

# ENVIRONMENT

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

### Our progress

**16** people have enrolled in our Electric Vehicle Scheme

**100%** of waste was diverted from landfill at Xaar and FFEI

**39.5%** of waste was recycled at Xaar and FFEI

**99%** reduction in Scope 2 emissions

**100%** fully recyclable packaging for all Xaar products

# Our journey

**When we began our ESG journey in 2021 with the formation of our Sustainability Roadmap, we had a very clear picture about how we would deliver on our ambitions. Over the last three years, excellent progress has been made – and every day that passes, takes us a step closer to delivering on our decarbonisation and wider environmental goals.**

In 2023 we moved the responsibility for delivering our Roadmap to our Continuous Improvement Team (CI). This group is empowered to deliver positive change. It brings together operational experience, alongside enhanced ESG best practice. Their energetic response to delivering on our sustainability goals has resulted in improved tracking systems, new ideas and methods of communication as well as wider colleague engagement. Importantly, sustainability is no longer seen as a 'silo' - it is embedded into every element of decision-making across our operations.

Our internal re-organisation has delivered tremendous results and positive outcomes – including recognition as a finalist at the prestigious **edie Sustainability Awards** for the successful decarbonisation of our cleanrooms. We are excited to see how we can build on this as we get closer to 2030.



## Electric Vehicle scheme

Currently 16 employees have enrolled in our Electric Vehicle scheme. This helps reduce our Scope 3 employee commuting emissions (Cat 7).





# Driving efficiency

## Project background

Our Huntingdon cleanrooms account for 80% of our energy use on site, making them the clear centrepiece to achieving our 2030 net zero goal. Identified as our highest-energy consumer, we took a collaborative approach to understand where energy was being misused or wasted, and how this could be resolved.

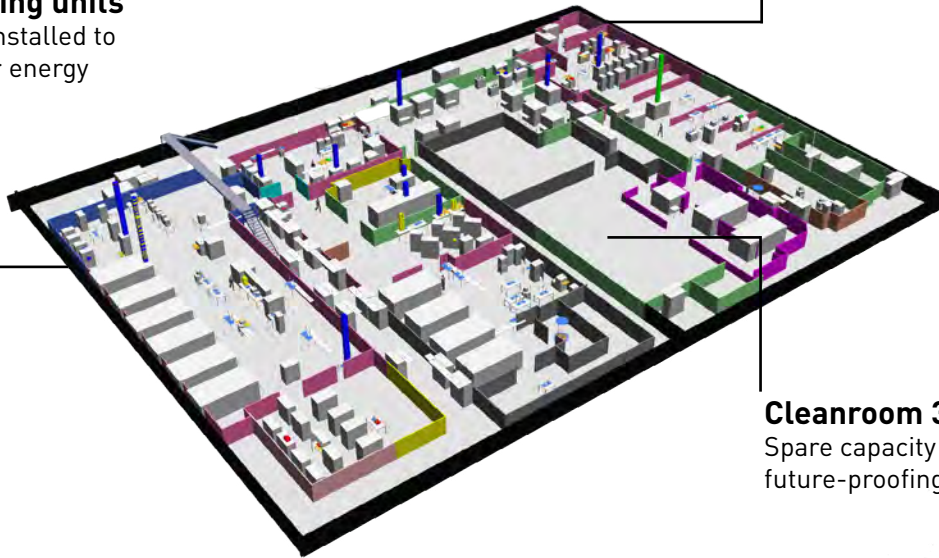
Digital map of Xaar's cleanrooms

### Air-handling units

New units installed to improve our energy efficiency

### LED lighting

New LED system installed with lighting controls



### Cleanroom 3

Spare capacity – future-proofing our growth



## What we did

### Step 1

This major project was divided into two phases – with clear aims and objectives for each. The focus of Phase 1 was a significant energy saving against our 2022 baseline.

### Step 2

Working with our partner SIEMENS, we created a complex digital twin of our cleanrooms. This enabled us to test and check our modelling and decisions first.

### Step 3

Upgrades to building services included a new LED lighting system, lighting controls and new energy efficient air-handling units to maximise our savings.

## Results

**100%** Full mitigation of the increased cost of energy

**18%** increase in foot print, future-proofing our growth

## External recognition

We are thrilled that this project was a finalist at the edie Sustainability Awards 2024.



## What's next...

During Phase 2 we are targeting further reductions against the 2022 baseline. This phase focuses on cleanroom compressor efficiency, and the implementation shutdown routines on machines & tools. We are confident the second phase of our project will continue to deliver outstanding results.

# Water, waste and air



## Water

We regularly monitor and record water usage and promote responsible consumption. Our operations are considered as low water usage, and we do not have any operations in regions of high water stress. We are pleased with the progress we are making. For example, in our printhead business, we reduced our freshwater usage by 16% in 2023 compared with 2022 levels. Our next focus is to work towards Group level water data collection.

Xaar water usage	2023	2022	2021
Freshwater usage (m3)	5,184	6,180	5,000
Effluent and wastewater (m3)	1,741	4,649	4,542



## Waste

Recognising the importance of waste reduction, we are working to achieve zero waste to landfill across the Group. In 2023, 100% of the waste from Xaar and FFEI was diverted from landfill, of which 39.85% was recycled. One of our key ambitions for the future is to achieve zero waste to landfill across all our UK sites by the end of 2024.

Waste diverted*	46,816.2kg
Waste recycled*	18,657kg

\*These are the combined figures for Xaar and FFEI businesses



## Air

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



*ESG is much more than a day-job to me. I've spent much of this year reviewing strategies, changing internal processes and bringing ESG to life which will encourage more colleagues to feel that they are part of our sustainability journey. Small changes have made a real difference. Now, ideas come from every corner of our team and each person knows their ideas are important, logged and will be considered for implementation. I am really excited to build on this in 2024, and see what further improvements we can make to Xaar's sustainability commitments.*



**Beth Connolly-Atkins**  
Continuous Improvement & ESG Lead, Xaar





# Group carbon footprint

Find out more about our Annual Results




## Tracking our Scopes

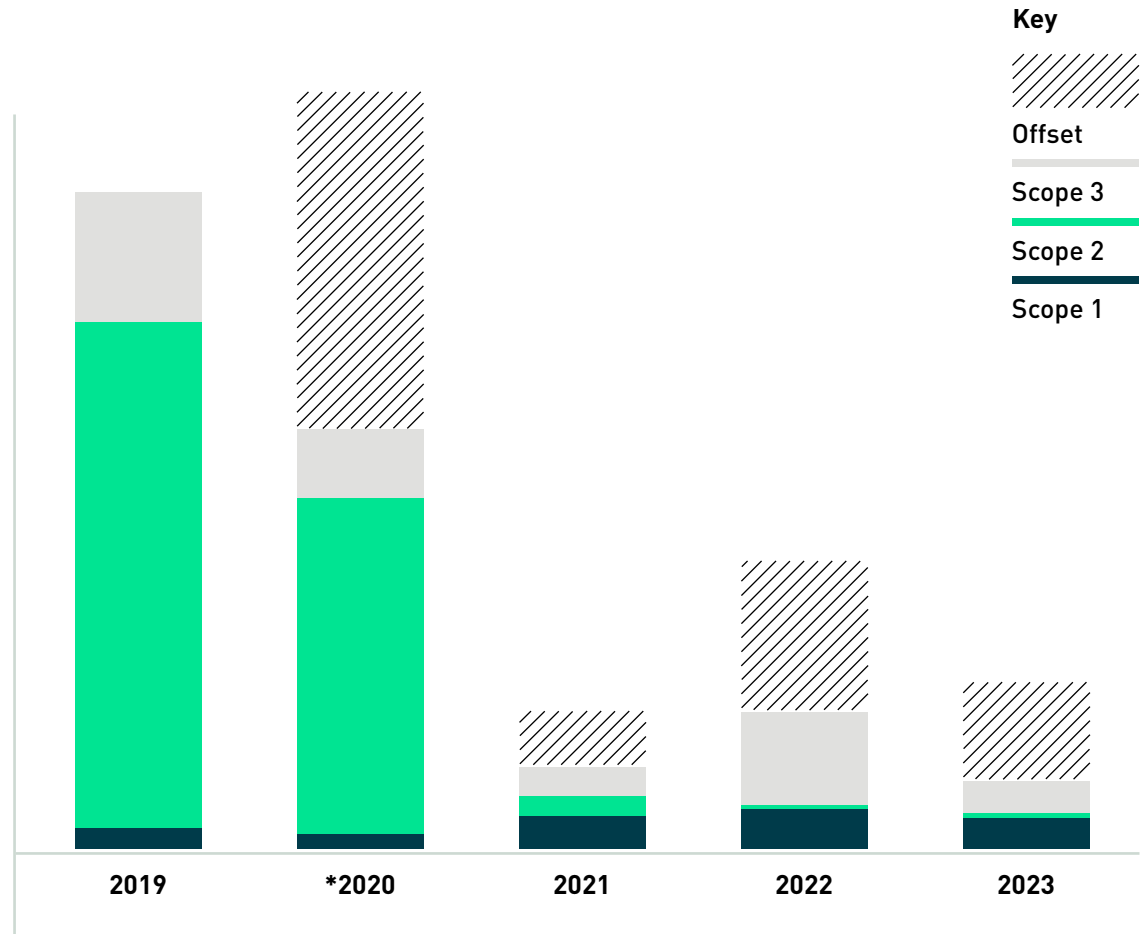
Xaar has set a goal of Net Zero by 2030 (Group Scopes 1,2 & 3). This year, our Continuous Improvement team led the way on carbon reduction. Thanks to additional EV fleet infrastructure, a move to green electricity supply contracts – and investments in energy efficiency, we have reduced our Scope 1 and 2 greenhouse gas emissions by 2,536 tCO<sub>2</sub>e against our 2019 baseline. This is equivalent to driving a diesel car for 9,454,784 miles which is the same as driving to the Moon and back to Earth 39 times.

Scope 3 CO<sub>2</sub> emissions currently represent calculated and estimated CO<sub>2</sub> emissions from travel and employee commuting. As the Group's Sustainability Roadmap progresses, we aim to collaborate with our supply chain via a materiality assesment. Our assesment and supply chain audits will be used to validate our upstream model data and reduce CO<sub>2</sub> emissions. Activities on downstream Scope 3 have not yet been initiated, but we aim to understand and report on these in the future and to drive reductions across our full Scope 3 CO<sub>2</sub> emissions.

# 99%

reduction in Scope 2 emissions against the baseline year achieved through the conversion of all UK energy to green contracts.

### Group Greenhouse Gas Emissions Scopes 1, 2 & 3.



\*The data for 2020 includes the offsets for 2019.





# Delivering on decarbonisation

**ROADMAP GOAL:** Xaar has set a goal of Net Zero by 2030 (Group Scopes 1,2 & 3)

Decarbonisation is a major area of focus for our team, and 2023 has been a year of intense activity. During 2023, we have worked hard on transformational projects – including a major upgrade to our UK cleanrooms in Huntingdon – that will impact our carbon footprint and future-proof us against energy market volatility.

**Decarbonisation in numbers...**

**500** trees planted in Kenya

**100%** of electricity is from renewable sources

**12** EV charging points installed across Xaar UK sites

## OFFSETTING

We are a global business – which means our need for travel has to be balanced with our commitment to reduce our Scope 3 emissions. We have made great progress - but we recognise that there is still more we need to do. Whilst we are doing this work, we are taking steps to offset our carbon.

Working with our partners Carbon Footprint, we are supporting offset schemes in Africa, Asia, South America and the UK. Many of these projects support biodiversity and the climate – and offer wider social impacts too. All of these projects are paired with Verified Carbon Standard (VCS) approved carbon credits to guarantee the carbon offsetting.



2020 - Heqing Solar Cooker Project in China



2022 - Energising India using Solar Energy Projects



2021 - Hebei Haixing 49.5 MW Wind Farm Project in China



2023 - Buenos Aires Renewable Energy Project in Brazil



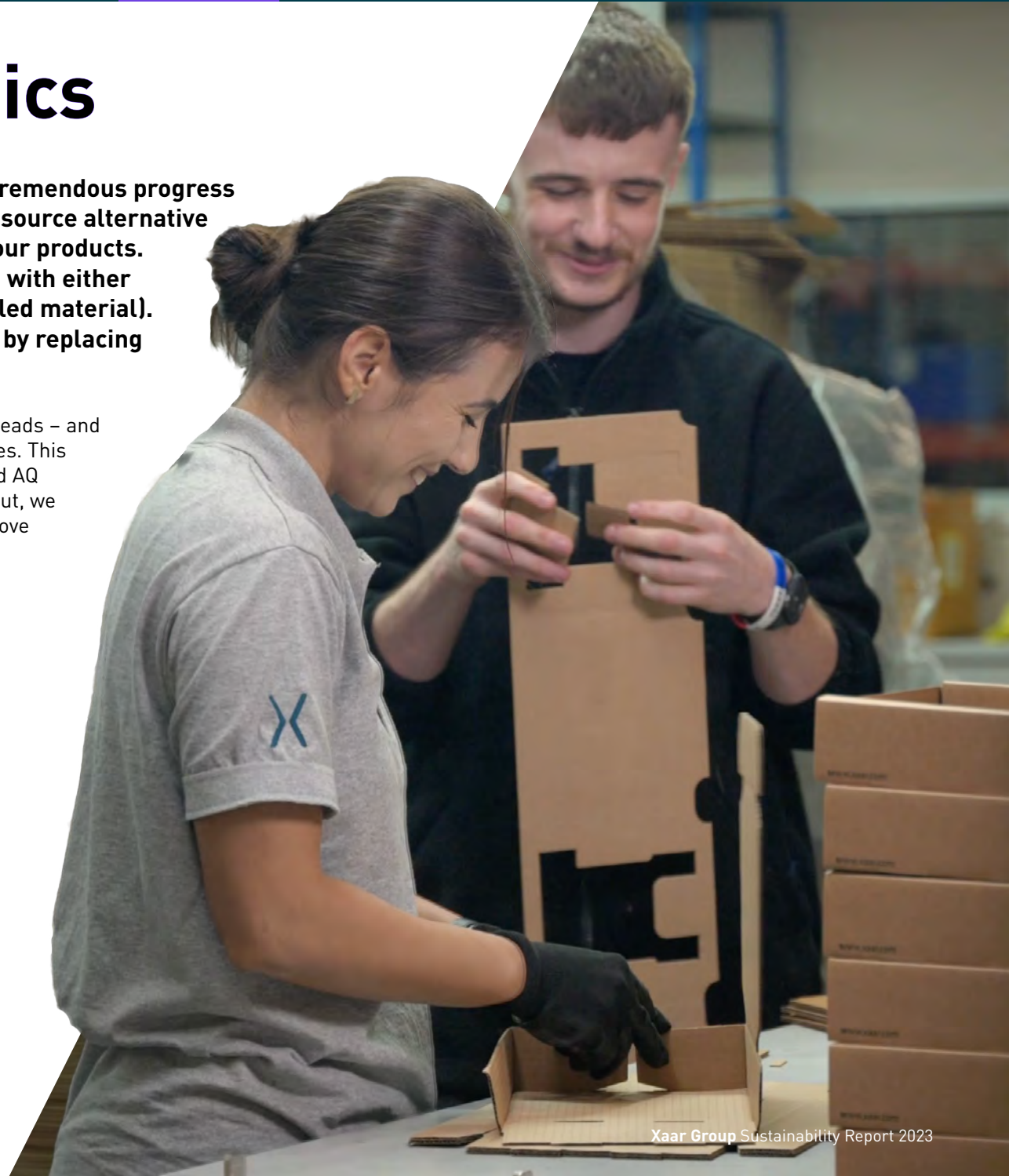
2023 - 500 trees planted in Kenya



# Packaging and plastics

**Packaging is a key area of focus and we have already made tremendous progress in this area. This is largely the result of work by our team to source alternative materials and environmentally friendly products to protect our products. This includes switching our product packaging to cardboard, with either cardboard or recyclable foam inserts (made from 30% recycled material). We have also eliminated the need for plastic packaging tape by replacing it with a water-activated paper tape.**

In 2023, we stopped the 'double-bagging' of 50X, 100X, 200X and AQ printheads – and we have also removed the need for an additional bag used for print samples. This has removed two plastic bags from the packaging of all our 100X, 200X and AQ printheads and one bag from our 50X printhead. This is great progress – but, we think we can go further – and we continue to look for further ways to improve the sustainability of the packaging of Xaar products.



## Biodiversity

Plan BEE has been a huge success! Bees were introduced to the Huntingdon site as part of our commitment to enhancing local biodiversity. We now have two hives and a group of staff volunteers are being trained to look after them.

