

**relinea**<sup>®</sup>  
Reliable, Resourceful.



# GRP RISER GUARD



[www.relinea.com](http://www.relinea.com)



**Relinea is a trusted,  
pioneering expert with 18  
years' experience  
designing and delivering  
alternative composite  
solutions to the  
construction industry.**

**We are at the forefront of  
a revolution in materials  
through GRP innovation &  
design ensuring a  
sustainable future for all.**

**Reliable. Resourceful.**



---

# Contents

|                                       |         |
|---------------------------------------|---------|
| Introduction                          | Page 4  |
| Company Overview                      | Page 5  |
| Our Services                          | Page 7  |
| GRP Riser Guard - Riser Void Solution | Page 9  |
| Fully Designed Solution               | Page 10 |
| Bespoke Projects                      | Page 13 |
| EXO Building Case Study               | Page 16 |
| Intelligent Design Calls For GRP      | Page 17 |
| Benefits of GRP                       | Page 18 |
| Sustainability                        | Page 19 |



Reliable in the services and products we supply.  
Resourceful in building better GRP solutions  
that will last well into the future.

# Introduction

We innovate, design and fabricate advanced technical GRP structural components to overcome weight, corrosion and slip issues. With a revolutionary approach that uses intelligent GRP design and innovative composite manufacturing to challenge the conventions of construction, we work with our clients to find unique, long-lasting, sustainable solutions.



## WHAT WE DO IS DIFFERENT

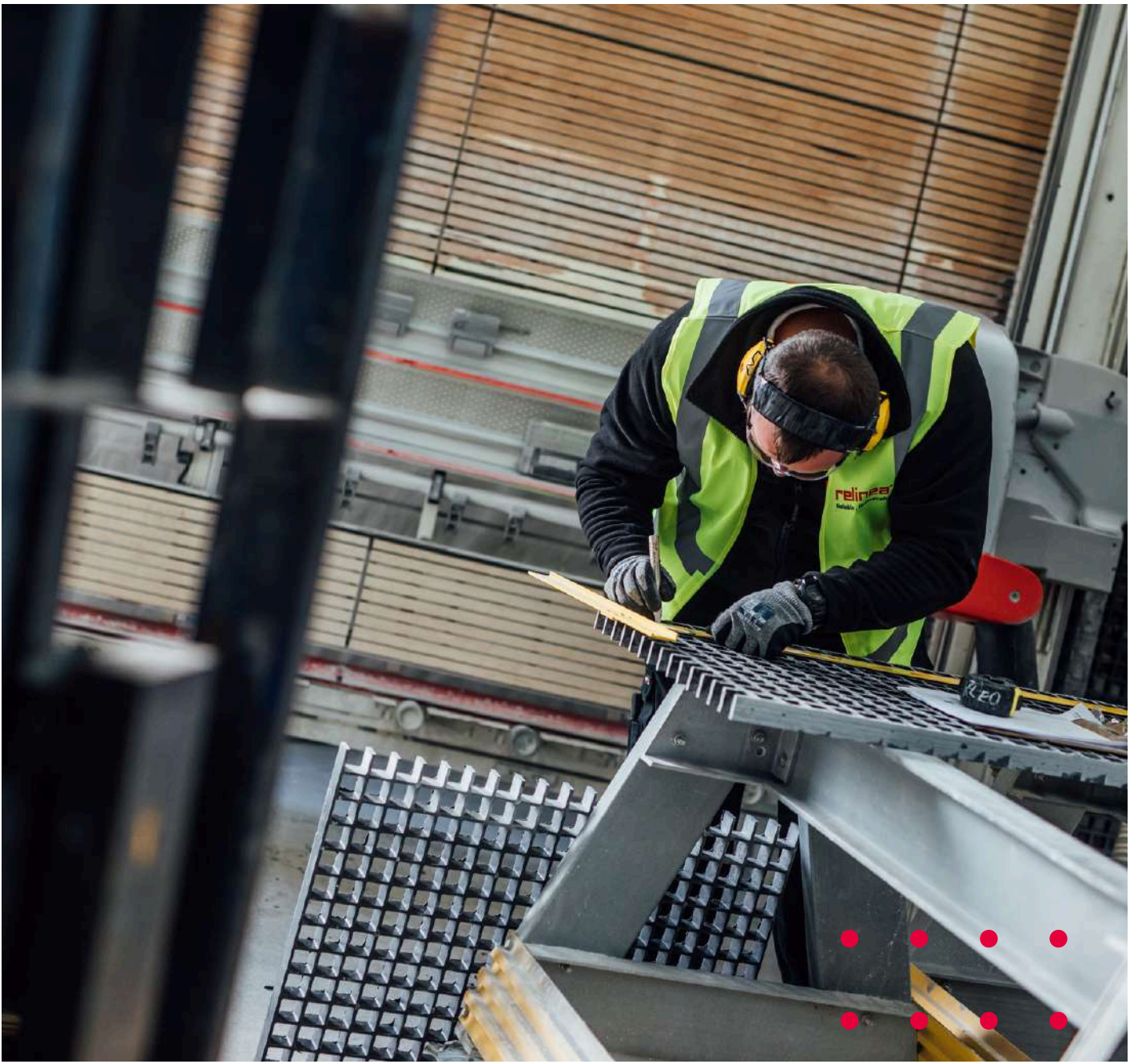
Our GRP designers, technicians, and installation teams deliver entire projects from start to finish. Our team has a deep understanding of our customers' operational and process challenges, and the expertise and specialist knowledge to design bespoke GRP solutions. Harnessing our strengths, we develop new products and services that fulfil our customer's needs and help build a better, stronger, more sustainable world.

# Company Overview

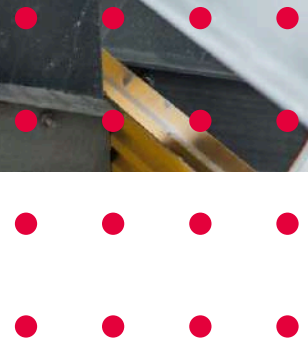


The exceptional quality of our workforce provides a valuable competitive edge. We strive to employ and retain the most qualified people available and to maximise their opportunities for success through training and development. Our specialists have over 18 years of experience focusing only on fibre composites and are accredited to BS9001, RISQS, CHAS and Constructionline Gold standards.





**relinea**<sup>®</sup>  
Reliable, Resourceful.



---

Wherever you go in our company, you'll find an uncompromising commitment to performance, innovation, customer satisfaction, and social responsibility.

# Our Services

Our GRP designers, technicians, and installation teams deliver entire projects from start to finish. Our team has a deep understanding of our customers' operational and process challenges, and the expertise and specialist knowledge to design, fabricate and install bespoke GRP solutions.



## CONSULTATION

We navigate our clients through their specific GRP technical issues to find composite cost reduction solutions that are flexible, long, lasting and easier to install. Our focus is engineering, not sales, which speaks volumes about our corporate philosophy



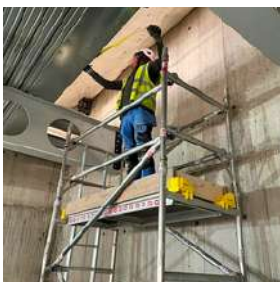
## DESIGN

With one of the largest dedicated composite design teams in the sector combined with 18 years' experience in the manufacture of GRP products we are best placed to provide truly innovative, sustainable solutions.



## FABRICATION

Our highly skilled composite fabrication teams use the latest technology and manufacturing techniques to deliver peerless results reducing on-site adjustment time of GRP mouldings and fabricated structures.



## INSTALLATION

Our expert GRP installation team brings years of professional experience to every job, ensuring that your completed project meets our high-quality standards.

“

Every GRP project is bespoke, benefiting from our innovative fibreglass design knowledge and high quality standards.



ISG, Eastcheap Court, London

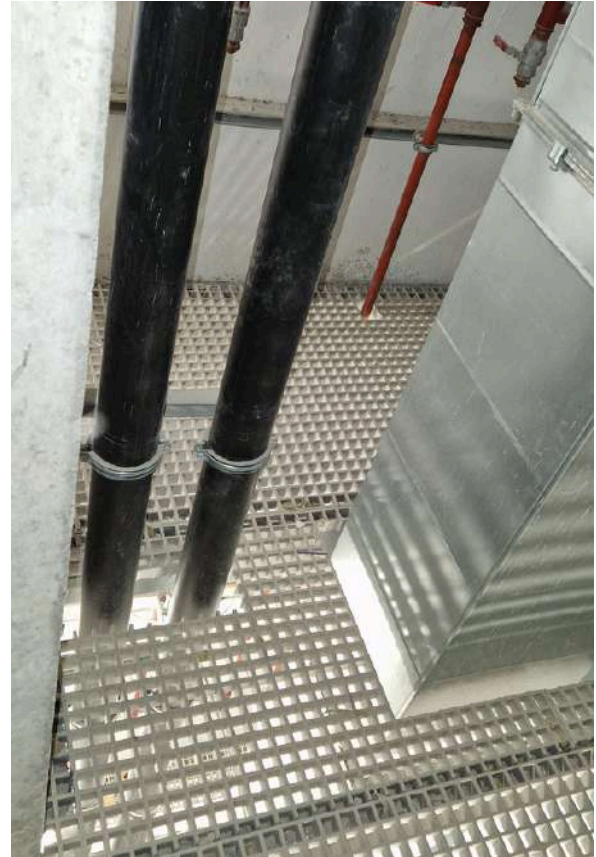


# Riser Guard

## All-In-One Service Riser Void Solution

Riser voids pose one of the biggest threats to safety on any large-scale construction site. Almost 50% of construction-related incidents are due to falls from height, even a tape measure dropped from height can seriously injure or even tragically kill.

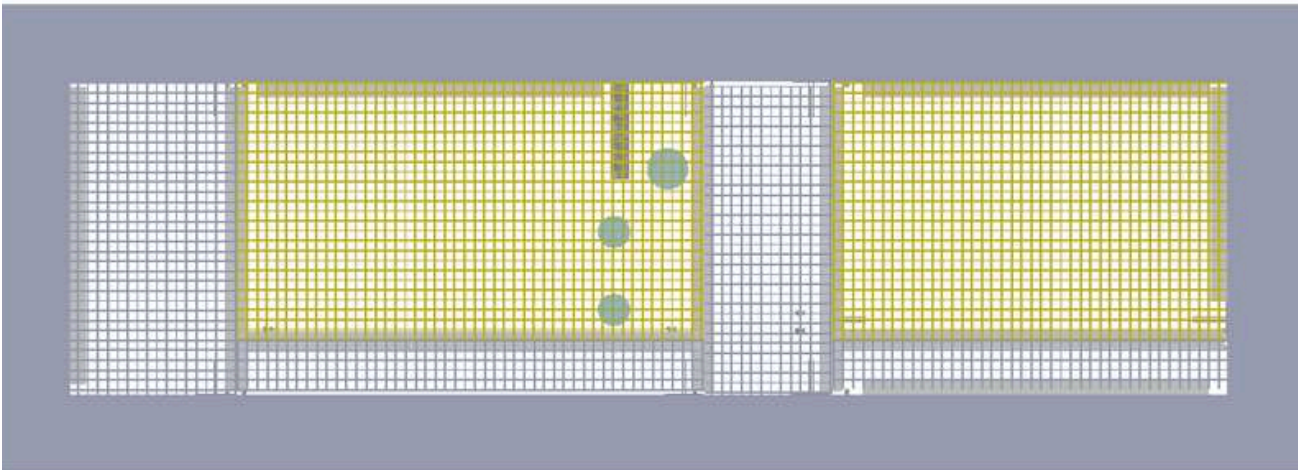
Relinea's GRP service riser flooring helps to fill the void quickly & effectively, ensuring onsite safety for construction workers, mitigating the risk of death or serious injury.



Sisk - Mater Hospital, Dublin



Mercury - Data Centre, Paris

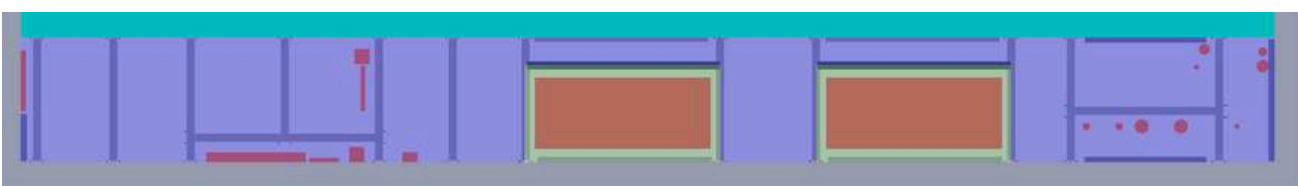


## Fully Designed Solution

**Our service riser flooring system is manufactured entirely using glass-reinforced plastic (GRP) structural components in combination with mesh grating.**

Using innovative design, modern manufacturing techniques, and accredited installation, we provide a safe, lightweight solution that is both cost-effective and customisable. Riser Guard offers a plethora of benefits over existing products such as 'Flowforge' and other competitors offerings, so it is no wonder that more and more architects, contractors, and developers are specifying Relinea Riser Guard for their service riser floors.

Our GRP riser system provides a flexible & practical solution that takes away the challenges of riser flooring installation and will reduce overall costs. When your construction team needs certainty regarding design, installation, cost and performance Riser guard is the perfect fully designed solution.



## Cost Certainty

Riserguard eliminates the need for costly edge protection thus avoiding continuous inspection & surveillance. It reduces the cost of installation of M&E equipment by providing easy lift out panels, and reduces the need for return visits to the site by other trades

## Safer Solution

A fully floored out riser void at the outset eliminates the risks of falls. The risk posed during the M&E installation is reduced by providing a safe working platform. The lightweight GRP is easily handled and manoeuvred on-site, and there is no need for hot works.

## Cleverly Designed

Innovative use of sustainable GRP structural materials and bracketry that are prefabricated into individually packaged kits. The design incorporates the full M&E layouts using fully supported lightweight lift out panels. We can supply CAD and BIM models.

## Performance

Maintenance free, corrosion and impact resistant, and with a life span of 50+ years, our Riser flooring will suffer no damage from a heavy impact. Non-sparking and fire-resistant, ideal for installations where there's a risk of sparking from a tool dropping onto steel grating

## Low Installation Costs

Riserguard can be installed at any stage during the construction of a building. While "the earlier the better", we can work to your schedule. Flexible design combined with lightweight, easily fabricated material allows for straightforward on-site modification

## Easy On-site Handling

Individual Pre-packaged Kits that are pre-fabricated to suit each riser can be easily transported around the site. The lightweight GRP means there is no need for heavy lifting gear, a simple two man installation team using hand tools will suffice.





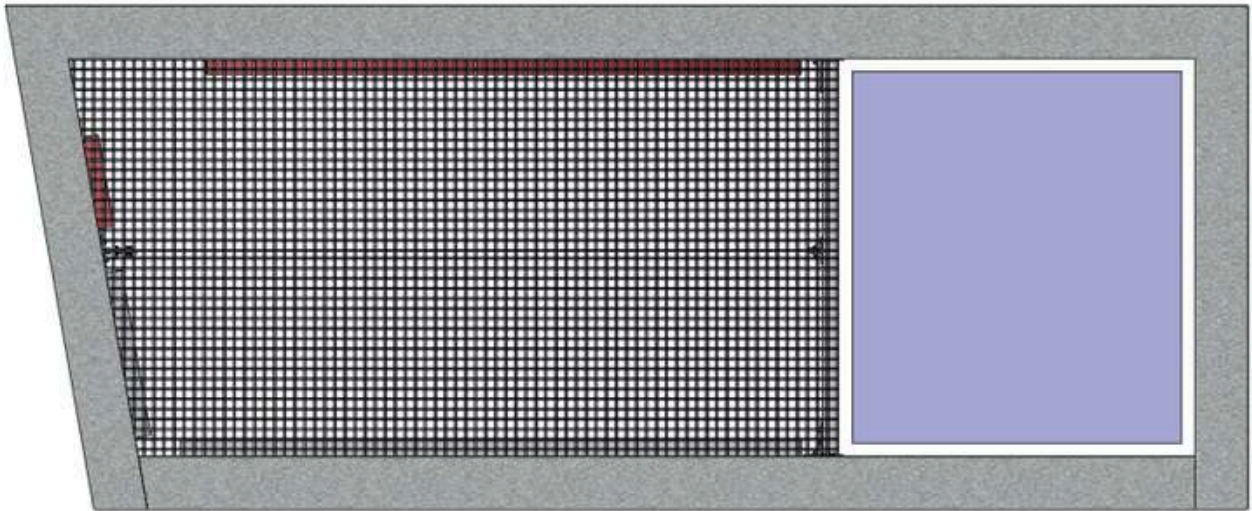
Sisk - Grangegorman Campus, Dublin

**relinea**<sup>®</sup>  
Reliable, Resourceful.



---

Almost 50% of construction related incidents are due to falls from height. Fill the void quickly and safely with our bespoke, cost effective Riser Guard system.



## Every Project Is Bespoke

**Relinea offer 2 types of GRP Riser Guard, each unique to your project. The complete all in-one M&E Package and our Standard Package for riser void protection.**

Our system can either be cast into concrete, or retro fitted to riser voids at a later date. Additional supports can be provided if required using Relinea GRP Pultruded profiles such as angles, channels and beams.

We offer a full detailed design service to allow for support of grating to accommodate service penetrations at a later date. This can be designed in conjunction with the relevant M&E contractors to aid installation and minimise future required alterations.

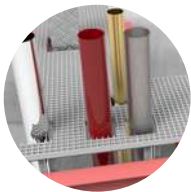
### SPECIFICATIONS:

Our profiles are manufactured to EN 13706 Reinforced plastics composites – specification for pultruded profiles. All profiles above 3 mm thick are manufactured to E23 – having the most stringent requirements for quality. Our profiles can achieve Class 1 Fire Rating to BS476 part 7, EN 13501 and ASTM E84-19A.



# GRP Riser Guard M&E Package

Relinea's advanced Riser Guard M&E Package is designed around the M&E services. Providing a full structural support system with easily handled lift out panels.



## Stage 1: M&E Layout

Using the latest CAD software, we incorporate the M&E layout for accurate positioning of structural supports and flooring.



## Stage 2: Support Installation

GRP 'Re-Struct' profiles are installed into the riser void with specifically designed bracketry and certified fixings.



## Stage 3: Flooring Installation

GRP 'Re-Grid' bi-directional grating is securely fixed to structural framework with lightweight lift out panels to suit the M&E layout.



## Stage 4: Completed Installation

The void has now been filled ensuring site safety for all personnel.



## Stage 5: Pipework Installation

Sections can be cored on site using standard cutting tools, to allow for the passage of pipes through the grating.



## Stage 6: Duct Installation

Lightweight lift out panels allow ducts to easily pass through the grating whilst providing a safe working platform.

---

# Standard Riser Guard Package

Our standard Riser Guard package\* is a cost-effective solution designed to help you fill the void quickly and effectively



## Stage 1: Shelf Angle Installation

Re-Struct GRP shelf angle installed around the perimeter of the riser void as required.



## Stage 2: Additional Support Installation

For wide riser voids additional support beams maybe required to adequately support the grating.



## Stage 3: Flooring Installation

GRP 'Re-Grid' bi-directional grating is securely fixed to structural framework.



## Stage 4: Completed Installation

The void has now been filled ensuring site safety for all personnel.

\*Our Standard Riser Guard Package is designed only to fill the riser void and avoids the need for on-site fall protection and associated policing.

Additional supports would be required to support grating around the M&E services.

The Standard Riser Guard Package tends to be used when the M&E package has not been decided.



## Problem/Challenge

The Exo Buildings' construction consisted of a steel portal with Comflor composite panels and a concrete top screed. To avoid the need for edge protection, Bennett's wanted the installation of Relinea's Riserguard GRP Riser Flooring to coincide with the installation of the Comflor decking as it progressed up the building.

The Riser Guard system had to be installed prior to the screed but the grating level had to be flush with the final floor level. Our in-house design department worked alongside the client's design team to develop a bespoke connection.

Bennetts' also wanted to fully integrate the GRP floor and support layout with the M&E equipment being installed into the riser voids. Riser Guard's full system has the added benefit of providing a safe working platform for the M&E teams to complete their installation by incorporating lift-out panels that match the riser layout avoiding the need for remedial fabrication on site.

## Solution

Riser Guard can be installed early in the construction programme and avoids the need for the provision of costly and potentially hazardous barriers and edge protection.

Once installed, the Riser Guard system can be easily altered if changes have to be made due to updates on the M&E layout, which is a huge advantage over steel. Even in situations where the M&E layout is not finalised it is cost-effective to incorporate as much of the riser layout as possible in the early stages as this will avoid the need for multiple visits. There is also the added advantage of reducing the costs of the installation of M&E and the need for access equipment.

Having the riser void floored at an early stage, eliminates the need for expensive temporary flooring and provides a safe working surface for the mechanical and electrical installers.



## Intelligent Building Design calls for GRP Riser Flooring

Working with John Sisk & Son, Relinea's installation team recently installed Riser Guard Service at Coopers Cross in Dublin.

Coopers Cross is a major redevelopment scheme for Kennedy Wilson comprising an entire city block it represents one of the largest undeveloped sites in Dublin's central business district. At 5.9 acres, It forms part of the Docklands Strategic Development Zone, facilitating the regeneration of the Docklands.

The office buildings have been designed for maximum efficiency and flexibility with bright, open floorplates and will target the highest certification and sustainability standards, including NZEB, LEED Platinum, BREEAM Outstanding and WELL Platinum.

With the numerous benefits of GRP such as its high strength-to-weight ratio, anti-slip properties, impact resistance, and non-conductivity, there is numerous reasons why Riser Guard was the perfect product for this project.

- ✔ GRP provides a flexible & practical solution that takes away the challenges of riser flooring installation and will reduce overall costs.
- ✔ By specifying Riser Guard you can close out the risk assessment for falls and fires at the design stage.
- ✔ Riser Guard eliminates the need for costly edge protection thus avoiding continuous inspection & surveillance.
- ✔ Individual Pre-packaged Kits that are pre-fabricated to suit each riser can be easily transported around the site.

---

# Benefits of GRP

**Maintenance free, corrosion and impact resistant, our GRP products have considerably low life cycle costs compared to traditional materials.**

GRP can be effectively used in the development of new structures to achieve a superior service life without the need for regular, costly maintenance. As we work towards sustainability goals and extending the life of products, glass-reinforced plastic can also be incorporated into existing structures to extend existing service life.

Relinea can develop solutions that have a much lower carbon footprint in comparison to traditional building materials such as concrete & steel. Built to last, GRP is the material of the future for those seeking energy-efficient, green, sustainable solutions.

## Long Term Cost Savings



Maintenance free, corrosion and impact resistant, and with a life span of 50+ years, our GRP products have considerably low life cycle costs compared to traditional materials. No replacing, re-painting or repairing.

## The Safety Benefits of GRP



Slip resistant, non-conductive, and fire retardant. Our integral grit finish offers the world's highest slip resistance for a walk-on surface. Due to their non-conductive nature our products do not have to be earthed.

## The Practical Benefits of GRP



80% lighter than steel, GRP products make for an easy two man installation. Impact resistant and with a high strength to weight ratio, they are easily fabricated and handled on site.



---

# Sustainability

Relinea is committed to using manufacturing and innovation to make the shift towards a more sustainable business. Integrating sustainability into our business model and ways of working creates value for all. At every stage of our process, we reduce our environmental impact through innovation, R&D, and waste minimisation. Early engagement through planning and design combined with robust advanced product solutions ensures a reliable and sustainable future.



Relinea is known for providing GRP products and services that continually improve the quality of life and the environment by fulfilling society's need for infrastructure including, clean water, construction, transportation, and reliable energy – in a sustainable way.



**Products made from GRP can offer significant environmental benefits because of their characteristically low weight, good mechanical properties, and excellent resistance to corrosion.**

### **RECYCLABLE**

GRP waste is often shredded and processed to create a high-grade alternative for the cement industry, where it is used as a fuel and mineral raw material.

### **LONG LIFESPAN**

The thermosetting resins used in GRP are far stronger and more durable than other plastics, giving most GRP products a lifespan of more than 50 years.

### **LOW CARBON FOOTPRINT**

GRP's CO<sub>2</sub> equivalent is less than half that of a concrete bridge and approximately a third of the CO<sub>2</sub> equivalent for a steel bridge. As a result, GRP's carbon footprint is also very favourable.

### **ENERGY EFFICIENT**

50% less energy is needed to produce glass-reinforced plastic (GRP) than steel.

### **LIGHTWEIGHT**

GRP structures are 75% lighter than steel which means 50% less energy is needed for transport and assembly.

### **ECO FRIENDLY**

GRP produces fewer greenhouse gasses and consumes less energy at the production stage than both steel and aluminum. Pultrusion takes place in a fully-closed process, which minimises the evaporation of volatile compounds, and no smoke clouds or toxic air pollutants are created.

# Our Customers





**relinea**<sup>®</sup>

Reliable, Resourceful.

-  [www.relinea.com](http://www.relinea.com)
-  [info@relinea.com](mailto:info@relinea.com)
-  +44 (0)28 9447 0010