

Strategic Report.

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Chairman's statement.



"I am pleased to report that the Group has increased its revenue and profitability, which is especially admirable considering most companies in the Group suffered from severe component shortages throughout the year."

Mike Allcock
Chairman and Joint Chief Executive

Another year has passed without a return to a more stable business climate, and with one crisis being replaced by another. Nevertheless, I am again pleased to report that the Group has increased its revenue and profitability (before and after the effects of its acquisition of Zemper).

This positive performance is especially admirable considering most companies in the Group suffered severe component shortages throughout the financial year, hampering production output and efficiency, and softening year-end results. Most Group companies continue to face supply shortages, particularly for electronic components and microchips, whilst having substantial order books.

Component scarcities have inevitably affected the Group's enviably high levels of customer service, but I hope the situation is at last improving. In addition, of course, the Group is also contending with significant cost inflation of materials, wages and utilities.

The Annual Report and Accounts contains a more detailed appraisal of each company's individual achievements and challenges.

Group results

Revenue increased by 22% to £144m or by 10% excluding revenue associated with the acquisition of Zemper. Operating profit increased by 29% to £25m, or by 20% on a like-for-like basis excluding the addition from Zemper and last year's exceptional item. A 17% operating profit return on revenue is a good achievement, under the circumstances, but the Board thinks that improvements can be made, and all businesses are targeted to improve.

A high proportion of growth within the Group is again attributable to Thorlux Lighting in the UK and Famostar in the Netherlands.

There was a notable downturn at TRT Lighting due to the lack of a sizeable one-off project during the year and some factory efficiency issues. TRT's order book has now returned to a good level. A new operations director started at TRT in mid-August and is addressing manufacturing performance.

Zemper made a solid start within the Group despite facing similar issues to other companies as referred to throughout this report.

General overview

All companies in the Group have significantly increased their stock levels during the year - from a low point of £20m to £29m on a like-for-like basis - to support their large order books as well as to further mitigate the ongoing supply chain risk. It is important that this stock is carefully managed to avoid overshoot and obsolescence in coming months. Whilst stock has increased significantly overall, it is rare for a fully populated bill of materials to reach the assembly areas, causing the delays mentioned, and dampening Group performance as a whole.

Whilst order delivery lead times have increased dramatically, for example at Thorlux Lighting, within the Group we are striving to deliver on time where possible, notwithstanding the supplier issues mentioned.

All companies have been affected by significant cost increases. Whilst the intention has been to recover cost increases by making selling price increases in a fair manner, some Group companies were better than others in achieving this in a timely fashion. Within the Group we need to be agile and react to market

conditions, being prepared to reverse price rises if the cost base changes again, as well as driving through efficiency savings where practical.

Electrozemper S.A. (trading as Zemper) has settled nicely into the Group. The timing of Zemper's financial reporting is now aligned with that of the Group; consequently only nine months of its figures are included in this year's final results. The results presented are dampened by the required acquisition accounting adjustments. Technical teams from around the Group have embarked on several synergy projects together and some common sustainability and circularity work. I hope this will improve productivity and enhance margins too.

As mentioned in my interim report, in December 2021 the Group purchased a 50% stake in Ratio BV from the Netherlands, a company that designs and manufactures electric vehicle chargers, connecting leads and electrical wiring accessories. Figures for Ratio are not included in the operating results of the Group, with our share of profits included within profit before tax. Revenue growth, as expected, has been significant, even though Ratio has experienced component shortages like other companies. Profitability has grown only slightly but is in line with expectations due to the investments required to develop the more high technology chargers, especially suited to the UK market and some of the Group's commercial customers. Ratio now has a developing UK operation, with five employees, distribution and manufacturing space, and new ranges of cloud-connected chargers which are targeted to be ready in late autumn this year. These are exciting times for all concerned.

FW Thorpe has successfully adapted to rapid changes in its market in recent years, including the wholesale change to LED technology, and now the change to wireless-enabled high

technology solutions that provide not only energy savings but many other benefits such as energy and status reporting and data collection. The Thorlux SmartScan system, for example, continues to mature and, in my opinion, is the leading solution for the UK market, and beyond. The first-generation system was launched in 2016, and in 2019 won a Queen's Award for Enterprise in the Innovation category. Generation 2 is now available, following successful site trials over the last 12 months. The most recent system offers a raft of new features to keep it ahead of the competition, and provides customers with freedom to manage and communicate with their lights in a much faster, more complete and even more robust way. The new generation SmartScan system was developed in collaboration with Thorlux's biggest customer and resulted in Thorlux winning the lighting contract for one of the largest factories in Europe, in central Germany. The majority of the software is developed in house with Thorlux's own engineers and, as such, is now exclusively in use in most Group companies.

The next challenge for FW Thorpe, which is certainly topical in its industry, is the global one of sustainability. To that end, within the Group we have a good head start, having commenced our programme in 2010. In order to remain in a prime position, FW Thorpe needs to continue to invest in greener solutions for its factories, better sourcing and control of components, more circularity to designs, and more energy efficient product solutions. Apart from the well-publicised ongoing tree planting projects, FW Thorpe will continue to roll out solar solutions for its numerous factory roofs. Through good foresight and, probably, fortunate timing, last year, before the energy crisis and availability issues, FW Thorpe bought a further 3,000 large 2.094 by 1.038 metre PV panels at a cost of around

£0.9m to cover the roof of the main Thorlux facility in Redditch. These are in a warehouse on standby for fitment. Prior to being able to mount them to the 30-year-old roof, significant enabling works are being completed – at a further cost of £0.7m. At the time of writing, with such enormous rising electrical costs, it is hoped that the panels will be commissioned soon – hopefully they will be online around the time of this year's AGM in November.

Efforts continue within the Group to improve companies' sustainability credentials and move sooner towards Net Zero – which, apart from being the right thing to do, will bring commercial advantages. Initial third-party support and assessment is now complete. I hope to be able to share the estimated CO₂e (total carbon footprint) number for the Group as a whole when the Group is more certain of its direction. It has taken months of work to collect and collate accounts for emissions from all Group activities in scope 1, 2 and 3; the estimated CO₂e number not only includes emissions due to the Group's sales, manufacturing and distribution activities, but also the emissions from the Group going about its normal business – for example, including emissions from the supply chain and from downstream use of products by customers and the electrical energy the luminaires consume. To be able to say the Group is Net Zero seems a distant dream, but every watt saved in Group factories and saved by making its lights more efficient is another watt that does not have to be reduced and offset.

Apart from electrical energy consumption, sustainability involves many other factors, such as material selection, reduction, re-use and recycling. Within the Group, all employees are involved: they are being trained and developed, and receive a frequent chairman's sustainability newsletter, with contributions from

Chairman's statement continued

around the Group; some employees have even been awarded with a 'Net Zero Hero' tee shirt for special achievements. Many of the efficiency gains in Group factories and at product level reduce costs, make Group companies more successful at winning orders, and improve the Group's reputation. For example, Thorlux was awarded Manufacturer of the Year at the prestigious Lux Awards in 2020, with specific mention of its tree planting, and solar PV works in the judges' comments.

Acquisition

I mentioned above that, following significant design and engineering effort, the Group won a major German factory lighting project, involving around 10,000 luminaires on the Thorlux SmartScan generation 2 platform. The German customer for this project, SchahLED Lighting GmbH, has rapidly become the Group's largest customer over the last 3 years or so. SchahLED's independent majority shareholder approached FW Thorpe to discuss the sale of its shares; it was natural for FW Thorpe to have a keen interest, as well as for SchahLED's management to want to continue to build on the trading relationship of the last few years. Although members of the Board of FW Thorpe had planned for a few years to be quieter on the acquisition front, we approached this situation in both a defensive capacity to protect existing work, but also in an opportunistic way, as we see good growth potential in SchahLED's business model of focusing on energy saving payback projects, and think they could be adopted in some other territories. So, I am pleased to announce that on 26 September 2022, FW Thorpe acquired an 80% shareholding in SchahLED GmbH, with the remaining shares to be acquired subject to performance conditions over the next 3 years. FW Thorpe paid an initial consideration from cash reserves, with the remaining shares available in due course with certain earn-out conditions.

Last year SchahLED's revenue, which has grown rapidly in recent years, was €15.9m, with an EBITDA of €2.8m. The company has solid growth plans and will continue to focus on selling high technology wireless lighting systems, in future supplied almost exclusively by the Group.

Personnel

I would like to thank all Group employees for their dedication and commitment throughout the financial year. All areas of the business have been under significant pressure from dealing with the current economic climate, including issues related to sourcing difficulties and manufacturing capacity. Engineering teams have faced the constant pressure of re-designs to accommodate alternative components, and those facing customer service issues have had their patience stretched. The diligence of Group employees does not go unnoticed and is sincerely appreciated.

Dividend

Performance as a whole for the year to 30 June 2022 allows the Board to recommend an increased final dividend of 4.61p per share (2021: 4.31p) which gives a total for the year of 6.15p (2021: 5.80p excluding special dividend).

Outlook

The dramatic rising cost of energy is a catalyst for customers to study their lighting energy consumption and look for ways to reduce it. In the media there is often mention of turning lights off to reduce usage, but of course commercially, in most cases, doing so is simply not practical and may be dangerous. The whole Group, and especially Thorlux, is focused on designing energy saving products; therefore I anticipate that orders should be resilient if a recession

becomes inevitable. Customers' energy costs have trebled in some instances, which means investment payback periods could be one third of those a year ago.

FW Thorpe has a broad portfolio of customers; those in government or blue-chip industries have usually found the capital to invest in their assets when times get more difficult.

Within the Group we have taken actions to cover rising costs: we continually strive to achieve better margins without unfairly penalising our customers, ensuring long term retention rates. We strive for further efficiency improvements and have the cash to invest in energy saving and sustainability projects.

The Group has started the financial year with a robust order book and some healthy projects on the horizon. The Group sees an improving supply and operations picture and, as such, the Board expects a good first half performance despite ongoing pressures on operating costs.



Mike Allcock
Chairman and Joint Chief Executive

11 October 2022

Marketplace.

? What is the impact of inflationary cost pressures?

One of the key challenges for all of our businesses this year and into the next financial year, is managing supply chain pressures in terms of availability of supply and increased costs.

The Group has responded well to these challenges with our engineering teams redesigning products to accommodate alternative parts and our procurement teams around the Group working together to source materials. The Group has the ability to increase stock holding of strategic components when required, to mitigate both price and availability concerns.

The operating costs of the business have also increased, with employment, logistics and utility costs all driving higher during the year.

We have responded by increasing selling prices, however, these take time to materialise.

? How has the market sector approach evolved in recent times?

There is growth in a number of areas that continues to justify our investment in business development.

Reduction in some sectors was offset by growth in certain target areas.

We will consider how we deploy our existing selling resources over the next few years in order to target specific sectors and territories.

Our product and solution portfolio continues to evolve and can cater for a variety of different sectors. We continue to focus on specific sectors that are investing but with some renewed endeavour on those that have reduced in previous years.

? Do your competitors have an interest in each of these markets as well?

We have both domestic and international competition across all of these markets, from listed multinationals to solid private businesses. We continue to differentiate ourselves with product and systems innovation, combined with excellent customer service through the life cycle of a project.

? Are you in each of these markets in all of the geographies you operate within?

We tend to focus on particular product ranges and technologies in new territories. We continue to work with existing partners and our Group presence in certain countries to drive export sales growth.

We continue to focus on building our reputation by targeting certain sectors in these territories.

? Where is the focus for FW Thorpe for 2022/23?

Order books across the Group are at the highest levels and compounded with the material availability issues is causing extended lead times for our customers.

Returning to normal levels of service is paramount for our businesses this year but can only be achieved when supply is stabilised. We will need to be agile in the coming year if economic conditions become more challenging.

UK +12%

- Increased business from target sectors
- Services revenue with improved gross contribution
- Reduced revenue from street lighting sector but with improved orders in final quarter of 2021/22

Netherlands +5%

- Continued Famostar growth, Lightronics revenue at similar levels
- Margin pressure at Lightronics driven by material cost increases, increased operating profit at Famostar

Spain/France

(inc. in Rest of Europe)

- Revenue in line with expectations, improved levels in France with the addition of Zemper
- Margin pressure at Zemper driven by material and logistics cost increases

Rest of Europe +119%

(inc. Zemper acquisition)

- Continued growth in Germany driven by SmartScan
- Scandinavian market continued to be positive

Other countries +31%

- Improved demand in Australia, difficulty with logistics in current climate
- Dampened demand in UAE

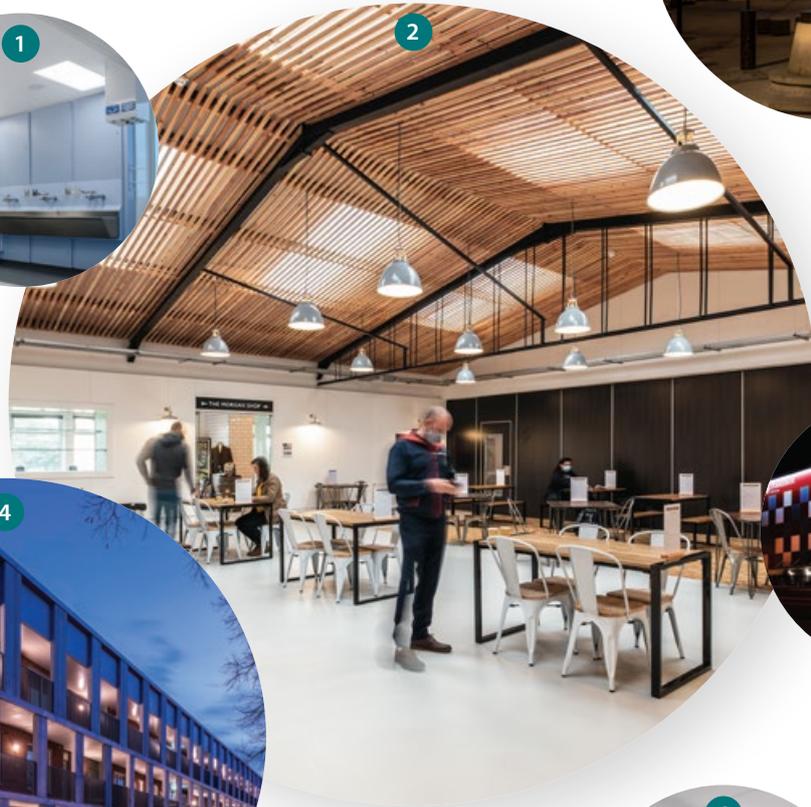
Marketplace continued

The Group services a diverse range of clients across a variety of different sectors. These sectors are targeted by our sales teams, sector specialists and product experts as well as dedicated company specialisms in areas such as emergency or outdoor lighting.

The product portfolio across the Group gives us the ability to deliver a complete project, from boiler room to board room and beyond.



1



2



3



4



5



6

- 1 Pharmaceutical
- 2 Hospitality
- 3 Display

- 4 Housing
- 5 Advertising
- 6 Research & Development



- 7 Commercial
- 8 Facilities
- 9 Retail
- 10 Education

- 11 Industrial
- 12 Infrastructure
- 13 Healthcare
- 14 Manufacturing

CASE STUDY

Ordnance Survey Head Offices, Southampton.

Client:

CBRE

End user:

Ordnance Survey

Location:

Ordnance Survey Head Offices, Southampton

Ordnance Survey's 16,000m² exemplar head office outside of Southampton is a purpose built, highly energy efficient office building. It has been designed with innovative features that give it a striking appearance, resulting in nominations for numerous architectural awards. The development was also designed to achieve a BREEAM Excellent rating; it makes maximum use of natural resources and minimises greenhouse gas emissions wherever possible.

The building comprises open plan occupied office space over four floors, a data centre, plant rooms, roof space and external walkways.

Challenge

Thorlux Lighting was asked to replace the existing luminaires with an installation that would both complement the architecture of the building while providing a low energy and minimal maintenance lighting solution.

Luminaires

High performance LED luminaires combined with the SmartScan wireless management system were selected. The luminaires have inbuilt energy usage monitoring, and users have instant access to energy performance data via the SmartScan website. The information displayed on the website can be accessed from anywhere using a computer, laptop, tablet or smart phone.

Commissioning

Thorlux provided a professional on-site commissioning service to ensure that the products were configured to provide the desired performance and return on investment. The end users' requirements and expectations were agreed prior to Thorlux's site visit.

Carbon offsetting

For CBRE, one of the main advantages of using Thorlux products was the ability to carbon offset the CO₂ produced during the manufacture and use of the luminaires. In 2009 Thorlux designed an ambitious carbon offsetting scheme to help compensate for the CO₂ released into the atmosphere as an indirect result of factory and selling activities and customers' use of luminaires. To date the total number of trees planted is 165,687; these trees will sequester over 41,000 tonnes of CO₂ over a period of 100 years.

Client testimonial

"From initial engagement to project completion Thorlux Lighting was brilliant. The installation was completed with more than 3000 fittings being replaced and the client can now use the SmartScan portal to track and highlight energy usage and lighting patterns throughout the site."

Matthew Balcombe
Project Manager
CBRE | FM-FMSO

Luminaires installed



Light Line



G3



Hi-Style LED



Thoroproof



Prismalette



Passway

Before



Installation

3,015
Fluorescent luminaires
replaced

After



CBRE team visit
to plant trees at
the FW Thorpe
carbon offsetting
site in Wales.

Market drivers.

Market-specific drivers.

Increase in demand for technology

What this means

- Evolution of controls technology – wireless
- Connectivity with the internet and other devices – the Internet of Things
- Ability to offer customers additional functionality by adding different sensor technology and presenting data
- The Group's shift to LED sales now representing over 90% of total revenue

The opportunity

- Improves ability to hold specification business with our own controls offering
- Potential to supply retrofit projects with wireless controls where wired controls were cost prohibitive
- Offer solutions to provide additional data specific to the market sector

How we are responding

- SmartScan continues to evolve since launching in 2016, the latest generation has been launched successfully in the last year
- Further development of the SmartScan platform, bringing other non-lighting devices into the web portal
- Occupancy profiling, air quality sensing, and the ability to change colour temperature are all features
- All new product developments are LED based
- Continual review of LED technology offerings to take advantage of the latest advances and ensure we are offering the best solutions to our customers

Drive for energy efficiency and carbon reduction

What this means

- Global emissions targets
- Increasing energy costs in Europe

The opportunity

- Increased demand for sustainable, energy efficient lighting solutions
- Demand for retrofit lighting solutions driving energy savings using both LED and wireless controls technology

How we are responding

- We continue to offer energy saving technology with the SmartScan platform
- Financing options with partners to make solutions more affordable to customers to match the savings achieved
- Offering turnkey packages to customers to enable change
- Investment in electric vehicle charging products with Ratio



 **Image:**
Morgan Motor Company, Malvern



Macroeconomic drivers.

International economic conditions

What this means

- Countries are now dealing with the impact of the conflict in Ukraine and the global energy crisis
- Pressure remains on global supply chains – raw material price pressure, component shortages
- Certain sectors could slow investment given recent interest rate raises and concerns over future economic growth

The opportunity

- Increased energy costs are resulting in shorter payback periods for energy saving lighting projects
- Renewed focus on carbon saving investments with support from Governments
- Potential to win market share or acquire competitors who struggle in these economic conditions

How we are responding

- Ensure our businesses are not reliant on any one sector in particular
- Continue to develop innovate product solutions in all our businesses
- Target sectors where demand is stable or increasing
- Redirect sales focus as appropriate

Globalisation

What this means

- Responding to the demands of our traditional customers who are developing a global footprint
- Harmonisation of technology from the adoption of LED brings the threat of increased competition from both Far Eastern and Western economies
- Resilience in the supply chain is being tested post-pandemic and with increased logistics costs

The opportunity

- Chance to establish ourselves in new territories with established customers in the countries we currently supply into
- Sourcing opportunities – chance to review what is sourced from where. Considering not only price, quality, carbon footprint but the security of supply
- Potential for customers to reconsider sourcing strategies and buy “local”

How we are responding

- Working with global customers
- Continual development of the supply chain
- Potential to establish new offices in chosen locations to support both customer and supply chain development in the future

Business model.

Customers come to us for peace of mind. They want the correct technical solution, professional service, sustainability of products/services and the ability to provide support during a product’s warrantable life and beyond.

Our business model is focused on the needs of customers and the marketplace, with a robust capital structure that underpins our ability to deliver sustainable growth, innovative products and excellent customer service.

The key resources we utilise ...

Design & Innovation

Continuous product development – products, software/controls, lighting design

Talented People

Continual development

Manufacturing Facilities

UK – multiple sites,
Europe – Netherlands, Spain
Continual investment

Financial & Environmental Sustainability

Financial stability,
Carbon Offset Scheme

The service offering we provide ...

Design & development

Designing and developing products in line with customer specifications and sustainability requirements.

£2.1m (2021: £1.5m)

Manufacturing

Manufacturing bespoke lighting systems and components.

Investment in solar at Group facilities:

£0.4m (2021: £0.3m)

Services

Supporting customers throughout the products lifecycle.

£4.5m (2021: £4.4m)

Group operations ...

Specification renovations, new build, energy saving, compliance, technology adoption.

Diversified product portfolio gives the ability to supply a complete project – “boiler room to board room, and beyond”.

Cross-selling opportunities with other Group companies to offer a complete solution to a wide variety of sectors.

Sustainability leadership Group-wide initiatives and support in achieving sustainability targets.



 **Image:**
Prime, Worcester

Solutions provided for our customers

We supply lighting systems including the controls, and install them for our customers.

We then maintain the lighting system for its lifecycle and provide support.

Solutions Provided

- Energy efficiency
- Low maintenance
- Rapid installation
- Longevity of product
- Low total cost of ownership



Read more about **Our customers** on pages 22 to 23

Value generated

	Short term	Long term
Customers	Replacement of ageing technology with improved lighting systems	Innovative lighting that delivers cost savings and additional benefits, such as data capture and presentation
Shareholders	Opportunity to invest in a company that pays a progressive dividend and with a robust balance sheet	Sustainable profit growth drives future shareholder returns
Employees	Opportunity to work with an innovative market leading company within the lighting industry	Continual development with a variety of Group companies in a number of different territories
Environment	Build on the work of many years, delivering energy saving products and continuing our carbon offset programme	Develop and implement our sustainability strategy as we drive towards net zero
Communities	Employment opportunities and supporting local charities	Providing sustainable employment in the local areas where our businesses are located.

Strategy.

Our products are sold throughout the world. The Group management team is passionate about developing the business for the benefit of the shareholders, employees and customers. With the energy and ability of our staff we look forward to the future with enthusiasm. Our aim is to create shareholder value through market leadership in the design, manufacture and supply of professional lighting systems.

Our focus is for long-term growth and stability, achieved through the following priorities:

Risks key

- A** Adverse economic conditions
- B** Changes in government legislation or policy
- C** Competitive environment
- D** Price changes
- E** Business continuity
- F** Credit risk
- G** Movements in currency exchange
- H** Cyber security
- I** Exit from the European Union
- J** Impact of Ukraine conflict on domestic and global economies



Focus on high quality products and good leadership in technology

Customers continually require new and innovative ways in which to reduce the operating costs of their lighting installations. There is also the requirement to reduce their environmental impacts.

Progress to date

- Continued enhancement of features for the SmartScan wireless system
- Shared product development between certain companies within Group
- Acquired additional and new product portfolios with the addition of Zemper – emergency lighting and Ratio – Electric vehicle charging

Future opportunities

- Further development of SmartScan
- Continuous research and development
- Targeted acquisition

Associated risks **C**

- Product acceptance
- Initial product introduction

Strategy in action

- SmartScan
- Visio
- D-Sign

Read more on pages 36 to 37 and 50 to 53

Continue to grow the customer base for Group companies

With the continued investment in the product portfolio and the broad range of sectors we can service, the focus will be on expanding our customer base in new markets and territories.

Progress to date

- Targeted approach in the Netherlands with Thorlux industrial product portfolio
- Introduce Famostar product portfolio to territories where the Group has a presence
- Introduce Zemper product portfolio to territories where the Group has a presence

Future opportunities

- Consider further sales offices overseas

- Potential business development investment
- Investment in sales personnel in the UK and overseas
- Targeted acquisition

Associated risks **A C D J**

- Short-term cost increase without immediate return
- Prolonged time required to establish FW Thorpe brands in new territories"

Strategy in action

- Ordnance Survey head offices

Read more on page 22

Overview of strategy.

- Strategy was designed to build on the values that have been at the core of the company since its inception. FW Thorpe has been built on product innovation – design and product development is fundamental.
- The Group is product led. This enables us to maintain competitive advantage with marketing leading products, utilising technology to retain and attract new customers.
- Sustainable growth is key to our stakeholders – targeting new customers in existing or new territories, using our product portfolio to drive into new sectors.
- Control of the manufacturing processes is of utmost importance – key processes are kept in-house with targeted investment in new machinery as required.
- Family principles and how we treat our people is fundamental to our success. The Group prides itself on the development of people from within the organisation providing training and experience as well as maintaining our core values.



Focus on manufacturing excellence

Along with continued product development, the need to innovate the production process is essential.

Progress to date

- Rebuild completed of Lightronics factory following fire in 2020
- Famostar facility extension project commenced
- Complete solar investment at Thorlux

Future opportunities

- Develop manufacturing facilities for Ratio EV products in the UK at Target Park facility

Associated risks C E

- Reduced productivity while changes are implemented
- Learning curve on introduction of new products and processes



Read more about **Strategy in action: Building for the future** on page 38



Continue to develop high quality people

Talent is one of our main sources of competitive advantage and it is imperative we continually develop and retain it within the business.

Progress to date

- Training and development
- Apprentice scheme continues
- Investment in management training

Future opportunities

- Continued investment in training and personnel development

Associated risks C I

- Ability to retain staff in competitive local job markets
- Loss of UK personnel from the EU due to Brexit

STRATEGY IN ACTION

ZEMPER



Established in 1967 by Aurelio Espinosa, father of the current Managing Director Jesús María Espinosa, Zemper was initially involved in the manufacture of transformers and electrical voltage stabilisers. Subsequently, with the aim of increasing its turnover, it began the manufacture of emergency lighting and became Electrozemper S.A. (Zemper) on 25 March 1978.

The company operates from a modern 10,000m² self-contained factory in Ciudad Real manufacturing hundreds of thousands of luminaires per year.

For over 50 years the company has focused on manufacturing quality products, and this mentality has not been lost over time. Zemper has adapted to changes in the market and in the needs of its customers, who not only demand high quality products but also a greater commitment to environmental sustainability.

Market sectors



Commercial Infrastructure Industrial



Retail & hospitality Healthcare Education

43M
Luminaires
manufactured

9,000
Emergency
lighting projects

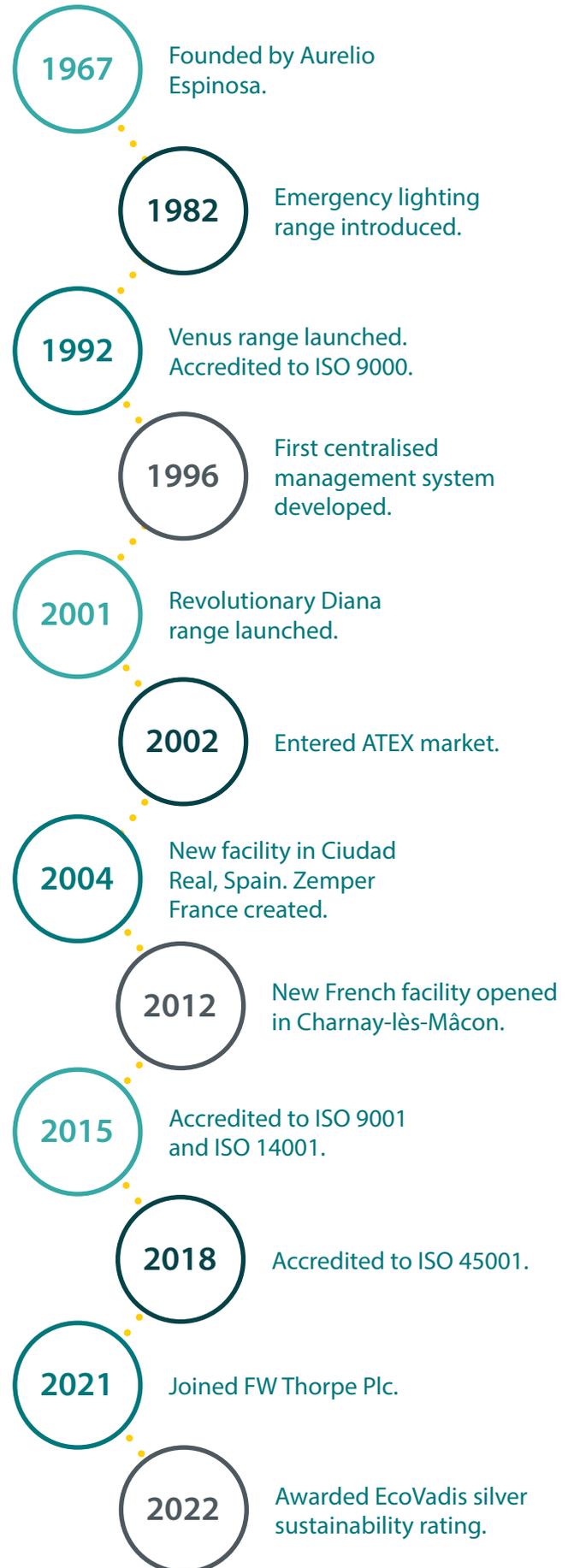
30
Countries
served



In 2018, Zemper made the commitment to add to its quality system, resulting in the creation of an integrated management system with certification to the following standards:

- ISO 9001:2015: Quality Management System.
- ISO 14001:2015: Environmental Management System.
- ISO 45001:2018: Health and Safety Management System.
- IQNet SR 10: Social Responsibility Management System.

This positions Zemper as the first company in its industry in Spain to be certified with these four management systems at the same time (source provided by AENOR).



Zemper Facilities



Zemper – Head Office

Ciudad Real, Spain

Since: 1967

Staff: 120

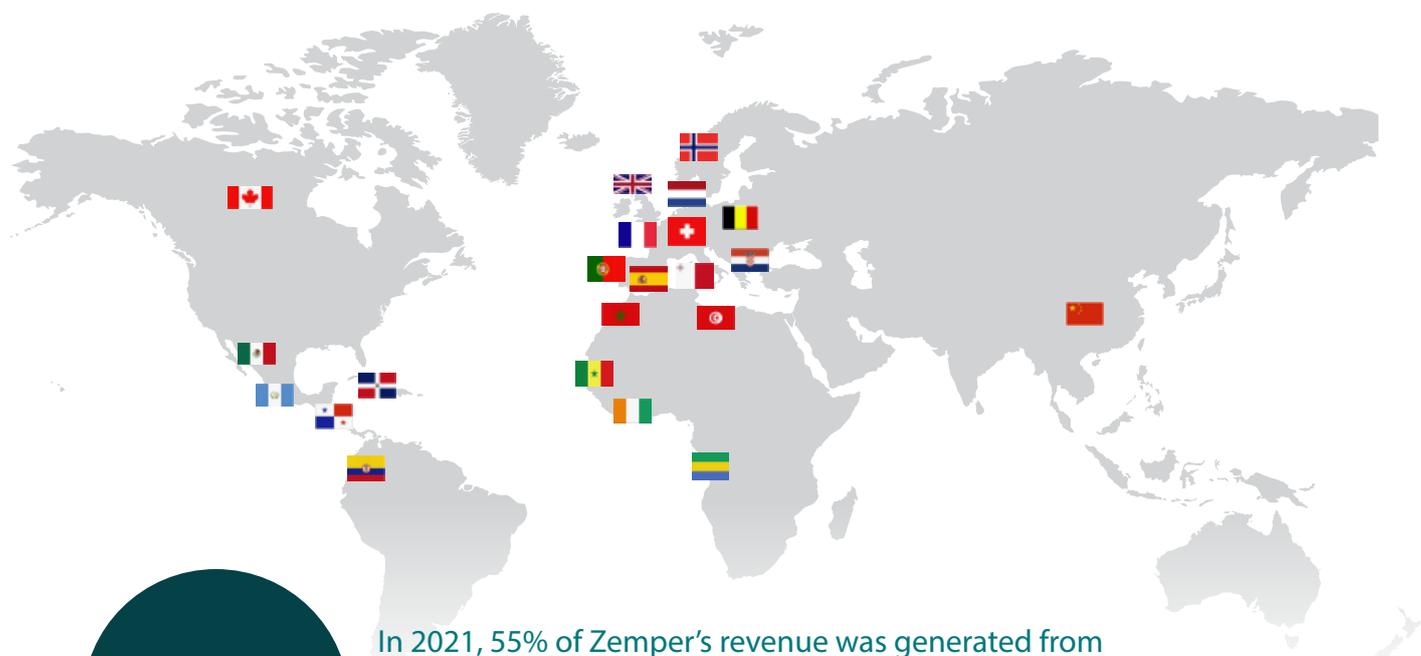


Zemper France

Charnay-lès-Mâcon, France

Since: 2000

Staff: 20



Markets served

In 2021, 55% of Zemper's revenue was generated from outside Spain, largely due to its direct presence in France and sales into Belgium, Columbia and Morocco.

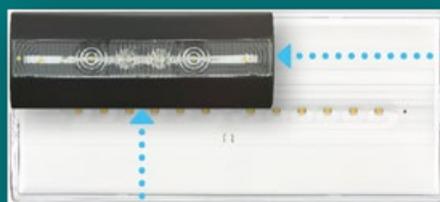
Project:
Gencat,
Barcelona

Product feature – Alya range

Launched in 2021, the Alya family of luminaires is a new concept within the emergency lighting sector.

Its size, up to 60% smaller than similar luminaires of its type, make it unique and one of the smallest emergency luminaires on the market. Sustainability is key to the design of the Alya range. Being compact, it uses fewer materials and also requires significantly less maintenance than its predecessors. Its high efficiency also greatly increases the durability of the battery.

The Alya family is designed for a wide range of applications and consists of three types: Alya, an emergency luminaire specifically designed for use in the ceiling; Walya, an emergency wall luminaire; and Exitalia, designed as an exit information sign that can be adapted to any position and surface, wall mounted or recessed.





In December 2021, FW Thorpe Plc announced the acquisition of 50% of the share capital of Ratio Electric B.V. in the Netherlands. Ratio was established in 1960 by its pioneering founder Hans Snaak. The company developed products such as energy distribution systems for data centres and offices, a breakthrough plug and play shore power connection which set a new standard in the maritime world, and innovative charging solutions for electric cars.

Today Ratio Electric continues to supply high quality, functional and affordable products to OEMs, installers and specialised wholesalers, with e-mobility accounting for nearly 60% of the business.

Over 60 years of experience, combined with FW Thorpe skills and expertise, enable Ratio to develop smart solutions for current and upcoming customer needs, such as connected charging stations and market-leading charging pillars. Ratio EV Charging is a collaboration between FW Thorpe Plc and Ratio Electric. Ratio EV Charging designs, and will manufacture, EV charging products at its factory in Redditch, specifically to serve the UK market.

“This is an exciting opportunity for the Group. FW Thorpe’s know-how in electrical engineering, manufacturing and lighting, combined with Ratio’s experience in electrical vehicle charging, will allow the introduction of new products into the UK market as well as supporting growth in Ratio’s existing markets.

We see similarities in technology and engineering skills, giving the Group the opportunity to diversify into new areas of engineering with high growth potential.”

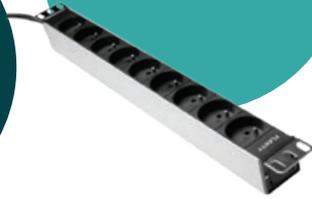
**Mike Allcock
Chairman**



E-Mobility



Data Centre



Office



Marine



SmartScan development.

The next generation.

Launched in 2016, SmartScan has continued to evolve over the last 6 years. The latest generation offers an extensive range of new customer features that improve user interaction and simplify maintenance of the system.

An increase in wireless network speed enables faster access to information, providing a larger data set and improved analytics. In addition, this faster network allows for a live, secure, truly IOT (internet of things) system that is now online permanently. This allows users to interact with installations from anywhere in the world without any delay, a valuable feature for larger multi-site users.

User control has been improved with the addition of manual dimming and an increase in the number of available scenes on offer. A new selection of battery or mains powered switches complements the range and offers a simplified method for connection of smart phones for app control. The SmartScan website and method of communication with installations has evolved to meet the latest security standards, future proofing the system for years to come.

The first installation of this next generation of SmartScan commenced early 2022 at two manufacturing facilities in Europe, both owned by the same company. In total 4558 high bay industrial luminaires and 6650 office luminaires have been supplied.

The base requirements of the installation included automated lighting control (presence detection and daylight dimming) in the production halls and automated

lighting with user control (scene setting) in the offices.

However, the customer also asked for features that were not previously available. Subsequently, the next generation of SmartScan was developed to secure the order. These additional features include:

- Web based commissioning of luminaires (reducing time and cost by 50%).
- The ability for the customer to re-zone or adjust lighting parameters via the SmartScan website.
- The ability to change luminaire parameters via the interactive site drawing.
- Manual dimming via a push switch.
- Additional scenes and fixed manual dim levels via the new scene plate.
- New battery powered options for the scene plate, to simplify installation.
- New smart phone connection and app.
- New global commands for system override for out of hours or for alarm signals.
- New calendar function that will change system parameters out of hours.
- Faster remote testing and diagnostics.

The first phases have been commissioned successfully.

Client testimonial

“As long-term users of the amazing Thorlux SmartScan system we are fully aware of its capabilities; however certain end users have asked for more. We approached Thorlux with our requests and they exceeded all of our expectations with the ‘generation 2’ update. This helped us secure our largest installation to date and the end user is delighted with the new features on offer.”





-50%
Commissioning time

+49%
Revenue
2021/22

NEW LIGHTRONICS FACILITY

Building for the future.



Following the devastating fire in September 2020 that destroyed the assembly area and experience centre at Lightronics, work is now complete on the new structure at Waalwijk.

Both levels of the new building are being used as a production facility and warehouse. At 4200m², the floor space is almost double that of the old property, optimising production routing and improving the working climate for Lightronics employees. The high bay warehouse adjoins the manufacturing area, ensuring that components are always to hand for assembly, minimising internal logistics.

The new building is entirely gas-free, reducing the CO₂ footprint, and it will be equipped with solar panels for energy-neutral manufacturing. In addition to these measures, the Group carbon offsetting scheme compensates for emissions from manufacturing and logistics and the company is installing multiple charging points for visitor and employee electric vehicles. Behind the property, a waste recycling plant will be established to ensure the optimum sorting and disposal of various waste flows.

The new building has not only added space, but has also improved and streamlined the manufacturing facility, further strengthening Lightronics' position as a leading Dutch lighting manufacturer.

“With our new facility, we can continue to define our targets for the future of Lightronics. This property puts our employees even more centre stage. We were able to scrutinise the work climate and layout again. In addition, the new building has allowed us to further reduce our CO₂ footprint.”

Jos Spapens
Lightronics Managing Director



+59%
Manufacturing space

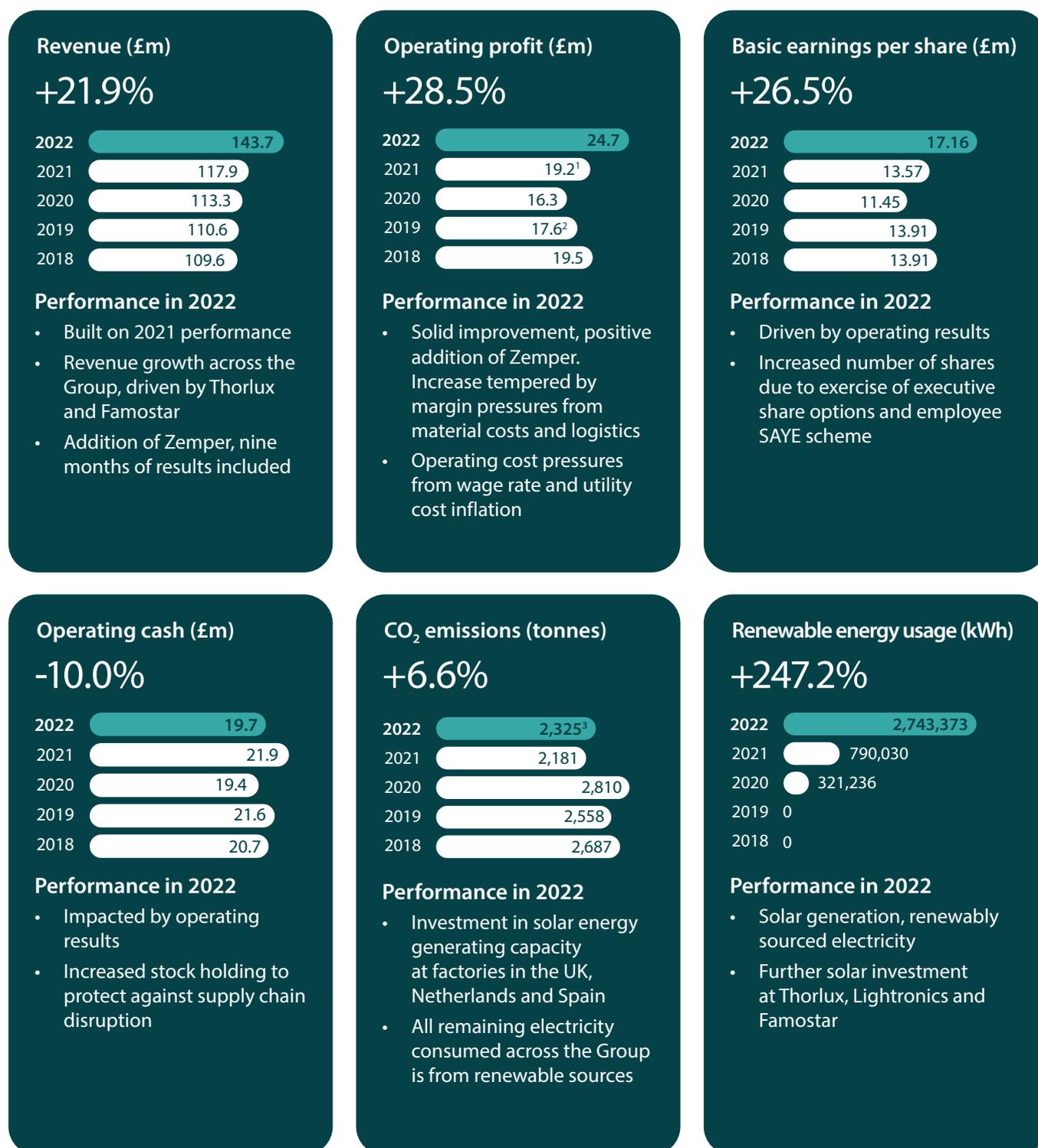
0%
Reliance on gas

+146%
Solar capacity



Key performance indicators.

The following key performance indicators are considered to be the most appropriate for measuring how successful the Group has been in meeting its strategic objectives.



1 2021 excludes the exceptional item in respect of Lightronics fire £1.6m

2 2019 excludes the profit on disposal of property of £1.9m

3 2022 includes 9 months of Zemper

Operational performance.

2022 Group Company Overview

FW Thorpe Plc encompasses individual companies that concentrate on particular market sectors and geographical locations. The companies provide the Group with diversity as well as risk mitigation, as they do not compete with one another and are complementary.

The companies within the Group can be affected differently by trends and economic impacts within their respective markets. The continuing development and market adoption of LED lighting and controls technology allows Group companies to share the benefits of their product and technical expertise, differentiating themselves from competitors.

Improved Group performance in 2021/22 was driven by increased revenues at Thorlux, a solid performance by the businesses in the Netherlands, and the addition of Zemper, for which nine months of trade were added to the results.

Within the other companies, TRT failed to build on the success of last year but has a solid order book to start the new financial year. Portland deserves a special mention, with its revenue and profit having recovered to almost pre-pandemic levels, as well as the company launching new products into two further market sectors during the year.

This year's growth has been hampered by supply chain challenges, both of price and availability. Traditional materials such as steel, plastics and cardboard saw significant price increases, and electronic components – especially microprocessors and modems, required for the more sophisticated systems – became scarce. The Group's engineering and procurement teams performed valiantly to meet customer demand.

In addition, employee related costs increased in the latter part of the year due to statutory wage increases; this will be further compounded in the financial year to come with inflationary pressures. Utility cost increases have been well documented, although the Group's investments in solar panels in recent years have mitigated some of the increase in electricity costs. Gas price increases have yet to show an impact.

Sales prices have been increased across Group companies, some more effectively than others. These increases of course take time to filter through, but the Group started to see some positive effects in the final quarter of the year; however, Group companies were still supplying certain larger scale projects without the full impact of these increases.

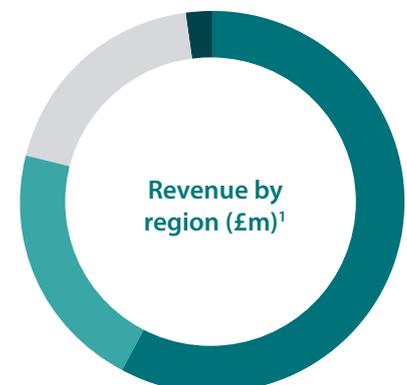
Whilst revenue increased, profitability growth was more challenging. The cost pressures mentioned and the operational inefficiencies caused by supply constraints dulled results. Despite this, continued new product introductions, investment in manufacturing facilities, and sales into new markets have helped the Group deliver decent results yet again, even against the backdrop of challenging economic conditions and uncertainty.

The Group continues to be underpinned by the development of market-leading lighting equipment, by investment in manufacturing and employee capabilities, as well as by aspiring to deliver excellent customer service in difficult circumstances.

The following is an overview of 2021/22 for each company.



● Thorlux UK	78.9
● Netherlands companies	34.7
● Zemper	14.2
● Other companies	15.9



● UK	83.2
● Netherlands	30.3
● Rest of Europe	27.4
● Rest of the World	2.8

¹ Excluding Intercompany

Operational performance continued



Record order and revenue performance from Thorlux surpassed last year's all-time high. A positive contribution was achieved from different sectors. The order book is currently at a high level, and includes a significant healthcare project to be delivered over the next two financial years.

The ability of Thorlux to deliver increased revenue has been hampered by the shortage of labour in the first half of the year, together with the ongoing challenge of sourcing components. The engineering and procurement teams have worked tirelessly to resolve these issues, and the company's ability to re-engineer and source alternatives has stood it in good stead. The customer facing teams also deserve credit for managing customer expectations in this tricky climate.

Investment in business development has again paid off this year; Thorlux's depth of product range and capability to service the broadest portfolio of customers has enabled it to continue to secure projects across a variety of sectors.

Overseas revenues have grown, driven by the Thorlux partnership in Germany. Revenue from Australia improved during the year, despite the logistical challenges of increased shipping times. UAE revenue has been disappointing. Results directly from the Republic of Ireland were slightly lower; however, the team has won projects for delivery into other territories again this year.

Services such as surveying and sub-contracted installation and project management works have a dilutive impact on results; however, an improved contribution from installations this year supported a growth in operating profit. Whilst margin is impacted by providing services, Thorlux's ability to offer a "one stop shop" helps it secure significant projects, contributing to the good order pipeline currently ahead.

Investment in product development continues with the successful launch of the next generation of SmartScan, which will give customers faster access to a larger data set and improved analytics, as well as web based commissioning functionality. See how the product continues to evolve on page 36. Thorlux has already completed the first deliveries on a significant project in Germany.

Teams have been distracted by re-engineering and sourcing challenges, hampering Thorlux's ability to bring new products to market, but so far teams continue to deliver in both regards.

Capital investment had a sustainability theme this year. Solar panels were acquired to complete the Thorlux rollout; enabling works are ongoing, with roof issues to be fixed shortly. A number of fleet vehicles were exchanged for either full electric or hybrid cars; this technology now makes up 47% of the Thorlux fleet.

A new SmartScan van has been added to the marketing effort with the ability to serve more customers during a visit, and a full event programme has been planned for the next 12 months. Further investment to improve the company's ability to deliver the current order book is expected during the next financial year.

Whilst Thorlux enters the new financial year with a significant order book, the supply chain challenges are not over. Also, economic storm clouds are gathering, it seems, with the threat of recession and higher interest rates. The targets within Thorlux will be to steady the supply flow and improve productivity to reduce the order backlog and improve the company's ability to service customers in a more timely manner.





A strong second half performance helped move the business towards pre-pandemic revenue levels. Major projects had been lacking in previous years, and the business has also been impacted by increased costs.

Philip Payne's ability to offer modifications of standard designs to accommodate architectural demands differentiates its range from those of competitors, which are generally produced in higher volumes. The discerning client expects more than the standard trade offering.

Notable projects supplied this year included the BSI's Kitemark House, the Old War Office and Sky Studios.

The Specto-XT wireless emergency lighting system continues to provide Philip Payne's sales team with the ability to supply the majority of a client's needs. Occupational safety standards can be met and regulatory compliance achieved with minimal disruption and installation costs.

Philip Payne's collaboration with Famostar continues, with some positive momentum during the year and sales revenue achieved for Famostar products from the UK. Export revenues are at a similar level to the previous year, with lower than historic levels of activity via the Group's selling operations in the UAE.

With the ability to visit customers severely restricted in the last few years, Philip Payne invested in a new demonstration vehicle, similar to that of Thorlux. The Mobile Training Unit, or MTU, offers continuing professional development (CPDs) around the country and demonstrates Philip Payne's product portfolio to clients; its initial outings have made a positive impact, with some promising enquiries so far.

Following the investment in selling resource and marketing activities, revenues have improved to marginally below the peaks of the past few years. The company has some work to do on improving operating profit levels – a clear target for the coming year.

Revenue (£m)

£3.2m

+16% (+3%)



Operational performance .continued



Another solid performance from Solite was driven both by demand for clean-room lighting and by bespoke projects for clients and the Group. This has brought revenues to pre-pandemic levels; however, operating results need to improve.

Profitability has been a challenge; higher costs and the ability to secure sales price increases have dampened performance this year. Whilst forward ordering mitigated some of the cost challenges, selling price increases only started to take effect in the latter part of the year due to the long term project nature of the business.

There has been a change in management following the retirement of Phil Myles, Managing Director since 2011. The Board would like to thank Phil for his contribution in transitioning Solite into the successful business it is today.

Investments were made in improving the efficiency of the manufacturing facility, with assembly space added through the introduction of a mezzanine structure in the building and the reorganisation of storage space. There is still work to do but, as supply constraints ease through the coming year, the investments put the business in a good place to improve productivity.

Continuous improvement of the product portfolio has been maintained despite pressures on the technical engineering to deliver alternative product options because of supply challenges.

Solite carries a strong order book into the new financial year, as well as the ability to engineer solutions for specific customer requirements. A renewed focus on operational matters should support the quest to grow the business, which is underpinned with potential opportunities.



PORTLAND LIGHTING

The standout performance of the year was that of Portland. The growth this year is due to the return of business in Portland's traditional markets. Focused on the retail and hospitality sectors, Portland has continued to recover from the pandemic lows experienced in recent years, following its strong close to last year.

Results for the year were largely unaffected by the inflationary pressures felt by others in the Group, with the business managing to cover component requirements with increased stock levels. There will be some pressure on costs in the new financial year, with higher utility costs (to some degree offset by the Group's investment in its roof mounted solar array) and an increased wage bill due to the current inflationary environment.

With sustainability in focus, Portland has reduced plastics packaging by 90% this year by replacing plastic bubble wrap with a recycled paper version which is both recyclable and biodegradable.

The company continues to develop products to target new markets. For example, it had some initial success in the road safety signage market securing trial orders with local authorities, some of these in partnership with TRT. There has also been some traction with Portland's other new product portfolio targeting domestic customers. LeisureLUX has been launched both directly and via Amazon this year, as well as at tradeshows such as the Caravan, Camping and Motorhome Show.



There is a positive atmosphere around Portland this year, with recovery of its traditional market and some initial successes with new product portfolios. Moving into the new financial year, Portland expects to convert trial orders to rollouts and for there to be further stabilisation of the traditional business.

Revenue (£m)

£3.8m

+35% (+16%)

Operational performance continued



TRT's performance was surprisingly disappointing following the highs of last year's record figures. Orders started very slowly during the year; combined with the inability to pass on price increases to customers, this led to a poor profit performance only marginally above break-even.

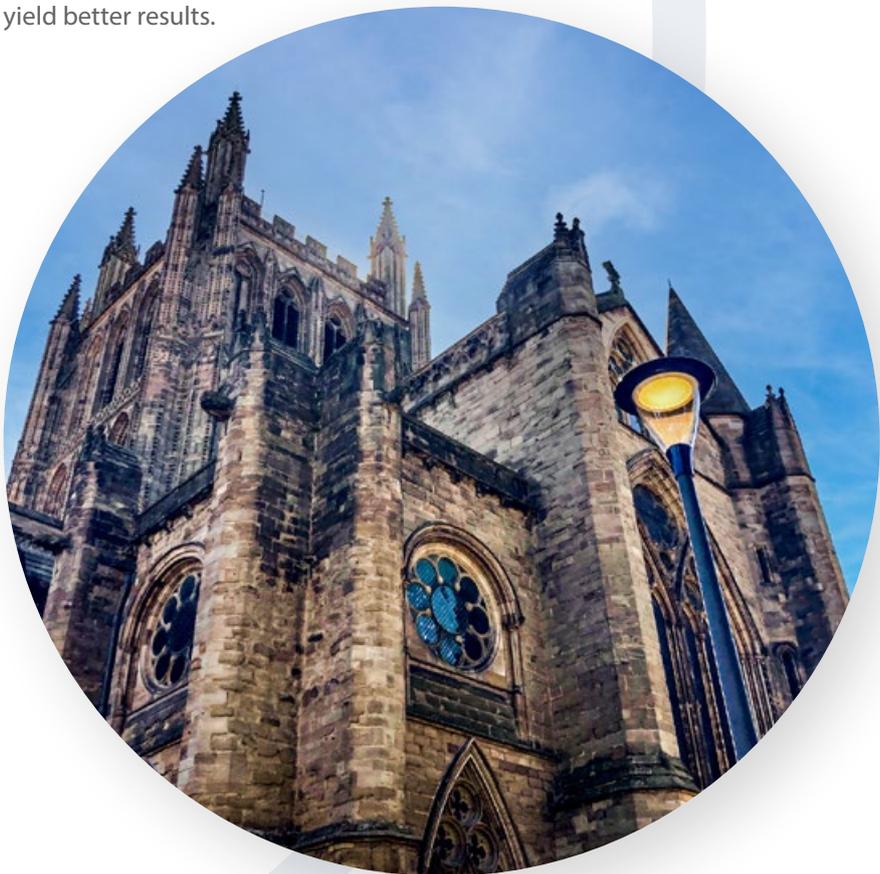
TRT continued to supply Thorlux with a significant rail project during the year, but long awaited tunnel projects have been delayed; however, two orders are expected to be delivered in the first half of 2022/23. TRT did not enjoy its usual intake of larger scale street lighting rollout projects; however, a large local project has been secured and is on track for delivery commencing early in the new financial year.

Having resized the operations to reflect lower demand midway through the year, the company continues to struggle with operational effectiveness. Some changes are underway in how the business is managed to improve productivity.

Product development, as in some other Group companies, has been hampered this year due to re-engineering to cope with supply shortages. Having said that, the new Nano street light is due for imminent launch and will improve TRT's chances of securing larger scale rollouts in the future and improve the margins on those that have been secured. On the road lighting side of the business, there is a collaboration with Portland to introduce road signage lighting such as Belisha beacons into the range.

TRT continues to develop its offering for amenity lighting projects, by introducing its own products and those of the Group. This year has also seen a partnership to supply handrail lighting, which is becoming an important part of amenity lighting designs; TRT now has the ability to offer this to customers as part of an overall solution.

Whilst last year was disappointing, this year starts with renewed optimism with a decent order book from a street lighting perspective as well as solid opportunities for tunnel lighting projects to boost results. Amenity projects will also be targeted this year, and the collaboration with Group companies should yield better results.





Results for the business might seem disappointing this year at first glance; however, revenue in euros is consistent with last year's and, despite margins being impacted by increased costs, Lightronics has delivered a creditable operating profit return in line with Group expectations.

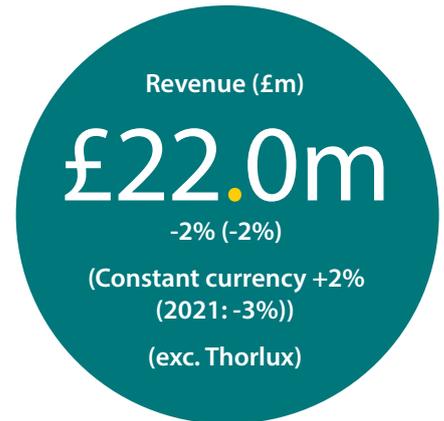
Lightronics battled with rising costs and employee turnover, and following the fire had to continue to manage its operations across two manufacturing sites until the new building was completed in early June of this year. Logistics costs also increased dramatically, as seen elsewhere across the Group.

Completion of the new building was a significant milestone. The purpose built facility now offers a solid base from which to grow the company. The next steps are for further solar investment to feed a larger scale facility that has electric vehicle charging, and for the replacement application centre to demonstrate its capabilities to customers.

No major projects were secured this year, with business dominated by street lighting rather than the higher margin impact-proof segment. Sales into Germany and France were at similar levels to last year.

Product development remains key to the success of any FW Thorpe business. Lightronics continued to work with Thorlux and TRT in particular, sharing product developments and technologies. These businesses share similar product portfolios and customer types, therefore collaboration can reduce costs and improve success.

Lightronics welcomed a new Commercial Director to the team with a remit to drive the business forwards and utilise the investment made in new facilities.



Operational performance continued

Famostar

Famostar delivered yet another year of growth since joining the Group in 2017. Targeted customer activity, the continued success of SmartScan and the addition of Thorlux product sales have driven revenues to new heights this year.

The Netherlands continues to be the main market for Famostar; however, efforts continue to develop sales via the UK utilising the additional sales resource at Philip Payne as well as selling certain products through Thorlux. The business will also look to work with Zemper in new territories whenever appropriate.

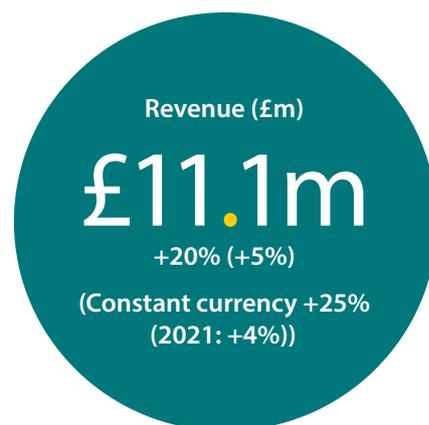
Famostar now manages the distribution of Thorlux products into the Netherlands; there was some initial success this year, with a number of projects secured through an increased marketing effort. Further growth is targeted for 2022/23 following an investment in selling resource.

Famostar continues to drive sustainability efforts and is currently reviewing the use of alternative plastics and printed circuit board recycling. Cardboard packaging has been reduced by 20% during the year following a review as part of the Group's renewed focus on sustainability initiatives.

Given the continued profitable growth of the business, Famostar has commenced construction of a new warehouse and manufacturing facility. This will bring some operational efficiencies and savings from third party rental as well as the ability to support future growth. This investment should be completed during the new financial year.

Succession was an important topic during the year. We congratulate both Richard Stroo (Managing Director) and Frank Risseeuw (Technical Director and Group Head of Synergy) for their new roles and thank Frans Haafkens for his guiding hand over the last few years.

Famostar will look to consolidate the success of last few years and strive for growth domestically through existing channels, offering SmartScan and delivering projects with the Thorlux product portfolio. Export markets will continue to be explored in conjunction with other Group companies.



ZEMPER

In 2021 the Group welcomed the addition to the Group of Electrozemper S.A., trading as Zemper, the specialist emergency lighting provider. Zemper derived revenues from Spain, France and Belgium, as well as other export markets.

Zemper was a family business with over 50 years of history, with the ability to injection mould its own components and populate finished printed circuit boards as well as its own robotic final assembly and testing process. Read more about Zemper on pages 30 to 33.

Results were hampered by the similar types of cost increases to those experienced across the Group: materials, labour, logistics and utility costs. Revenues, however, were generally in line with expectations. Zemper expects sales price increases to take effect in the new financial year to help address this situation.

The addition of Zemper will further strengthen the Group's emergency lighting presence in Europe and provide opportunities for the Group to share components and technologies. The Zemper team has brought some manufacturing and

engineering know-how to the Group and is actively taking part in sharing best practices and ideas. Work has started on a number of synergy projects, including to increase sales into regions where the Group already has a presence, and to investigate the potential for shared manufacturing capabilities and consider product development ideas.

In the next financial year Zemper will, of course, have the benefit of a full trading year, and the Group will start to see some of the benefits of Group collaboration.



Revenue (£m)

£14.2m

9mths included

Innovations from around the Group.

Portland – Bee Seen range.

A new division of Portland Lighting has been created to service the local authority market and its contractors. Utilising many years of site experience and customer feedback, the first range of Belisha beacons was launched in January 2022.

The modular Bee Seen range of beacon globes is cleverly designed to incorporate further high-vis additions to suit the safety requirements of individual sites. The family includes a flashing standard yellow beacon, a non-flashing white beacon used for marking centre island sites, and a high visibility beacon. The arrays dim at night to avoid dazzling drivers and have user settable brightness levels which can be adjusted during installation to suit particular site conditions.

The range comprises three options:

Standard Beacon

A high performance LED Belisha beacon featuring long life, low energy and low maintenance.

Centre Island Beacon

A high performance LED white centre island beacon.

Hi-Viz Beacon

An enhanced version of the Bee Seen beacon offers adjustable daytime enhancements, improving driver perception and pedestrian safety at zebra crossing points.

Standard Beacon



Centre Island Beacon



Hi-Viz Beacon



Famostar – D-Sign.

The new D-Sign emergency luminaire has been designed to be both aesthetically appealing and easy to install.

The slender design and continuous pictogram provide a modern twist without compromising functionality or reliability.

The D-Sign is available as surface mounted, recessed or suspended, in white, black and in a specially dimmed version (Cinema dim) for environments such as theatres and cinemas where the brightness of the legend might be disturbing. For ease of installation the surface mounted version can also be changed from ceiling to wall mounting simply and quickly, without any tools.

In 2021 the D-Sign won the prestigious Red Dot Design Award, an international award for product design.



TRT – Nano.

At TRT Lighting, the focus has been on developing a market leading residential streetlight.

The Nano has been designed to use as few components as possible to deliver the company's most energy efficient luminaire to date. With today's increased energy bills, Nano returns an efficacy result of 174lm/W, ensuring that the total cost of ownership and the luminaire's carbon footprint are significantly reduced over the life of the product.

Key features:

- Interchangeable and upgradable LED module and control gear enable reuse and repair.
- Utilisation of materials that can be easily recovered and recycled at end of life.
- Reduction in ancillary components.



PRODUCT SPOTLIGHT

The all-new Visio family.

In 2021, Thorlux launched the new Visio family of luminaires for high bay applications. By utilising over 85 years of experience in illuminating industrial environments and listening to our customers' needs, Thorlux has designed Visio, Visio Pro and Visio Sport to tackle the latest lighting challenges.

With environmental impact and material usage key considerations, the luminaires are as compact as possible whilst still delivering excellent photometric performance, very high light outputs, and a long reliable lifetime.

The three versions in the family have been tailored for specific applications.

Visio is designed for a wide range of applications, including warehouses and manufacturing spaces.

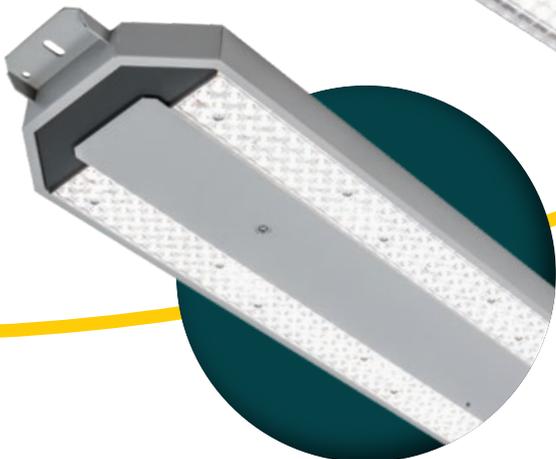
Visio Pro is designed for arduous environments. With a high ingress protection rating of IP66 protecting it from dust, dirt and water, Visio Pro is ideal for heavy industry, food manufacture or maintenance depots.

Visio Sport has been designed with sports halls in mind and, while it shares many common features with Visio Pro, it also includes specific features such as compliance with the demanding ball impact requirements from the German sports hall standard.

64%
Reduction
in PCBs *

40%
Reduction
in metalwork *

65%
Reduction
in lenses *



Visio



Visio PRO



Visio SPORT

* Visio 1400mm vs Solow XLED Quadline. Figures are based on material weight



Sustainability.

A key ambition in the development of Visio was to minimise its environmental impact, considering the materials used and its manufacture and distribution, as well as its through life operation. The size of the luminaire and the choice of materials were therefore key aspects for the specification. When compared with the Solow XLED, the luminaire it replaces, the material usage of the Visio is greatly reduced using 40% less metalwork and over 60% less in LED PCBs and plastic lenses. This reduction in size also means that less cardboard packaging is required and less space is taken up, making distribution more efficient.

All Visio luminaires provide a very long and reliable lifetime, up to 100,000 hours of operation, and are fully serviceable. All the components can be replaced, extending the lifetime of the product as well as making upgrading to more efficient LEDs in the future possible, features

that are now highly important when considering product circularity. The luminaires can also be fully disassembled once end of life is reached for recycling.

The Visio family is available with our award winning SmartScan lighting management system. Through the integral sensor which monitors presence and daylight, the luminaire will automatically control itself and only switch on when needed as well as dim in accordance with any daylight ingress, ensuring maximum energy savings, reducing through life costs, and reduced carbon emissions. SmartScan also allows users to monitor their energy performance data and complete operational status information for all SmartScan standard and emergency luminaires. This information is displayed on the SmartScan website, which can be accessed from anywhere using a computer, laptop, tablet or smart phone.

Supreme performance.

The Visio family is available in four different light distributions. Custom optics have been developed to a Thorlux specification, with each optic comprising an individual lens per LED to ensure maximum efficiency and light control.

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 it one of the most efficient luminaires in the Thorlux range.

By Visio providing a range of distributions for both open area and high rack warehouse applications, lighting designs can be optimised to use as few luminaires as possible whilst still illuminating the space to the required standard. This focus on light efficiency means light is placed where it is needed, optimising the lighting scheme and reducing capital expenditure, running costs and carbon emissions.

Financial performance.



“The Group profitability has been driven by another positive year from Thorlux. The Netherlands companies made a strong contribution . . . ”

Craig Muncaster
Joint Chief Executive,
Group Financial Director and
Company Secretary

The directors have pleasure in submitting their annual report and the audited consolidated financial statements of the Group and the Company for the year ended 30 June 2022.

Results and dividends

Revenue increased by 21.9% to £143.7m with operating profit increasing by 28.5% to £24.7m, supplemented by the addition of Zemper acquired in October 2021. Excluding Zemper revenue increased 9.9%, with operating profit up 20.3%.

The increase in Group profitability has been driven by another positive year from Thorlux. The Netherlands companies made a strong contribution, unhampered by accounting adjustments for earn-out provisions which were settled back in September 2021.

Zemper made a positive contribution, before IFRS adjustments for the acquisition, of £1.6m. Given the Group has committed to acquiring the remaining shares over the next three years, we account for 100%

of the profit derived by Zemper, but adjust the operating profit for the amortisation of intangibles valued at acquisition. Details of the consideration for this acquisition are provided in note 34.

The remaining UK companies all posted positive contributions with improvements in all except for TRT, however, the overall results for the other companies continue to be dampened by the results from our overseas sales offices in the UAE and Australia.

Net finance expense is impacted by the Zemper acquisition and continued low interest rates on our cash deposits.

The taxation charge represents an effective rate of 16.7% (2021: 21.5%). The rate is lower than the previous year resulting from a reduction in non-deductible expenses and reduced profits in the Netherlands where the headline rate is higher. The effective tax rate for UK companies is lower than the current corporation tax rate due to patent box relief driven by the Group's product innovations.

Cash balance remained strong following significant investments during the year.

In April 2022, the Company paid an interim dividend of 1.54p per share (2021: 1.49p) amounting to £1,803,000 (2021: £1,736,000) and a special dividend of 2.27p (2021: nil) amounting to £2,659,000 (2021: nil). A final dividend of 4.61p (2021: 4.31p) per ordinary share is proposed amounting to £5,403,000 (2021: £5,028,000). If approved the dividends will be paid on 25 November 2022. Total dividends paid during the year amounted to £12,079,000 in aggregate (2021: £6,631,000). The final dividend for 2021 was paid on 25 November 2021.

Cash and liquidity management

The Group's cash is managed in accordance with the treasury policy. Cash is managed centrally on a daily basis to ensure that the Group has sufficient funds available to meet its needs and invests the remainder. The majority of cash is placed with approved counterparties either on overnight deposit or time deposit. There are a series of time deposits that

are maturing on a rolling cycle in order to meet regular business payments, with a margin for larger regular and one-off payments as well as seasonal variation in cash requirements.

The Group primarily trades in sterling. There is an exposure to foreign currency as the Group buys and sells in foreign currencies and maintains currency bank accounts in US dollars, Australian dollars, UAE dirhams and euros. The activities of buying and selling in foreign currency are broadly matched with currencies bought and sold as required in order to minimise currency exposures. Larger exposures would be hedged in order to reduce the risk of adverse exchange rate movement. There were no currency hedging derivatives in place at 30 June 2022 or 30 June 2021.

Pension scheme position and funding

The latest triennial actuarial valuation was completed as at 30 June 2021. This valuation showed that the pension scheme position remains in surplus and a funding level for the future has been agreed between the trustees of the scheme and the directors of the Company. The directors consider it unlikely that any changes to the present funding levels will have any significant effect on the strength of the Company's statement of financial position.

Group research and development activities

The Group is committed to research and development activities in order to maintain its market share in the sectors and territories we operate.

These activities encompass constant development of both new and existing products to ensure that a leading position in the lighting market is maintained. During the year the Group spent £2,096,000 (2021: £1,516,000) on capitalised development costs, which includes internal labour.

Property, plant and equipment

The directors are of the opinion that the market value of the freehold land and buildings is in excess of their net book value. While it is considered that the market value is significantly greater than the net book value for many of the Group's properties as a result of being acquired between one and over 20 years ago, management considers that undertaking formal valuation exercises would be costly for limited value and consequently no formal exercise has been undertaken.

Investment this year increased from a significantly lower level last year. The main capital expenditure focused on the rebuilding of the Lightronics facility (covered by insurance proceeds), a further underpinning of our sustainability credentials with an increased investment in solar panels for the Thorlux factory and replacement vehicles, that were typically hybrid or electric.

Creditor payment policy

The Group's policy concerning the payment of its trade creditors is to accept and follow the normal terms of payment among suppliers to the lighting industry. Payments are made when they fall due, which is usually on the day after the end of the calendar month following the month in which delivery of goods or

services is made. Where reasonable settlement discount terms are offered for early payment, these terms are usually taken up. The number of days represented by the Company's year end trade payables is 42 (2021: 43). The Group continues to report on payment practices and performance as per UK legislation.

Internal financial control

During the year, a member of the Group finance department has visited all operating sites to assess their compliance with a selection of key control procedures and any non-compliance reported to the Group Board. Any areas of non-compliance noted as part of this process have been addressed.

In addition, the executive directors regularly visit all operating sites and review with local management financial and commercial issues affecting the Group's operations. Regular financial reporting includes rolling forecasts and monthly financial reports comparing performance against plan as well as the previous year. These reports are reviewed locally with a Group representative and monitored by the Group Board. Accordingly, the directors do not consider that an internal audit department is required.



Craig Muncaster
Joint Chief Executive, Group
Financial Director and Company
Secretary

11 October 2022

Section 172.

Stakeholder engagement.

The Group has the responsibility for managing the challenges that affect the business on a daily basis; this also includes our impact on our key stakeholders. Our ability to engage and work constructively with these stakeholders underpins the long-term success and sustainability of the Group.

Key stakeholders and how we engage with them:

Employees

Why we engage

The right people, capabilities and engagement across the Group is the platform to drive our long-term success

How we engage

- Employee committees.
- Health & safety committees.
- Employee appraisals, training and development.
- Communication via web portal, notices and company newsletter.
- Group board meetings held periodically at different company sites.

Customers

Why we engage

Understanding the needs of our customer is fundamental. We aim to deliver the correct technical solution, professional service, sustainability of products/services and support the customer during a product's warrantable life and beyond

How we engage

- Meetings/maintaining close relationships via regional sales or business development teams.
- Providing Continuing Professional Development seminars and education opportunities.
- Company websites.
- Customer specific events, including trade shows.
- Order execution – from lighting design, through to delivery, installation and commissioning.

Shareholders

Why we engage

Trust from our shareholders is key to delivering our strategy and long-term success. We endeavour to provide fair, balanced and meaningful information to shareholders and potential investors to ensure they understand our performance and strategy

How we engage

- Trading updates at appropriate times.
- Regulatory News Service.
- Investor meetings and presentations, including company visits.
- Dedicated Group website.
- Annual and Interim reports.
- Annual General Meetings.





Image:
Met Office visit the FW Thorpe carbon offsetting project, Devauden

Suppliers

Why we engage

We need to maintain reliable relationships with suppliers for mutual benefit and ensure they are meeting our standards, from value for money, quality, through to business ethics

How we engage

- Meetings and negotiations with key suppliers.
- Site visits.
- Quality management reviews and audits.
- Attending supplier forums and trade shows.

Communities & environment

Why we engage

The Group is committed to be a responsible member of the community and considers the environmental impacts of the customer's use of our products as well as our own operations

How we engage

- Support local and national charities.
- Engagement with local MPs and Chambers of Commerce.
- Members of appropriate trade and industry bodies.
- Carbon offset scheme in place since 2009, accredited under the Woodland Carbon Code.
- Recent investment in solar panels in the UK and Netherlands facilities.
- Products and systems support energy saving and carbon reduction – London Stock Exchange Green Economy mark in 2020.

The directors are aware of their duty under Section 172(1) of the Companies Act 2006 to act in the way they consider, in good faith, would be most likely to promote the success of the Company for the benefit of its members as a whole, and in doing so have regard (amongst other matters) to:

- The likely consequence of any decision in the long term.
- The interest of the Company's employees.
- The need to foster the Company's business relationships with suppliers, customers and others.
- The impact of the Company's operations on the community and the environment.
- The desirability of the Company maintaining a reputation for high standards of business conduct.
- The need to act fairly between members of the Company.

The Board considers its key stakeholders to be its employees, customers, shareholders, suppliers and the communities and environment we operate within.

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 CO₂. 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.



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 CO₂ 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 CO₂. 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 CO₂e 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 CO₂e 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 ₂ e 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)



£23,153
Charitable donations
+1% (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.



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.

Upstream activities

A Emissions from purchased goods and services

Scope 3

-  Purchased goods and services
-  Capital goods
-  Transportation & distribution
-  Business travel
-  Leased assets

Emissions from purchased energy

Scope 2

-  
- Purchased electricity, steam, heating & cooling for own use

Reporting company

Emissions from FW Thorpe manufacturing & operations

Scope 1

-  Company facilities
-  Company Vehicles

Downstream activities

B Emissions from our goods and services in use

Scope 3

-  Transportation & distribution
-  Processing of sold products
-  Use of sold products
-  End-of-life treatment of sold products
-  Leased assets

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

Reporting for Task Force on Climate-Related Financial Disclosures

The FCA introduced requirements for premium-listed companies to report against the Task Force on Climate related Disclosures (TCFD) framework on a comply or explain basis for years starting on or after 1 January 2021. TCFD is a reporting framework that consists of a list of recommendations for companies to consider, with the aim to improve and increase the reporting of climate-related financial information.

This does not apply to FW Thorpe until 2023, however, in preparation for its introduction and as the Group transitions on its sustainability journey from carbon neutral to net zero, it is important to understand and assess the climate-related risk to our business. This year we report for the first time on the four thematic areas set out in the TCFD's recommendations: strategy, governance, risk management, metrics and targets.

Strategy

Summary of disclosure

Disclosure of the actual and potential impacts of climate-related risks and opportunities on the business where such information is material.

The Group will assess the materiality and prioritise climate related risks and opportunities in terms of the potential financial impact.

Climate scenarios will need to be selected to assess the potential future impact.

To assess the climate risks, climate projections will need to be utilised. These risks will need to be applied to our value chain including manufacturing operations and supply chains.

The financial impact will need to be quantified.

Governance

Summary of disclosure

Disclosure of the Group's governance around climate related risk and opportunities.

The Chairman and Joint Chief Executive has overall responsibility for the management of climate-related risks and opportunities.

The executive directors are accountable for the day to day management of climate change guided by the Board.

Sustainability targets are set each year for Group companies to achieve.

The Board will continue to be engaged on a range of sustainability topics to further develop their climate-related expertise.

Risk

Summary of disclosure

Disclosure of how FW Thorpe identifies, assesses, and manages climate-related risks.

The Board evaluates the risks within the business. The Group as a manufacturer of energy consuming products has an impact on the environment in terms of its operations and its products in use.

Climate and the sustainability has been added as a Principal Risk. Details of our principal risks are set out on pages 69 to 71.

Further development of the Group's approach to climate change risk management building on the Group's evolving understanding of materiality, time horizons and approach to risk.

Metrics and Targets

Summary of disclosure

Disclosure of the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

Our Scope 1 and 2 GHG emissions are disclosed on page 63, these have been offset since 2012 with the Group's tree planting initiative established in 2009.

Scope 3 GHG emissions will be disclosed in the future once the Group is clear on the impact on this number by the calculation of products in use.

The Group will continue to decrease its total GHG by reducing the impact of its operations and improving energy efficiency of its products as well as continuing to promote energy saving controls.

The Group aims to grow its revenues from climate-related product solutions through energy efficiency and products supported the use of electric vehicles, chargers and cables.

Principal risks and uncertainties.

Risk management process

The Board is responsible for the identification and effective management of risks posed to the Group. Due to the impact certain risks could pose, the Board regularly reviews the likelihood of risks occurring and the potential impact they could have on the business. Detailed below is a list of the principal risks facing the business, and the corresponding actions the Board is currently taking in order to manage them.



Area of risk	Type of risk	Description of risk	Mitigation of risk	Possible impact on performance	Strategic priorities impacted upon	Change in period
A Adverse economic conditions	 Strategic	Deferred or reduced capital investment plans in market sectors, which our products are supplied into and are key sources of revenue for the Group Impact of Ukraine conflict on domestic and global economies	<ul style="list-style-type: none"> Broad range of customers in differing sectors High quality, technically advanced products to differentiate the Group from competitors Actively seek to identify new opportunities to ensure we maximise our potential of winning new business 	High	1 2 4	
	 Financial					

STRATEGIC PRIORITIES KEY

- 1 Focus on high quality products and good leadership in technology
- 2 Continue to grow the customer base for Group companies
- 3 Focus on manufacturing excellence
- 4 Continue to develop high-quality people

RISKS KEY

- Increase in risk
- No change in risk
- Decrease in risk

Principal risks and uncertainties .continued

Area of risk	Type of risk	Description of risk	Mitigation of risk	Possible impact on performance	Strategic priorities impacted upon	Change in period
B Changes in government legislation or policy	 Strategic	Reduction in public sector expenditure and changing policy increases risk to our order book Increased complexity of access to EU markets	<ul style="list-style-type: none"> Continue to seek to diversify our customer portfolio to ensure we have an appropriate spread, mitigating the risk of any industry or specific sector spending issues Develop sales in new markets 	Medium	2 4	
C Competitive environment	 Strategic  Financial	Existing competitors, powerful new entrants and continued evolution of technologies in the lighting industry eroding our revenue and profitability	<ul style="list-style-type: none"> Offering innovative products and service solutions that are technologically advanced products to enable us to differentiate ourselves from our competitors Investing in research and development activities to produce new and evolving product ranges Investing in new production equipment to ensure we can keep costs low and maintain barriers to new market entrants 	Medium	1 2 3 4	
D Price changes	 Financial	Erosion of revenue and profitability	<ul style="list-style-type: none"> Management reviews prices, at least annually, to take into account fluctuations in costs, in order to minimise the risk of reduction in gross margin, or the loss of market share from a lack of competitiveness 	High	1 2	
E Business continuity	 Operational	The majority of the Group's revenues are from products manufactured in the Redditch facility	<ul style="list-style-type: none"> High level of importance attached to environmental management systems, health and safety and preventative maintenance Insurance cover is maintained to provide financial protection where appropriate Increased production flexibility with the ability to build products in more than one manufacturing facility 	High	2 3	
F Credit risk	 Financial	The Group offers credit terms which carry risk of slow payment and default	<ul style="list-style-type: none"> Credit policy includes an assessment of the bad debt risk and management of higher risk customers The Group maintains a credit insurance policy for a significant proportion of its debtors 	Low	2	

Area of risk	Type of risk	Description of risk	Mitigation of risk	Possible impact on performance	Strategic priorities impacted upon	Change in period
G Movements in currency exchange	 Financial	The Group is exposed to transaction and translation risks. With some natural hedging in EUR this risk is primarily with changes in the GBP:USD rates	<ul style="list-style-type: none"> The Group has increased its sourcing of materials to maintain a natural hedge to offset its currency risk from EUR receivables, whilst at the same time buying EUR and USD when the exchange rate is favourable, compared to our operational rates, to minimise the risk 	Low	2	
H Cyber security	 Operational	A breach of IT security could result in the inability to operate systems effectively and efficiently or the release of inappropriate information	<ul style="list-style-type: none"> Continual review and monitoring of potential risks Computers encrypted where necessary to protect data Cyber security awareness training for employees ongoing 	Medium	1 3 4	
I Exit from the European Union	 Strategic	Increased complexity of access to EU markets, customers in certain EU territories actively moving business from UK companies	<ul style="list-style-type: none"> With the Group having a manufacturing presence in two EU countries, the Netherlands and Spain, this leaves us ideally placed to react to any negative trade barriers that may be imposed on the UK Continue to develop closer working relationship with these entities, sharing product development, market knowledge and operational expertise to ensure we have the flexibility to adapt to any changes in the future Creation of legal entity in Republic of Ireland to route all EU business in the future to ease the process of customers trading with us 	Medium	2 4	
J Impact of Ukraine conflict on domestic and global economies	 Operational	Potential impact on supply chains including increase in certain raw material prices and disruption to some shipping routes. Impact of energy supply price increases	<ul style="list-style-type: none"> Alternative sources for certain materials and alternative shipping routes, albeit with higher costs in some circumstances Electricity usage has been reduced with implementation of solar panels at the majority of manufacturing sites across the Group 	Medium	2 3	

STRATEGIC PRIORITIES KEY

- 1** Focus on high quality products and good leadership in technology
- 2** Continue to grow the customer base for Group companies
- 3** Focus on manufacturing excellence
- 4** Continue to develop high-quality people

RISKS KEY

-  Increase in risk
-  No change in risk
-  Decrease in risk