



JBA
group

Environmental
Report
2020

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Environmental management policy

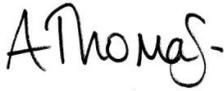
The JBA Group is committed to minimising the environmental impact of its operations and activities, as far as is reasonably practical, and using its influence to promote better environmental outcomes. Concern for, and protection of, the environment is integral to our professional activities and the management of the Group.

We maintain an ISO 14001:2015 certified Environmental Management System that is appropriate to the nature, scale and environmental impacts of our activities and services. We are committed to continually improving our environmental management system, preventing pollution and reducing our carbon emissions. JBA Consulting is a registered IEMA EIA Quality Mark organisation demonstrating our commitment to excellence in Environmental Impact Assessments.

We comply with all legislation, standards, statutory and other obligations and best practices that are relevant to our activities and the jurisdictions in which we operate. We seek to comply with client policies where required and reasonably possible to do so without conflicting with our own policies or other obligations

Environmental report

This report summarises the environmental performance of our operations in terms of our carbon equivalent emissions, use of resources and waste management. It includes an assessment of our carbon footprint and covers the period from 1 November 2019 to 31 October 2020 for all operating companies trading within the JBA Group.

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Abbreviations

BRE	Building Research Institute
CAD	Computer Aided Design
CEEQUAL	Sustainability rating scheme for infrastructure projects
CIEEM	Chartered Institute of Ecology and Environmental Management
CO _{2e}	Carbon dioxide equivalent
CRuMP	JBA Group Carbon and Resource Use Management Plan
Defra	Department for Environment, Food and Rural Affairs
EA	Environment Agency
EIA	Environmental Impact Assessment
EMS Rep	Environmental management system representative
EPI	Environmental performance indicator
GFDRR	Global Facility for Disaster Reduction and Recovery
Group	JBA Group Limited
IEMA	Institute of Environmental Management and Assessment
IoM	Isle of Man
IRiS	Integrated Riparian Survey
ISO	International Standards Organisation
JBA	JBA Group Limited
KWh	Kilowatt hours
NEAS	National Environmental Assessment Service
NRW	Natural Resources Wales
PARM	Projection augmented relief model
RWLA	Raised water level areas
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SSSI	Site of Special Scientific Interest
UNESCO	United Nations Educational, Scientific and Cultural Organization
YDRT	Yorkshire Dales Rivers Trust

Summary of our 2019-20 performance

Overview

The year has been dominated by the global Coronavirus pandemic. The significant changes it has brought to our lives have had devastating impacts on health, finances and economies but, conversely, have had a positive effect on our environmental impact. Our response to the pandemic has demonstrated that, in the short term, we can work in ways that have a lower environmental impact. As we emerge from the pandemic, our challenge is to develop these short-term behaviours into sustainable, long term ways of working.

Our rapid adaptation to Covid-secure ways of working introduces opportunities to expand the environmental monitoring of our operations that we will investigate going forward. In 2019-20, our monitoring shows significant reductions in our environmental impact, but these reductions must be viewed in the light of the pandemic-enforced restrictions. Highlights include:

- [Publishing the JBA Group Carbon and Resource Use Management Plan.](#)
- [Reducing our overall and per capita carbon footprint.](#)
- [Reducing our overall and per capita paper consumption.](#)
- [Reducing the overall and per capita CO₂e emissions from our measured office energy use.](#)
- [Reducing the overall and per capita CO₂e emissions associated with our business mileage.](#)
- [Producing less business waste.](#)

Objectives and intended outcomes for 2019-20

Objectives

- **Environmental impacts:** Reduce the adverse environmental and sustainability impacts of our operational activities.
- **Environmental management:** Improve the environmental and sustainability management of our projects.
- **Influencing stakeholders:** Widen our influence to achieve better environmental and sustainability outcomes.

Intended outcomes

- Recognition as an environmentally responsible business.
- Year on year reduction in carbon emissions.
- Certification to ISO 14001:2015 and IEMA EIA Quality Mark.
- Evidence of our professional expertise, innovation and value to the environment.

Performance against our objectives



To help us achieve our intended outcomes, we identified key actions for each objective and monitored our performance.

Objective - Reduce the adverse environmental and sustainability impacts of our operational activities

We identified the following key actions to minimise the adverse environmental and sustainability impacts of our operational activities in 2019-20:

- Reduce our use of natural resources.
- Reduce our energy use and associated carbon emissions.
- Reduce the waste we send to landfill.
- Increase staff awareness of our environmental impacts.
- Monitor and report our environmental performance within our operational activities.

We reduced the amount of paper we used, per capita, by 56% compared to last year. Our overall paper use fell by almost 2,000kg and 85% of the paper we used came from recycled sources.

The per capita CO₂e emissions associated with energy use in locations where our energy use can be measured fell by 27.5% compared to last year.

We travelled almost a million fewer business miles and the per capita CO₂e emissions from our business travel fell by 42% compared to last year.

Our offices produced 47% less waste than last year and we increased the percentage of our business waste that was sent for energy generation or recycling.

We published the JBA Group Carbon and Resource Use Management Plan.

We maintained a Sustainable Actions Log and encouraged staff to record their actions, both in work and at home. We continued to publish results from our Group-wide environmental monitoring.

We renewed our UKAS accredited certification to ISO 14001:2015.



Objective – Improve the environmental and sustainability management of our projects

We identified the following key actions to improve the environmental and sustainability management of projects:

- Improve environmental risk assessment in projects.
- Improve reporting of environmental incidents.
- Identify and mitigate potential environmental impacts.
- Identify good environmental design.

We maintained a suite of environmental and sustainability training modules to raise staff awareness of environmental risks.

We maintained our registration as an EIA Quality Mark organisation approved by IEMA, we achieved recognition as a CIEEM Registered Practice and our CEEQUAL assessors retained their qualifications.

We reported more of our positive environmental interventions and improved how we analyse all environmental reports.

We participated in the Environment Agency task and finish group looking at carbon reduction through innovation for flood risk management projects.

We worked with the Environment Agency's National Environmental Assessment Service (NEAS) in South East England to develop a greater understanding of framework supplier knowledge of environmental sustainability in project design and delivery to plan a learning and development programme to improve our collective skills and knowledge.

We updated and expanded our internal project management training to encompass a suite of six self-learning modules covering aspects including risk management, environmental management and health and safety aspects of projects.

We updated our standard Terms & Conditions so that all deliverables are only provided in electronic formats, unless agreed in-advance, reducing paper use and the amount of printing we carry out.

We identified and mitigated potential environmental impacts and identified and encouraged good environmental design within our engineering design and feasibility projects and our environmental impact assessments.



Objective – Widen our influence on stakeholders to achieve better environmental and sustainability outcomes

We identified the following key actions to widen our influence amongst stakeholders:

- Record our wider contribution to sustainability and environmental management good practices.
- Provide staff training in the application of sustainability and environmental good management techniques and tools.
- Contribute to national environmental records.

Our teams continued to support the promotion of good environmental management practices both within and outside of JBA.

We maintained and expanded our in-house environmental e-learning portfolio and continued our programme of botanical lunchtime seminars at Doncaster to support development of staff knowledge on a wide range of plant taxa and the identification of ornamental and invasive species.

We maintained the groundwater comprehensive flood map and contributed habitat and species data to regional record centres.

We attended the Environment Agency annual Carbon Expo conference in Birmingham and presented on how Natural Flood Management can deliver carbon benefits for flood risk management projects. We held a workshop attended by Ofwat, the Environment Agency, and numerous water companies on the application of natural capital assessment to the water industry. Our work supported the development of recommendations and guidance issued to all water companies.

We appointed a dedicated Sustainability Manager to support our services through the delivery of our sustainable business objectives and assist our project teams in delivering sustainable outcomes for our clients.

We maintained our online staff knowledge centre, posting a wide variety of information on diverse range of environmental topics, including climate change, land use, flood risk, and geospatial data.

We established an online staff calendar of training opportunities, enabling staff to access the latest information on a wide range of environmental and sustainability topics, and to promote knowledge sharing and professional development.

We hosted a stand at the Institute of Fisheries Management (IFM) Irish Branch conference in Dublin, demonstrating our expertise to attendees on catchment restoration and fish pass design, highlighting recent project examples and team capabilities.

Environmental sustainability became a mandatory agenda item for all office meetings, encouraging staff to discuss sustainability actions and share knowledge on good practice.

Objectives for 2020-21

We have again set ourselves objectives and identified key actions to help us achieve our intended outcomes in 2020-21. We will continue to monitor our performance against these objectives.

Objective	Key actions	Intended outcome
Reduce the adverse environmental and sustainability impacts of our business activities and the projects we work on.	<p>Develop and implement the CRuMP.</p> <p>Monitor and report paper use, business waste, water use, emissions from our metered energy use and business travel.</p> <p>Improve the environmental and sustainability performance of our work for clients.</p> <p>Influence our stakeholders to deliver best practices and outcomes for the environment and sustainability.</p>	<p>Recognition as a sustainable and environmentally responsible business.</p> <p>Year on year reduction in carbon emissions.</p> <p>Legal compliance.</p> <p>Certification to ISO 14001:2015 and EIA Quality Mark.</p>

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1. Environmental performance indicator results - year to 31 October 2020

1.1 Key action: reduce our use of natural resources: per capita paper use

Key action achieved



Per capita paper use fell by 56%

We used almost 800 reams of paper less than last year

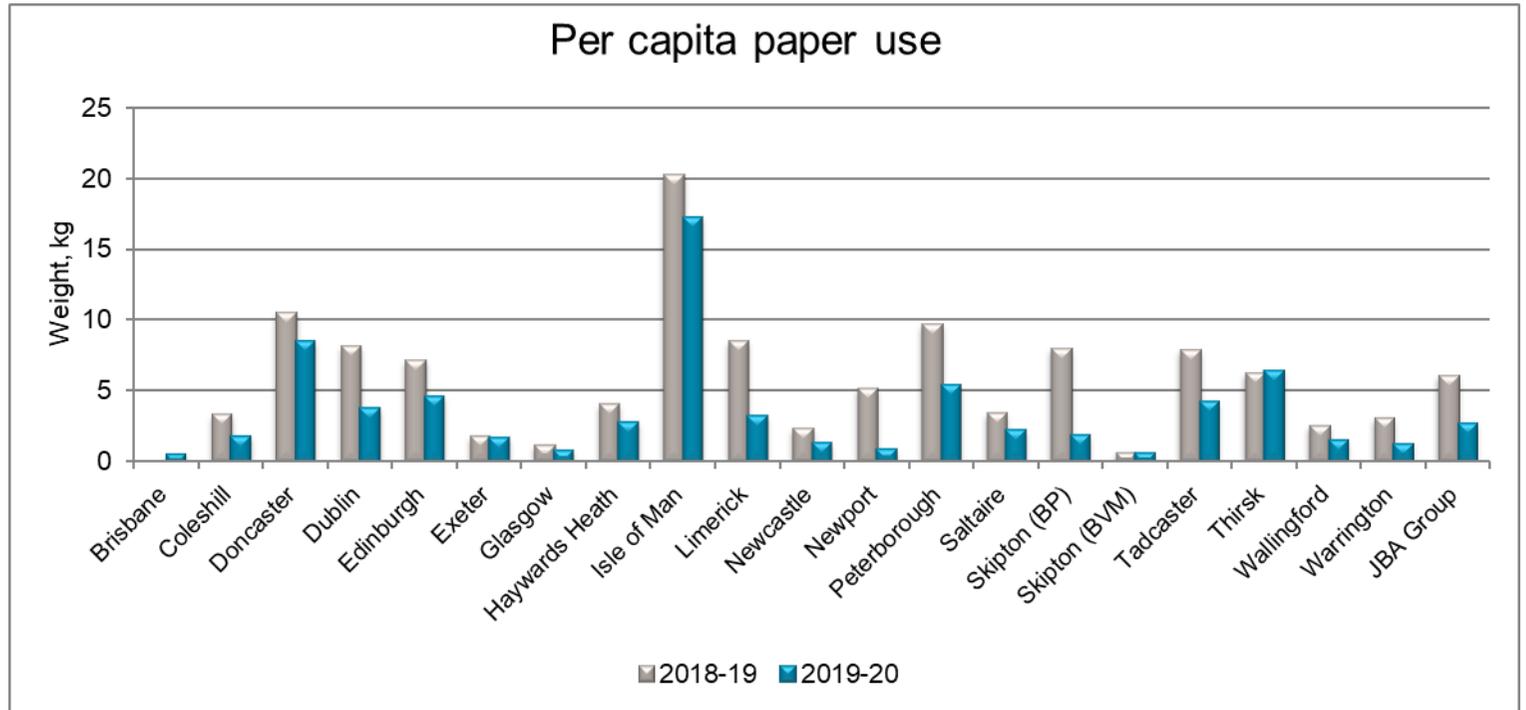
Table 1-1: Paper use								
	Virgin paper used (kg)	Recycled paper used (kg)	Total paper used (kg)	Paper used per capita (kg)	Change in per capita paper use (kg)	Change in per capita paper use (%)	Recycled paper use (%)	Total emissions (kg CO _{2e})
2018-19	559	3,021	3,581	6.05	-1.85	-23.4%	84.4%	2,932
2019-20	235	1,366	1,600	2.67	-3.38	-55.9%	85.3%	1,226
Note:	Conversion factors used are Defra's <i>UK Government GHG Conversion Factors for Company Reporting</i> . Paper use measured at our UK, Ireland, Isle of Man and Brisbane offices							

In 2019-20 we reduced our per capita paper use by 56%. This contributed to our key action to reduce our use of natural resources. Our overall paper use was almost 2,000kg less than the year before - equivalent to almost 800 reams of A4 paper. Our per capita paper use fell from 6.05kg to 2.67kg. This continues to build on reductions achieved in previous years: eight years ago, the equivalent figure was 14.0kg per capita.

Figure 1-1 compares per capita paper use at each of our offices during 2019-20 and 2018-19. This demonstrates both the year-on-year decrease and the wide variation in paper use across our offices. The variation reflects the differing client requirements and types of projects our offices undertake: our Isle of Man clients require hard copy plans and reports, as do the Internal Drainage Boards served from our Doncaster and Thirsk offices; and the design work undertaken at offices such as Edinburgh, Peterborough and Tadcaster often requires the production of paper drawings. In all offices we encourage our clients to consider their need for hard copy documentation and have updated our Terms and Conditions to reflect this.

The Coronavirus pandemic has had many negative effects on life in 2020 but our reduced paper use is one positive result of the changes to working practices that it has enforced. We will aim to maintain this lower level of resource use in future years.

Figure 1-1: Per capita paper use at our offices and across the JBA Group



1.2 Key action: reduce our energy use and associated carbon emissions: per capita CO₂e emissions from our measured energy use

Key action achieved



Our measured per capita CO₂e emissions fell by 27.5%

We monitor the energy used by 75% of our staff

Table 1-2: Emissions from our energy use at offices and the data centre						
	Monitored locations, kg CO ₂ e			Extrapolated for all UK and Ireland locations, kg CO ₂ e		
	Total emissions	Per capita emissions	Change in per capita emissions	Total emissions	Per capita emissions	Change in per capita emissions
2018-19	206,632	414	-44kg -9.6%	269,124	454	-44kg -8.8%
2019-20	148,190	300	-114kg -27.5%	197,243	335	-119 -26.2%
Note:	Conversion factors used are Defra's <i>UK Government GHG Conversion Factors for Company Reporting</i> Emissions calculations include transmission and distribution losses associated with electricity use					

In 2019-20, we reduced our total and per capita energy use in the locations where it is measured. This contributed to two of our key actions: to reduce our energy use and associated carbon emissions; and to reduce our use of natural resources.

Our total recorded CO₂e emissions fell by 58,442kg which equates to a 27.5% decrease in CO₂e emissions per capita. Extrapolating our recorded emissions to all UK, Ireland and IoM offices and data centre locations suggests a 26.2% decrease in CO₂e emissions per capita.

We calculate our energy use at locations where JBA energy consumption is measured separately to that of other occupants. In 2019-20, we measured our energy consumption at Doncaster, Edinburgh, Glasgow, Haywards Heath, Isle of Man, Limerick, Newcastle, Newport, Peterborough, Saltaire, Skipton Broughton Park, Tadcaster, Wakefield data centre and Wallingford¹

75% of our staff are based in the monitored offices and all staff have access to processing machines in the data centre. Prior to the changes to working practices introduced in response to the Coronavirus pandemic, this data provided a good estimate of overall JBA energy use as the offices vary in terms of size, location and work type.

Our most significant energy use is electricity and so it is important that we concentrate our efforts on managing our electricity use. Where we control electricity contracts for our offices, we continue to pursue our policy of purchasing from renewable sources. In

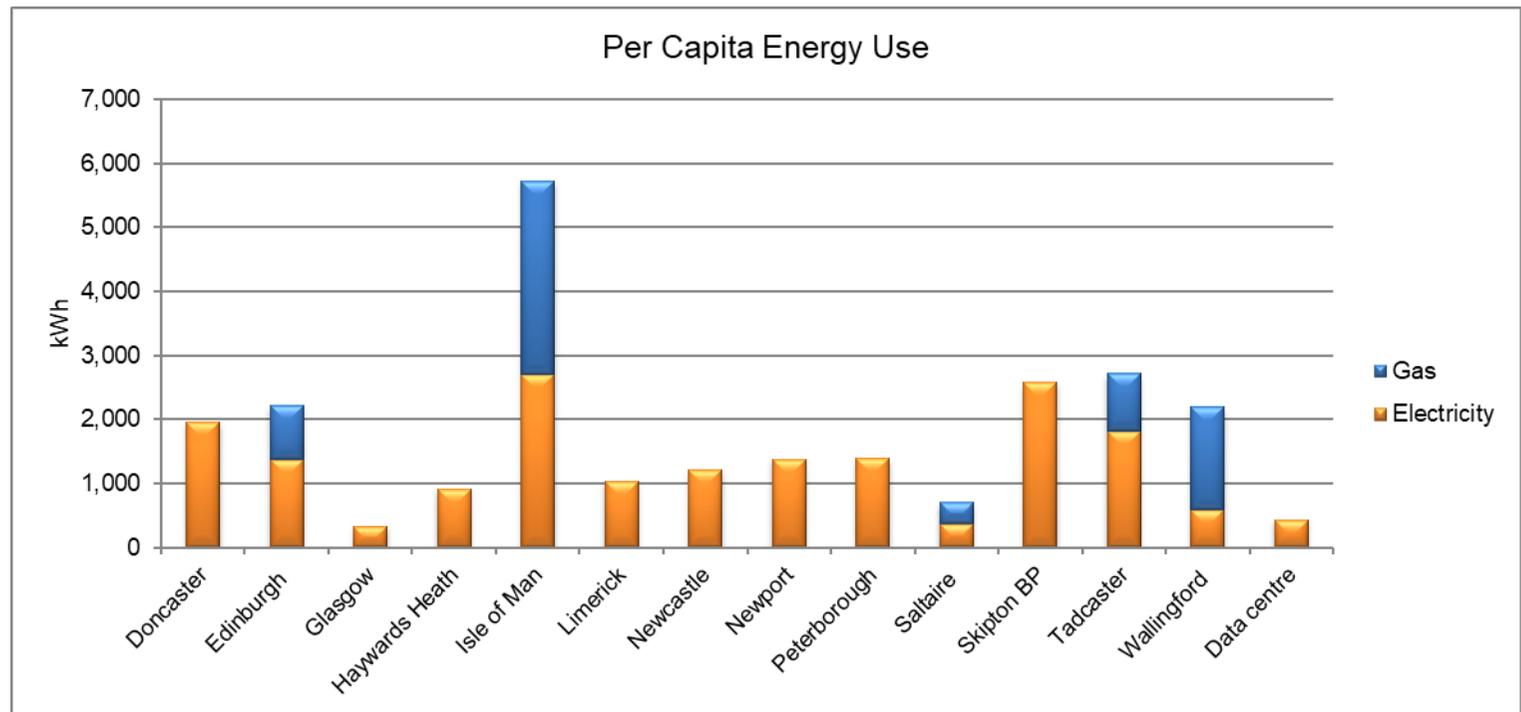
¹ For 25% of the year

45% of our electricity came from renewable sources

2019-20 this accounted for 45% of the electricity used across the JBA Group. We purchased electricity from renewable sources for our offices at Doncaster, Glasgow, Limerick, Newport, Skipton Broughton Park, Tadcaster and Wallingford².

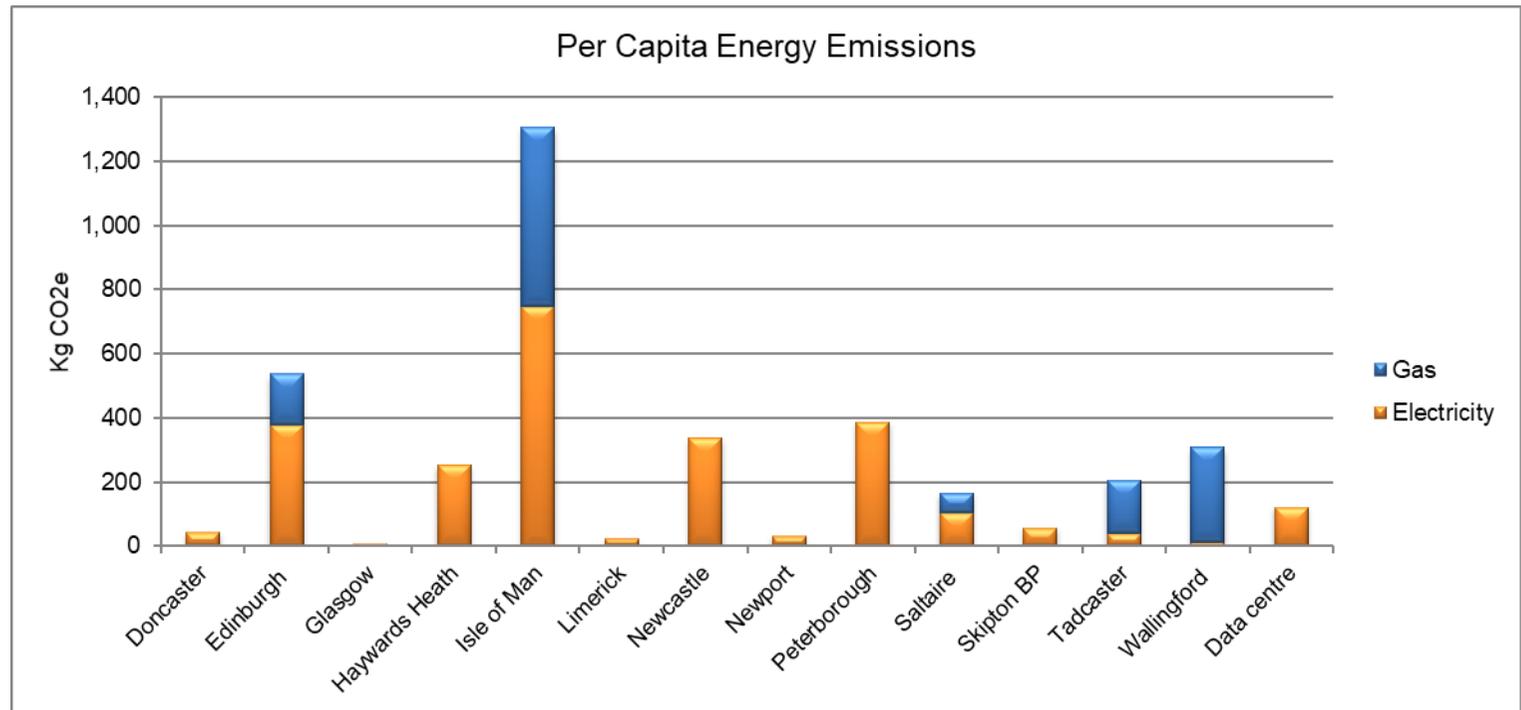
Figure 1-2 compares the energy used per capita at offices where JBA energy use is measured and Figure 1-3 shows the resulting CO₂e emissions. Per capita calculations for the Isle of Man office are affected by the small office population.

Figure 1-2: Measured per capita energy use



² For 25% of the year

Figure 1-3: Per capita emissions from measured energy use



Our response to the Coronavirus pandemic has been a significant factor in the reduction in our office energy use this year. Our offices remained open for much of the year, but with a much-reduced population since March and hence a lower energy use. Conversely, staff working from home are likely to have increased their domestic energy use, but we were not able to measure this.

1.3 Key action: reduce our energy use and associated carbon emissions: per capita CO₂e emissions from our business travel³

Key action achieved



Per capita CO₂e travel emissions down by 42%

We travelled almost 1 million miles less than last year

Table 1-3: Travel emissions						
	Total miles	Total emissions, kg CO ₂ e	Emissions per mile, kg CO ₂ e	Emissions per capita, kg CO ₂ e	Change in emissions per capita, kg CO ₂ e	Change in emissions per capita, %
2018-19	2,081,955	394,496	189	648	-155	-19%
2019-20	1,149,320	232,835	203	374	-274	-42%
Note:	Conversion factors used are Defra's UK Government GHG Conversion Factors for Company Reporting					

In 2019-20 we achieved our key action to reduce our per capita CO₂e emissions from our business travel.

We travelled almost a million business miles fewer than the previous year – a 45% reduction. We reduced our total CO₂e business travel emissions by 41% and our per capita business travel emissions by 42%, compared to the previous year.

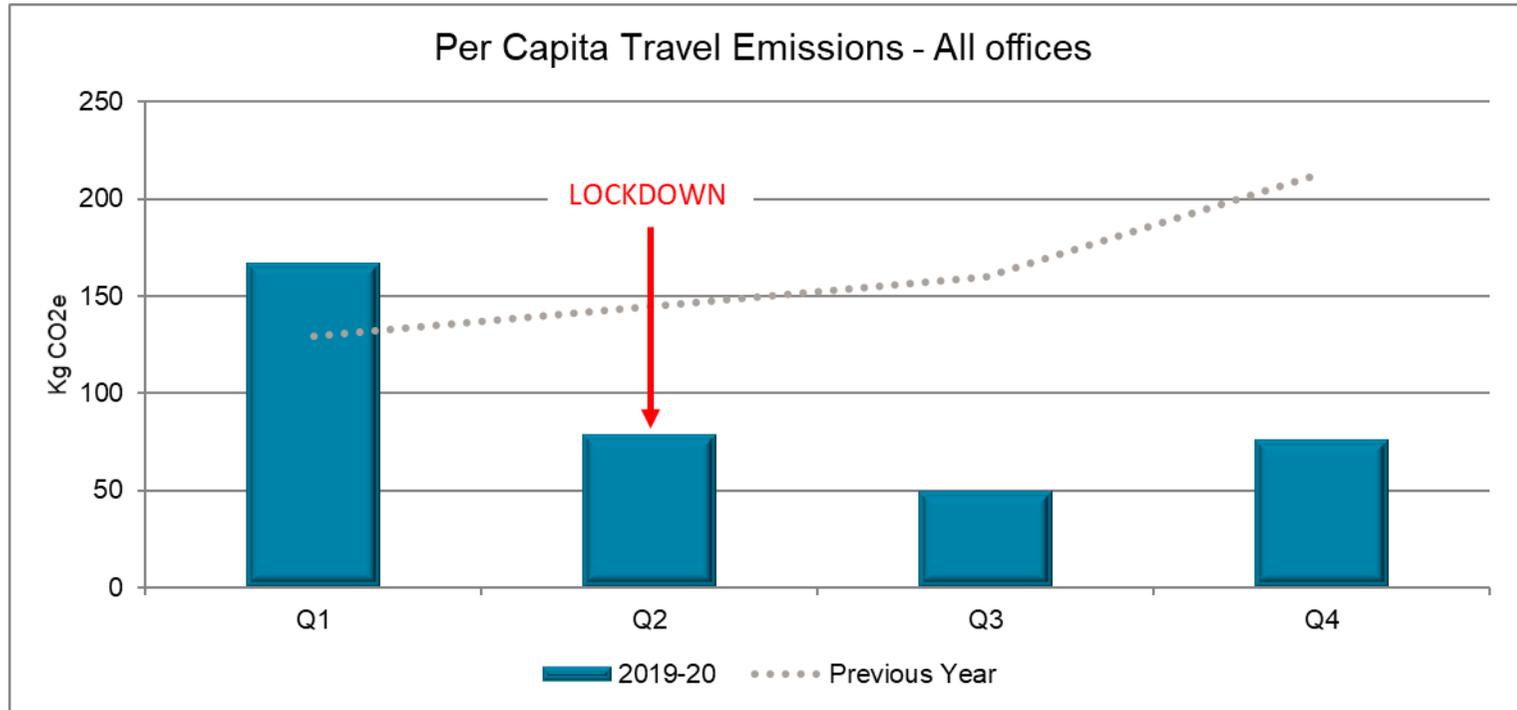
Figure 1-4 shows that much of the reduction in business miles was the result of travel restrictions and changes in working practices enforced by the Coronavirus pandemic. We are working hard to ensure we learn from this experience and do our best to maintain a lower level of business travel in future.

We are committed to:

- Rigorously promoting our travel hierarchy to minimise mileage and encourage the use of more sustainable modes of transport for essential travel.
- Making maximum use of virtual meetings and methods of communication.
- Supporting agile and flexible working.
- Encouraging our clients to minimise project travel requirements.

³ Business travel measured at all JBA Group offices

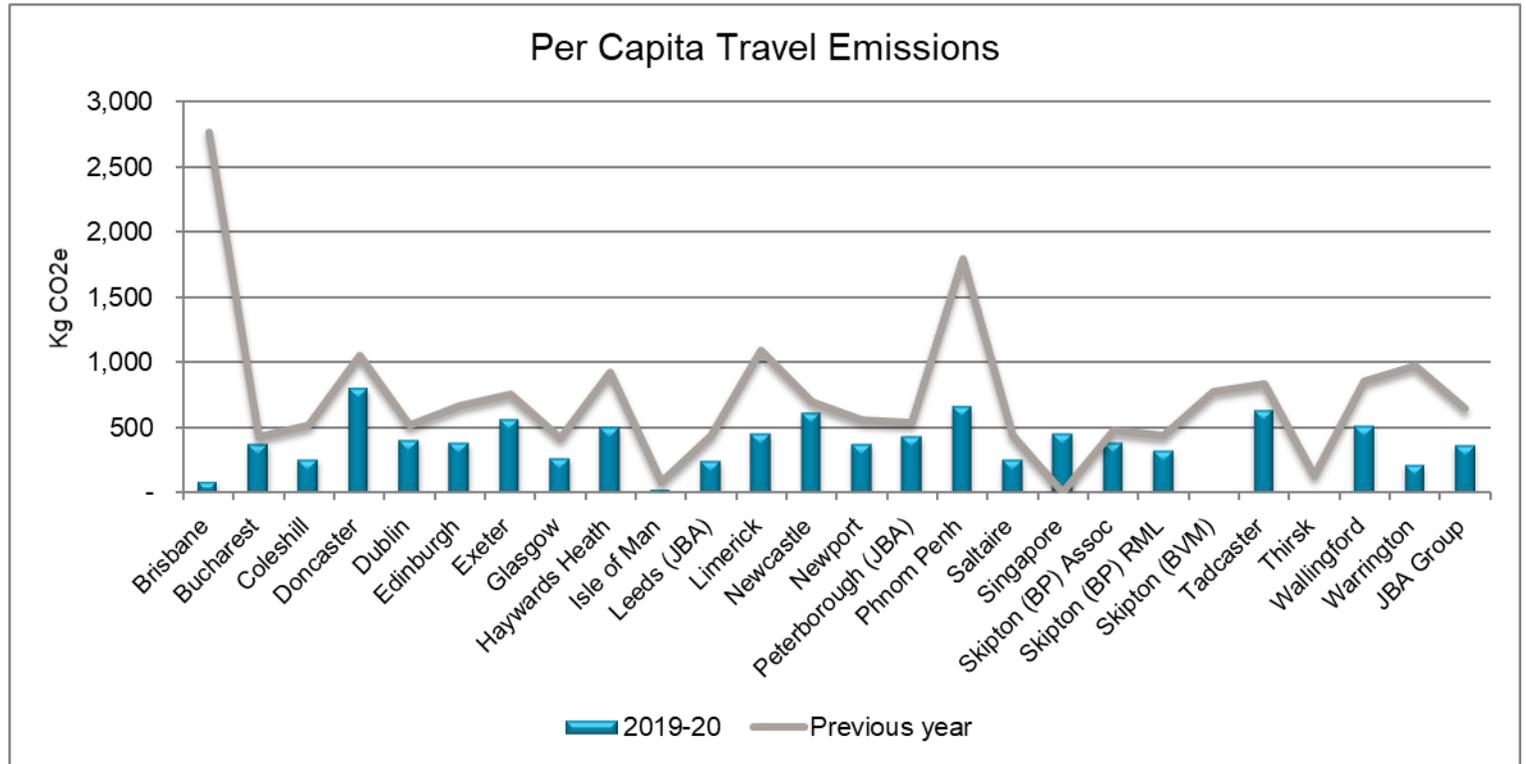
Figure 1-4: Per capita emissions from our business travel throughout the year



Our average CO₂e emissions per business mile travelled increased by 7.4% in 2019-20 but remain lower than two years ago at 202.6gCO₂e/mile. This increase is explained by the temporary adaptations we made to our Travel Hierarchy in response to the pandemic. We prioritised the use of cars over public transport to be sure essential travel was undertaken in a Covid-secure manner.

Figure 1-5 compares the per capita business travel emissions recorded for each of our offices in 2019-20 and 2018-19.

Figure 1-5: Per capita emissions from our business travel - by office



1.4 Key action: reduce our waste sent to landfill

Key action achieved



Table 1-4: Business waste							
	Total waste		Waste sent to landfill		Waste sent for recycling or energy generation		
	Overall, kg	Per capita, kg	Overall, kg	Per capita, kg	Overall, kg	Per capita, kg	Overall, %
2018-19	15,508	26.17	5,687	9.6	9,821	16.57	63%
2019-20	8,202	13.7	2,903	4.85	5,300	8.85	65%

We produced 47% less waste

In 2019-20 we achieved our key action to reduce the office waste we send to landfill.

Our offices produced 47% less waste than the previous year. We sent 2,784kg less waste to landfill, a reduction of 49%, and we reduced the waste we sent for energy generation or recycling by 4,521kg (46%). Our rate of recycling increased from 63% to 65% of our waste.

Whilst this is very good news, these results must be viewed in the light of the Coronavirus pandemic which forced our offices to close, or operate with a much-reduced population, for several months. This change in office operations has played a significant role in reducing the waste that our offices produced and measured but is a statistic we will work hard to maintain.

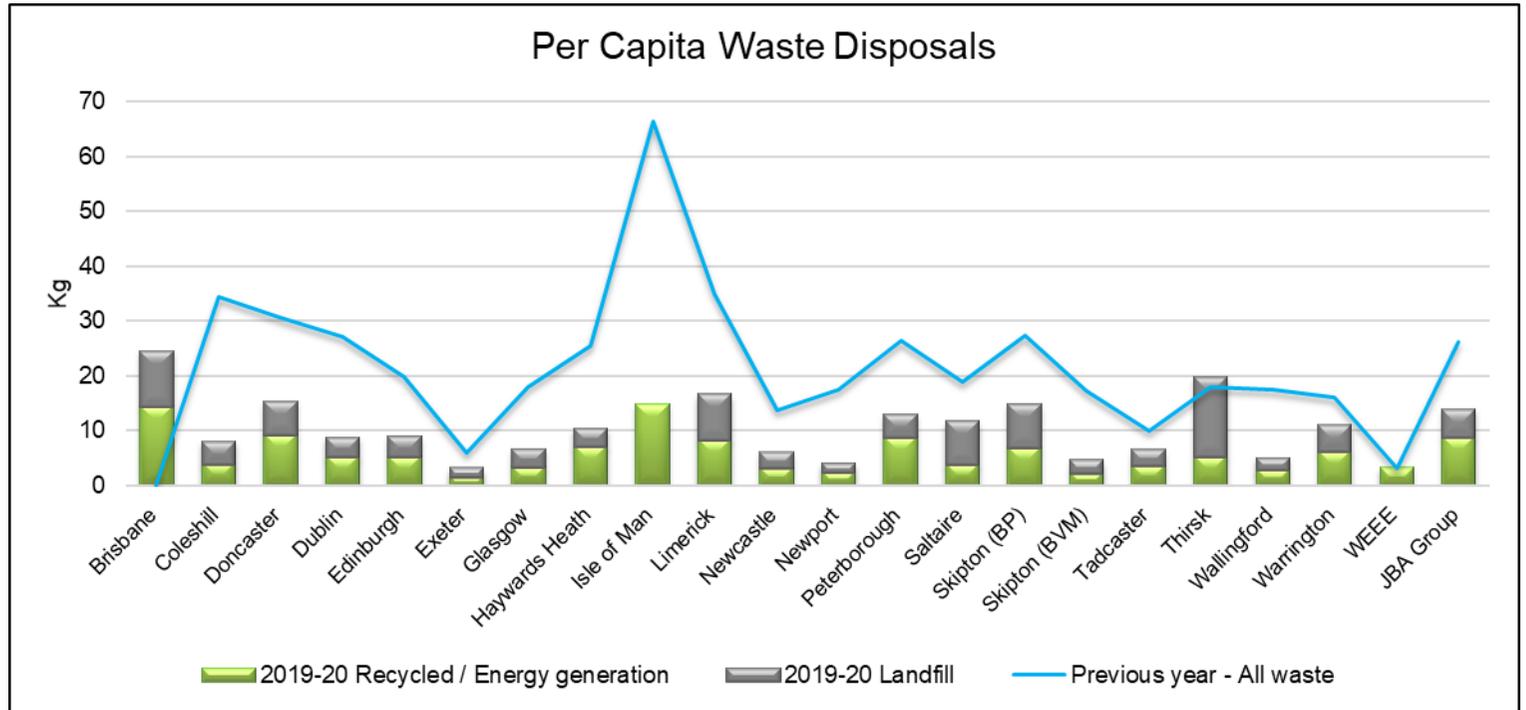
We already monitor waste produced by our UK, Ireland and Isle of Man offices and, this year, we extended our business waste monitoring processes to include our Brisbane office as shown in Figure 1-6. We monitor the amount of business waste each office disposes of and identify how much is sent to landfill and how much is recycled or sent for energy generation.

We recycle 65% of our waste

We record the volume of waste disposed of and convert this to weight using a set of conversion factors devised several years ago. Whilst this is not the most accurate method of monitoring our waste it does allow for comparisons between offices and years. We intend to review and update the conversion factors to improve the accuracy of our waste monitoring and have already started this at our Skipton head office.

In addition to business waste, we collect and recycle a wide range of personal waste streams in our offices.

Figure 1-6: Per capita business waste



2. Environmental achievements beyond our EPIs

2.1 Certifications

Our EMS is certified to ISO 14001:2015

ISO 14001:2015

Our environmental management system has been certified to ISO 14001:2015 and its predecessor Standards since 2008.

This certification was renewed in 2020 following a successful external recertification audit. It confirms that our environmental management system enables us to enhance our environmental performance, fulfil our compliance obligations and achieve our environmental objectives.



We are an EIA Quality Mark organisation



IEMA Environmental Impact Assessment Quality Mark

JBA Consulting has been approved as an Environmental Impact Assessment (EIA) Quality Mark organisation by the Institute of Environmental Management and Assessment (IEMA) since 2018.

The EIA Quality Mark is a voluntary scheme, operated by IEMA, that allows organisations that lead the co-ordination of statutory EIAs in the UK to make a voluntary commitment to excellence in their EIA activities. Every year, EIA activity is independently reviewed to ensure it delivers excellence in a range of areas; such as EIA management, regulatory compliance and team capabilities.

As part of this accreditation, we have demonstrated our commitment to sharing and improving EIA practice.

We are a
CIEEM
Registered
Practice

CIEEM Registered Practice

In April 2020 we received the good news that we had been successful with our application to the Chartered Institute of Ecology and Environmental Management (CIEEM) to become a Registered Practice. CIEEM is the leading professional body representing ecologists and environmental managers across the UK and Ireland. It seeks to promote the highest standards of professional practice within the industry.

Registered Practices are champions of high professional standards and deliver the best outcomes for biodiversity whilst supporting a thriving economy. They are ambassadors in their field and help to raise the profile of the profession by sharing their expertise and supporting others to do their bit for our natural world.

Being a Registered Practice demonstrates that JBA Consulting follows the Code of Practice laid out by CIEEM. This consists of actively supporting CIEEM's Objects and ensuring all works are compliant with current law and guidance and are undertaken with openness and integrity. It commits members to ensuring employees are treated fairly and are supported with opportunities for training and professional development.

Registered Practices are at the forefront of the environmental management profession. Being granted Registered Practice status reflects our commitment to high professional standards and gives our clients, prospective clients, partners, employees and the wider public confidence that we are competent in our field and delivering excellent quality work.

CEEQUAL

CEEQUAL is an evidence-based sustainability assessment, rating and awards scheme delivered by the Building Research Institute (BRE). Applying CEEQUAL improves the quality and sustainable design and construction of civil engineering, infrastructure, landscaping and public realm projects.

We have several CEEQUAL-qualified Assessors in JBA. This year, they supported the Environment Agency (EA) by applying CEEQUAL to improve the sustainability of several large-scale coastal and fluvial flood risk management projects. These included Star Inn Gates water level management project, which sought to provide a long-term, sustainable solution to manage water levels across the Pevensey Levels SSSI. We applied CEEQUAL to the River Itchen flood defence scheme, which aimed to develop a detailed design for new and improved flood defences along a 3.6km frontage of the west bank of the River Itchen in Southampton.

Working closely with EA staff, our Assessors coordinated the assessment process, identified and documented the evidence-base to support the CEEQUAL certification process, and liaised with BRE to ensure this work meets the rigorous evaluation and award requirements.

We have
CEEQUAL
qualified
assessors

2.2 Environmental services provided by JBA

As an environmental consultant, concern for, and protection of, the environment is integral to our professional activities. This section provides just a few examples of the ways our work interacts with, and benefits, the environment.

Environmental Impact Assessments

We are committed to providing excellence in Environmental Impact Assessment (EIA) activities. EIA is a statutory process required as part of planning consent or marine licence application for infrastructure development projects where there are likely to be significant effects on the environment.

For projects deemed to be EIA Development there is a legal requirement that likely significant environmental effects are reported by competent experts. Our *Register of EIA Competent Experts* lists our EIA Co-ordinators and EIA Topic Specialists who have authority to technically review and approve EIA deliverables.

2019-20 was a busy year for our EIA teams, who worked on six statutory EIAs during this period. This included assessment work to support the restoration of the historic Hammer Pond in the Thursley National Nature Reserve in Surrey on behalf of Natural England, a new energy recovery facility in Redcar on behalf of Hartlepool Borough Council, and 6km of new coastal and fluvial flood defences to the east of Cardiff for Cardiff County Council.

Ecological Services

The RSPB commissioned us to carry out Special Area of Conservation (SAC) condition monitoring as part of the Celtic Rainforest LIFE project that was funded by EU Life and the Welsh Government.

We assessed areas of Old Sessile Oakwoods (the 'Atlantic Rainforest') in some of the most iconic locations in Wales, including the Maentwrog Valley, Nant Gwynant and woodlands on the National Trust's Dolmelynlyn Estate.

The surveys involved finding our way off the woodland paths to set out 50m plots and record features of woodland structure and processes.



Approved by
IEMA as an EIA
Quality Mark
organisation

Our ecological
teams work in
iconic locations

We use a bespoke Integrated Riparian Survey (IRiS) technique



We were commissioned by Natural Resources Wales (NRW) to undertake catchment-wide feasibility studies to identify river restoration opportunities across six catchments across Wales.

The work was multidisciplinary and involved geomorphologists and ecologists from across our Coleshill, Doncaster, Tadcaster and Exeter offices.

We utilised our bespoke Integrated Riparian Survey (IRiS) technique to flag opportunities such as woodland planting, scrape/wetland creation, use of woody material, invasive non-native species management and bank enhancement works.

We concluded by undertaking a prioritisation exercise to identify which opportunities will deliver the greatest gains for biodiversity, geomorphology and flood risk management.

Four of our ecologists are on the EA's class licence for water vole displacement

In February, we undertook water vole mitigation works for the EA at two raised water level areas (RWLAs) and several structures across the Somerset Levels.

The work required us to develop mitigation strategies, gain approval to work under the EA's class licence for water vole displacement, supervise vegetation strimming works and monitor watercourses for water vole activity.

There are only a limited number of ecologists across the UK permitted to work under the EA's licence and four of them work for JBA!

Teams from our Doncaster and Exeter offices successfully delivered the project despite the additional pressures placed on site work due to the Coronavirus-enforced lockdown in March. We adopted very flexible working practices and novel techniques to ensure this success.



We monitored bird activity as part of our site supervision works



The EA commissioned us to provide site supervision work for an emergency scheme in Lydd, Kent. The works involved repairing a breach in a sea defence and constructing a rock revetment wall and several new groyne to protect the coast from erosion and flooding.

Avocets *Recurvirostra avosetta* have been recorded historically in this location and so we monitored bird activity leading up to the nesting season and liaised with Natural England and the EA. We devised a buffer “no works” area around the nesting sites and advised that works should stop until the end of the nesting season.

As a result, the works were programmed around nesting activity but were still completed on time. Monitoring showed that our advice had resulted in no adverse impacts to nesting birds; in fact, it had been the best nesting season for avocets in the last 20 years!

Habitat improvements

We have been involved in habitat improvements associated with a large-scale and complex coastal flood risk management scheme for the EA at Hythe Beach.

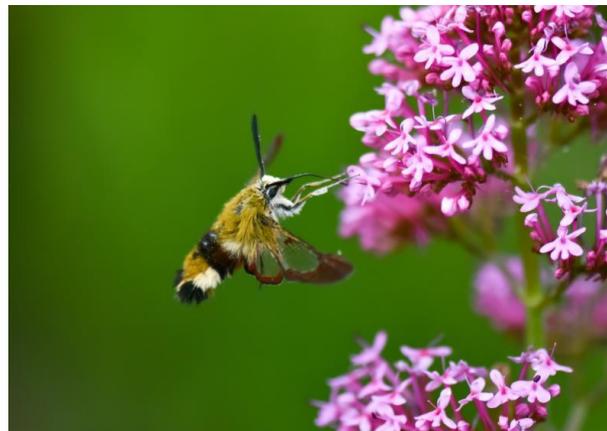
Originally developed by another consultancy, it quickly became apparent that no environmental enhancements had been included in the scheme design.

We developed a range of intertidal habitat enhancements to improve the design. We promoted the installation of features such as retrofit rock pools in the rock revetment and groyne. We proposed the incorporation of various colonisation substrate onto the new defence structures. We reduced off-site waste by utilising old groyne timber to create new habitats. Bournemouth University has now been commissioned to monitor and report on the effectiveness of these features.



We proposed coastal habitat enhancements to improve an existing scheme design

Our botanists are devising experimental methodologies to improve habitats



In February, we were awarded a small research project by the EA to investigate how sterile flood embankments can be made into pollinator-rich swards.

The EA had already trialled a few ad-hoc pieces of work and our role, working with Plantlife, was to bring these together, analyse them qualitatively and devise a statistically robust experimental methodology to be implemented across a number of sites in England.

This is the initial project with more exciting work to follow as the experiments are rolled out. This was a great win for our ecologists and involved a team effort to deliver, with the work undertaken by our botanists from our Doncaster, Tadcaster and Exeter offices.

Carbon audits and reducing carbon footprints

We carried out an unusual project in association with the Yorkshire Dales Rivers Trust (YDRT).

Working closely with two upland farms and the YDRT, we undertook detailed carbon audits of farms in Upper Wharfedale, Yorkshire.

The aim of the project was to gain a better understanding of the carbon emissions that arise from traditional upland hill farming methods and to identify opportunities to reduce and offset those emissions.

We considered the wider benefits of the audit and baseline carbon accounting so that potential interventions could be planned to deliver combined benefits: benefits such as carbon sequestration, soil improvement, natural flood management, recreation and increased biodiversity.



We carried out carbon audits of upland farms

We developed a tool to help small communities reduce their carbon footprint

We worked with Craven District Council to develop a tool that small, rural communities can use to help lower their carbon footprint. The tool was developed for the rural community of Malhamdale in the Yorkshire Dales and focussed on reducing local reliance on fossil fuels. Through engagement with members of the community and technical analysis of available renewable energy options, the tool delivers bespoke feasibility assessments. It provides a holistic decision-making framework to streamline feasibility assessments. For Malhamdale, the tool led to specific recommendations that the community is looking to implement.

Increased reporting of positive environmental interventions

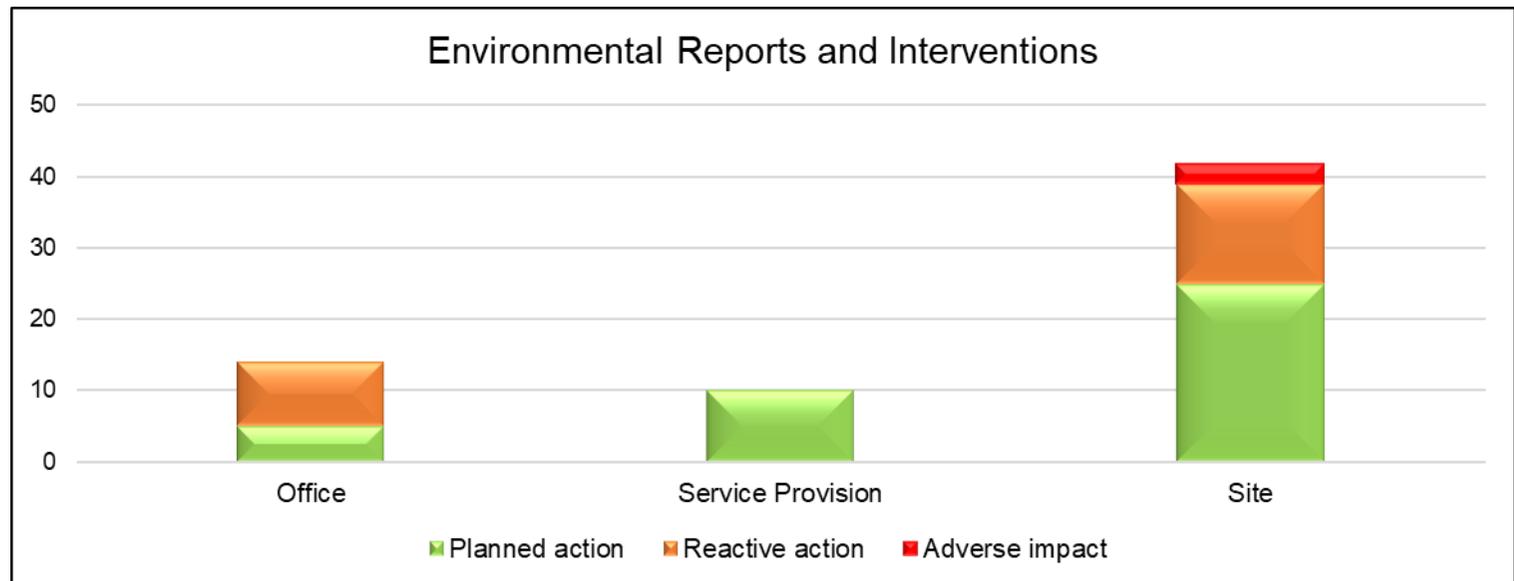
2.3 Environmental reports and interventions

Our staff reported 66 environmental incidents, near misses or observations in 2019-20 relating to our office operations, our service provision and our onsite activities. The majority are positive interventions, but three relate to reports of adverse impacts. All reports were reviewed and, where appropriate, followed up in accordance with our incident investigation process. Reports have been categorised as

- causing an adverse impact;
- reacting to a near miss event; or
- planning an action to minimise the negative environmental impacts or gain an environmental improvement.

23 of the reports involved reactive actions, such as actions following a near-miss type event, and 40 were observations leading to improved outcomes. 21% of the reports related to how we operate in our offices, 15% were opportunities identified by our staff to improve the environmental outcome of the services we provide and 64% related to our site-based activities.

Figure 2-1: Environmental reports and interventions



2.4 Carbon and Resource Use Management Plan

Carbon and Resource Use Management Plan

We published our Carbon and Resource Use Management Plan

Almost all our work is connected with, and influenced by, climate change, and we are acutely aware of the threats we face as a global society. We recognise we are experiencing a climate emergency and are committed to doing what we can to ensure we minimise the environmental impacts of our business, and we are focused on doing this in the right way.

We have already taken important steps to embed sustainability in JBA. We now want to take this further. This increased ambition is reflected in the JBA Group Carbon and Resource Use Management Plan (CRuMP), which we published in 2020. The CRuMP encompasses both our resource use—energy, water, the goods and services we procure, and the waste we produce—and our carbon emissions; the two aspects are inherently connected, and it makes sense to take a holistic approach to how we reduce both. The CRuMP will help us work more sustainably, not only in our own operations, but also taking account of our indirect emissions and impacts. It supports planning and decision-making across all our business activities and helps to embed environmental sustainability in our governance, values and behaviours. It encourages us to engage more with our staff, suppliers, and clients on this subject, to demonstrate our commitment to sustainability, show leadership within our industry, and manage our supply chain with accountability. The CRuMP encompasses the business operations of the entire JBA Group and all group-wide businesses have a role to play in contributing to and achieving our aims and objectives, targets, and actions.

We aim to be a Net Zero business by 2030

Our objective is to be a Net Zero business by 2030: for our annual carbon footprint to show we have saved more carbon than we have produced. Our first priority is to minimise our energy use and emissions. The CRuMP includes a range of measures focused on minimising our use of fossil fuels that will reduce our emissions getting into the atmosphere. This means making changes to the way we operate to reduce our fossil fuel consumption and ensure all the energy we use is from renewable sources.

We recognise that this will take time to achieve and we need to deal with a legacy of residual emissions. Therefore, we will offset these residual emissions. Due to concerns relating to additionality and the overestimation of carbon savings, we will offset our residual carbon emissions at a ratio greater than 1:1. This will give us confidence that our offsetting delivers the required emissions reductions. We are currently investigating specific emissions reductions measures to offset our residual emissions. We are focused on community-scale renewable energy generation local to our office locations. We believe this approach is best as it addresses the principle structural issue causing climate change: our reliance on energy generation from fossil fuels. However, we recognise that our approach to offsetting will need to include both emissions reductions and carbon removals. Therefore, we will, in time, include carbon removal measures within our offsetting approach so that we ultimately achieve 100% of our offsetting via carbon removals.

We share ideas to promote sustainability

2.5 Sustainability

We have continued to develop and expand the Sustainability hub on our intranet site to provide a helpful and valued source of information that all our staff can use to explore individual, project, and corporate sustainability matters.

We maintained our Sustainable Actions Log, which staff use to record individual and group sustainability actions and share ideas and good examples. This includes a range of sustainability issues including energy use, waste and recycling, low carbon travel, food supply and community initiatives. We currently have 97 actions recorded on the log, including:

- Switching to a 100% renewable energy supplier for our Limerick office.
- Initiating separate food waste collections at our Coleshill office and encouraging other businesses in the office block to do the same.
- Creating a wildflower meadow on an area of rough grassland behind the JBA Trust's weather station at Broughton Park.
- Replacing our hand soap supplier in our Newport office for one who provides refillable bulk containers – once empty they collect and replace the container for reuse, thereby ensuring a zero-waste stream.
- Planting 600 broadleaved tree saplings outside our Broughton Park office. An enthusiastic group of 33 volunteers managed to do this without using any new plastic: all the tree tubes are re-used from other local planting projects where they are no longer needed thus diverting plastic waste from landfill or incineration.
- Taking part in the planting of 250 broadleaved tree saplings on the bank of the River Aire near Skipton. Staff from our Saltaire office joined with the Bradford City Angling Association.
- Donating used office furniture to the Boher Christmas Market, held each year to raise funds to support community activities in the community of Boher, near Limerick.
- Purchasing our first all-electric car – a Nissan Leaf Tekna 30kWh – which we power via 100% renewable electricity at our Broughton Park office. It was built in the UK and can travel up to 150 miles on a single charge.



New e-learning modules

Sustainability e-learning modules

We continued to maintain and expand our suite of environmental e-learning modules, which cover many aspects of environmental management, including catchment management, ecology, sustainability, and waste management.

We increased the training allowance for all permanent staff. The allowance is now up to six days of staff time and this further enhances our long-standing industry lead in supporting staff lifelong Learning and Skills Development.

We ran numerous lunchtime webinar sessions covering a wide range of environmental and sustainability topics and issues, including hydrometric monitoring, arboriculture, scheduled monuments and consenting, and the application of nature-based options for natural hazard management.

Recognising sustainability and good practice

Working with the Coal Authority, our joint venture with the contractor JN Bentley – JBA-Bentley – was shortlisted for the 2020 IEMA Sustainability Impact Awards under the Transport and Infrastructure category. This was for the design and build of the Lynemouth Mine Water Treatment station, completed in 2019, and now one of the largest mine water treatment stations in the UK. The project drew on specialists across the whole of JBA, including hydrogeology, ecology, geo-technical, and engineering and was designed with partners Mott MacDonald. It was great to see our hard work recognised in this way.

For the second year running, we were shortlisted in the Consultancy of the Year (medium) category by the Chartered Institute of Ecology and Environmental Management (CIEEM). This award recognises high standards of professional practice, delivery of high quality practical outcomes, and a commitment to evidence sharing and good practice, supporting the professional development of staff and promotion of the profession.

JBA-Bentley also received a 'Highly Commended' award at the 2020 Institute of Civil Engineers (ICE) Yorkshire and Humber Awards. Our Victoria Clough Culvert scheme in Earby was recognised due to the significant carbon savings it achieved (41%) and strong commercial performance. The scheme was shortlisted for the 'Smeaton Award' which celebrates projects worth less than £5m.

Shortlisted for sustainability and environmental awards

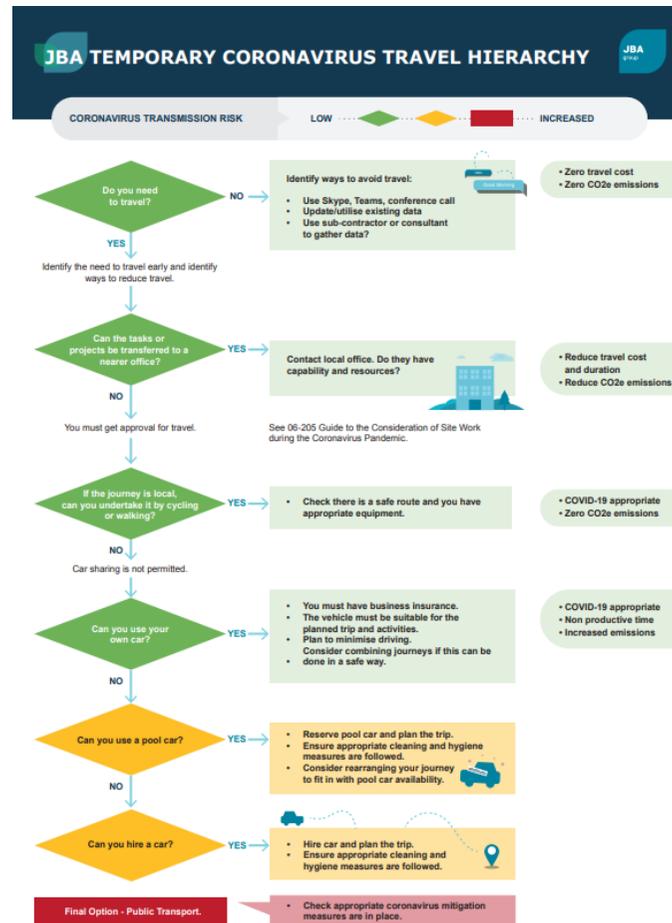
2.6 Business travel and low carbon commuting

We encourage our staff to adopt low carbon business travel and commuting.

The JBA Travel Hierarchy – adapted to respond to the Coronavirus pandemic

Figure 2-2: JBA travel hierarchy

We adapted the JBA Travel Hierarchy to enable Covid-secure essential travel



The JBA Travel Hierarchy ranks options for business travel according to what is best for the environment. We have used this tool to guide our business travel decisions for many years.

This year, on a temporary basis, we adapted our long-standing Travel Hierarchy to respond to the needs of the pandemic. We prioritised the use of cars over public transport to enable Covid-secure essential travel.

This resulted in our average CO₂e emissions per business mile travelled increasing in comparison with last year, but it was essential to ensure the safety of our staff.

Despite this adaption, we used public transport instead of cars for 23% of our business mileage in 2019-20; this equated to over 268,000 miles.

Taking the train
avoided 58,000kg of
carbon emissions

We saved
1,000 air miles

We purchased an
electric car

We hire low
emission cars

We reward low
carbon commutes

Trains

In 2019-20, we travelled over 260,000 miles by train. Taking the train in preference to making a journey by car reduced our carbon emissions by 58,000 kg.

We encourage regular travel by train for business mileage by offering staff an interest free loan for the purchase of corporate season tickets and by reimbursing the cost of railcards when they are used to purchase tickets for business travel.

Ferries

Where practical, we use trains and ferries in preference to planes for journeys from the UK to Ireland and for some journeys in Australia.

In 2019-20 our staff travelled over 1,000 miles by ferry.

Electric cars

In 2019-20 we took delivery of an all-electric Nissan Leaf car. Not only does it produce zero emissions when being driven, it is charged when 'at base' at Broughton Park with electricity purchased via our renewable electricity tariff.

Car hire and cycling

If public transport is not a viable option and company vehicles are not available, we use low emission hire cars for essential business travel. For very local travel, we pay a generous expenses rate to staff who use a bicycle for business travel.

We are a member of the Enterprise Car Club that enables us to combine public transport with car hire by providing access to short term hire vehicles at rail stations. This makes it possible for us to travel by rail even if our destination is not close to a station.

Encouraging low carbon commutes

We continued to pay our Environmental Reward Scheme to staff as reward for regularly using low carbon methods of commuting. Under this scheme, staff who walk, cycle, car-share or use public transport to travel to work for a significant proportion of their journeys are entitled to receive a financial bonus. The Coronavirus-enforced lockdown reduced the number of staff who qualified this year and so to address this anomaly, we applied the scheme only to the pre-lockdown period of the year. 211 members of staff qualified for this reward in 2019-20 and, between them, earned over £21,000.

Average CO₂ emissions of our fleet decreased

The JBA vehicle fleet

We maintain a fleet of company vehicles for essential business travel that we cannot undertake by public transport. The majority are low emission, fuel efficient vehicles apart from utility vehicles that are required to meet our off-road access needs; their use is restricted to such purposes.

Table 2-1 shows the average CO₂ emissions and fuel economy of our fleet. This year, we added an electric car to our fleet and removed a van and petrol car. This resulted in average CO₂ emissions decreasing by 5gCO₂/km and average fuel economy staying the same.

Table 2-1: JBA vehicle fleet					
Vehicle	CO ₂ (g/km)	Fuel (mpg)	Vehicle	CO ₂ (g/km)	Fuel (mpg)
Grey Nissan Leaf - Electric	0	n/a	Black Qashqai	99	74
Grey Corsa Exc AC CDTi Ec	88	86	Black S60 R-Design D2	103	72
Silver Astra 1.6 CDTi	89	83	Silver Focus 1.6 TDCi	115	64
Blue Astra 1.6 CDTi Ecofl	91	83	Blue Astra 1.7 CDTi 16v Ecoflex	119	63
Silver Astra 1.6 CDTi Ecofl	94	79	Dark Grey Astra SRI CDTi	119	63
Red Astra Design CDTi	95	79	White Combo Van 1.3 CDTi	130	57
White Astra 1.6 CDTi	97	76	White Combo Van 1.3 CDTi	130	57
Silver Astra 1.6 CDTi Excite	97	76	White Astra Van Club CDTi	132	57
Black Qashqai 1.5 dCi	99	74	White Ranger XL D/Cab 4x4	192	35
Black Qashqai 1.5 dCi N-Connecta 5d	99	74	White Boxer 335 L3 HDi	195	41
Average across the fleet				109	67

We purchase fleet vehicles made in Britain to help us work towards our sustainability goals

We reduce our business mileage by holding virtual meetings and webinars

2.7 Virtual communications

The year began with JBA continuing its determined move towards an increased use of digital communication tools, seeking to build on previous progress in terms of the environmental benefits realised using technology, as opposed to the more traditional practice of travelling to face-to-face meetings.

With this approach already embedded in JBA, all staff were able to seamlessly embrace remote working as the response to the Coronavirus pandemic developed. Colleagues were able to continue working and communicating effectively, both externally and internally, across all areas of the business. Throughout the on-going pandemic, we have been using our technology to support clients, suppliers and other third parties, some of whom did not have access to digital communication tools of their own.

Office 365

Microsoft Office 365 continues to form the core of our communications system, but this year has seen the transition from Skype for Business to Microsoft Teams as the main communication tool.

Teams has proved itself to be an invaluable asset for us, as our staff have been able to maintain JBA's presence across the world. In a period where travel was simply not an option, the benefits and power of digital communication to connect people over distances both near and far, without the environmental impact, have become increasingly clear to everyone. As a result of this, looking to the future, we see a significantly increased use of virtual meeting environments being welcomed across the board, something that we will continue to seek to drive.

Teleconferences

Where the use of Teams is not possible, we utilise the Arkadin teleconferencing system throughout the Group as an alternative method of hosting external meetings.

Webinars

In addition to meetings, we use our virtual conferencing facilities for broadcasting webinars, training courses and presentations to all offices. This avoids the need for the presenters to travel to each JBA office thus reducing the mileage, carbon emissions and staff time. Webinars are recorded to enable staff to watch them a second time, or for those not available to watch the first presentation.

2.8 Our offices

Office location and size

Environmental issues are a key consideration when we select locations and properties for our offices. We consider commuting distances for staff, proximity to client offices and accessibility by public transport. Our Exeter, Isle of Man, Newcastle and Wallingford offices, for example, are located very close to key clients; our Haywards Heath, Newcastle, Newport, Saltaire and Warrington offices are all within walking distance of train stations.

We manage our office space to ensure each office is an appropriate size for its current population. This helps us to run energy efficient offices by avoiding empty space.

Skipton – Last year’s move to our new head office has enabled us to bring together all our teams that work in Skipton. This year, we reunited teams from our Belle Vue Square office with colleagues across the JBA Group at Broughton Park. The purpose built, eco-friendly and modern office space supports flexible and collaborative working in an environmentally friendly environment.

Scotland – We merged our Glasgow and Edinburgh offices. The resulting reduction in office space has been possible due to the increase in agile working preferred by many of our colleagues in these offices. It has resulted in a decrease in the energy use within our Scottish offices and the move to working from home has reduced emissions associated with commuting.

Teams based at our Saltaire, Singapore, Isle of Man and Wallingford offices all relocated to new premises this year.



Saltaire – Expanding teams, as a result of the growth in the range of environmental services we offer, meant it was time for our Saltaire office to relocate. The office hasn’t moved far and is still located in the unique Salts Mill UNESCO World Heritage site.

It is conveniently located two minutes’ walk from Saltaire station. The office premises can accommodate our expanding teams, enable a more agile approach to working and provide access to additional meeting rooms for virtual meetings and presentations.

The new premises are run on electricity only which will be more energy efficient.

Singapore - Our JBA Risk Management office in Singapore moved to new premises in May 2020. The new Carpenter Street shared office location is a new build and more energy efficient than our previous location. The air conditioning can be used in an efficient manner with individual working areas being locally controlled to minimise energy use.

Offices near to clients and public transport

Office relocations to bring staff together and increase energy efficiency

Isle of Man - After four years in their Onchan office, the Isle of Man team relocated to a new office in Douglas. The new office has excellent transport links and is within 5 minutes' walk of the centre of Douglas.

The team look forward to reducing their carbon footprint and taking advantage of the public transport and reduced energy consumption in the smaller newly refurbished premises.



Wallingford - We have expanded the range of services we offer from our Wallingford office and, to support this, have increased the number of teams and staff that are based at the office.

This growth meant we had outgrown our Castle Street premises and so we moved our Wallingford office to new, larger premises this year. The new office provides additional desk space but also more meeting rooms for virtual meetings, presentations and cross-office working.

Our office facilities encourage low carbon commuting

Facilities to encourage low carbon commutes

Most offices, including Edinburgh, Newcastle, Saltaire, Skipton, Tadcaster and Warrington, have facilities for secure bike storage and shower facilities to encourage staff to cycle to work. Our Skipton head office has charging points for electric vehicles to encourage low carbon travel by staff and clients.

Office services

Where we can select the energy provider for our offices, we choose suppliers who provide electricity generated from renewable sources. In 2019-20, we transferred the electricity contact for our Limerick office to a renewable energy provider and continued to purchase electricity from renewable sources for our Doncaster, Glasgow, Newport, Skipton Broughton Park, Tadcaster and Wallingford offices.

We use motion sensitive lights, lights on a timer, lighting in banks that can be switched on and off individually and LED lighting to reduce the energy required to light our offices.

We monitor water use at offices where our water use is separately metered. Currently this is possible at our Tadcaster, Wallingford, Edinburgh and Doncaster offices.

We purchase electricity from renewable sources

We prevented 250kg of CO₂e emissions by using recycled paper

Paper and printing

85% of the paper we used in 2019-20 came from recycled sources. By using recycled paper instead of 100% virgin paper we have avoided almost 250kg of CO₂e emissions. This is approximately equivalent to the emissions produced by driving 800 miles in an average car, boiling a kettle 16,000 times, or using an LCD TV continuously for 2 months.

We encourage staff to keep their printing requirements to a minimum by reminding them of the environmental and financial costs of printing. We minimise ink and paper usage by using double-sided, two pages per sheet and draft print as the default settings for our printers. Each office has a repository to collect scrap paper, which we reuse as note pads and for draft prints.

We use electronic documentation wherever possible, continue to decrease our use of paper documents and encourage our clients to do the same. We provide staff with software that reduces the need to use paper such as Autodesk Design Review that allows CAD drawings to be reviewed digitally and so reduces the number of drawings we need to print.

Waste management

We manage our waste in accordance with the waste hierarchy and minimise the waste we produce by reducing, re-using and recycling resources. All offices have waste separation facilities, and we recycle the following items at the majority of our offices:

- batteries
- card
- cans
- CDs/DVDs
- electrical equipment
- glass
- organic waste
- paper
- plastic bottles
- print consumables
- tetra-pak cartons

We manage our waste in line with the Waste Hierarchy

We use the Terracycle service to increase the range of items we can recycle, and we return used print consumables to the manufacturer for re-use or recycling. Many offices have reduced their plastic waste by buying cleaning and hygiene products in bulk and refilling containers. Several offices purchase milk in glass bottles. We minimise our use of batteries and, where possible, use rechargeable batteries in our equipment.

All offices have arrangements in place with licensed waste carriers to collect our general and recyclable waste. The JBA Group is a registered lower tier waste carrier. This allows us to transport waste between offices to central collection points and take excess cardboard from new IT and other equipment to a local recycling centre.

When an electrical item or piece of IT equipment reaches the end of its useful life within JBA we dispose of it via a central contract managed by our IT department. We use an approved supplier who provides a service to re-use or recycle redundant electrical equipment in a secure, certified and auditable fashion using techniques recommended by Defra.

2.9 Connecting with local communities and the environment

Supporting local communities, suppliers and social enterprise

We support local communities and social enterprises

Where possible we support the local economies around our offices by using local suppliers. Our head office uses locally based HR advisers, pension administrators, financial auditors and solicitors. All our offices use local cleaning and maintenance companies and, where possible, we use surveyors located close to our projects. Some offices obtain milk from local suppliers. We use AirBnB rooms and small independent providers for some business accommodation.

We support environmental, social and community projects; for example, by subscribing to The Compliance People's legislation update service and attending their training events. The Compliance People operate as a social enterprise in which their profits are gift aided to Newground Together - a charity which supports environmental, social and community projects.

In 2019-20 we took delivery of an all-electric Nissan Leaf car. As well as producing zero emissions and being charged at Broughton Park via our renewable electricity tariff, the car and battery were built in Sunderland and purchased from a local family-owned car dealership.

Sharing ideas about flood risk management

We share ideas and information with local schools and organisations

In 2019-20, we continued to support a wide range of events to raise awareness and support learning about risks in the water environment, particularly through the JBA Trust.

Staff from the JBA Trust and volunteers from the JBA Group attended a community event organised by the River Worth Friends in Keighley. This used physical demonstration models to show how engineered structures can affect the flow of water in rivers and how topography and features can affect the flow of water through catchments.



We provided sandbox training for staff and volunteers at the Slimbridge Wetland Centre.



This training will enable the Wetland Centre staff to use the model for public engagement events that enable visitors to learn about wetlands in a unique and interactive way.

We provide educational resources and workshops



JBA Trust ran workshops for primary school pupils which involved model demonstrations and linked educational activities to support learning about rivers, structures and river safety awareness.

We collaborated with the University of Nottingham at an event that enabled secondary school pupils to learn about flood and coastal risk management in exciting and engaging ways.

Pupils explored the geography and flood hazards in their local area by using the Skipton projection augmented

relief model (PARM). This allowed them to see maps, images and animations projected on to a 3D printed model of Skipton.



The JBA Trust continues to develop our educational learning resources. In April, we launched three new educational packs, which included resources for primary, secondary, higher education and continuing professional development. These were particularly valuable and timely resources given the switch to online learning in response to the Coronavirus pandemic.

In early 2020, we published a series of new videos on the JBA Trust YouTube channel. These demonstrated our mini hydraulic flume, our augmented reality sandbox and our projection augmented relief model. We created Spanish versions of the videos to present at the first Central American World Bank/GFDRR 'Understanding Risk' conference in Costa Rica in February.

CoastSnap

We encourage public participation to raise awareness of coastal change



CoastSnap encourages the public to help gather images of coastal change from fixed camera locations.

We have developed a 3D image design that members of the public can print to create their own phone mount and as nearly everyone has a smart phone and likes to help this is a really positive way of gathering data.

Currently we are collating images at Stonehaven and soon at Montrose so we can gather information on how the beaches are moving.

We contribute to our local environment

Tree planting



February saw the start of a project in which our staff will plant 600 trees outside our Skipton head office. This is part of our commitment to sustainability, carbon sequestration and staff well-being. It is a small step in the direction of larger rewilding aspirations for the Broughton Hall Estate who are working with us on this project. It is hoped this new woodland will become home



to birds, mammals, insects and woodland flora. It will also contribute to staff well-being as a place where staff can spend time with nature during lunchtime walks. The newly planted trees are set back from the access road to help avoid encroachment and are protected from browsing animals by re-used plastic tubes. The project was undertaken without the use of any new plastic. All the tree tubes are re-used from other local projects where they are no longer needed, thus diverting plastic waste from landfill.

In 2007, we established a new woodland, Catgill Wood, on land within the Broughton Hall Estate in North Yorkshire under an agreed management scheme. We planted over 5,000 mixed native broadleaf trees on a 1.62 hectare area of land. Based on research by the Forestry Commission⁴, Catgill Wood is expected to sequester 8.75 tonnes of CO₂ each year.

Carbon sequestration



Although the CO₂ sequestered by Catgill Wood represents a small proportion of our carbon footprint, Catgill Wood is a very tangible sign of the importance we attach to our environmental performance. Establishing and maintaining the wood clearly demonstrates our commitment to the environment and has enthused and involved staff – in its original creation, its ongoing maintenance and as a recreational resource.



⁴ Forestry Commission Publications. Climate Change Information Pack, Sheet 6 Mitigation: Planting More Trees.

Just Be Active

Our *Just Be Active* initiative encourages staff to interact with their local environment



Our colleagues shared a range of online challenges via Virtual Runner, Death by Burpees, spinning challenges

Our annual Just Be Active initiative took a slightly different turn this year and was moved to earlier in the year to help staff working from home. The focus this year was on having fun and sharing with colleagues, but with appropriate social distancing in place.

This year's activities included virtual Yin Yoga and Tai Chi sessions.



Our staff enjoyed a variety of exercise such as walking, running, cycling and gardening, much of it with their families.

Almost all activities involved engaging with the natural environment and so this health and wellbeing-led initiative also had environmental benefits by encouraging staff to get out and about and enjoy their local environment.



Teams. Everything from and online cycling games.



3. Our carbon footprint

We measure our carbon footprint as the CO₂e emissions related to energy use in our offices and data centre, our business travel and this year, for the first time, our paper use. We have achieved significant reductions in our carbon emissions this year from all three sources, but these reductions must be viewed in the light of our response to the Coronavirus pandemic which has had a significant impact on our working practices:

- Our offices remained open for much of the year but with a much-reduced population since March and hence a lower energy use. Conversely, staff working from home are likely to have increased their domestic energy use, but we were not able to monitor this.
- We travelled almost a million fewer business miles than the previous year but much of this reduction was a result of the Coronavirus-related travel restrictions.
- There is likely to have been some unmeasured paper use due to staff working from home instead of in our offices.

3.1 Emissions from our paper use

Total CO₂e emissions from our paper use down by 58%

Table 3-1: CO ₂ e emissions from monitored paper use				
	Virgin paper used (kg)	Recycled paper used (kg)	Total paper used (kg)	Total emissions (kg CO ₂ e)
2018-19	559	3,021	3,581	2,932
2019-20	235	1,366	1,600	1,226
Note:	Carbon emissions calculated using formulae from <i>UK Government GHG Conversion Factors for Carbon Reporting</i> Paper use measured at our UK, Ireland, Isle of Man and Brisbane offices			

We have included CO₂e emissions from our use of paper in our carbon footprint for the first time this year.

We measure the amount of virgin paper and paper from recycled sources that we use to enable us to calculate the associated emissions.

3.2 Emissions from our energy use

Total CO₂e emissions from our energy use down by 27%

Table 3-2: CO ₂ e emissions from energy use						
Year	Total energy used ¹ (kWh)	Total green energy used (kWh)	Total non-green energy used (kWh)	Equivalent emissions ² (kg)	Change in total emissions (kg)	Change in total emissions (%)
2018-19	1,898,701	779,751	1,118,950	269,124	-1,895	-0.7%
2019-20	1,378,212	525,089	853,123	197,243	-71,881	-26.7%
Notes:	<ol style="list-style-type: none"> 1 Data recorded at offices where JBA energy use can be monitored extrapolated to estimate usage at unmonitored offices. 2 Carbon emissions calculated using formulae from <i>UK Government GHG Conversion Factors for Carbon Reporting</i>. 					

We calculate our total energy use and emissions from a combination of recorded and estimated data. We use recorded data for locations where JBA energy use is metered. For multi-occupant offices where JBA energy use is not separately metered, energy use and emissions are estimated using a per capita average calculated using data from our monitored offices. We are not currently able to include estimates for our offices in Brisbane, Bucharest, Phnom Penh, San Francisco or Singapore due to the differing climates meaning a UK focussed per capita average is not appropriate.

To ensure we include all greenhouse gas emissions, we report emissions as carbon dioxide equivalent (CO₂e) and include emissions due to electricity transmission and distribution losses for all locations, including those supplied with energy from renewable sources.

Our total monitored and estimated CO₂e emissions from energy use in our UK, Ireland and IoM offices and data centre fell significantly in 2019-20, by 26.7%.

3.3 Emissions from our business travel

Total CO₂e emissions from our travel down by 41%

Table 3-3: CO ₂ e emissions from all business travel					
Year	Total miles	Change in miles	Total emissions kg CO ₂ e	Change in emissions kg CO ₂ e	Emissions per mile kg CO ₂ e
2018-19	2,081,955	+25,068	394,496	-29,698	189
2019-20	1,149,320	-932,635	232,835	-161,661	203
Note:	Conversion factors used are Defra's <i>UK Government GHG Conversion Factors for Company Reporting</i>				

Table 3-3 shows that we travelled almost a million business miles less than the previous year: a 45% reduction. We reduced our total CO₂e business travel emissions by 41% and our per capita business travel emissions by 42% compared to the previous year.

Our average CO₂e emissions per business mile increased by 7.4% but this increase is explained by the temporary adaptations we made to our Travel Hierarchy in response to the Coronavirus pandemic.

3.4 Overall JBA Group emissions

Overall CO₂e emissions decreased by 235,248kg – a 35% reduction

Table 3-4: Total JBA Group CO ₂ e emissions in Kg								
	Paper use emissions	Energy use emissions	Travel emissions	Total emissions	Total emissions per capita	Change in total emissions	% Change in total emissions	% Change in per capita emissions
2018-19	2,932	269,124	394,496	666,552	1,125	-31,593	-4.5%	-15.3%
2019-20	1,226	197,243	232,835	431,304	721	-235,248	-35.3%	-35.9%
Note:	Conversion factors used are Defra's <i>UK Government GHG Conversion Factors for Company Reporting</i>							

Table 3-4 shows our overall carbon footprint calculated by combining the CO₂e emissions from energy use at our UK, Ireland and IoM offices and data centre, our business travel and our paper use.

In 2019-20, our overall carbon footprint was 235,248kg CO₂e lower than the previous year; a 35% reduction. Our per capita carbon footprint decreased by 36%.

3.5 Changes in our carbon footprint since 2009

The following graphs show how our carbon footprint has changed over the last decade. Figure 3 shows our total carbon emissions and per capita emissions calculated from our office and travel energy use. Figure 4 shows how the source of emissions that make up our carbon footprint has changed over time. This graph highlights the increased contribution travel emissions have made to our carbon footprint as the JBA Group has expanded across the world.

Figure 3: Overall and per capita carbon footprint

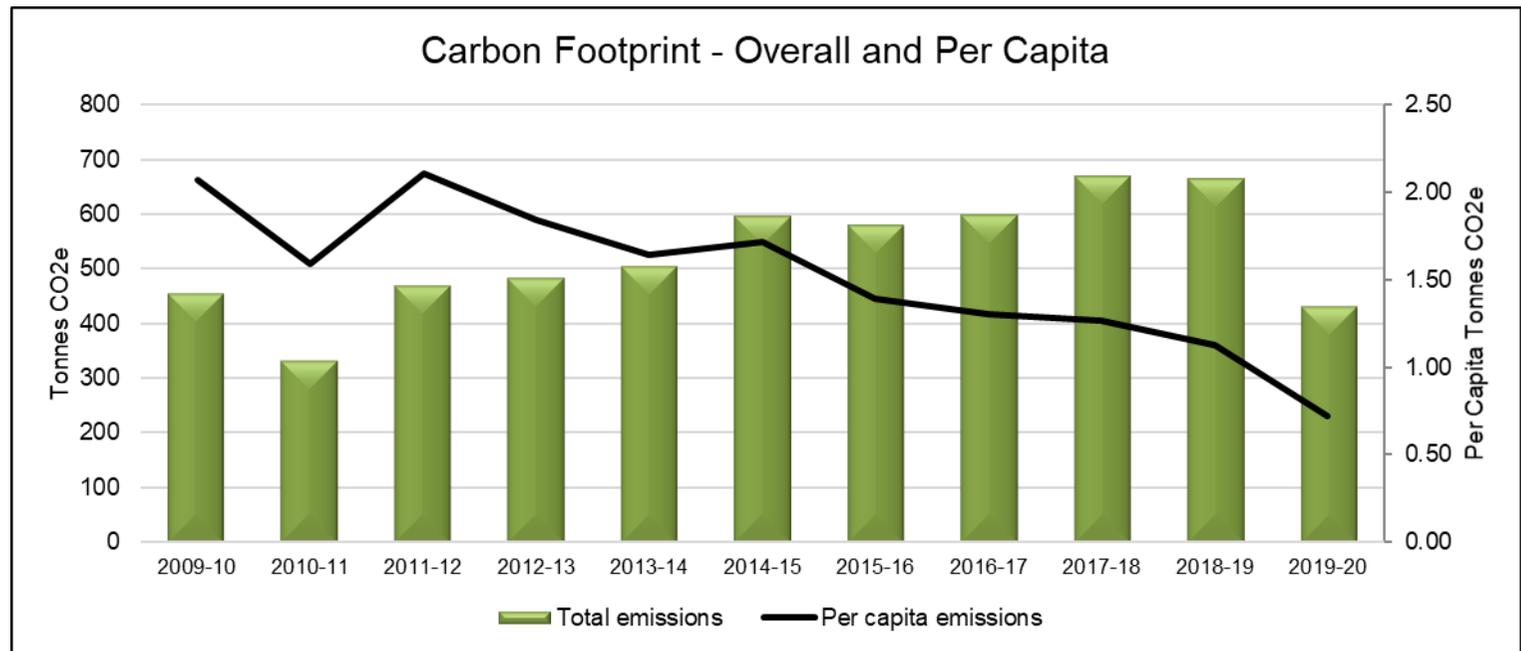
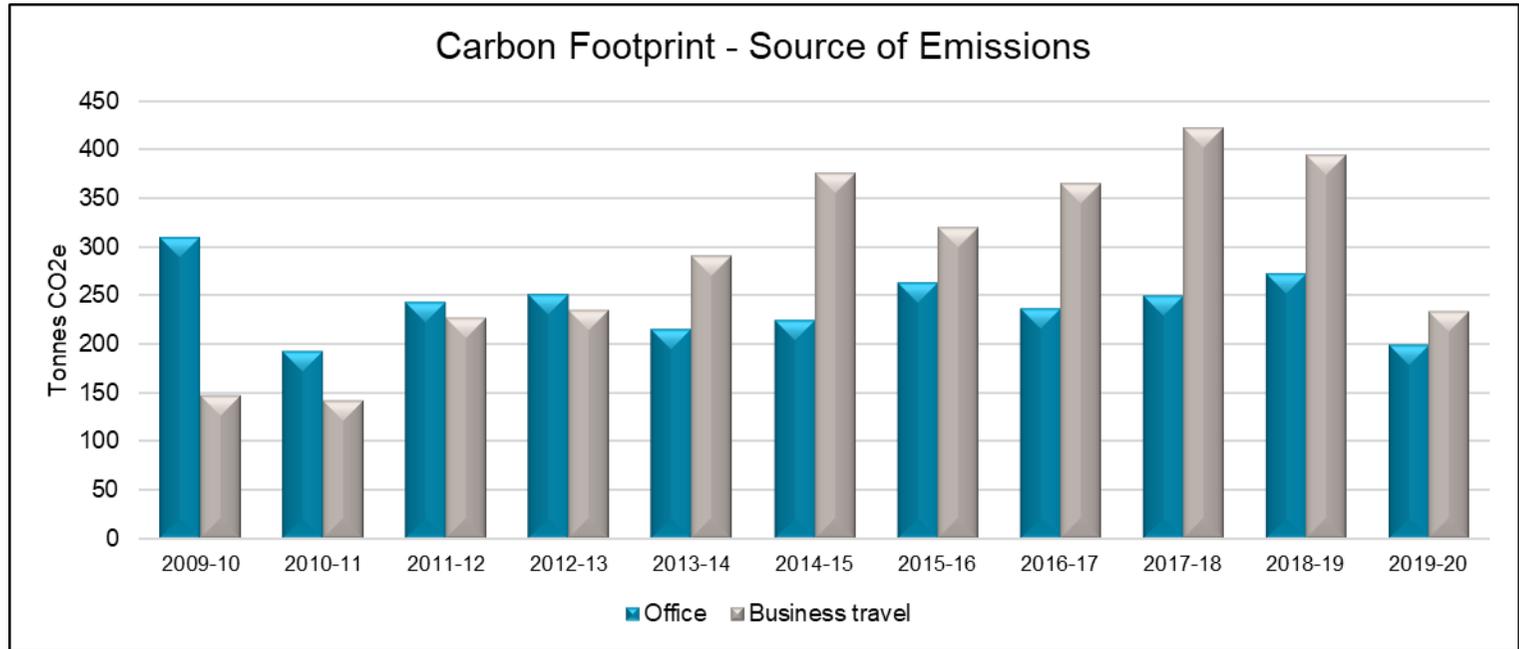


Figure 4: Source of emissions making up our carbon footprint



4. Summary of our performance for the financial year 2019-20

Table 4-1: Environmental performance summary						
	Key action: 2019-20	Results: 2019-20	Results: 2018-19	Year on year change	Percentage difference	Key action achieved in 2019-20
Per capita (kg)	Per capita reduction in paper use	2.67	6.05	-3.38	-55.9%	yes
Per capita (kg CO ₂ e)	Per capita reduction in emissions from energy use at metered offices	300	414	-114	-27.5%	yes
Per capita (kg CO ₂ e)	Per capita reduction in emissions from business travel	374	648	-274	-42.3%	yes
Business waste	Per capita reduction in waste sent to landfill	4.85	9.6	-4.75	-49.5%	yes
Carbon footprint (tonnes)		431	667	-235	-35.3%	
Carbon footprint per capita (tonnes)		0.7	1.1	- 0.4	-35.9 %	

5. Environmental objectives and actions for the year ahead

For 2020-21, we have again set ourselves objectives and identified key actions to help us achieve our intended outcomes. We will continue to monitor our performance against these objectives.

Objective	Key actions	Outcome
<p>Reduce the adverse environmental and sustainability impacts of our business activities and the projects we work on.</p>	<p>Develop and implement the CRuMP.</p> <p>Monitor and report paper use, business waste, water use, emissions from our metered energy use and business travel.</p> <p>Improve the environmental and sustainability performance of our work for clients.</p> <p>Influence our stakeholders to deliver best practices and outcomes for the environment and sustainability.</p>	<p>Recognition as a sustainable and environmentally responsible business.</p> <p>Year on year reduction in carbon emissions.</p> <p>Legal compliance.</p> <p>Certification to ISO 14001:2015 and EIA Quality Mark.</p>



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