# CARBON REDUCTION PLAN

Dextra GROUP PLC

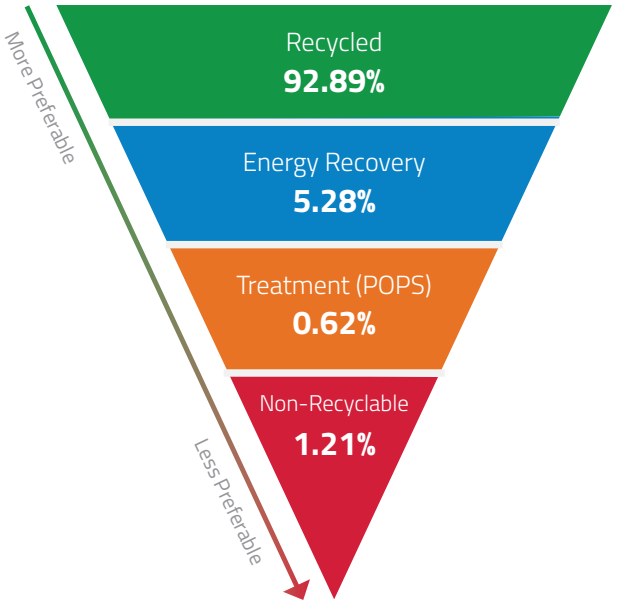
## Streamlined Energy and Carbon Reporting / Greenhouse Gas (GHG) Emissions

In line with the Greenhouse Gas Protocol (GHG) Corporate Accounting and Reporting Standard, Dextra Group plc continues to be engaged in processes to reduce our energy and greenhouse gas emissions and carbon footprint.

Dextra maintains both scope one & two emissions, which are generated from our premises, processes, warehouses, and offices, respectively. We also maintain scope three emissions from a range of transport including company vehicles.

Dextra Group operates a full waste and electrical and electronic equipment (WEEE) recycling service through its delivery fleet, which are back filled with waste luminaires, reducing unnecessary journeys and Dexreco, a Group subsidiary is a registered AATF.

**How did we dispose of our waste in 2023?**




Dextra has embraced green energy in its manufacturing process, further reducing the company's environmental impact and carbon footprint. We have large solar arrays on a number of buildings, with Phase 2 to completed Summer 2023 and Phase 3 by Spring 2024. The installation of solar arrays generate power to support operational functions and manufacturing equipment. We export approximately one third of our generated solar energy back to the grid.

**2022**

**595,130**

total solar generation in kW/h

**2023**

**1,206,246**

total solar generation in kW/h

**2024**

**1,791,590**

projected solar generation in kW/h

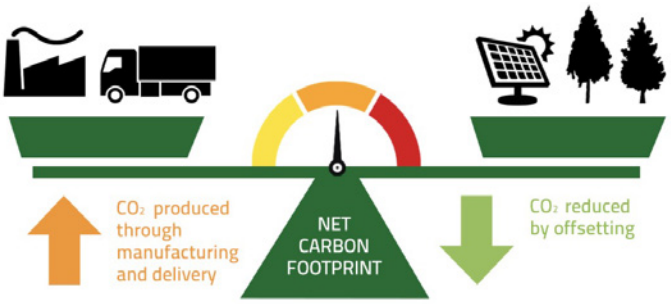
Further benefits are realised through charging hybrid and electric vehicles operated by the company. Dextra are continually striving to source the most innovative, energy efficient and sustainable equipment for its manufacturing processes.

## Carbon Offsets

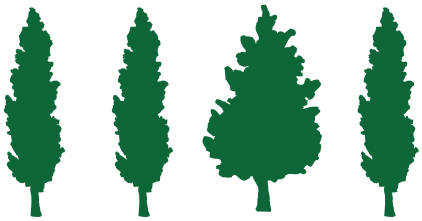
Despite all of the adopted sustainable innovations some $CO_2$ will unavoidably be released as the result of its manufacturing and business operations. In 2018 Dextra Group initiated a number of carbon offsetting measures on an estate in Exmoor.

They included changes to existing habitat management and a comprehensive carbon sequestration scheme. Across its 900 acres the estate working with DEFRA, Natural England and other stakeholders, is planting additional trees which absorb $CO_2$ and create a 'carbon bank' at an equivalent rate of 1 tonne of $CO_2$ per tree over its lifetime.

All calculations are monitored, assessed and verified via an independent specialist consultant. Implementing changes to the management of the land benefits existing habitats providing great benefits for biodiversity and planned management and planting programmes ensure that these environments not only act as important stores for carbon (as well as continuing to sequester carbon), they are also vitally important to store and clean water and purify the air.




**900 acres** of woodland and farmland managed sustainably with



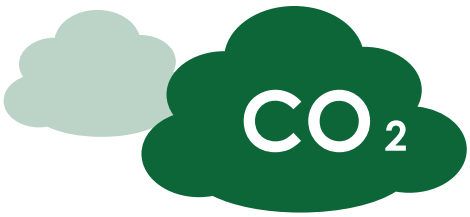
**40,000**

**trees planted since 2018**

storing

**69,980**

**tonnes of $CO_2$**
whilst capturing an additional
**1010 tonnes per annum**




An ambitious tree & habitat planting programme was **completed in 2023**.

The diverse range of habitats provide **great benefits for biodiversity**.

**Planned management and planting programmes ensure** that these environments not only act as important stores for carbon (as well as continuing to sequester carbon), they are also vitally important to store and clean water and purify the air.

# DEXTRA GROUP - CARBON REDUCTION PLAN

## Commitment to the Environment

Dextra will continue to operate the business in an ever increasing ecologically responsible manner that minimises risk to our environment, employees, customers and the wider community.

To design and manufacture luminaires that are as energy efficient as possible through continuous internal research and development. Producing sensors and control systems that further reduce energy consumption via enhanced presence and natural daylight detection.

Dextra Group is proud to operate an ISO Integrated Management System. The accreditation confirms that Dextra Group meets the highest of international environmental standards.

In 2022, Dextra Group devised a strategy to reduce our carbon footprint significantly including:

- Encouraging employees to purchase renewable technology vehicles i.e., hybrids, battery electric; fully electric and plug in hybrid now as preference on company car policy,
- Purchasing energy efficient equipment where appropriate and required in our premises,
- Replacing HVAC systems with energy-efficient equipment where possible,
- Adopting behavioural change measures where possible,
- Continuing with carbon offsetting,
- Further solar array installations.

**We have a longstanding commitment to tackling climate change. Our calculated carbon footprint for the 2022 fiscal year is 2,295.72 $tCO^2e$, whilst energy consumption was 10,138,090.97kWh (10,138 MWh).**

## 2022 Emissions

**Scope 1**

(natural gas, propane and transport)

**1,888.08**

Tonnes $CO^2$ equivalent ($tCO^2e$)

**Scope 2**

(electricity)

**373.47**

Tonnes $CO^2$ equivalent (tCO2e)

**Scope 3**

(electricity T&D)

**34.16**

Tonnes $CO^2$ equivalent ($tCO^2e$)

## Total = 2,295.72 $tCO^2e$

Scope 1, 2 and 3 carbon intensity metric: 0.094 $tCO^2e$ per $M^2$ (based on 24,312 $M^2$ floor space).

## Efficiency Measures Taken

1) We introduced a concerted programme to identify and remove most single use plastic and polystyrene from final product packaging, including the introduction of paper adhesive tape over polymer alternatives. We can report that we have now introduced a new cast pallet wrap into our packaging process.
2) A fabric first approach to constructing product packaging through a redesign of bespoke cardboard boxes. Introducing slot and tab closure thus reducing the reliability on traditional adhesive measures.
3) The increased utility of recycling bespoke wooden crates for bulk transport thus minimising erstwhile cardboard protection.
4) A continuation of carbon sequestration through additional tree planting on Exmoor within extant wider business sustainability plan.
5) Increased adoption of PHEV and EV vehicles.

## Objectives for 2023 and beyond

- Introduce yet further plastic recycling measures where practicable
- Further tree planting on Exmoor estate in line with current aims
- Continued reduction on reliance on fossil fuel company vehicles
- Expansion to the current suite of dedicated EV charging point parking places
- Further solar arrays to cover all buildings
- Prepare for the energy savings opportunity scheme (ESOS) phase 3 compliance process
- Reduce the C02 Emissions of the Transport Department by 2% relative to mileage between 1st January 2023 & 31st December 2023, comparable to same period in 2022.
- To reduce by 1% the total reported mass of Carbon Dioxide Equivalent (tCO2e) as reviewed and reported through the annual SECR report for the calendar year 2022-23. (This will be in comparison to the year 2021 – 2022).

Alongside reducing the environmental and carbon impact of our production processes, it is equally important that we minimise the embodied and lifetime carbon of the products we manufacture. Our approach to this will be threefold, firstly to minimise the power consumption of luminaires over the course of their lifetime, secondly to minimise the embodied carbon with new design approaches and finally to extend the lifetime of luminaires wherever possible reducing replacement cycles and therefore CO2 production.

Wherever possible we will seek to adopt new technologies and optical designs that improve the performance of our luminaires allowing lower power sources to be used that ensure a minimum of light is used and effectively distributed to meet the requirements of the applications they are intended for. This brings dual benefits by reducing energy consumption and carbon production whilst also reducing operating costs. It is important to note that in most use cases the vast majority of a luminaires carbon production is not in its manufacture but in the energy consumed over its lifetime hence our continued focus in this area is critical to minimise our impact on global warming.

In future luminaire designs we will assess the carbon content of the materials used as well as the energy intensity of production processes and transportation miles of components and seek to minimise our environmental impact in all three areas. We will use recycled and locally sourced materials and components where possible both lowering carbon emissions from transportation and simplifying procurement of replacements. Our designs will consider end of life disassembly to ensure that materials can be easily recycled at end of life with minimal energy input. All efforts will be taken to ensure that the embodied carbon of our range is minimised wherever possible, but not at the expense of efficiency or longevity given the carbon impact of compromise in these areas will outweigh the benefits gained from reduced embodied carbon.

Longevity and ease of repair are key aspects of reducing embodied carbon, longer product life cycles and the ability to repair luminaires reduces the frequency of replacement and therefore the embodied carbon that each replacement cycle generates. At Dextra we have always used branded European components ensuring excellent component lifetimes and simple component sourcing in the event that repair is required. Our drivers typically have a lifetime of 100,000 operating hours to 10% failure rate whilst our LEDs offer 10% lumen depreciation over 60,000 operating hours ensuring that our product life expectancies are typical for current state of the art LED technology. We will continue to review and update the technologies used in our luminaires to extend lifetime wherever feasible.

Our assembly processes have always embraced simplicity of repair and upgrade and are assembled with screws or other easy to remove fixings ensuring simple access to the electronic components with commonly available tools. We do not use bonded assemblies or fix components with permanent methods such as rivets. We only use European branded components from respected companies such as Tridonic, Philips and Osram for our drivers and emergency modules ensuring both longevity and that replacement components can be easily sourced in the event repairs are required. All Dextra luminaires are supplied with a five year warranty including three years on-site repair, therefore quality, longevity and simple repair benefits both supplier and end user. All luminaires are labelled with a unique identification label allowing us to trace full manufacturing details of the product ensuring that the components used can be easily identified and replacements sourced.

Many luminaires in our product range already contain dedicated gear trays for the key electronic components such as driver, emergency module, battery and LED circuit board. This allows the luminaire to be upgraded at end of life with a simple tray replacement ensuring the housing and diffuser can be retained minimising wastage and also reducing the cost of replacement both in materials and labour. Examples of such ranges include the Amenity Plus, Exterior, Decorative, IP65, Secure and Halo, Discalo, Graduate, Runway, Tanek, Typhon, Hydra, Splash and IMPR amongst others.

Our future designs will continue to ensure that luminaires are simple to repair with easily replaced components that are easily sourced and will incorporate one piece trays allowing luminaires to be upgraded at end of life when routes of repair with individual component replacements have been exhausted.

## Methodology

We have reported all of our emission sources under the Companies Act 2006 (Strategic Report and Director's Reports) Regulations 2013 as required. We have calculated and reported our emissions in line with the GHG Protocol Corporate Accounting and Reporting Standard (revised edition) and emission factors from the UK Government's GHG Conversion Factors for Company Reporting 2022 (reference "Introduction guidance").

This statement will be reviewed and updated in April 2024 in line with our SECR and ESOS reporting.
Issued 31/03/2023