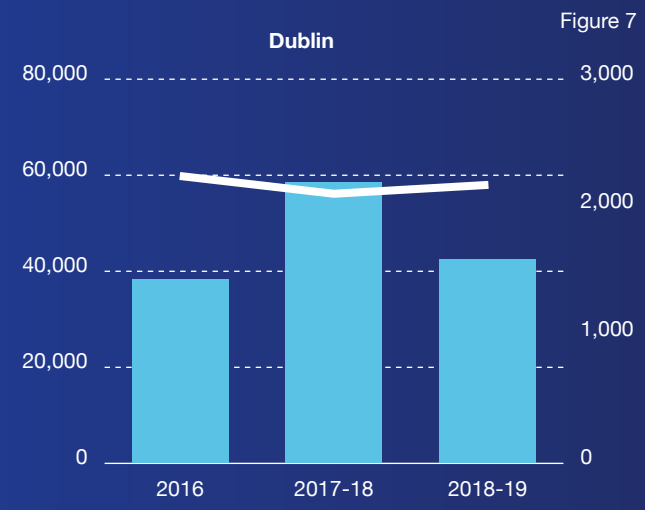


Figure 8

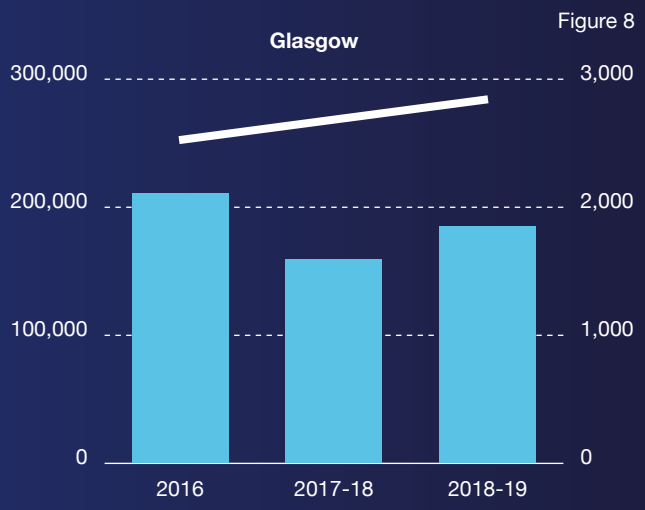


Figure 9

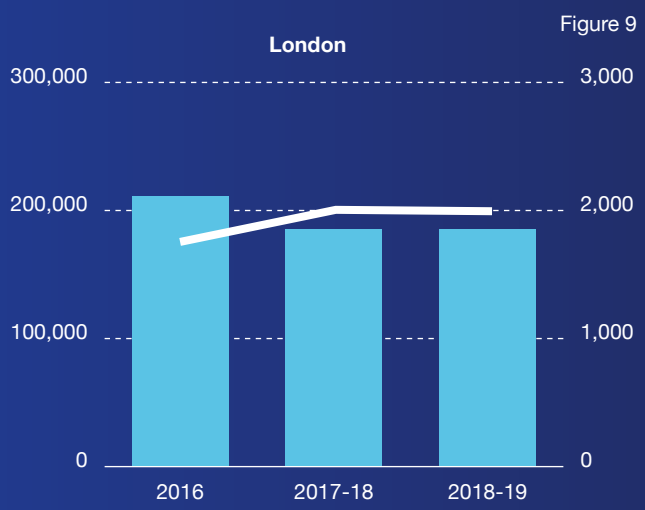


Figure 10

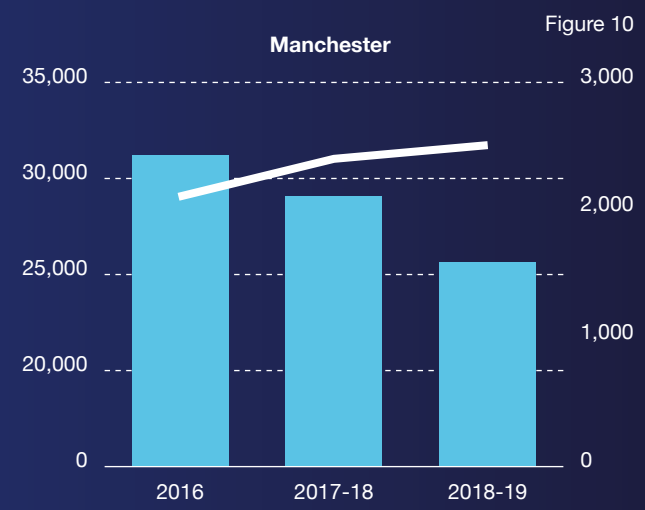
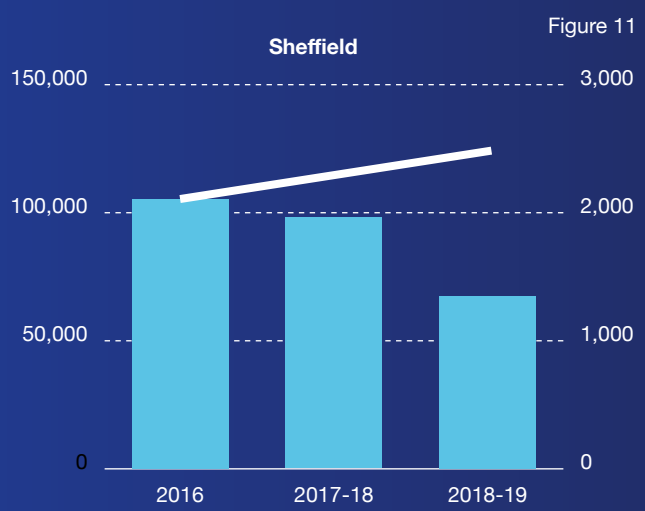


Figure 11



Gas Consumption (kWh)
left axis

HDD at 15.5°C
right axis

6. Water

Tables 14 and 15 and figures 12 and 13 show water consumption by studio, and normalised per capita. We have reduced our total water consumption by 16% and 22% per capita. Consumption accuracy has improved with the move of our Birmingham studio. Our Bristol studio remains a problem due to a lack of sub-metering and reported leaks which had contributed to an increase in water consumption prior to home working.

Aside from the reductions made due to the move to home working, our improvements in water consumption have also been aided by upgrades to taps in Dublin, the trial of waterless urinals in London, a change to the CWS tank cleaning process in Manchester that avoids the need to empty the tank, and conscious consumption in Glasgow.

Data granularity remains an issue across our studios, with limited water consumption data available.

Total water consumption Table 6

	2018-2019	2019-2020	% change over previous year
Total (m3)	7,281	6,139	-15.68
Per capita (m3)	8.52	6.67	-21.69

Water consumption per studio (m^3) Table 7

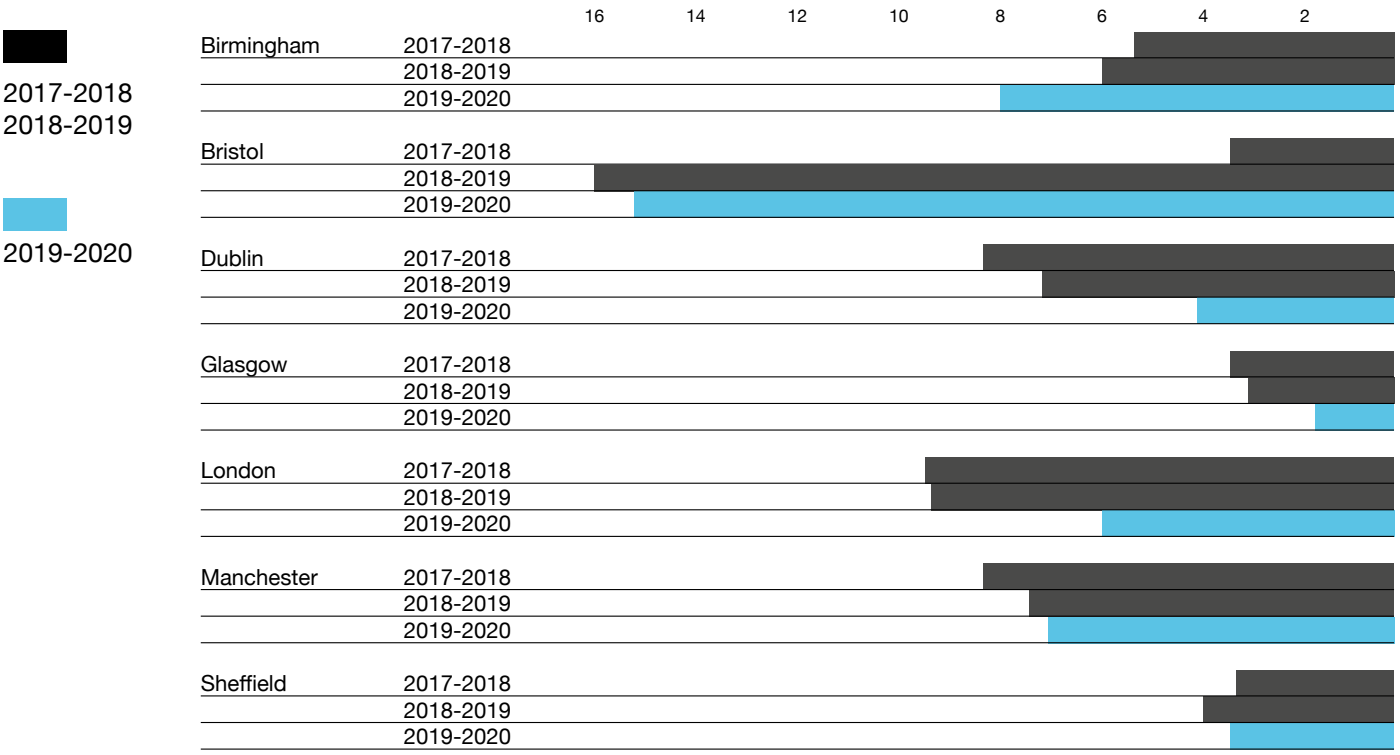
	2018-2019	2019-2020	% change over previous year
Birmingham	153.15	202.18	+32.01%
Bristol	1019.50	1095.40	+7.44%
Dublin	394.80	259.18	-34.35%
Glasgow	205.00	112.00	-45.37%
London	3761.00	2723.00	-27.60%
Manchester	1523.95	1540.66	+1.10%
Sheffield	223.80	207.00	-7.51%

Water consumption per studio per capita (m^3/capita) Table 8

	2018-2019	2019-2020	% change over previous year
Birmingham	5.98	7.62	+27.29%
Bristol	15.86	15.21	-4.10%
Dublin	7.32	4.71	-35.74%
Glasgow	3.10	1.79	-42.14%
London	9.46	6.25	-33.95%
Manchester	7.72	7.25	-6.13%
Sheffield	4.46	3.69	-17.31%

Water consumption per capita (m³/capita) by studio

Figure 13



7. Business Travel Emissions



One of the many ways we aim to reduce our carbon footprint and promote health and wellbeing is to actively encourage and promote sustainable travel.

Although we recognise that the extent of travel required is project specific and largely dictated by project commitments, in FY 2018-2019, we set ourselves the target of capping CO2 emissions from business travel at the FY 2017-2018 level of 808kgCO2/capita.

We have achieved a 44% total and 48% reduction in per capita business travel emissions compared to FY 2018-2019.

The 368kgCO2/capita from business travel in FY 2019-2020 contributed 37% of our total Scope 1, 2 and measured Scope 3 carbon footprint. The reduction of business travel due to home working has been the main factor in this reduction, however our sustainable travel policy to only travel when meetings cannot be held remotely and having a number of staff based on site has also contributed to the large reduction. In the six months July 2019 – December 2019, prior to home working, we achieved a 17% reduction in business travel emissions from the same six months in 2018.

Table 16 shows large % reductions in business travel, particularly in the distance travelled by domestic flight. In FY 2018-2019 our domestic flights contributed over 16% of our business travel emissions, despite a greater distance travelled by train (our lowest carbon option). This is illustrated in figure 15.

Business Travel Table 9

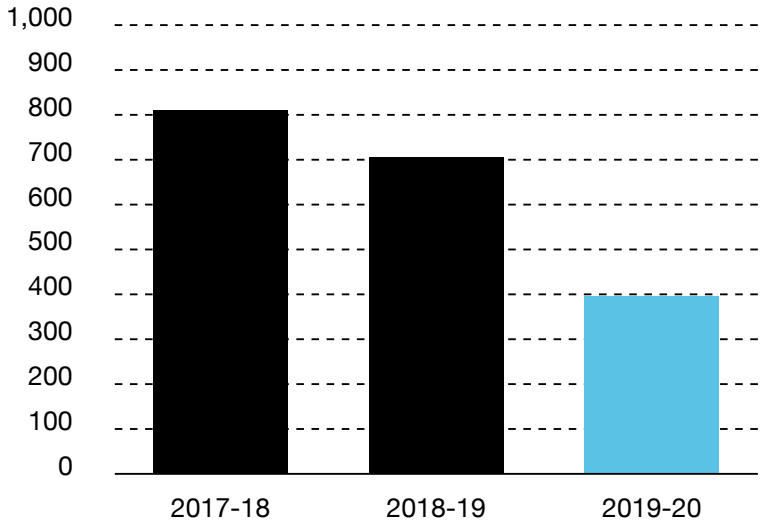
Mode of travel	Total kilometres 2017-2018	Total kilometres 2018-2019	% change over previous year	Kilometres/ capita 2017-2018	Kilometres/ capita 2018-2019	% change over previous year
Train	2,122,674	1,114,677	-47.49%	2,248	1,101	-51.02%
International flight	1,557,192	928,609	-40.37%	1,649	917	-44.39%
Short haul flight	638,548	432,143	-32.32%	676	427	-36.83%
Domestic flight	418,275	174,868	-58.19%	443	173	-60.95%
Car	375,777	221,798	-40.98%	396	219	-44.70%
Total	5,112,465	2,872,095	-43.82%	5,412	2,836	-47.60%

Our reported business travel emissions for 2019-2020 have been calculated based on train and rail travel bookings through our travel providers Egencia and FCM travel. Vehicle emissions are calculated based on business mileage expenses claims, which includes taxi mileage.

Our Business Travel Carbon Management Plan has been successfully embedded across the practice, to provide staff with alternative, sustainable travel options, reducing reliance on single occupancy car use.

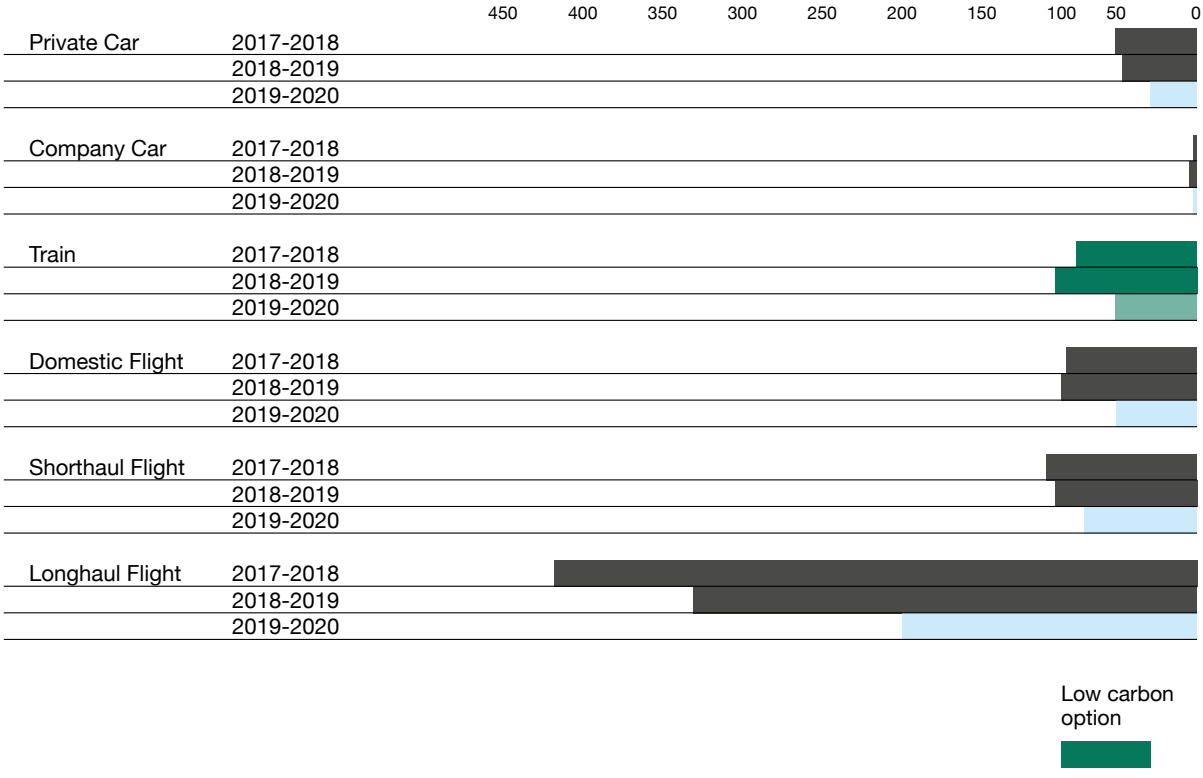
As part of the Travel Plan, we have established a ‘travel hierarchy’, setting out a decision making framework to minimise travel, where possible, and its impact. Staff are required to follow this framework to help them make the right travel/transport decisions. A challenge will be to maintain a robust position against unnecessary travel as the pandemic subsides, continuing to support remote, digital meetings.

Business Travel (kgCO2e) per capita Figure 14



Figures 14 and 15 illustrate our Business Travel emissions in total and by mode of transport (per capita), from the previous two reporting years.

Business Travel by Transport Mode (kgCO2) per capita Figure 15



8. Materials and Waste

All of our studios have in place robust waste management procedures to ensure that we are accountable for the waste we produce and make every effort to maximise waste diversion from landfill. Waste management procedures vary considerably between each studio. For example, in some studios commingled waste is collected for sorting and recycling off site, whilst in other studios waste is separated at source. At the end of FY 2019-2020 our Dublin and Birmingham studios began to weigh samples of general waste to enable full reporting on waste for FY 2019-2020 alongside all other offices.

Where our studios are located in multi-tenanted buildings, waste management is typically dealt with on a whole-building basis. Whilst the variation in data per studio does not lend itself well to the analysis of data trends, we feel that it is important to our environmental reporting to include our impact from waste as far as practical. Table 17 below shows the availability of waste data and waste streams across all of our studios, demonstrating the variation in approach.

Waste streams at our studios Table 10

Waste	Birmingham	Bristol	Glasgow	Dublin	London	Manchester	Sheffield
White paper/ Cardboard	✓	✓	✓	✓	✓	✓	✓
Commingled recyclables (plastic)	✓	✓	✓	✓	✓	✓	✓
Glass	x	✓	✓	✓	✓	x	x
Organic waste	x	✓	✓	x	✓	✓	x
General Waste	✓	✓	✓	✓	✓	✓	✓
Printer Cartridges	x	✓	✓	✓	✓	✓	✓
Mobile Phones	x	✓	✓	x	✓	x	x
Computers	x	✓	✓	✓	✓	x	x
Printers	x	✓	✓	✓	✓	x	x
Batteries	x	✓	✓	x	✓	x	x
WEEE	x	✓	✓	✓	✓	x	x

Table 11 reports the quantities of waste generated in FY 2019-2020 compared to FY 2018-2019. When interpreting this table it is necessary to refer to the waste data availability table 17 to note where lack of data availability may impact on reported figures.

Despite an increase in staff numbers, we have reduced recorded general waste by 16%. In our Sheffield studio, un-recyclable waste feeds into the local Veolia district heat system that supplies our building with heat. In London, our chosen waste contractor First Mile, collects waste and converts it to energy to power London homes.

Our reduction in general waste demonstrates the effectiveness of office campaigns that remind staff to reduce waste and recycle, initiatives to go disposable-free in our London and Manchester canteens, and the increase in availability of mixed waste streams. Upgrades to our ICT equipment in FY 2017-2018 has generally resulted in a reduction of the production of electronic waste since.

Although much of the waste previously sent to landfill is now recycled or converted to energy, we aim to reduce all waste to a minimum and will be working to assess where we can reuse materials and reduce waste through our supply chains, implementing circular economy principles where viable.

Quantities of waste and recyclables Table 11

Waste		2018-2019	2019-20	% change over previous year
White paper/Cardboard	Kg	10,190	7,100	-31.20%
Commingled recyclables (plastic)	Kg	65,838	53,785	-18.31%
Glass	Kg	192	83	-56.77%
Organic waste	Kg	29,233	22,740	-22.21%
General waste	Kg	17,756	14,914	-16.01%
Printer cartridges	Units	186	121	-34.77%
Mobile phones	Units	8	3	-62.50%
Computers	Units	75	22	-70.67%
Printers	Units	3	0	-100.00%
Batteries	Kg	194	34	-82.40%
Other WEEE	units	1,229	406	-66.97%
Total non-electrical waste	Kg	123,208	99,208	-19.50%

9. IT Energy and Environmental Improvements



Across all of our UK and Ireland studios, a programme of continual IT improvements ensures that we benefit from the latest developments in energy efficient and environmentally sound products.

In FY 2019-2020 the aging air conditioning systems in our Manchester and London server rooms were upgraded. This should reduce the energy required to keep equipment operating within its optimum temperature ranges. Newer equipment is also able to operate at a higher temperature.

Although our IT infrastructure has increased significantly to accommodate staff working from home in response to the COVID-19 pandemic, we are working hard to reduce this impact. Over the next financial year we will be trialling the use of cloud based virtual desktops to enable us to reduce the load of systems in our studios, while providing benefits of increased resilience and flexibility.

10. Summary

In FY 2019-2020 we have been successful in reducing our Scope 1 and 2 carbon emissions to 497 kgCO2e/capita; an 18% reduction from the previous year. The summary of performance section at the front of the report detail the studio-specific initiatives that we have successfully implemented to contribute to this reduction, alongside the unforeseen and unfortunate reduction in occupation of our studios as a result the COVID-19 pandemic.

Key initiatives and improvements include:

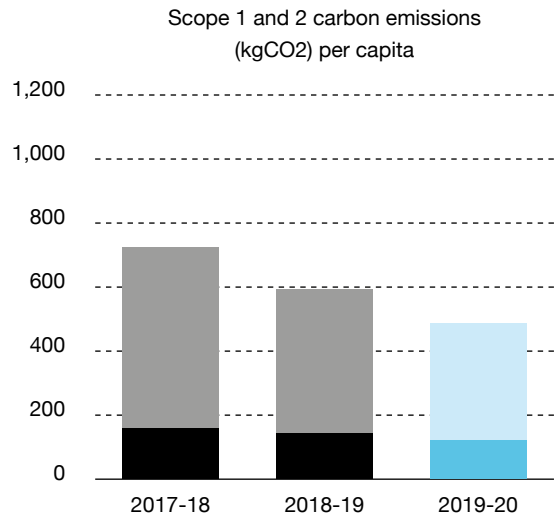
- The move of the Birmingham studio to an office space that uses electricity more efficiently
- Upgrades to air handling units in the Glasgow studio café
- Raising the Sheffield server room temperature
- Communication on more effective use of the pod cooling in London
- Upgrades to light fittings
- The installation of new more efficient chillers in Manchester and London
- Recalibration of building systems and maintenance schedules in our Sheffield studio

The following graphs provide a summary of our environmental impact over FY 2019-2020. Although our energy and carbon performance continues to improve, the more significant challenge is measuring and maintaining reductions in Scope 3 related emissions.

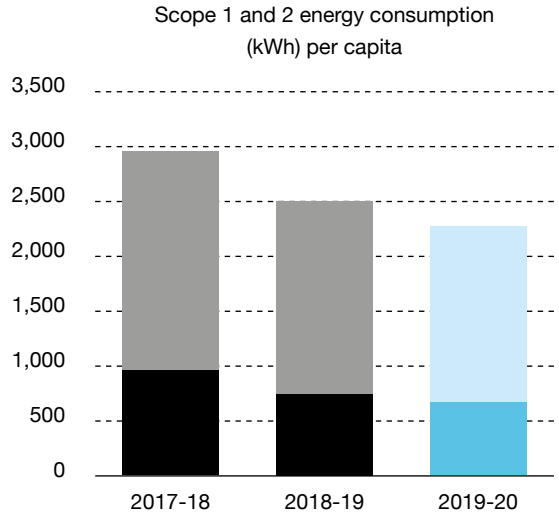
Our interventions will continue to be determined based on those that offer the greatest benefit to our working environment, appropriate to our commercial position and length of lease (where investment is required).

We will continue to review the relevance of targets, and adapt or amend where we feel necessary. In doing this we will ensure that we continue to drive down our environmental impact.

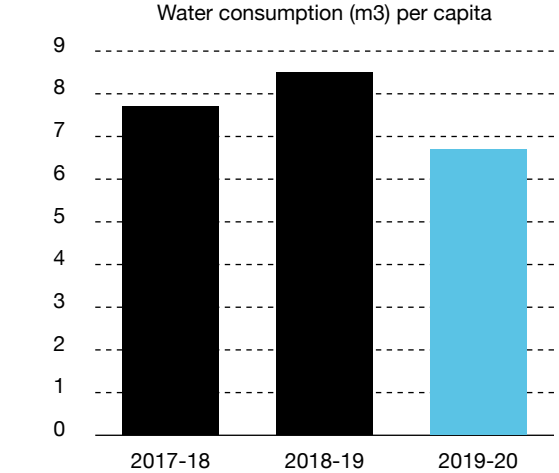
Carbon Emissions — Figure 16



Energy — Figure 17



Water — Figure 18



11. Future Projections

Projected future energy consumption and carbon emissions (All Studios)

Figure 19

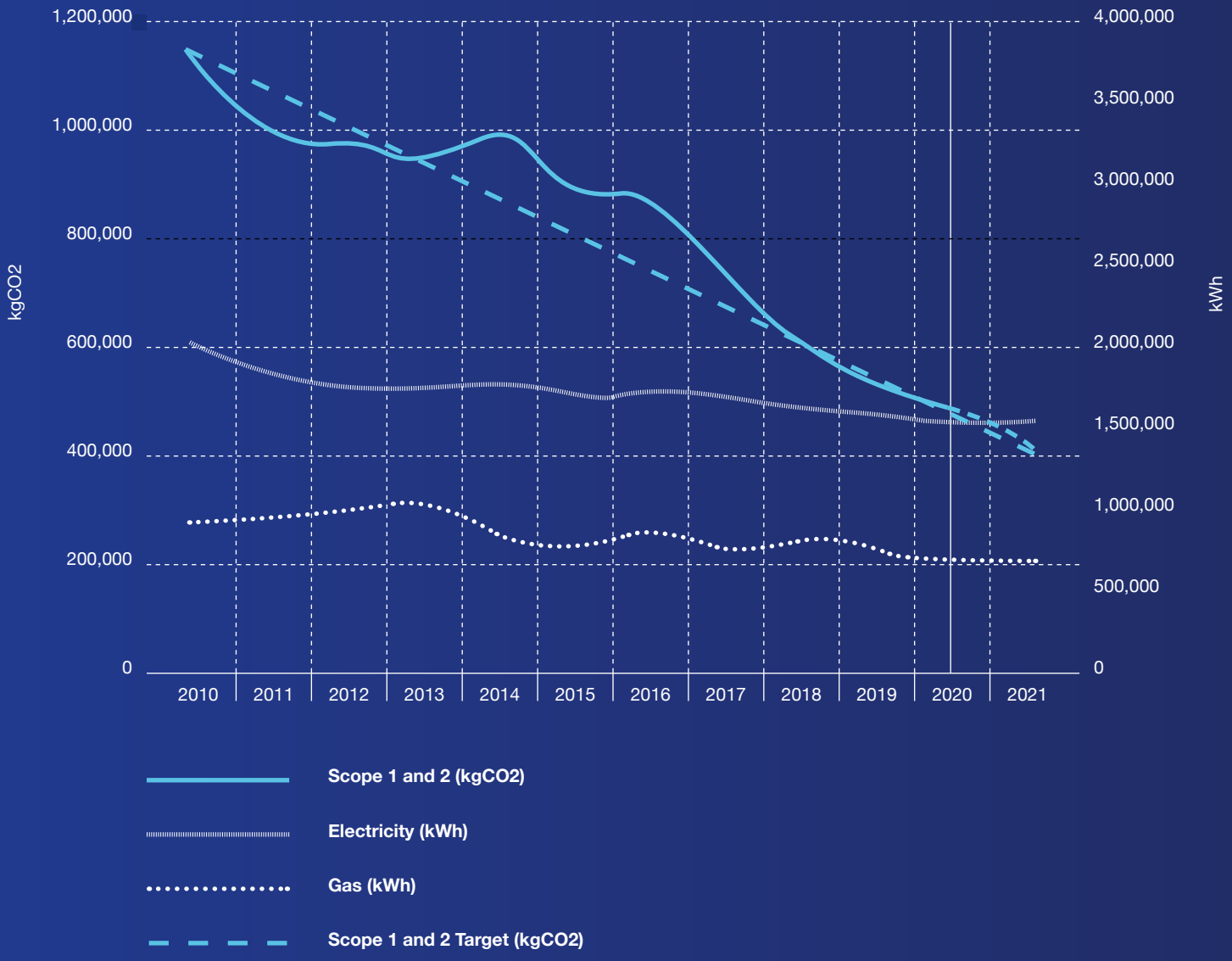


Figure 19 below outlines projected energy consumption and CO2 emissions on the basis of the trend analysis applied to the data collected since 2010. It demonstrates that we are meeting our targets of continual improvement year on year.

The graph also highlights that while gas and electricity consumption have declined, we cannot rely on the decarbonisation of grid electricity to help maintain the trajectory towards eliminating our operational carbon emissions.

Projected future water consumption (All Studios) Figure 20



In FY 2019-2020 we have seen a significant reduction in water consumption, despite a suspected leak or faulty meter in our Bristol studio (under investigation by the building management). We have initiated discussions with building management around installing PIR linked water shut off valves in the bathrooms of studios where they are not yet present. This, we hope, will eliminate further spikes characterised by the peaks in figure 20 below. The figure indicates projected water consumption on the basis of the trend analysis applied to the data collected since 2010. In addition to leak detection measures, we will continue to drive behavioural change to reduce water consumption to keep our performance in line with our target.

Where our staff numbers continue to grow and we expand to acquire new office space, our total energy and water consumption may rise with business growth, even where we continue to achieve reductions per capita. Environmental performance will play a key role in the selection criteria of new office space.

2020/2021 Action Plan

Across the practice we are:

- Setting Science Based Targets with the aim of achieving net-zero operational carbon of our studios by 2025
- Working to ensure our studios communicate our sustainability ambitions to our landlords, clients, and guests through their design and operation
- Developing and integrating minimum environmental performance standards for healthy materials, embodied carbon, operational carbon, and biodiversity net-gain for our projects

Birmingham	• Review environmental data from first year in new studio and identify opportunities for improvement • Arrange for collective compostable waste collection with neighbouring tenants
Bristol	• Replacement of bike lockers with a stand in the car park to accommodate more bikes
Dublin	• Installation of new secure bike shed • Installation of LED lighting on 2nd floor
Glasgow	• Replacement of emergency lighting at end of life with low power lamps
London	• Work with caterers to source teabags that do not contain microplastics • Investigate feasibility of grey water storage and/or rainwater harvesting
Manchester	• Remove all single use plastic • Plan water tank cleaning to prevent need for them being emptied/waste water
Sheffield	• Investigate installation of tap limiters

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