

LightGraphix

Creative Lighting Solutions

OUR VISION

A world where lighting innovation, experience and inspiration
combine responsibly to enhance the visual environment.

We strive to monitor our business impact on the environment, manufacture responsibly, and make sustainably conscious design choices

- Products are designed to use minimal material, and are future-proofed through repairable engines and modular features
- We take ownership of our environmental impact by proactively taking steps to reduce it throughout our operating and manufacturing process
- By supporting carbon offsetting initiatives, we can balance emissions that are currently unavoidable

As a leading manufacturer of lighting solutions, we are committed to a sustainable way of thinking and acting, where we limit our impact on the environment in which we live, work and play. Responsible product design and manufacturing is a continually evolving topic which we monitor closely in-house and work with our suppliers to adjust to.

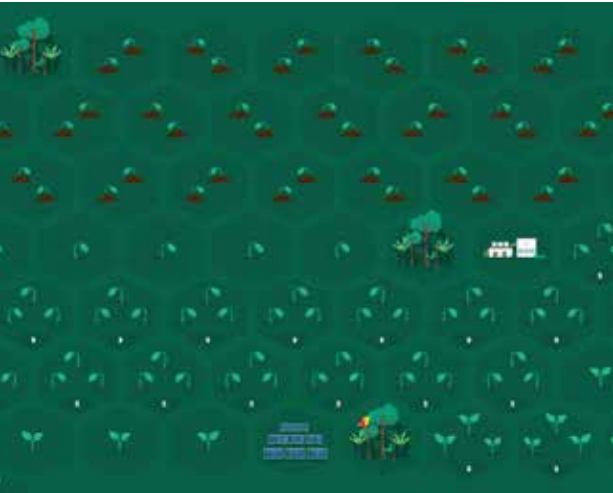
Through our efforts, we aim to reduce the impact of our business activities as much as possible, whilst still offering our customers the same high-quality products and excellent service they have come to expect. Whilst we take every step possible to work towards a sustainable manufacturing model, there are still instances where technologies and materials are not yet advanced enough to provide an environmentally-friendly solution.

We want to reassure our community that sustainability is at the top of our agenda at all levels of the business and ethical practices have always and will continue to be placed at the core of our company ethos and product DNA. As technologies and supply chain attitudes progress, we look forward to sharing our journey, which can be found within this document.



CARBON NEUTRAL CERTIFIED

For the financial year of 2023, we have been certified as a carbon neutral business by Blue Marble for offsetting our scope 1, 2 and 3 emissions.



In 2022 we joined the leading carbon offsetting provider Ecologi, a carbon emission offsetting platform offering businesses the opportunity to sponsor a range of certified reforestation, renewable energy installation and welfare projects all around the world. Ecologi only supports projects certified by either the Gold Standard or Verra's Verified Carbon Standard (VCS). This is evidenced by transparent, real-time data provided on their website including receipts, certifications awarded and data on the impact of all the offsetting projects combined.

In 2023, our work with Ecologi helped avoid over 300 tonnes of carbon by planting trees or funding renewable energy projects, a far greater amount than our measured footprint.. As a UK manufacturer, we have also chosen to fund local reforestation projects in the UK to restore previous mining, logging, and agricultural land. These efforts have allowed us to offset our carbon emissions well beyond target.

We will continue to explore more ways in which we can make an immediate dent in our carbon footprint. Stay up to date with our impact via the ecologi section on our website.



“Over 600t of CO₂ has been offset through verified carbon avoidance projects so far

“7,000+ trees planted in 2022 & 2023

PRODUCT DESIGN

We are proud to design and manufacture products in the UK, where the majority of product components are sourced locally to our office and manufacturing facilities just outside of London. Our industry leading LED lifetime of 90,000 hours to 90% output demonstrates that our high-quality products have been expertly engineered to last. We have also developed design initiatives and services which allow us to offer circularity across our products.

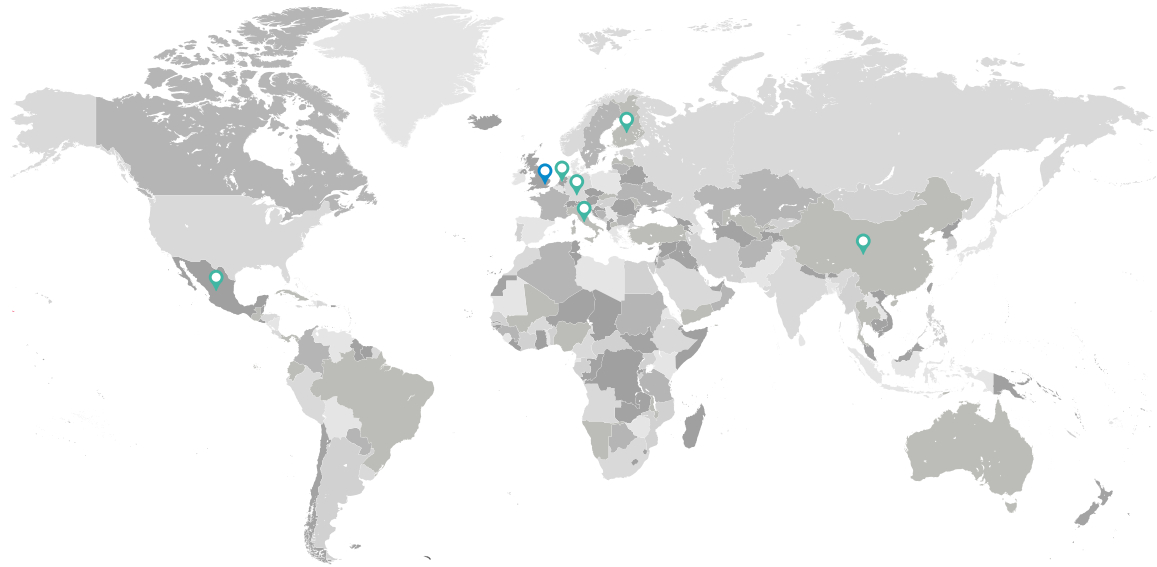
OUR PRODUCT JOURNEY

To provide a true account of our product journey, we have provided the locations of the components origin, rather than masking this with the locations of the suppliers we purchase from in the UK.

UNITED KINGDOM



REST OF THE WORLD



 **LIGHTGRAPHIX**
20, Bourne Road
Ind. Park
Crayford
Kent
DA1 4BZ

 **ALUMINIUM LINEAR PROFILE**
Surrey

 **BODIES**
Buckinghamshire

 **FIXINGS**
East Sussex & Northants

 **GLARE SHIELDS**
Northfleet

 **O-RINGS**
Cheltenham

 **PAINT FINISHES**
Kent & London

 **SPRING CLIPS**
Norfolk

 **SLEEVES**
Buckinghamshire & Kent

 **CABLE**
Italy

 **GLASS**
Germany

 **LEDs**
Japan

 **OPTICS**
Finland

 **PCBs**
Netherlands

 **LED DRIVERS**
China, Italy & Mexico

MATERIALS AND FINISHES

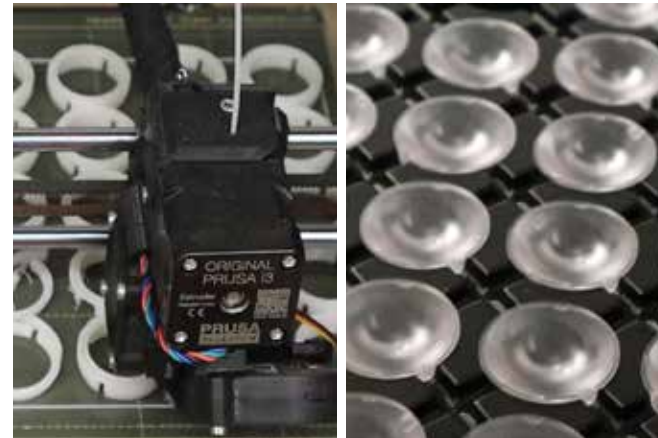
The majority of the material we use is 100% recyclable and has previously been recycled, such as our stainless steel. We restrict the use of non-recycleable materials as much as possible, and are committed to removing those we do use from our products.



METALS

A large portion of our bezels are machined from 316 Stainless Steel, not cast, which means it remains a completely recyclable material even after it has had a paint finish applied. At least 80% of the contents of the Stainless Steel we purchase has been formerly recycled. We offer solid metal finishes like brass and bronze which also have infinite recyclability.

All heat sink bodies are machined from solid aluminium, which is another highly recyclable material.



USE OF PLASTICS

Plastics contained within our products include the optic, O-rings, cable insulation, acetal fixing options and 3D printed parts. We are currently looking to switch all 3D printed parts and tools over to recycled or biodegradable filament once the parts have undergone testing to ensure they still function as required.

Where we must use plastics we try to only work with suppliers that conform to the directives of RoHS (Reduction of Hazardous substances) and REACH (Registration, evaluation, authorization and restriction of chemicals). We are constantly reviewing our components to find alternatives or, where possible, remove them completely from our bill of materials.

“At least 80% of the contents of the Stainless Steel parts we purchase has been formerly recycled



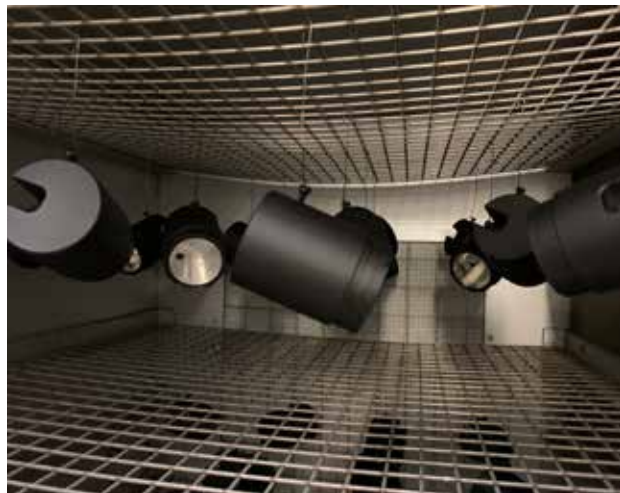
IN-HOUSE PAINTING AND FINISHES

We paint all of our products in-house. This includes wet spray and powder coating. All paint waste is collected from our factory and recycled using a specialist waste recycling company that conforms to ISO14001 and BS OHSAS 450001.

The wet spray process does not require stoving in an oven as it uses solvents to harden the paint on the material, and therefore maintains a low energy consumption process. Powder coat paint does need to be stoved for up to 30 minutes at up to 200°.

Plating is a finish that we offer on request but due to the harsh chemicals involved in its process, is one of the least environmentally friendly finishes available. Although plating onto aluminium is the more cost-effective solution within our industry, at LightGraphix we recommend only plating onto stainless steel or brass, as the chemicals used to plate onto these materials are significantly less severe.

In the next year we plan to introduce a finishes rating system which will help our customers determine how sustainable their chosen finish is compared to others, as this can play a large factor in the product's overall sustainability score.



RLE SCHEME

Replaceable light engines

Our unique circular design innovation gives customers an unlimited ability to repair and upgrade products at any stage in their life cycle.



We have been repairing and upgrading products since 1979 and have always had the ability to repair LED engines on larger and interior focused products. With miniature exterior fittings however, we faced more of a challenge accessing inner components and so in 2019, we began designing a solution.

After extensive testing, we slowly phased in our new circular innovation on products, such as the LD42 wall light, LD43 uplight, LD71 and LD72 downlight range. In 2022 we confirmed the launch of the RLE system across 20 miniature exterior IP67 rated products - a list that continues to grow.

Based on a single modular LED insert, the RLE system provides our customers with an unlimited ability to repair and upgrade LED fittings at any stage in their life cycle, renewing them for decades, with minimal material waste as a result.

The RLE system's modular design varies between product groups, but all LED engine inserts apply the same principles.

The repair can be conducted onsite, which halves the emissions associated with sending them to our factory for repair and then being delivered back to the customer for install. The used engines can be returned to us where they will be disposed of responsibly or recycled.

RLE SCHEME PRINCIPLES:

- > Provides lifetime circularity for LightGraphix products
- > Minimises material waste at all stages of the life cycle
- > Provides flexibility to alter lit effect at any time
- > Global partners can stock inserts, reducing shipping emissions
- > A cost effective replacement solution

In 2022 we were extremely proud to be awarded a Platinum and Green rating at the Build Back Better awards to mark our innovative achievement.

Watch the launch video via the RLE section on our website.



PRODUCT DESIGN



Concept images only.
RLE replacements must be done in a dry,
dust-free environment.

R+R SCHEME

Repair & refurbish

We have been offering repairs and refurbishments on our products since 1979, but to ensure customers were aware of this service, we officially introduced our R+R scheme, which allows us to reduce material waste on products that do not currently have replaceable light engine (RLE) capability.

To ensure all materials are reused where possible, any products that are not supported by the RLE scheme may be eligible for repair under our R+R scheme.

This service includes:

- > Removing small artificial defects from bezels
- > Repainting of bezel and surface mounted products
- > Re-polishing bezels
- > LED engine repair where possible

Due to the nature of how we seal our products to guarantee their high IP ratings, it is not always possible to access the engine for repair. In this case we will disassemble the product and separate parts for recycling.





ANTI-WICKING BARRIER

Our anti-wicking barrier is just one of the design features we have engineered into products to ensure that they are built to last.

Part of our responsibility to the environment is ensuring that we are designing products that are proven to work in their specified environments, especially exterior projects where weather related factors onsite can lead to the fitting failing. If we can pre-empt and prevent these failures in our products engineering, then we can further reduce unnecessary waste.

One of the leading causes of water ingress failure on any LED fitting is due to incorrect IP rated connections made on-site between the electricity supply and luminaire. This can result in water travelling up the cable and reaching the inner components, leading to irreversible damage.

Originally introduced in 2013, our innovative anti-wicking barrier has significantly reduced the risk of water ingress failure on interior and exterior fittings by adding a further layer of protection within the luminaire itself, stopping moisture from reaching the electrical elements.

Since introducing this innovation we have had a 0% return rate on fittings for cable related water ingress failure, significantly reducing component and material waste.

TM 65 & 66

In 2023 we have made TM65 and TM66 data available on our top 20 products and will continue to evaluate the rest of our range to help our community achieve more sustainable lighting specifications.



TM65 is a rating that focuses on embodied carbon in building services. It covers the greenhouse gas emissions associated with a products manufacture, installation, maintenance, repair, replacement and end of life.

A complete breakdown by weight of all materials is used, as well as production location, production energy consumption and service life results.

TM66 determines the circularity of lighting products. Products are awarded a rating based on the following factors:

- > Long life and repair
- > Recyclable materials
- > Additive/subtractive manufacturing techniques and localisation
- > Repair or upgrade services

The TM66 result is based entirely on the truthfulness of the answers provided by manufacturers about their materials. To ensure our justifications are honest and fair, we sought third-party verification through circular lighting expert Simon Fisher FSLl and hope that fellow manufacturers are also demonstrating the same integrity.

We have always designed products with the highest quality materials and provided honest and clear information on where these materials will perform best applicationally to ensure their longevity. With schemes like RLE and R+R, once products reach the end of their life, we have provided an unlimited ability for repair, upgrade or refurbishment with minimal waste as a result so that they can continue to perform for the absolute maximum amount of time, in line with the principles of the TM65 and TM66.

Designers can find TM65 and TM66 data on individual product data sheets under 'environmental data'.



“Very much like our company’s core values, our approach to TM66 has been to be as honest and open as possible. We design our products to be of the highest quality, and perform thorough testing throughout the design process to make sure this happens. We then provide our customers with all the necessary information in order for them to be accurately specified.”

STEPHEN HARRIS
Head of Design



“LightGraphix have a commitment to environmental sustainability where we actively reduce our carbon footprint, aim to use renewable energy sources wherever available, and prioritise environmentally low impact practices throughout our operations. We keep sustainability at the forefront of our initiatives to ensure a greener future for all.”

BRETT HARDING
Operations Director

OPERATIONS

In the near future we look forward to achieving formal ISO9001:2015 and ISO14001:2015 accreditation, though we are compliant with a majority of these standards already and have been for many years.

ENVIRONMENTAL STANDARDS

With the implementation of an Environmental Management System to govern our processes, we are able to monitor our impact closely at each level of our business.

We are committed to the following:

- > Integrate environmental policies and procedures fully into all business activities as a critical element.
- > Comply with all environmental legislation, standards and contract requirements that are applicable to the company's operation.
- > Continually improve environmental performance and prevention of environment impact, taking into account current best practice, technological advances, current scientific understanding, customer and community needs, and to educate, train and promote employees to work in an environmentally responsible manner.
- > Complete environmental assessments for all aspects and impacts of each new activity that the company may undertake. Then, promote, develop and design services, facilities, equipment and work practices that have the least environmental impact, taking into account the efficient use of energy and materials, the sustainable use of renewable resources, and the responsible disposal of waste, thereby minimising any serious or irreversible environmental degradation.
- > Promote and encourage the adoption of these principals by suppliers and contractors acting on behalf of the organisation.
- > Develop, implement and maintain emergency preparedness plans.
- > Foster openness and dialogue with both employees and the customers, encouraging them to respond with their concerns or improvement ideas within the scope of the organisation's operations and maintain a set of environmental objectives and targets that are monitored through the management review process to ensure effectiveness.

PACKAGING

Our cardboard and packing tape is 100% recyclable. Suppliers are certified by the FSC, which means they only use materials from ethical sources. We also shred any cardboard packaging we receive from our own suppliers and reuse it to protect our products in transit. Treated wood pallets are transported to our local recycling centre. We will be transitioning all protective bagging to recyclable/biodegradable solutions to eradicate plastics from our packaging.

SHIPPING

We are partnered with reputable shipping providers like APC, FedEx and Royal Mail who endorse their own environmental policies and share a similar vision for sustainability in their business conduct.

WASTE

We work with reputable waste management companies to dispose of hazardous waste such as left over paint and residue responsibly as per the Waste Framework Directive. For all electrical waste, we conform to the WEEE (Waste from Electrical and Electronic Equipment) set of directives.

ENERGY

All our products are assembled by hand onsite at our sole premises with very little machinery involved, meaning we consume little energy compared to other manufacturing processes. The electricity that we do consume is supplied with a fuel mix made up from 76% renewable sources. Self sufficiency is a matter we are exploring as part of our facilities refurbishment in late 2023.

OUR COMMITMENTS

Sustainability is a fundamental element of our business that we are continually integrating into our company ethos and product DNA. As we investigate the impact of our business activities further, we know more action is required to achieve our environmental goals.

NEXT STEPS:

- > Remain embedding sustainability at the core of our design ethos for all new products and upgrades to existing ones
- > Continue to integrate replaceable light engines into existing products, whilst designing new products with modularity and RLE capability
- > Calculate and share our Scope 1, 2 and 3 emissions through an Environmental Management Portal
- > Switch to 100% recyclable or biodegradable plastics
- > Become a carbon neutral business

Our commitments are just the beginning of a long-term strategy to take responsibility for our business activities. We expect to see these pledges not only progress, but evolve and set new benchmarks for our industry and other manufacturers. Our senior management team are committed to reviewing our policies, progress and next steps on a quarterly basis and are excited to see what the future holds for sustainable lighting solutions.

For more information on our policies and procedures please get in touch.



ROBERT BUXTON

Director, Sales & Marketing

A handwritten signature in black ink that reads "Robert Buxton".



SIMON LYON

Director, Design & Finance

A handwritten signature in black ink that reads "Simon Lyon".



STAN HARRIS

Director, Production

A handwritten signature in black ink that reads "Stan Harris".



BRETT HARDING

Director, Operations

A handwritten signature in black ink that reads "Brett Harding".

LightGraphix Ltd

20 Bourne Road Ind. Park, Crayford, Kent, DA1 4BZ

Telephone +44 (0)1322 527629

Email light@lightgraphix.co.uk

www.lightgraphix.co.uk