OUR CULTURE

Sustainability.

The Group is committed to addressing today's sustainability challenges and opportunities, adjusting its business strategy accordingly.

Understanding the needs of customers, key stakeholders and the expectations they have is central to ensuring that the Group prioritises the most critical issues and operates a responsible and sustainable business.

Sustainability has been at the core of FW Thorpe for many years. Products are designed for longevity using recyclable materials, and the Group's direct carbon impact has been measured for over a decade, with emissions offset using its own independently certified tree planting scheme since 2009. Thorlux Smart technology has been saving energy for customers as well as reducing their carbon impact since 2003. FW Thorpe now holds the Green Economy Mark, which identifies companies and funds listed on the London Stock Exchange that generate between 50 and 100% of total annual revenues from products and services that contribute to the global green economy.

The journey so far: the Group's progress so far and plans for the future

Over the last two decades, FW Thorpe has sought to address its carbon impact, by working towards carbon neutrality for its manufacturing and distribution operations. This has led to a major employee engagement programme on energy efficiency of its operations, as well as significant recent investments in renewable energy generation with the addition of roof-top solar photovoltaic (PV) panels to the Group's manufacturing facilities. This investment in solar PV will enable the Group to generate 40–50% of its own electricity usage when the project is completed later this financial year.

Since 2009, FW Thorpe has been planting trees on its own land in Wales to offset Group emissions each year. To date 165,687 trees have been planted, offsetting 41,000 tonnes of CO_2. A further 15,000 trees will be planted by the end of 2023.

FW Thorpe has been officially recognised as being carbon neutral, with systems of reduction, measurement and certified offsetting in place, since 2012. This decade long status has been independently assessed by a third party in accordance with ISO 14064-1, an international standard for the quantification and reporting of greenhouse gas (GHG) emissions and removals. Meeting this standard provides independent assurance of the Group's long-standing commitment to sustainability across all of its operations worldwide.

CARBON NEUTRAL SINCE 2012

What does "carbon neutral" mean?

Being carbon neutral means that FW Thorpe offsets the carbon dioxide emissions it generates (scopes 1 and 2 of the Greenhouse Gas Protocol) by its business activities.

Scope 1

All direct emissions from the activities of an organisation, including fuel combustion on site, such as in gas boilers and in its fleet of delivery and other company-owned vehicles.

Scope 2

Indirect emissions from electricity purchased and used by the organisation. These emissions are caused during the production of the electricity that is ultimately used by the organisation.

Alignment with the UN Sustainable Development Goals

The 17 Sustainable Development Goals (SDGs) were launched in 2015 by the UN, aiming to end poverty and create a life of dignity and opportunity for all, within the boundaries of the planet. The SDGs define global sustainable development priorities and aspirations for 2030 and seek to mobilise global efforts among governments, business and civil society around a common set of targets. FW Thorpe activities align most closely with six UN SDGs, covering the themes of good health and well-being, affordable clean energy, decent work and economic growth, responsible consumption and production, and climate action.

Ensure healthy lives and promote well-being for all at all ages

Ensure access to affordable, reliable, sustainable and modern energy for all

Promote sustained, inclusive and sustainable economic growth

Sustainable cities and communities

Ensure sustainable consumption and production patterns

Take urgent action to combat climate change and its impacts

Our sustainability focus areas.

The link between the Group's sustainability journey and its strategic priorities related to its products, operations, business model and people is vital to the long-term success of the business.

Products (Design and Innovation)

New Products:

- Design principles – circularity focus, recycled/ renewable content
- Product lifetimes – e.g. 100,000 hours operation
- Energy efficiency
- Smart technology
- Health & Well being – e.g. Flexview product
- Minimum certification against sustainability and circularity standards – e.g. EPDs

Sourcing:

- Electronic components
- Plastics
- Metals
- Wiring
- Packaging

Supply chain:

- Determine sourcing criteria with key suppliers

Operations (Manufacturing Excellence)

"Responsible production"

Energy usage:

- Own solar generation
- Source from renewables
- Continue carbon offset programme

Waste:

- Reduce waste to landfill

Distribution:

- Hybrids/EV, shipping routes
- Packaging – type, return/reuse
- Goods in – shipping routes, air freight, packaging

External activities:

- Sales & engineering fleet – Hybrids/EV/ hydrogen
- Consider travel policy – trains, air travel
- Ability for certain staff to work at home – reduced travel
- EV charging at work using solar energy suppliers

Business Model

- New products supporting green economy – e.g. electric vehicle charging
- Existing products that support the green economy – e.g. Smart, SmartScan
- Refurbishment/reuse business – replacement light engines, upgraded controls
- Alternative financing models for customer projects

People

- Health & safety measures – ISO 45001 across the Group
- Training and development
- Employment of young people – continued support of apprenticeship scheme
- Diversity, gender pay
- Responsible wage/salary rates
- Flexible working

Products.

From an environmental point of view, the greatest impact of a luminaire is during the operating phase and, more specifically, in the amount of energy it consumes.

The Group has continued to invest in the development of energy efficient luminaires and control systems, utilising LED technology, including circuit-board design, software development, thermal modelling and optical lens design, ensuring its luminaires provide the optimum lighting performance with the best use of energy and minimal stray emissions. Utilising the most up to date and high-quality LEDs, based on criteria such as colour rendering, luminous flux and thermal stability, guarantees that Group luminaires offer exceptional quality in terms of luminous efficacy and lifetime.

New products

The Group endeavours to limit the environmental impact of its products throughout their lifetime and new product design follows an FW Thorpe Plc agreed Circular Design Strategy.

Read more about **TRT case study** on page 61

Offering increasingly energy-efficient luminaires and lighting solutions reduces energy consumption and prolongs the lifetime of all products.

Read more about **Bee Seen case study** on page 61

The Group's products have always been engineered to last and extending the life of a product allows it to remain in use for as long as possible, this may be by designing products to be physically durable or allowing the product to adapt to a user's changing needs through easy upgrade.

Read more about **Solite case study** on page 61

The Group is actively promoting retrofit solutions for existing and new customers. Utilising the bodies of existing luminaires by designing custom made gear trays to replace traditional light sources with LED realises significant benefits in terms of energy efficiency, maintenance costs and luminaire lifetime.

Read more a **Thorlux case study** on page 61

Thorlux continues to collaborate with WMG Business through a Knowledge Transfer Partnership. The focus for the project has been to assess and improve new product development processes to ensure new products become more circular in their design. To facilitate this, Thorlux has reviewed the environmental impact of certain products in terms of the amount of embodied carbon that they contain. This provides an insight into which materials have the greatest environmental impact and therefore how this knowledge can be used to design more circular products in future. To complement this, a methodology has been developed to score and compare products based on a multitude of factors that cover design, production, product life cycle and end of life scenarios. The aim is to embed these circular principles and concepts into the NPD (new product development) team through workshops and design related activities with the aim of launching more circular products.

The aim is for certain newly developed luminaires to have an environmental product declaration (EPD); a material declaration that shows the types of materials included in the product.

Supply chain

The Group is committed to its Supplier Code of Conduct to ensure an ethical and sustainable supply chain and is working with suppliers to embed sustainable practices.

The FW Thorpe Plc supply chain comprises approximately one hundred mainline suppliers. These companies are based throughout the world and vary considerably, both in terms of size and amount spent with them. All the product suppliers are subject to an approvals process before they are permitted to supply products. Many hold international quality standards and accreditations and are regularly audited to ensure ongoing compliance with quality standards and other regulatory requirements. In addition, the Group has approximately five hundred non-product suppliers, who are predominantly based in Europe. These suppliers are subject to the same due diligence processes as the product suppliers.

Sourcing

Sustainable sourcing, including social, ethical and environmental performance factors, is integrated into the Group's practices and procurement decisions. All materials used in manufacture comply with the directive on Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS). The choice of material has a significant environmental impact throughout the luminaire's lifetime, so the Group is working to increase the use of sustainable materials to reduce this impact. As the Group begins to embed the principles of the Circular Economy into its business, one of the first initiatives is to reduce the amount of packaging waste generated by the business. Improved planning will allow Group companies to successfully manage inventory, reduce excess, consolidate deliveries and eliminate the purchase of unnecessary items, all of which will reduce the amount of supplier delivered waste. The recycled content of all raw materials is being established and increased wherever possible.

Sustainability in action:

The TRT Nano has been designed to use as few components as possible to deliver the company's most energy efficient luminaire to date. The interchangeable and upgradable LED module and control gear enable re-use and repair and materials have been used that are easily recovered and recycled at end of life.

Sustainability in action:

Portland Lighting - the aluminium post extrusion of the BEE SEEN zebra crossing lamppost is able to sleeve over older existing 76mm lamp post columns extending their sustainable lifetime use.

Sustainability in action:

Solite recently supplied 700 geartrays and 280 complete fittings to a project in Ireland under their "Relight" programme.

Sustainability in action:

Thorlux has designed and supplied LED gear trays for existing fluorescent luminaires at a local authority customer, eliminating the expense, inconvenience and waste of replacing the entire luminaire.

Sustainability in action:

At Famostar all plastics will be changing from virgin plastics to biobased plastics, this is a climate-neutral polycarbonate made from biomass feedstock. The material is ISCC+ certified and uses no fossil feedstock resulting in a significant CO_2 reduction.

Operations.

Energy Usage

The Group has been officially recognised as being carbon neutral, with systems of reduction, measurement and certified offsetting in place, since 2012. To date the Group has planted 165,687 trees on its own land in Wales offsetting over 41,000 tonnes of CO_2. A further 15,000 trees will be planted by the end of 2023.

The Group has installed solar PV units on the roofs of the majority of its UK manufacturing facilities, as well as at Lightronics in the Netherlands and Zemper in Spain. The scheme will be extended at Zemper and implemented at Famostar during 2022/23.

The majority of the Group's electricity usage is from renewable sources.

All Group companies are certified to the international standards ISO 14001 (Environmental Management Systems) and ISO 9001 (Quality Management Systems).

Waste

All Group companies are required to meet ambitious targets to reduce waste to landfill through the economical use of resources and recycling of materials.

Group companies will target zero plastic bag and zero bubble wrap usage.

Distribution

Systems are being successfully introduced which lend themselves to the implementation of returnable and reusable packaging, including a customer packaging recycling scheme. All finished goods packaging is to be supplied from Forest Stewardship Council (FSC) or equivalent sources. Group companies will offer a return or reuse service for product packaging.

External Activities

A proactive policy is in place to increase the use of either hybrid or full electric vehicles (EVs).

Sustainability in action:

Famostar is removing all waste bins at the workplaces and desks and installing waste collection points at central points around the business premises.

Sustainability in action:

47% of the Thorlux fleet are electric or hybrid. All new Famostar lease contracts are for fully electric vehicles.

Key figures (excluding Zemper):

756,733
kWh of electricity is produced per annum from solar panels

220.54
tonnes CO_2e avoided per annum by the use of solar panels

25
year projection of 18,918,313 kWh of electricity produced from solar panels

25
year projection of 5,513.49 tonnes CO_2e avoided by the use of solar panels

Environment

Greenhouse gas emissions

The table below shows the Group's greenhouse gas emissions for the year ended 30 June 2022.

	Tonnes of CO_2e equivalent	
	2022	**2021**
Scope 1: Direct emissions from own operations*	964	1,011
Scope 1: Transport*	936	617
Scope 1: Total	1,900	1,628
Scope 2: Indirect emissions from purchased energy (mainly electricity)	425	553
Total Scope 1 and Scope 2 emissions	2,325	2,181
Intensity metric: tonnes of CO_2 per £1m of revenue	16.18	18.50

* 2021 restated to separate out transport from own vehicles.

The methodology used to calculate our emissions is based on current government published conversion factors. In the UK these are 2021 factors for July to December emissions and 2022 factors for January to June emissions.

The Group is committed to minimising the environmental impact of both its manufacturing processes and its products. To achieve this aim, in 2009 an ambitious carbon-offsetting scheme was launched to help compensate for these emissions and since then 165,687 trees have been planted. Further information may be found on the corporate website www.fwthorpe.co.uk/carbon-offsetting.

Global Energy Use

The table below shows the Group's energy use for the year.

	UK kWh	Rest of world kWh	Total kWh
2022			
Electricity	2,687,096	1,254,682	3,941,778
Gas	4,549,437	424,942	4,974,379
Total	7,236,533	1,679,624	8,916,157
2021			
Electricity	2,449,670	385,496	2,835,166
Gas	4,557,575	37,508	4,595,083
Total	7,007,245	423,004	7,430,249

People.

Safety

All Group companies are certified to the international standard ISO 45001 (Occupational Health and Safety Management Systems) or equivalent.

The Group is committed to developing a safe and healthy working environment for all employees consistent with the requirements of the Health and Safety at Work Act. Within the constraints of health and safety, disabled people are given full and fair consideration for job vacancies. Depending on their skills and abilities, disabled people enjoy the same career prospects as other employees, and if employees become disabled every effort is made to ensure their continued employment, with appropriate training where necessary.

Training and Development

The Group offers skill and personal development to all employees and continues to support its apprenticeship scheme. A number of senior managers and Directors within the Group are former apprentices.

The Group continues to work with Warwick Business School to develop our leaders of the future.

Employee Engagement and Diversity

Employees are kept informed of matters of concern to them as employees by publication and distribution of a company newsletter and other notices, or by specially convened meetings. Committees representing the different groups of employees meet regularly to ensure the views of employees are considered in making decisions that are likely to affect their interests.

The Group aims to improve the work-life balance by continuing to offer flexible work time models.

The Group offers a fully funded Employee Assistance Programme (EAP) and 24/7 GP video helpline that make available the support and resources needed to address any personal challenges and/or concerns that may affect well-being and/or work performance. The EAP is confidential and free to all employees as well as their eligible family members.

The Group is committed to the highest standards of openness, probity and accountability. The Whistleblowing Policy is intended to assist individuals who believe they have discovered malpractice or impropriety and to offer protection to those employees of the Group who disclose such concerns.

Employees are encouraged to share ideas and solutions through Group suggestion schemes to encourage sustainable development. A bi-annual Group sustainability newsletter is distributed to all employees with updates of company environmental initiatives and the FW Thorpe Sustainability Working Group has been set up to share, discuss, learn and circulate ideas on sustainability topics.

The Group pays employees above minimum wage rates as well as an additional annual profit share bonus for all those who meet eligibility criteria as well as access to a pension scheme with a contribution from the respective Group company.

The Group supports equal opportunity regardless of gender, age, religion, ethnic origin or sexual orientation.

The Group's Modern Slavery Act disclosure is published on the corporate website (www.fwthorpe.co.uk) in the company documents section.

During the year the Group gave £23,153 (2021: £22,992) for charitable purposes. This is made up of donations to charities of £7,942, and local causes of £15,211.

Image:
'Supplier Day' event at Thorlux HQ, Redditch

Image:
Thorlux donates equipment to local community organisation, 'Keep Redditch Tidy'

Business model.

27
Number of charities supported
+17% (2021)

17
Number of apprentices
No % change (2021)

Governance

Sustainable management and social responsibility are at the core of Group Governance. The Board and Group management is responsible for determining the strategic direction of sustainability initiatives and the governance and monitoring of sustainable working methods.

The company's shares are traded on the Alternative Investment Market (AIM) of the London Stock Exchange Plc. Previously the company was not required to comply with the Principles of Good Governance and Code of Best Practice ("The UK Corporate Governance Code", or the "Code"). Following a change to the AIM rules in 2018, from 28 September 2018, the company adopted the Quoted Companies Alliance's "Corporate Governance Guidelines for Smaller Quoted Companies" (the QCA Code) which the Board believes appropriate due to the size and complexity of the company.

It is Group policy to conduct all its business in an honest and ethical manner. The Group takes a zero-tolerance approach to bribery and corruption and is committed to acting professionally, fairly and with integrity in all business dealings and relationships wherever it operates.

A number of small-scale projects have been funded directly or indirectly by FW Thorpe, enabling the customer to benefit from energy savings immediately as well as lowering their carbon emissions.

£23,153
Charitable donations
+1% (2021)

Sustainability in action:

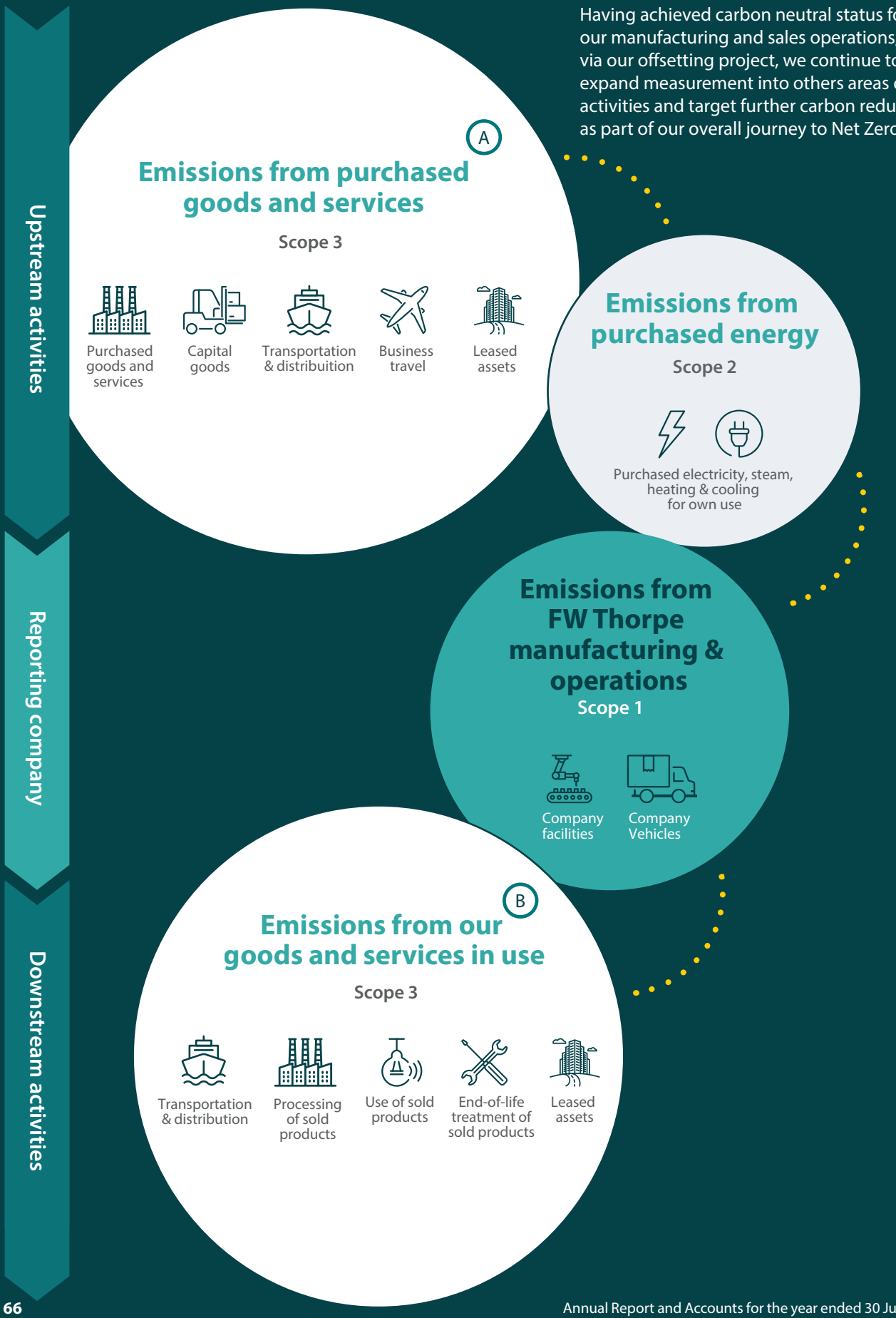
Thorlux launched the next generation of the SmartScan wireless lighting management system in 2022.
The system combines maintained illuminance, daylight dimming and presence detection which maximises energy savings, in some instances in excess of 70%. Even during the short winter days, there can be sufficient daylight for the luminaires to dim, providing energy savings throughout the year.

Sustainability in action:

FW Thorpe invested in Ratio Electric BV in December 2021, one of Ratio's core markets is electric vehicle charging products. We will introduce these products to the UK market as well as to develop products collaboratively for all markets.

Carbon neutral to net zero.

Having achieved carbon neutral status for our manufacturing and sales operations, via our offsetting project, we continue to expand measurement into others areas of our activities and target further carbon reductions as part of our overall journey to Net Zero.



The Greenhouse Gas Protocol Corporate Standard classifies a company's GHG (Greenhouse Gas) emissions into three 'scopes':

- Scope 1 emissions: direct emissions from owned or controlled sources.
- Scope 2 emissions: indirect emissions from the generation of purchased energy.
- Scope 3 emissions: all indirect emissions (not included in Scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.

Having achieved carbon neutral status by offsetting our Scope 1 and 2 emissions, the Group now strives to implement an ambitious Net Zero plan. Before we can do this, we need to measure where we are starting from. The Group has collated data on Scope 1 and 2 emissions for many years to support our tree planting carbon offset scheme.

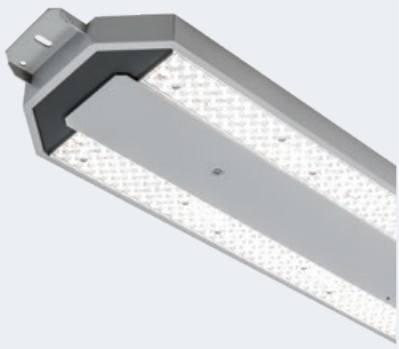
As Scope 3 emissions typically account for a high percentage of a company's carbon footprint, it is crucial that the Group tackles Scope 3 emissions to meet the aims of the Paris Agreement and play our part in limiting global warming to 1.5°C.

FW Thorpe Plc has set out its ambition to be a net zero company as soon as possible. To this end the Group is currently measuring and evaluating its Scope 3 carbon emissions and will set science-based targets, aligned to the Paris Agreement, to further reduce its carbon footprint. There are 15 categories of scope 3 emissions, ranging from upstream categories such as purchased goods and employee commuting, to downstream categories such as outsourced transportation and distribution, and the use of sold products. The greatest contribution to decarbonise the Group's value chain is to reduce emissions in the use phase of all products and by engaging with the supply chain.

Measuring our Scope 3 emissions at use phase is challenging. We provide a variety of products that have different applications, for example we can provide high powered fittings to a 24-7 operation and lower powered fittings to a school that only operates 2,800 hours per annum. With our SmartScan system, the operating hours and power levels are dramatically reduced. We also have emergency lighting products that consume very little electricity but use battery technology which has its own footprint considerations. We are developing a forecasting tool for each business in the Group using certain assumptions and typical product lifetimes.

As our products consume electricity they have a significant impact on our Scope 3 emissions. The core focus areas will be increasing the energy efficiency of our products benefiting both our customers and reducing those emissions, continuing to promote SmartScan technology to reduce energy usage, as well as working with key suppliers to understand how we can reduce the carbon element of certain components. The Group is currently investigating carbon insetting projects, working with existing partners to help them lower their emissions by investing in carbon reduction projects. In contrast to a carbon offset project, emissions are avoided, reduced or sequestered upstream or downstream within the Group's own value chain. Part of our Net Zero plan will ultimately be determined by the governments in the respective territories that we sell into meeting their commitments in terms of clean energy provision, for the UK this is 2035.

The Group expects to publish Scope 3 data next year, once we have a clearer picture of its constituent parts and our ability to influence the reduction of these emissions.



Sustainability in action:

Visio uses the very latest LED technology and when combined with the highly efficient optics produces a system efficacy of over 179 luminaire lumens per circuit watt, making Visio one of the most efficient luminaires in the Thorlux range.

See page 52 for further details