



A strong belief in responsibility

The Group strongly believes that effective management of the ESG agenda is integral to business success. The Group is not only compliant with all relevant regulation and legislation but has increasingly focused on enhancing the working environment for our employees and minimising the environmental impact of our manufacturing processes. There is internal reporting of key metrics to ensure continuous improvement throughout the business, and each member of staff is expected to take individual responsibility for their contribution and to work together to achieve shared goals.

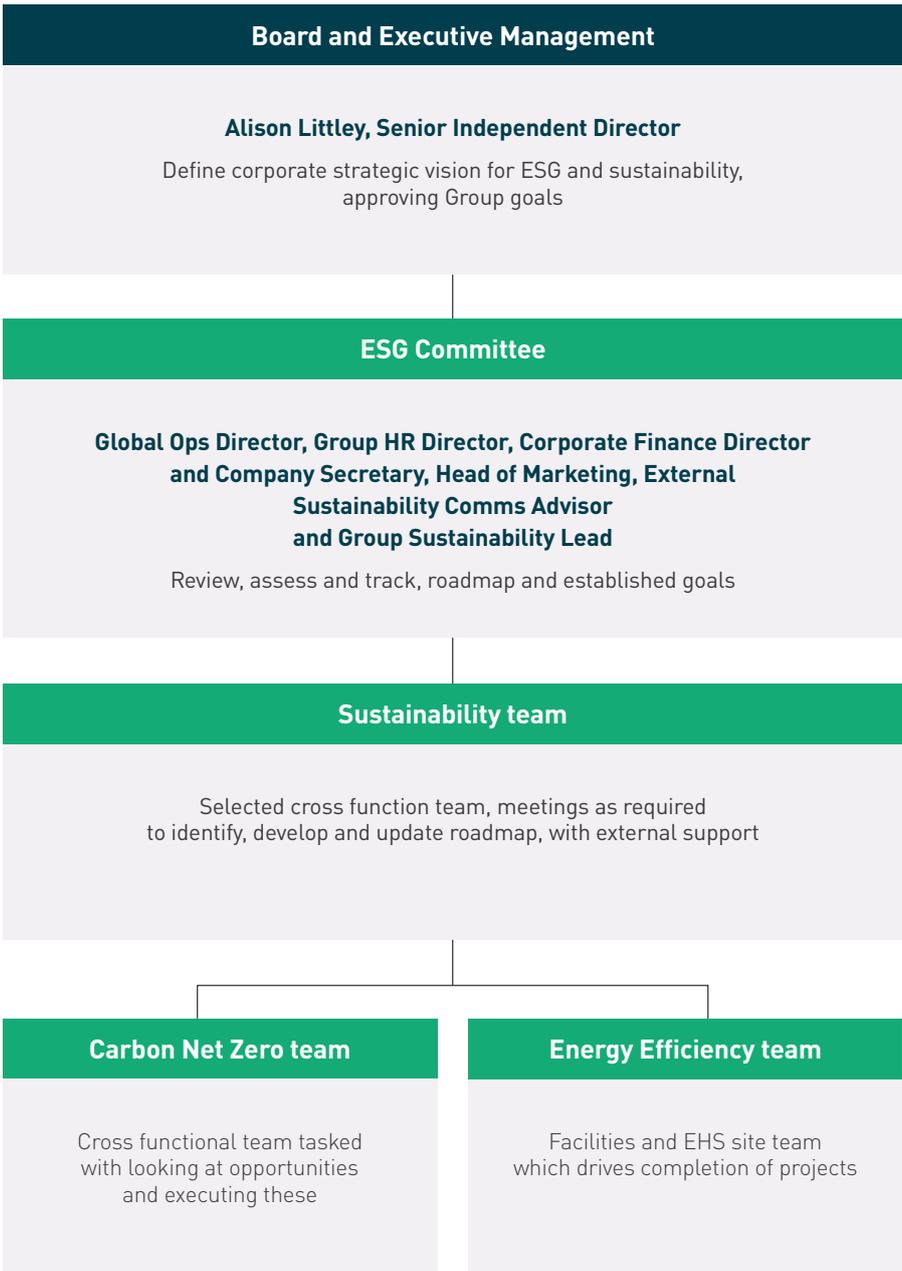
Digital print methods are inherently more environmentally friendly than the analogue techniques we seek to replace.

Our research shows that, compared to analogue alternatives, digital has a significant impact in reducing energy consumption (by as much as 55%), water consumption (by up to 60%) and CO₂ emissions (by up to 95%), in addition to reducing pollution and waste materials.

Sustainability governance structure

In the second half of 2021 we established a more formal ESG governance structure and formed a Sustainability team with accountability to the Board. The team, formed from representatives across the business, has developed a co-ordinated ESG Roadmap that will push Xaar towards its "Net Zero by 2030" goal. The Roadmap has four key pillars – Environment, People, Innovation and Community; its purpose is to drive our ESG goals beyond the Energy Reduction scope to a broader Group wide activity. The Roadmap will provide an essential backbone for much of Xaar's future investment and activity.

Xaar is committed to reducing its impact on the environment wherever possible, with Senior Independent Director Alison Littlely having specific responsibility for ESG matters.



Environment

Environmental best practice, our investment in sustainable manufacturing and improving operational efficiencies remain key areas of business focus. The Group fully complies with local and national regulatory requirements in respect of the environment relating to its use, storage, handling and disposal of materials, chemicals, and waste products.

Xaar maintains a Certified Environmental Management System that meets the requirements of ISO 14001:2015, helping us to manage our environmental aspects and impacts, which complements our commitment to continual improvement. It is readily available to view for interested parties. We carry out environment management reviews and audit programmes designed to measure our progress in relation to our policy statement and objectives.

Climate change

We have escalated climate change from an emerging risk to a principal risk as part of our risk management process.

See Risk management on page 44

Our aspiration is to lead our industry in environment and sustainability, in order to minimise the impact we and our products have on the world around us. We have set the aspiration to be 'Net Zero by 2030' and to drive sustainable growth and innovation for the zero carbon economy.

See Innovation on page 34

In 2022, we will assess the risks and opportunities of climate change to deliver activities that improve our resilience by either mitigating or adapting against physical and transitional risks. This will include a commitment to both setting Science Based Targets and evaluating the UN Sustainable Development Goals to determine those of primary importance to the Group.

Our ESG Roadmap – founded on four pillars

The ESG Roadmap aligns with the Xaar EPIICC values

Read more about EPIICC on page 32

+ Environment

Leading the way in environmental sustainability for the industrial inkjet technology sector.

Read more on page 29

+ People

An employer of choice by putting our people, their potential and wellbeing at the heart of all we do.

Read more on page 31

+ Innovation

Encouraging more sustainable approaches to design, manufacture, technology and collaboration across the whole product lifecycle.

Read more on page 34

+ Community

Actively engaging with our communities to provide practical, effective, lasting support that benefits society.

Read more on page 35

Sustainable and responsible business continued

Carbon / greenhouse gas emissions

A key Group activity at Xaar has been to identify opportunities, and drive continual improvement in energy efficiencies. We have seen reductions in energy usage and greenhouse gas emissions of the Company recorded in Scope 1 and 2 since 2015.

 **See Greenhouse gas emissions statement on page 41**

As part of the development to ensure affordable and clean energy, Xaar has entered into a supply contract during 2021 for the supply of green electricity from a renewable source in the UK. The target is to achieve 100% from renewable sources in the UK and to investigate methods to roll this out to other subsidiaries and locations throughout the Group.

All Group UK manufacturing locations are now supplied with certified carbon free electricity. Offices and laboratories will convert where green energy is available in 2022.

Carbon offset

During 2021, Xaar offset all 2020 Scope 1 and 2 carbon emissions (1,815 tCO₂e) for the Printhead business. We purchased trees to be planted in the UK, and Amazon tree protection (1,000 trees = 1,000 tonnes CO₂e). In addition we offset 815 tCO₂e purchasing solar cookers as part of the Heqing Solar Cooker Project for poor rural farmers in remote areas of China to replace coal for cooking and hot water needs.

In 2022 we will continue to offset our residual Scope 1 and Scope 2 carbon emissions, whilst we investigate and identify the full extent of the boundary in relation to our Scope 3 emissions which will be added to the offset in the future.

Waste

Xaar strives to reduce the amount of waste we produce, ensuring that all waste is disposed of ethically and legally through responsible waste handlers.

In 2021, the Group set a recycling target of zero waste to landfill, with any waste not recycled being sent to a waste to energy recovery process.

- **Electronic waste:** The Group is compliant with WEEE (Waste Electrical and Electronic Equipment) directives as required under UK and EU legislation.

Our waste handler Veolia has provided confirmation that zero waste went to landfill in 2021.

0kg

Landfill

13.48Kkg

Waste diverted

9,692kg

Waste recycled

Plastics and packaging

Xaar initiated a project to remove packaging complexity and improve sustainability, introducing new packaging for its printhead products in 2020. This project to remove plastic as a packaging material has reduced our plastic consumption by 1.2 tonnes per year.

Significant improvements in the use of fully recyclable and biodegradable cardboard packs during 2021 led to all printheads being shipped in boxes made from a mix of recycled and new material – whereby at least 70% of the printhead box and 85% of the cardboard inserts are from a recycled source.

In 2022 the Xaar Logistics team continues to focus on the remaining peripheral packaging boxes, with aspirations to convert all packing materials to be fully recyclable by mid-2022.

Biodiversity

Biodiversity is the key to healthy ecosystems, to provide us with the soils, nutrients, pollinators (75% of the world's crops are pollinated by insects), food and water that we need to survive.

As outlined in Carbon offset, to achieve carbon neutrality we are supporting action to protect trees in the Amazon, and have planted 1,000 trees in the UK. In 2022, we are looking to support and promote local employee campaigns, starting with the introduction of a beehive on site in Huntingdon, UK, and the distribution of wild flower seeds to employees.

In the medium term we will link biodiversity improvements with the employee wellbeing programme in developing outside spaces and garden areas for employees to actively promote physical and mental health.

None of our sites are located in or adjacent to protected areas.

Water

We have determined that our operations are considered as low water usage, and we do not have any operations in any regions with high water stress. However, within our Huntingdon factory location we need to be cognisant of the risk of flooding in the North of the Cambridgeshire region and the Fens, as well as the stress on the chalk streams and water aquifers in the South Cambridgeshire region. Xaar therefore considers water management throughout all activities of the Company and that water should be treated in a manner that will protect it for future generations.

- **Usage:** Water usage in Huntingdon operations is limited to domestic use. We regularly monitor and record water usage, and utilise water efficient taps and cisterns.
- **Emissions:** Xaar has a permit to discharge issued by Anglian Water; the effluent discharge is checked monthly by external consultants to ensure conformity to site discharge levels and content and reports show discharges are below permitted levels. There are no reported incidents in the last 12 months with regards to emissions to water.

Air

- **Quality:** We regularly monitor the air quality, temperature and relative humidity levels within the Huntingdon cleanroom facility. All cleanroom air supplies are fitted with HVAC filters. Xaar also remains conscious of the need for good indoor air quality, working hard to ensure adequate air circulation and routine maintenance of the systems.

There are smoking areas located away from Huntingdon building entrances.

- **Emissions:** Xaar has a permit issued by Huntingdon District Council due to the business using more than 2 tonnes of solvent for surface clean down each year. To comply with the permit any waste gases must not exceed total VOCs per room of 75mg/Nm³. This has been audited and confirmed via an external UKAS accredited company. There are no reported incidents in the last 12 months with regards to emissions to air. There are no significant air emissions in relation to NO_x / SO_x.

Printhead water usage	2021	2020
Freshwater usage (m ³)	5,000	5,087
Intensity ratio (m ³ /£m turnover – excl. royalties)	127	146
Effluent and waste water (m ³)	4,542	4,984



Hazardous materials

All substances handled and used by Xaar are in accordance to the CoSHH regulations and industry best practice, by risk assessment and evaluation in their usage, storage and disposal. Care is taken to look for any less harmful alternative substances where possible to minimise any potential impacts in their use beforehand.

People

Human rights

The Group respects all human rights and regards those rights relating to non-discrimination, fair treatment and respect for privacy to be the most relevant and to have the greatest potential impact on its key stakeholder groups of customers, employees and suppliers.

The Group undertakes extensive monitoring of the implementation of all of its policies and has not been made aware of any incident in which the organisation's activities have resulted in an abuse of human rights.

Xaar is committed to only supplying product that contains conflict free materials. Suppliers of parts containing tin, tantalum, tungsten or gold to Xaar are sent and required to complete an EICC- GeSI declaration providing evidence that parts supplied do not contain minerals sourced from areas of conflict – DRC or adjoining areas.

The Board has overall responsibility for ensuring that the Group upholds and promotes respect for human rights. The Group seeks to anticipate, prevent and mitigate any potential negative human rights impacts as well as enhance positive impacts through its policies and procedures, in particular, through its policies regarding employment, equality and diversity, treating customers fairly and information securely. Group policies seek both to ensure that employees comply with the relevant legislation and regulations in place in the UK and other operating locations and to promote good practice. The Group's policies are formulated and kept up to date by the relevant business area, authorised by the Board and communicated to all employees.

Code of Conduct

All new employees complete an induction process that outlines the expectations of the Company, its employees, customers and suppliers for the way in which business is conducted and helps to avoid situations that might lead to adverse legal issues or damage to our reputation.

The Group's most important corporate policies are incorporated into the Xaar Code of Conduct, and should be complied with at all times:

- Anti-bribery and Corruption Policy
- Confidential Information Policy
- Corporate Criminal Offence Policy
- Data Protection Policy
- Employee Share Dealing Code
- Email and Internet Policy
- Gifts, Entertainment and Hospitality Policy
- HS&E Policy Statements
- Sanctions Policy
- Whistle blowing Policy.

Each year the Group requires all employees to read and confirm that they understand and comply with these policies.

 See Group policies outlined in the Non-financial information statement on page 56

Whistleblowing

We have a Whistleblowing Policy that encourages open and honest communication where incidents of non-compliance are seen in our business. Whistleblowing issues are reported directly to management, and any significant issues, should they arise, are reported to the Audit Committee. In each instance, cases are investigated in detail and appropriate action taken.

There have been no whistleblowing incidents or reports by senior management to the Audit Committee.

Sustainable and responsible business continued

Modern slavery

The Group is committed to acting ethically and with integrity in all our business dealings and relationships, implementing and enforcing effective systems and controls to ensure modern slavery in all its forms (including human trafficking, forced labour and child labour) is not taking place anywhere in our Group businesses or in any of our supply chains. The Group has published a Group-wide Modern Slavery Policy and a statement on the steps taken to prevent slavery, which is available on the Group's website.

Health & safety and environment

Xaar has manufacturing sites in Huntingdon, Hemel Hempstead, and the USA, supported by R&D laboratories in Cambridge and Sweden, alongside head office functions in Cambridge, plus sales offices worldwide.

It is always Xaar's intention to conduct business in a manner that protects the public, the environment, and employee safety. Xaar's Environmental and Health and Safety policies provide a framework for the setting and reviewing of Occupational Health, Safety and Environmental Objectives. This demonstrates Xaar's continued commitment to the prevention of injury and ill health and also the continual improvement in our Environmental and Occupational Health and Safety Performance. Xaar believes that the combination of a safe place of work and safe working practices, together with a productive and innovative environment, are critical to the continued success of the Company.

UK Health & Safety reports	2021	2020
RIDDORs*	0	0
Accidents	9	6
Incidents	11	9
Near misses	5	7

* Reporting of Injuries, Diseases and Dangerous Occurrences Regulations.

The Group undertakes R&D activities and manufactures products in the UK and the USA. The Group complies with all local and European legislation. The Group's manufacturing facility in Huntingdon is both ISO 9001:2015 and ISO 14001:2015 certified and as a minimum complies to HSG65. It is the Group's policy to maintain this level of certification for its Huntingdon manufacturing facilities and to comply at all times with all relevant environmental and other legislation in the territories in which the Group operates. The Group is compliant with REACH ('Registration, Evaluation, Authorisation and restriction of Chemicals'), WEEE ('Waste Electrical

and Electronic Equipment') and RoHS ('Restriction of the Use of Certain Hazardous Substances') directives, as required under UK and European legislation. The Group has a proactive Health and Safety System modelled on OHSAS 18001/HSG65 in Cambridge, Huntingdon and Hemel Hempstead.

Equality and diversity

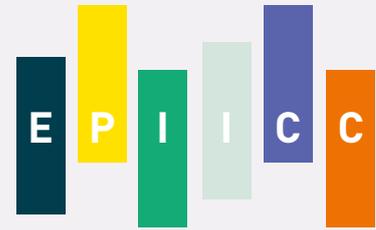
The Group is committed to providing a working environment in which employees feel valued and respected and are able to contribute to the success of the business. Employees are requested to co-operate with the Group's efforts to ensure that the policy is fully implemented.

The Group's aim is that its employees should be able to work in an environment free from discrimination, harassment and bullying, and that employees, job applicants, customers, retailers, business introducers and suppliers should be treated fairly regardless of:

- race, colour, nationality (including citizenship), ethnic or national origins;
- gender, gender reassignment, sexual orientation, marital or civil partnership status;
- religious or political beliefs or affiliations;
- disability, impairment or age;
- real or suspected infection with HIV/AIDS;
- membership of a trade union;
- pregnancy, maternity and paternity;

and that they should not be disadvantaged by unjust or unfair conditions or requirements.

A value-led culture



Everything with Passion

We care about our technology, our products, our partners and each other.

Innovative

We always look for new, better solutions.

Integrity

We deliver on our promises.

Creative

We push the boundaries of what's possible.

Collaborative

We work together as a team and with our clients.





The Group aims to ensure that applications for employment from people with disabilities, and other under-represented groups, are given full and fair consideration and that such people are given the same training, development and job opportunities as other employees. Every effort is also made to retrain and support employees who suffer from disabilities during their employment, including the provision of flexible working to assist their re-entry into the workplace.

The Group places considerable value on the involvement of its employees and has continued to keep them informed of the various factors affecting the performance of the Group. This is achieved through written communications shared through the Company intranet and email, and formal and informal meetings. All employees participate in a bonus scheme based on individual performance and Group business targets and, in the UK, have the opportunity to participate in an HMRC approved Share Save Scheme and Share Incentive Plan.

Based on the closing headcount at 31 December the split of staff by gender was as follows:

	2021 Male/ Female	2020 (restated) Male/ Female
All employees	350/105	311/77
Directors	4/1	4/1
Senior managers	39/7	27/5
Employees	307/97	280/71

The split between senior managers and employees (inc. agency staff) has been redefined and 2020 restated.

CEO pay gap ratio

The following table sets out the ratio of the CEO's total remuneration in respect of FY21 (taken from the single figure table on page 92) to the 25th percentile, 50th percentile (i.e. the median) and the 75th percentile full-time equivalent (FTE) of the Group's UK employees. In line with the applicable regulations, the corresponding ratios for 2020 are also included.

	2021	2020
Method	Option A	Option A
25th percentile	16:1	15:1
Median pay ratio	11:1	11:1
75th percentile	7:1	8:1

 **Further information is provided in the Remuneration Committee report on page 98**

Gender pay gap

Gender pay reporting is required for companies with over 250 employees. Xaar is reporting as Xaar Plc, including all UK subsidiaries. The snapshot date for Xaar's data is 5 April 2021. At that point Xaar had 265 relevant employees: 213 male and 52 female.

It is fundamentally important to understand that a gender pay gap does not necessarily mean men are paid more money for doing the same job. At Xaar we are committed to ensuring we pay based on merit not gender and we regularly monitor our pay awards to ensure that we pay the same rate for similar roles.

Xaar's mean gender pay gap stands at 14.38% (2020: 22.96%). As with many companies we do have a gender pay gap, though our results are consistent with other companies who operate within the technical, manufacturing or engineering sector.

There has been a shift across the quartiles with more movement for female employees from lower middle quartile to higher middle. This is a reflection of more female employees being promoted and appointed to senior roles.

We appreciate that improving our diversity will improve our results, and we continue to work on improvements over the longer term. A large part of Xaar's gender balance gap is due to the challenges of recruiting women into science and technology roles. Nevertheless we are continuing to work on increasing our gender balance in the following ways:

- Xaar operates in a male dominated industry and we are working to ensure that our hiring managers are trained to understand and recognise gender bias. We do, however, receive significantly fewer applications from females for technical roles.
- Our Talent Acquisition team assists hiring managers by giving practical advice, support and monitoring for gender bias. We seek to have both female and male candidates as part of the hiring pool whenever possible and we constantly review our processes to ensure we are encouraging more female applicants.

Sustainable and responsible business continued

- Xaar is supporting Cambridgeshire *Engineers of the Future* by sponsoring local schools' Imagineering Clubs, which is designed to introduce children to engineering and hopes to inspire young people and especially girls to take up STEM subjects. A number of our women from Engineering participate in these endeavours.
- We support all employees to achieve their potential with a talent management programme and we offer flexible working arrangements to support working parents.

Pension

The Group Personal Pension scheme is administered by Scottish Widows.

The Company pension contribution for Directors' (or cash allowance equivalent) does not exceed the contribution available to the majority of the workforce, currently 6% of base salary.

All the equity assets in the Pension Portfolio Funds now track indices, which exclude certain stocks on environmental, social and governance (ESG) grounds.

The funds, managed by their strategic partners State Street Global Advisors (SSgA) and BlackRock, track new benchmarks, which reflect exclusions policies, aligned with Scottish Widows' own policy introduced in 2020. The new benchmarks are amended versions of existing FTSE indices. They incorporate all of the stocks in the original indices, for example the FTSE All-Share, minus the excluded stocks.

Companies excluded from the indices include those that are severely violating international standards in relation to human rights, labour rights, the environment and corruption, known as the UN Global Compact (UNGC), controversial weapons manufacturers and those involved in thermal coal or oil sands.

Flexible benefits

In addition to the pension contributions, employees are also offered a range of flexible benefits each year, against which they can obtain individual and family cover including income protection and life assurance. Within the UK, there are a number of salary sacrifice schemes for employees including an electric vehicle scheme for employees to lease a new electric vehicle and a cycle to work scheme where employees can obtain finance and discounts on new bikes including electric options.

Employee health and wellbeing

Employee health and wellbeing remains a keen priority for the Group.

In line with this approach, the businesses within the Group have prioritised different initiatives that best reflect their workforce, such as volunteering and employee wellbeing policies, regular wellbeing weeks, step challenges, weekly Yoga sessions, qualified mental health first-aiders and other activities to encourage and promote a healthier workforce.

As part of the Flexible Benefits programme, employees have access to:

- **Health Shield**, a health benefit solution offering access to discounts and reimbursement of healthcare costs such as dentists, opticians, physiotherapists and health checks.
- **Fitness**, employees can pay for gym membership or gain access to gym discounts via a website, that also offers discounts on items such as fitness trackers, experience days and sports clothing.
- **Wellbeing** via an **Employee Assistance programme**, a positive preventative programme of information, advice and services that can help individuals deal with events in their everyday work and personal life, including bereavement assistance, manager consultation and coaching, and immediate crisis intervention, through telephone counselling teams 24/7.

Training, development & retention

Developing our talent is key to our on-going success, and in 2022 we will recruit a Learning & Development Manager to support the organisational plans and to identify enablers that can drive the attainment of employees aligned with the business requirements.

- An updated suite of Learning and Development tools is being developed to ensure key skills are developed and enhanced.
- Internal courses are developed in conjunction with the Institute of Learning and Management (ILM) to support key manager development.
- A new graduate and apprenticeship programme was launched in 2021.

The Group operates an online performance management and appraisal system providing opportunity for individual discussions on training needs and career planning. This is supported by a talent management and succession planning process from which the Executive Management Team assesses the outcomes, formulates action plans and reviews progress.

The Board is kept informed of the results. The loss of key personnel is identified by the Board as a key risk and is set out in further detail in the principal risks and uncertainties table on page 44. Voluntary labour turnover was 5.5% across the Group in 2021 (2020: 3.6%)

Our people response during the pandemic

During the COVID pandemic the safety and wellbeing of our employees has been and continues to be our overriding priority. Our executive and senior management teams have monitored events closely to ensure that we have been able to react quickly to an ever-changing situation. At the start of the pandemic we enabled working from home at short notice for those who were able to do so, and in the workplace we took actions to introduce enhanced hygiene and social distancing measures, screens, temperature checks, use of face coverings and more recently workplace lateral flow testing.

The Board recognises the commitment of the Group's employees demonstrated through the coronavirus pandemic as they responded with great agility and dedication to the new ways of working required.

Innovation

Xaar recognises that innovation is key to achieving many of the sustainability goals across all four pillars that support our Sustainability Roadmap. For 30 years, we've been reinventing inkjet and reimagining what's possible for printheads.

Sustainable product development

Encouraging more sustainable approaches to design, manufacture, technology and collaboration across the whole product lifecycle.

In 2021 we relaunched the Product Lifecycle Management process used to develop new and innovative printhead products; this now includes Design for Environment as part of the development considerations. Eco-design is the systematic application of environmental lifecycle considerations at the product design stage. The aim of eco-design is to avoid or minimise significant environmental impacts at all stages of the lifecycle of a product, from sourcing of raw materials and purchased components, design and manufacture, to distribution, use and end-of-life disposal.

Precautionary principle

The Company supports the precautionary principle by avoiding materials and production methods that pose environmental and health risks when suitable alternatives are available.

Xaar continues to review changes in the Restriction of Hazardous Substances Directive (2011/65/EU). As a result we are working hard to eliminate Substances of Very High Concern (SVHC) from the manufacturing process.

Resource efficiency

The Company products and processes are designed in such a way that energy and raw materials are used efficiently and waste and residual products are minimised over the products lifecycles.

As the COVID impact on the electronics supply chain became clear in 2021, Xaar implemented a circular and resource efficient approach to the recovery of key electronic and piece parts from printheads that do not meet our high standards. This innovative approach, along with considerable sourcing efforts, has allowed us to continue production despite global shortages.

Environmental performance

The Company routinely audits, follows up and reports on its environmental performance, with particular emphasis on evaluating the potential risks of present and future products and operations.

Product quality

We issued a number of Technical Bulletins throughout the course of 2021, advising customers on product updates, system improvements and product end of life announcements. No product recall was initiated in 2021, however we did complete a recall initiated in 2020. 18 XPMs were recalled from the field to enable replacement of a defective chip installed in error by a supplier that had the potential to unexpectedly halt the XPM operation. Advanced replacements were made available to all customers affected to minimise the impact on their production or research.

Community

Xaar is proud to play an active role in the communities in which it operates. As part of our commitment to social value and community we have an active programme of sponsorship for projects and initiatives that are aligned to our business values.

Xaar sponsors an Imagineering Clubs within a local primary schools. Imagineering Clubs are designed to introduce children to engineering through fun activities.

The sponsorship is part of Xaar's role in helping to create the 'engineers of the future' and drive interest in STEM subjects ('Science, Technology, Engineering and Mathematics') amongst school students. During 2020/21 the impact of COVID meant the clubs were held less frequently than previous years. Xaar is delighted that the clubs, and our support have restarted with the onset of the 2021/22 academic year.

For our own employees, the social club, which is aimed at encouraging staff to have fun and get to know each other socially, was paused during 2020 as a consequence of COVID restrictions. Activities have restarted as COVID restrictions allowed from H2 2021.

Volunteering

The Company recognises the benefits to Xaar, our employees and to the wider community of a framework within which volunteering can take place. Managed well, volunteering can raise our profile within the community and support our social responsibility plans.

Xaar supports employees' voluntary work/ activities by providing 'holiday matching' of up to two and a half days a year. We believe this will help them get involved in their community, support employee mental health and wellbeing through positive activities and additionally assist them in developing new skills and hone existing ones.

- Of the 1,000 trees purchased as part of the carbon offset (see environment section page 30), Xaar employees volunteered to assist with the planting of 100 trees at two local schools, assisting Year 2 children to plant 90 hedging plants at one of these schools.
- Xaar has donated and grant matched time off to an employee in 2022 to travel overseas and support construction of a school / facilities building in Africa.

Charities

Xaar contributes annually to charitable causes through three funds:

- A chosen charities fund: these should be charities that provide benefits locally, or charities with specific connection to Xaar staff:
 - Xaar employees usually raise money during the year for a number of charities, previously taking part in various activities for Comic Relief on Red Nose Day, coffee mornings for Macmillan Cancer Support and Christmas Jumper Day for Save the Children. Unfortunately due to the coronavirus pandemic in 2021 we were unable to participate in charity fundraisers this year. Charity nominations took place with Hinchingsbrooke Special Care Baby Unit receiving a donation of £2,000 in January 2021.

- A Sponsorship fund: for staff and their families engaging in charity events or team activities, Xaar will provide up to £100 towards an event (e.g. charity golf days, sporting events, donations to community foodbanks) or team sponsorship. Wherever possible the Xaar logo should be incorporated (e.g. in a team sports kit). There is a fixed annual budget to cover all sites.
- A Central fund: Xaar will donate monies as appropriate to disasters and emergencies or other local causes not covered by the other funds. This will be at the discretion of the Executive team.
- In total, the Group made charitable contributions to local and national charities during the year totalling £5,060 (2020: £3,150).

Charitable sponsorship

- In 2021, Xaar became an official supporter and sponsor to the 'Cows about Cambridge' event (www.cowsaboutcambridge.co.uk), becoming a headline sponsor of the Farewell Weekend (2021: £6,000, 2020: Nil). A team of Xaar employees also volunteered to assist in preparations for and also at the event. The event was organised to raise funds for the East Anglian children's charity 'Break' to help change the lives of vulnerable young people on the edge of care, in care and leaving care (www.break-charity.org/charity/).

Political donations

- The Company has a longstanding global policy against making contributions to political parties, political committees or candidates using Company resources (including monetary and in-kind services), even where permitted by law.
- No political donations were made in the current or previous year.

Taxation

We aim to manage our tax affairs in accordance with national legislative provisions and within the guidelines set down by the Organisation for Economic Cooperation and Development (OECD). Our objective is to structure our operations tax efficiently and take advantage of available incentives and exemptions provided by governments for eligible capital investments, R&D and similar expenditure.

We do not enter into any artificial tax arrangements.

We have not received any fines or penalties from any government tax agencies.

 **See Financial Statements – note 12 on page 137**

Sustainable and responsible business continued

The initial core recommendations

Progress against initial actions in 2021:

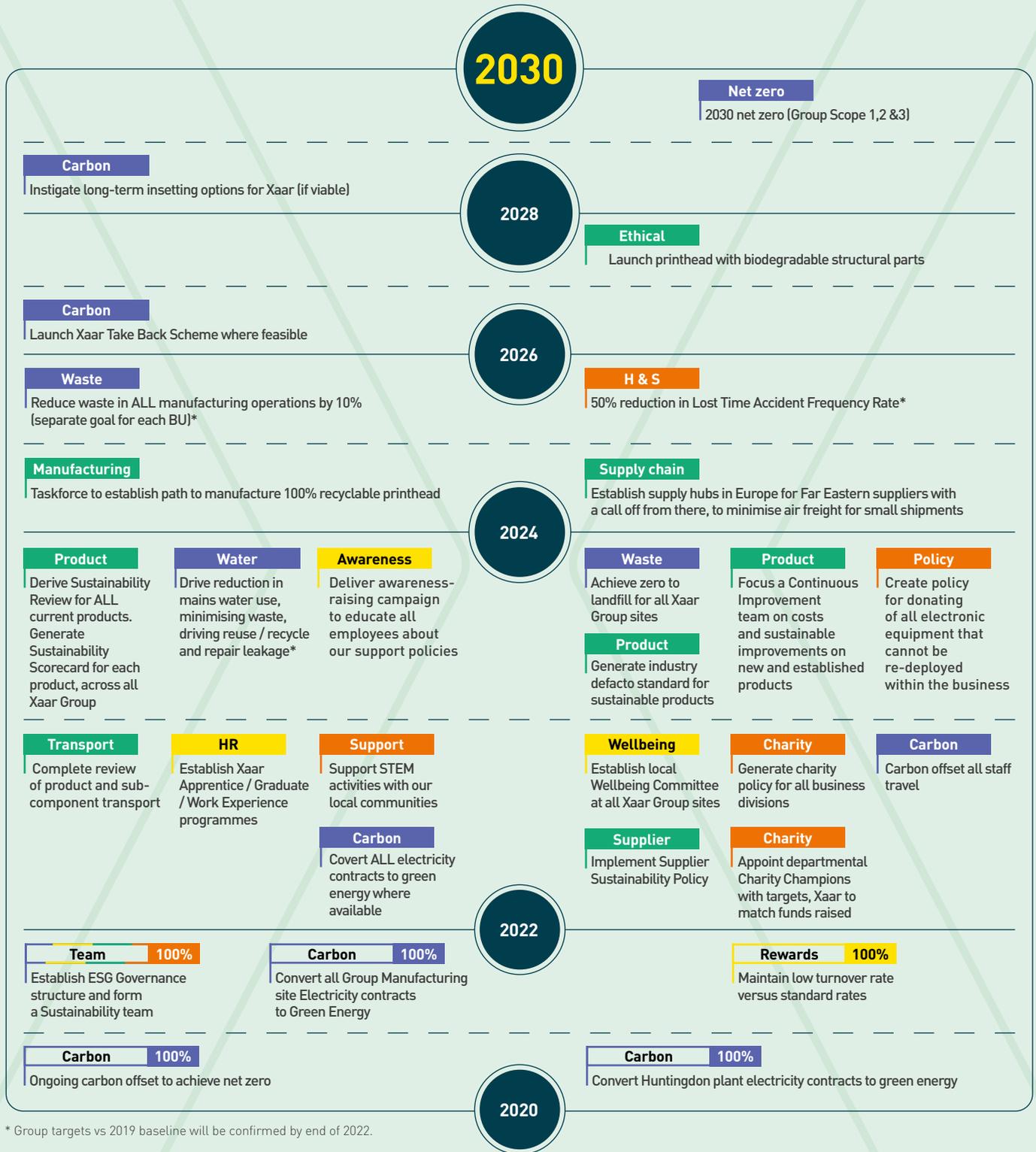
● Achieved ● Work ongoing

Initial action from 2020	Progress in 2021
Offset all of the UK regulatory Scope 1 and 2 carbon impact that we made and reported in 2020.	See: Carbon offset: Based on our carbon footprint reported in 2020 this makes Xaar a carbon neutral inkjet manufacturer. Carbon offset to continue in 2022 with an investigation to identify the inclusion of Scope 3 emissions for future offset.
Identify targets and metrics applicable to Xaar, to measure across the organisation.	Work ongoing – as part of TCFD requirements to identify Science Based Targets.
Preparation and identification of Scope 3 emissions within the supply chain – Identify tier 1 suppliers and their disclosures around climate change and GHG emissions.	Work ongoing – to address with tier 1 suppliers. Initial Scope 3 emissions for travel in 2021 identified for offset in 2022.
Review product return policy, to identify possibilities for improvements in responsible consumption in production and remanufacturing of products, reduction in plastic use, reclaiming raw materials, recovery of any heavy metals, copper, lead etc.	Identified as part of Sustainable Roadmap activities by committee actions to take place as part of sustainable product development and circular economy – actions to be defined.
Set, measure and disclose a zero waste to landfill target, any waste not recycled being sent to a waste to energy recovery process.	See Waste : UK operations certified zero waste to landfill by Veolia, with non-recycled waste being sent to waste to energy recovery.
Green energy projects to identify additional energy and GHG savings:	
Identify actions to remove natural gas as an energy and heat source, or replace with a renewable gas supplier e.g. biogas.	Work ongoing – Limited exposure with gas as a heat source, but working with landlord to identify and replace with electric alternative.
Electric vehicle chargers installation on UK sites and vehicle offer to employees.	Project scope finalised for installation in 2022 at HQ & Huntingdon offices. Electric vehicle options being offered to employees.
LED light installations to further reduce the utilisation of electricity.	Individual projects by location to replace lighting with LED alternatives. New HQ comprises LED lights only.
Investigate solar panel installation at Huntingdon location to generate a proportion of electricity ourselves.	Activities on solar continue with landlord discussion around installation with a contractual supply of energy to Xaar. These discussions are not complete so we do not expect any solar installation in 2022.

The ongoing objectives will be incorporated into the ESG roadmap for delivery in 2022/23.

Sustainability Roadmap

We all need to play our part to reach our goals



* Group targets vs 2019 baseline will be confirmed by end of 2022.

Our Sustainability Pillars

Environment
 Leading the way in environmental sustainability for the industrial inkjet technology sector.

People
 An employer of choice by putting our people, their potential and wellbeing at the heart of all we do.

Innovation
 Encouraging more sustainable approaches to design, manufacture, technology and collaboration across the whole product lifecycle.

Community
 Actively engaging with our communities to provide practical, lasting support that benefits society.

Task Force on Climate-related Financial Disclosures (TCFD)

In meeting the requirements of Listing Rule 9.8.6 R, the Board has concluded that:

- We comply with recommended disclosures – Governance, Risk Management
- We partially comply with recommended disclosures – Strategy (B5), Metrics (D10)
- We do not comply with recommended disclosures – n/a

Disclosures	Recommended disclosures	Response
A. GOVERNANCE		
Disclose the organisation's governance around climate-related risks and opportunities.	1. Describe the board's oversight of climate-related risks and opportunities.	<p>The Xaar plc Board reviews key climate-related risks and opportunities and oversees mitigation strategies as part of the bi-annual review of principal and emerging risks.</p> <p>Alison Littley, Senior Independent Director, has specific responsibility for ESG matters, including climate change and sustainability.</p>
	2. Describe management's role in assessing and managing climate-related risks and opportunities.	<p>Executive management receives reports from an ESG Committee whose members consist of senior managers across the Group.</p> <p>The ESG Committee meets on a quarterly basis to assess the opportunities and proposals developed by the Sustainability Working Group.</p> <p>The Sustainability Working Group meets regularly and is developing a roadmap whilst also receiving information from both the Carbon Net Zero team and Energy Efficiency team.</p> <p> See governance structure on page 29</p>
B. STRATEGY		
Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material.	3. Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	<p>Short term (2021-2025): We do not anticipate any significant physical risk changes over the short term. Implementation of transitional regulatory controls (e.g. carbon pricing) could potentially commence, and could affect raw material pricing, that would need to be passed onto customers.</p> <p>Medium term (2025-2035): Mitigating the physical impact of climate change is critical because we depend on raw materials sourced from countries that are particularly vulnerable to rising seas and temperatures from changing weather patterns. We have performed high-level assessments on our business in respect of 2°C and 4°C global warming scenarios which show that without action, both scenarios represent increased financial risks by 2030, with increased risk of property damage and business disruption from e.g. flooding. Under the 2°C scenario, transition risks and mitigation actions lead to carbon pricing being introduced in key countries and hence there are increases in both manufacturing costs and the costs of raw materials e.g. plastics and the metals used in products. Change in customer expectations as more companies committed to becoming net zero and set Science Based Targets, assessing the supply chain and Scope 3 emissions.</p> <p>Longer term (2035-2050): Under the 4°C scenario, there are likely to be significant risks arising from failure to transition, leading to significant increase in physical and adaptation risks. With significantly hotter summers (+4°C to +7.6°C), leading to increased flooding and storm losses and an expectation of significant uninsurable losses affecting financial markets and global economic growth.</p>

Disclosures	Recommended disclosures	Response
B. STRATEGY continued		
	<p>4. Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.</p>	<p>In managing these financial climate-related risks our business model would not require material change, except for increasing inventory levels of components to account for transport delays arising from exceptional weather events, and to consider mitigation for potential business disruption, e.g. flood defences.</p> <p>Opportunities exist in the transition to a low carbon manufacturer, by reducing both energy usage and utilising renewable energy sources to deliver lower costs to the business. Product development will incorporate sustainability as a central objective, to transition manufacturing from a linear to a circular process and to being a process to reduce, re-use and recycle materials all to be undertaken as part of Xaar's overall Sustainability Roadmap.</p> <p> See Risk Management on page 45</p>
	<p>5. Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.</p>	<p>We have undertaken a high level review of the likely impact of 2°C and 4°C global warming scenarios (see above) as outlined by the IPCC report issued in 2021. As part of the sustainability strategy to deliver Science Based Targets to achieve 1.5°C, an independent external climate related scenario review will be researched in 2022 to identify physical and transition risks and opportunities in delivering carbon neutral manufacturing leading to 'Net Zero by 2030'.</p>
C. RISK MANAGEMENT		
<p>Disclose how the organisation identifies, assesses, and manages climate-related risks.</p>	<p>6. Describe the organisation's processes for identifying and assessing climate-related risks.</p>	<p>The Group has processes in place for identifying, evaluating and managing the principal risks, which could have an impact upon the Group's financial performance. Climate change has been disclosed as an emerging risk in recent years, and has been escalated to a principal risk category in 2021.</p> <p>The Board has considered the potential impact of regulatory change that could occur in the short to medium term.</p> <p> See Risk Management on pages 45 and 49</p>
	<p>7. Describe the organisation's processes for managing climate-related risks.</p>	<p>See above – A. Governance – Xaar has introduced a new structure to identify climate-related risks to be reported to the Board bi-annually including making decisions to mitigate, transfer, accept, or control those risks.</p>
	<p>8. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.</p>	<p>As part of the Group's risk management, within the detailed risk register, climate-related risks are determined alongside other principal risk areas e.g. manufacturing facility, inventory and supply chain risks. The assessment is quantified via a Likelihood / Magnitude matrix to determine the overall net risk after mitigation.</p>

Disclosures	Recommended disclosures	Response
D. METRICS & TARGETS		
<p>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.</p>	<p>9. Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.</p>	<p>Initial metrics as outlined in 2020:</p> <ul style="list-style-type: none"> • Investigate metrics and targets to be defined as part of Science Based Target initiative • Continuing improvement / reduction in Scope 1 & 2 emissions along with intensity measurement • Scope 1 & 2 emissions to be offset to become 'carbon neutral' • Scope 3 emissions recognition. <p>Initial targets as outlined in 2020:</p> <ul style="list-style-type: none"> • Set, measure and disclose a zero waste to landfill target, any waste not recycled being sent to a waste to energy recovery process. • Generation of a Sustainability Roadmap. <p> See page 37 for Sustainability Roadmap</p>
	<p>10. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.</p>	<p>GHG emissions are disclosed as per the SECR requirements for Scope 1 and Scope 2.</p> <p>An initial assessment has commenced for Scope 3 emissions, and a boundary developed.</p> <p>We have recognised Scope 3 emissions arising from employee travel and commuting; the difficulty remains in determining the supply and quality of data via upstream and downstream value chain (ongoing).</p> <p> See GHG/SECR disclosure on page 41</p>
	<p>11. Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.</p>	<p>Xaar has committed short-term targets:</p> <ul style="list-style-type: none"> • To achieve a net zero target by 2030 • 100% renewable (green) electricity at UK facilities • Zero waste to landfill • Offset of all Scope 1 & 2 Group emissions as we continue to drive reductions in energy use. <p> See page 36 for progress summary</p>

Greenhouse gas emissions statement

Xaar plc has calculated its global greenhouse gas (GHG) emissions statement using an operational control consolidation approach.

Scope 1 emissions

Scope 1 emissions occur from sources that are owned or where Xaar plc has operational control. This includes direct emissions from gas combustion in our buildings and fuel used in leased Company vehicles. Actual and estimated gas consumption data has been collected from each of the leased properties under the control of the Xaar Group, from data sources including direct meter readings, meter readings from suppliers included on invoices and estimations where required based on available information from property management suppliers and other sources. Actual mileage data has been collected from the leased Company vehicle fleet.

Scope 2 emissions

Scope 2 refers to indirect emissions from the consumption of purchased electricity (also including any purchased heat, steam or cooling) from facilities owned or under the operational control of Xaar plc. Actual and estimated data has been collected from each of the leased properties under the control of the Xaar Group, from data sources including direct meter readings, meter readings from suppliers included on invoices and estimations where required based on available information from property management suppliers and other sources.

Scope 3 emissions

Scope 3 emissions are all indirect emissions – not included in Scope 2 – that occur in the value chain of the reporting company, including both upstream and downstream emissions. Scope 3 CO₂ emissions currently represent estimated CO₂ emissions from travel and estimates from employee commuting. As the Group's sustainability programmes develop we will capture more of our Scope 3 emissions and aim to collaborate with the supply chain to reduce them and will disclose progress in our Annual Report. Please refer to page 30 for actions that Xaar is undertaking to offset its carbon emissions.

Assessment parameters	
Baseline year	1 January 2013 to 31 December 2013
Consolidated approach	Operational control
Boundary summary	All entities and all facilities under operational control included subject to the materiality threshold applied
Consistency with the financial statements	The only variation is that leased properties deemed to be under operational control have been included in Scope 1 and 2 emissions
Materiality threshold	Materiality has been set at Group level at 5%*
Assessment methodology	Greenhouse Gas Protocol and ISO 14064-1 (2006)
Intensity ratio	Emissions per £'000 turnover exc. royalties (2021: £58.9 million)

* The total of any excluded emission sources is estimated to be less than 5% of Xaar plc's total reported emissions.

Greenhouse gas emissions

		Renewable *		2021	Renewable	Non-renewable	2020 Total
		Non-renewable	Total	Total			
Global energy use	KWh	10,610,069	752,331	11,362,400	2,351,508	7,764,206	10,115,714
	%	93.4%	6.6%		23.2%	76.7%	
UK	KWh	10,205,766	472,854	10,678,620	2,351,508	7,315,782	9,667,290
Non-UK	KWh	404,303	279,477	683,780	–	448,424	448,424
Absolute values							
Scope 1	tCO ₂ e	–	98	98	–	75	75
Scope 2	tCO ₂ e	–	116	116	–	1,741	1,741
Scope 3	tCO ₂ e	–	150	150	–	361	361
Total	tCO ₂ e	–	364	364	–	2,177	2,177
– Scope 1 & 2 emissions of which UK	tCO ₂ e	–	198	198	–	1,706	1,706
Normalised values							
Scope 1	tCO ₂ e/£'000	–	165	165	–	157	157
Scope 2	tCO ₂ e/£'000	–	198	198	–	3,655	3,655
Scope 3	tCO ₂ e/£'000	–	254	254	–	618	618
Total	tCO ₂ e/£'000	–	617	617	–	4,430	4,430

* UK energy certified by EON, in the form of Guarantees of Origin from renewable wind sources. US energy (Green Mountain) 100% carbon free, 68% renewable (balance being nuclear).

Historic greenhouse gas emissions

	2019	2018	2017	2016	2015	2014
Global energy use KWh	10,573,689	11,270,047	11,506,598	12,474,406	14,187,311	14,058,636
Scope 1 – tCO₂e	108.3	124.8	147.7	167.0	162.2	162.0
Scope 2 – tCO₂e	2,622.8	3,128.1	4,088.0	4,432.0	4,475.2	6,263.0
Total – tCO₂e	2,731.1	3,252.9	4,235.7	4,599.0	4,637.4	6,425.0