

# GRP Modern Engineering

**Smart Solutions for Construction,  
Energy and Safety**

.....

Discover how GRP delivers strength, corrosion resistance,  
and reliability for modern engineering solutions.



**+44(0) 1244 676000**  
.....

**[engineered-composites.co.uk](http://engineered-composites.co.uk)**  
.....

# UK GRP Pultruders



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# Welcome to

# Engineered Composites



*For 40 years, Engineered Composites has been at the forefront of innovation, delivering sustainable GRP solutions to industries across the UK. Our commitment to excellence and quality is unmatched, ensuring that every product meets the highest standards. As a trusted partner in sectors ranging from automotive, marine to construction, we consistently provide reliable and cost-effective solutions tailored to meet the unique needs of each industry. With integrity as our foundation, we are dedicated to shaping a future built on resilience, durability, and sustainability, ensuring peace of mind for all our clients.*

**Gavin Williams**  
MANAGING DIRECTOR





# Since 1986

# Pioneering

## A Legacy of Innovation

.....

At Engineered Composites Ltd, we have been at the forefront of composite solutions since our incorporation in 1986. Our founding goal was clear: to promote Glass Reinforced Plastic (GRP) composites as a sustainable alternative to traditional materials like steel.

## Industry Growth & Leadership

.....

Over the years, we have grown rapidly in both size and reputation, becoming the UK's premier provider of GRP solutions. Our focus on quality, durability, and efficiency has made us the trusted choice for wholesalers and businesses seeking advanced composite technology.

## Research & Development Focus

.....

From the beginning, Engineered Composites has led the GRP and Fibre Reinforced Plastic (FRP) sectors, with a strong emphasis on R&D and innovation. We have formed global partnerships with universities in the UK, US, China, and Hong Kong, pioneering new applications and industry standards.

## A Vision for Sustainability

.....

Our commitment to sustainability remains steadfast. We continue to advocate for GRP pultrusion as a low-carbon, eco-friendly solution for the future. With a passion for innovation, we support the industry in embracing GRP as the material of choice for long-term sustainability and performance.

# Composite

# Solutions



# Managing Director's Statement

At Engineered Composites, we leverage four decades of industry expertise, combining deep technical knowledge with cutting-edge manufacturing techniques to offer a comprehensive range of high-performance GRP products. Our dedication to quality and sustainability ensures that each product we supply is built to last, adhering to the strictest ISO 9001 standards. Together, we're building a safer, more sustainable world through advanced GRP technology



**WE'RE NOT JUST A SUPPLIER—WE'RE A COMMITTED PARTNER, delivering tailored solutions that drive efficiency and innovation across a variety of industries, including marine, rail, chemical, and water.**



## Revolutionising Construction: GRP in Modern Architecture

Glass Reinforced Plastic (GRP) is reshaping the landscape of modern architecture with its versatility, durability, and lightweight properties. Unlike traditional materials such as steel or aluminum, GRP offers greater design flexibility, making it ideal for intricate architectural designs. Architects and engineers are increasingly turning to GRP for applications like cladding, roofing, and structural elements due to its high strength-to-weight ratio and corrosion resistance.

## Design Freedom

The ability to mould GRP into complex, intricate shapes gives architects the flexibility to create unique facades and custom components. This adaptability opens up new possibilities in modern design, allowing for aesthetically striking and highly functional architectural solutions.

## Low Maintenance

Thanks to its non-corrosive nature, this material is ideal for structures requiring little upkeep. Whether exposed to harsh elements or corrosive environments, it offers long-term performance without the frequent maintenance associated with traditional materials like steel or wood.

## Durability

With excellent resistance to UV exposure, chemicals, and weathering, GRP ensures lasting performance in construction. It stands up to the toughest environmental conditions, offering an extended service life with minimal need for repairs, making it a dependable material choice for demanding projects.

## Sustainability

As a long-lasting and durable material, GRP reduces the frequency of replacements, conserving resources and limiting waste. Its production can also be energy-efficient, supporting sustainable construction practices and contributing to the creation of environmentally friendly, high-performance buildings.

# Meet our Team



**GAVIN WILLIAMS**  
MANAGING DIRECTOR  
.....



**MELANIE PERKINS**  
EXECUTIVE DIRECTOR  
.....



Every project begins with understanding our clients' needs. Our team takes pride in working closely with each customer, offering tailored guidance and support from initial consultation through to project delivery, ensuring quality and satisfaction at every step.

## A TEAM COMMITTED TO EXCELLENCE

Our team's strength lies in its expertise, dedication, and collaborative spirit, with decades of combined experience in the GRP industry. Committed to innovation, we continuously develop new applications and refine processes to enhance product performance, sustainability, and cost-efficiency, ensuring reliable and cutting-edge solutions for our clients.



**BETHAN JONES**  
INTERNATIONAL  
PURCHASING MANAGER  
.....



**SEAN LUMSDEN**  
OPERATIONS MANAGER  
.....



**CAITLIN PERKINS**  
SALES OFFICE ADMIN  
.....



**SOPHIE GARDNER**  
TRANSPORT &  
SALES ADMIN  
.....



**CHARLOTTE BLACKSTONE**  
SALES ADMIN  
.....



## The Company

For four decades, Engineered Composites has been at the forefront of delivering high-performance GRP (Glass Reinforced Plastic) solutions to a wide range of industries. Our journey is built on a foundation of expertise, innovation, and a commitment to excellence, making us the UK's leading independent supplier of sustainable GRP products.

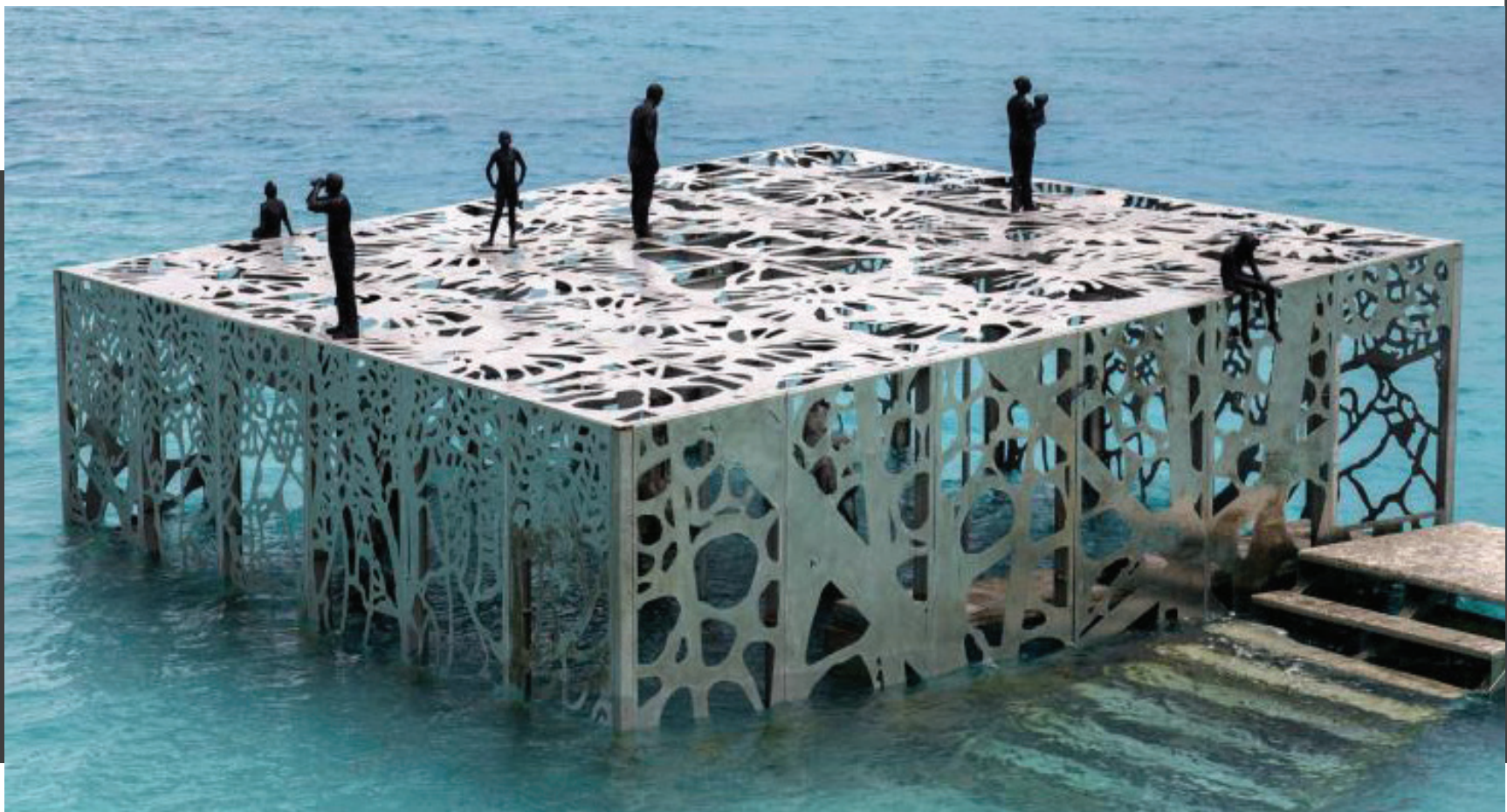


## Customer Focus

**Our success is built on the success of our clients. Every solution we provide is tailored to their needs, ensuring performance, reliability, and long-term value...**

Whether it's custom designs, technical support, or ongoing service, we are committed to your success at every stage of the journey. Your goals are our goals, and your satisfaction drives everything we do.

We take pride in being more than just a supplier—we're a trusted partner to businesses in sectors such as automotive, construction, marine, power generation, and more. Our extensive knowledge, coupled with a global network of manufacturing partners, allows us to provide tailored GRP solutions that meet the highest quality standards, ensuring consistency, durability, and long-term value.



## Our Values

**At the heart of Engineered Composites are core values that shape everything we do.**



### Quality Assurance

We prioritise delivering products of the highest quality, designed to withstand the toughest conditions while ensuring superior performance and reliability.



### Innovation

Our forward-thinking approach drives us to continuously explore new technologies and applications, ensuring that our solutions remain at the cutting edge of GRP advancements.



### Sustainability

We are dedicated to environmentally conscious practices, from sourcing sustainable materials to delivering long-lasting products that reduce waste and promote a greener, brighter future.

## Industry-Proven Solutions Built for Performance

- ✓ Up to 7 times the strength-to-weight ratio of steel, delivering exceptional durability in all applications.
- ✓ Resistant to UV, chemicals, and moisture, ensuring long-term performance in the harshest environments.
- ✓ Lighter than steel, GRP reduces installation time, structural load, and overall project costs efficiently.
- ✓ Customisable into complex shapes and finishes, GRP adapts to unique applications across various industries.
- ✓ Durable and low-maintenance, GRP minimises costs over time, outperforming traditional materials like steel.
- ✓ Proven in rail, marine, construction, and power sectors, GRP is a dependable choice for modern challenges.

# The Stronger Choice.

Up to **7x**  
The Strength  
of Steel

- ✓ GRP is engineered for applications where reducing weight and increasing strength are critical, making it a preferred material for construction, marine, and transport industries where safety and efficiency are top priorities.

## Regulatory Compliance

Engineered Composites ensures all GRP products meet rigorous industry standards, delivering solutions that comply with safety, quality, and environmental regulations. Our commitment to excellence guarantees reliability and performance across diverse applications, adhering to global compliance requirements.

1

### Pultruded Profiles

EN13706 - 2 Reinforced Plastic Composites, specifications for pultruded profiles.

2

### DECK500 Interlocking GRP Flooring

BS4592 Industrial Type Flooring, Walkways and Stair Treads

BS4592-4 Industrial Type Flooring, Walkways and Stair Treads

BS4592-5 Solid Plates in Metal and GRP

BS ENISO 14122-2 Safety Of Machinery: Permanent Means of Access to Machinery

3

### GRP Palisade Fencing

Tested independently to ASTM D7205/D7205M-Standard Test Method for Tensile Properties of Fiber Reinforced Polymer Matrix Composite Bars

4

### GRP Rebar

Tested independently to ASTM D7205/D7205M-Standard Test Method for Tensile Properties of Fiber Reinforced Polymer Matrix Composite Bars

5

### GRP Flooring & Grating GRP Handrails

BS4592:0 2006+A1 2012 Industrial Flooring, Stairs and Handrails for General Duty (0.36kN/m) and Heavy Duty (0.74kN/M)

BS ENISO 141 22 Safety Of Machinery: Permanent Means of Access to Machinery



# Our Key Market Sectors

Tailored GRP solutions driving performance and innovation globally.

Designed to meet the specific demands of industries ranging from construction to offshore environments. Each sector benefits from our commitment to quality, innovation, and tailored solutions that ensure optimal performance.



## CHEMICAL & WATER TREATMENT

.....

GRP's corrosion-resistant properties make it an essential material for chemical plants and water treatment facilities, ensuring durability in environments exposed to moisture, chemicals, and harsh substances.



## RAIL & TRANSPORT

.....

Widely used in railway and transport infrastructure, GRP delivers lightweight and non-conductive solutions for trackside fencing, walkways, and safety components, meeting stringent industry standards.



## OFFSHORE & MARINE

.....

In offshore platforms and marine environments, GRP provides unmatched resistance to saltwater corrosion, making it ideal for decking, handrails, and ladders that face constant exposure to harsh conditions.



## POWER GENERATION

.....

GRP's non-conductive and fire-resistant qualities ensure safety and performance in power plants and renewable energy installations, including wind turbine blades and solar panel frameworks.



## ARCHITECTURAL & ROOF ACCESS

.....

With its design flexibility, GRP allows architects to create intricate cladding, roofing, and facade elements, combining durability with aesthetic appeal for modern construction projects.



## CIVIL ENGINEERING & DEFENCE

.....

In high-security and critical infrastructure, GRP delivers robust solutions such as fencing, barriers, and structural reinforcements, trusted for its strength, resilience, and long service life.



## Introducing Engineered Composites

# GRP PRODUCTS



## High-quality GRP products are expertly tailored to meet the unique needs of diverse industries.

### GRP Pultruded Profiles

Engineered for durability, our glass fibre pultruded profiles combine high mechanical strength with exceptional resistance to corrosion and harsh environments.

### GRP Rods & Tubes

Designed with high glass content, these GRP rods and tubes deliver superior mechanical properties, making them ideal for structural and industrial applications.

### GRP Standard Handrails

Built for heavy-duty use, this robust handrail system offers strength, safety, and easy installation for a wide range of industrial environments.

### GRP Modular Handrails

An economical and versatile solution, GRP modular handrails offer high resistance to corrosion and are a durable alternative to conventional metallic systems.

### GRP Fencing

Versatile and durable, GRP mesh fencing suits utilities and platforms, while non-conductive palisade fencing secures railways and electrical enclosures.

### GRP Grating & Flooring

Durable and competitively priced, GRP grating and flooring provide anti-slip surfaces and high damage resistance for industrial and commercial use.

### GRP Interlocking Floors

The DECK500 GRP interlocking flooring system is lightweight, anti-slip, and easy to install, making it ideal for walkways, bridges, and industrial settings.

### GRP / FRP Rebar

Highly corrosion-resistant and lightweight, GRP reinforcement bars provide a durable, non-conductive alternative to steel for demanding construction applications.

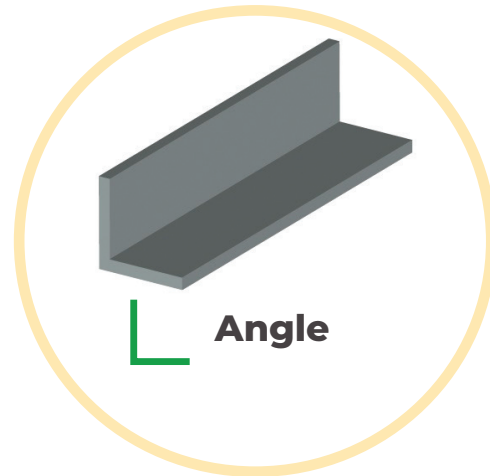
### GRP Scaffold Tubes

GRP scaffold tubes offer a lightweight, non-conductive alternative to steel and aluminium, with the same outer diameter for easy compatibility and safety.

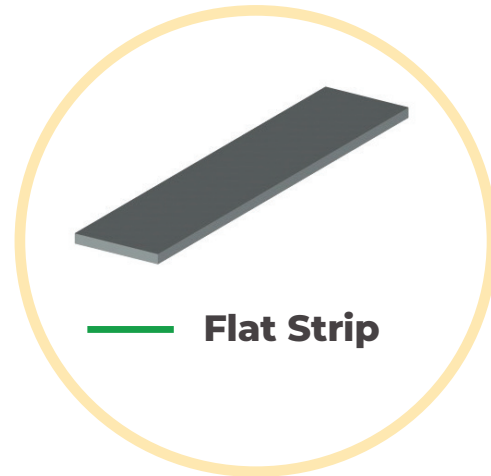


## Engineered Composites

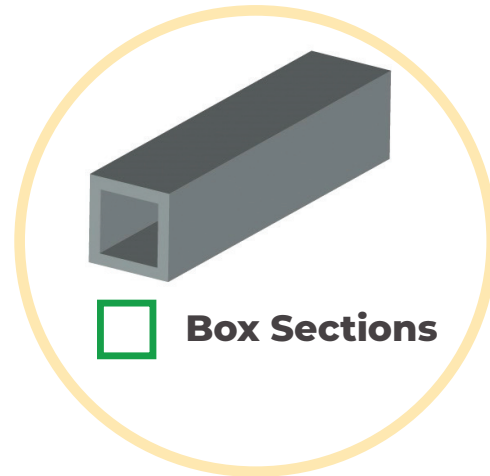
# GRP Pultruded Profiles



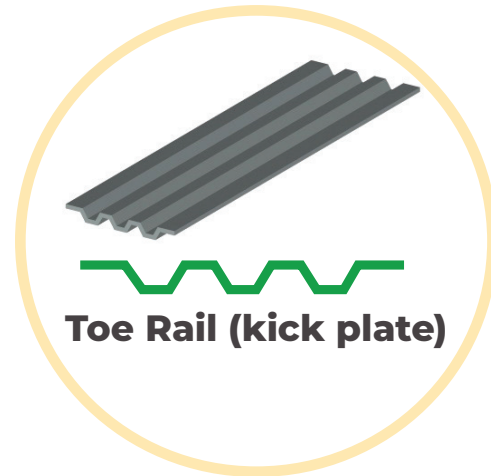
Angle



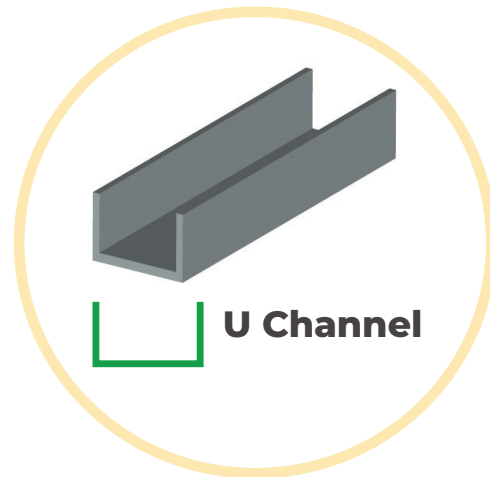
Flat Strip



Box Sections



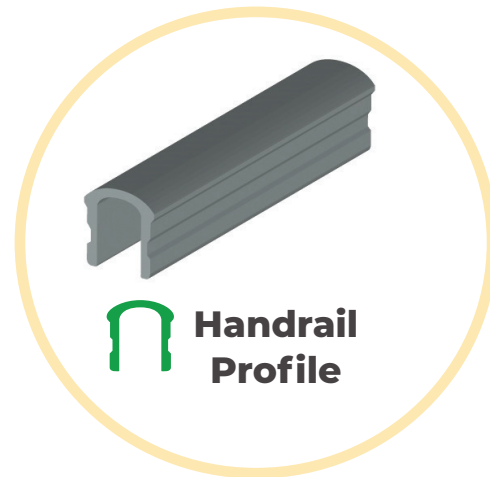
Toe Rail (kick plate)



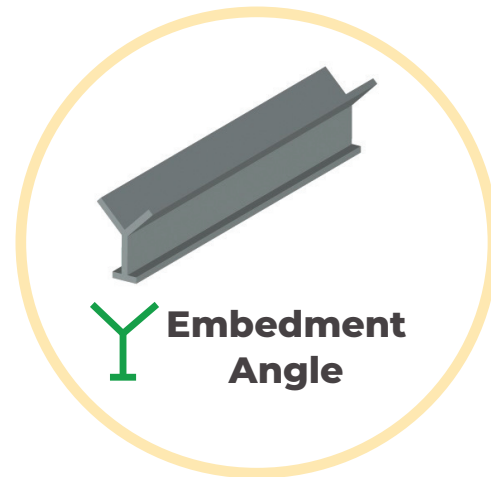
U Channel



'I' Beam +  
Wide Flange  
(H) Beams



Handrail  
Profile



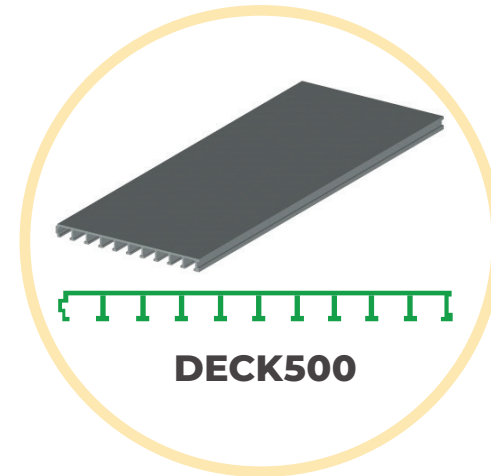
Embedment  
Angle

## Key Facts

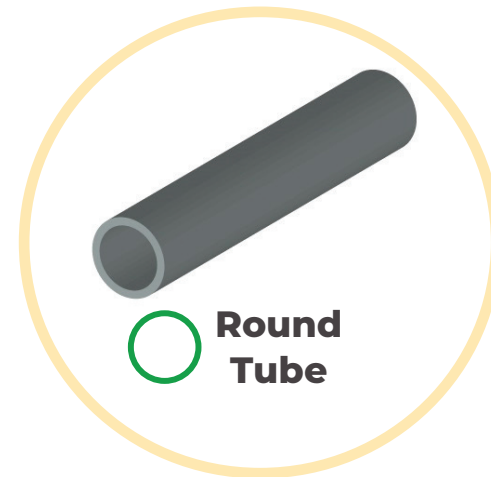
Glass fibre reinforced pultruded profiles provide durable, versatile solutions for walkways, platforms, ladders, and handrails. With exceptional corrosion resistance, they are a lightweight, cost-effective alternative to steel, aluminium, and timber. Easy to install without heavy equipment, they suit a wide range of environments.



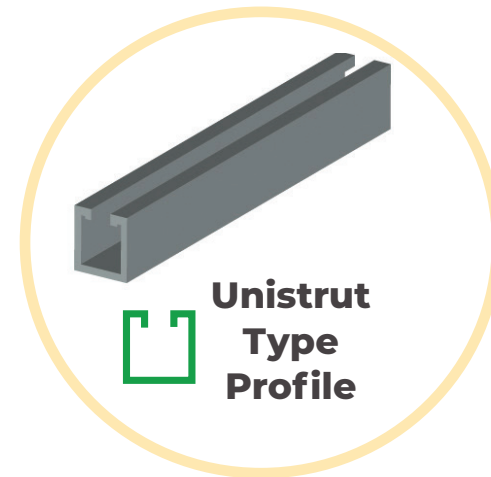
Ladder  
Rung



DECK500



Round  
Tube



Unistrut  
Type  
Profile

## Extensive Range

Our comprehensive selection of GRP pultruded structural profiles caters to a wide variety of applications, delivering versatility and reliability for numerous industries. Each profile is manufactured to exacting standards, ensuring consistent performance and long-term durability.

## Cost-Effective

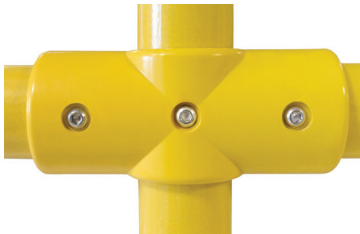
Engineered with advanced GRP formulations, these profiles combine excellent corrosion resistance with long-lasting performance, providing a lightweight and economical alternative to conventional materials.

## Easy Installation

GRP profiles are lightweight and easy to handle, enabling quick installation without heavy equipment. This ensures efficiency, reliability, and minimal downtime.

GRP Handrails

# GRP Modular Handrails

|                                                                                                                                  |                                                                                                                              |                                                                                                                             |                                                                                                                    |                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|  <p><b>Round Tube</b><br/>50mm od x 40mm id</p> |  <p><b>W Toe Plate</b><br/>(Kick Plate)</p> |  <p><b>3 Way Connection</b><br/>(Tee)</p> |  <p><b>4 Way Connection</b></p> |  <p><b>90 Deg Elbow</b></p>              |
|  <p><b>Right Angle Bend</b></p>                |  <p><b>Universal Joint</b></p>             |  <p><b>Universal 3 Way</b></p>           |  <p><b>Universal 4 Way</b></p> |  <p><b>Stanchion Post Base Foot</b></p> |

Standard Handrails

Our heavy-duty GRP handrails are durable, easy to install, and outperform metal and timber alternatives with their strength, low maintenance, and cost efficiency.

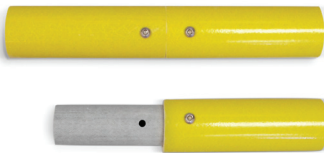
Modular Handrails

Ergonomic and cost-effective, GRP modular handrails provide a durable alternative to metal. With low maintenance, corrosion resistance, and high strength-to-weight ratios, they outperform steel, aluminium, and timber.

Stock Available

Browse our full range of GRP tubes and fittings in stock.



|                                                                                                                                   |                                                                                                                      |                                                                                                                      |                                                                                                                             |                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
|  <p><b>Side Fit</b></p>                        |  <p><b>Triangle Base Foot</b></p> |  <p><b>3 Way Corner</b></p>       |  <p><b>4 Way Corner</b></p>              |  <p><b>3 Way Connection Stairs 60 Deg</b> (Tee)</p> |
|  <p><b>4 Way Connection Stairs 60 Deg</b></p> |  <p><b>120 Deg Elbow</b></p>     |  <p><b>50mm Tube End Cap</b></p> |  <p><b>Stainless Steel Bolt Set</b></p> |  <p><b>Modular Handrail Spigot</b></p>             |



Engineered Composites

# GRP FENCING



## Non-Conductive GRP Fencing

GRP fencing is a highly effective alternative to steel, offering exceptional electrical insulation for environments where conductivity poses a risk. Designed with safety in mind, its non-conductive properties make it ideal for applications near railways, electrical enclosures, and other high-voltage areas. Durable and lightweight, GRP fencing also resists corrosion and requires minimal maintenance, providing a long-lasting, cost-effective solution for industrial and commercial use.



## A Highly Effective Alternative To Steel Fencing

### GRP Boundary Fencing

A durable, lightweight solution for securing property perimeters, offering superior corrosion resistance and long-term reliability over steel alternatives.

### GRP Trackside Fencing

Non-conductive and corrosion-resistant, GRP fencing ensures safety along railways and trackside areas, ideal for high-voltage environments.

### GRP Electrical Enclosures

Providing a non-conductive, robust barrier for electrical equipment, GRP enclosures deliver superior safety and durability in demanding environments.

### GRP Chemical Enclosures

Resistant to harsh chemicals and corrosion, GRP chemical enclosures ensure secure containment and protection in industrial and hazardous settings.

### GRP Gas Enclosures

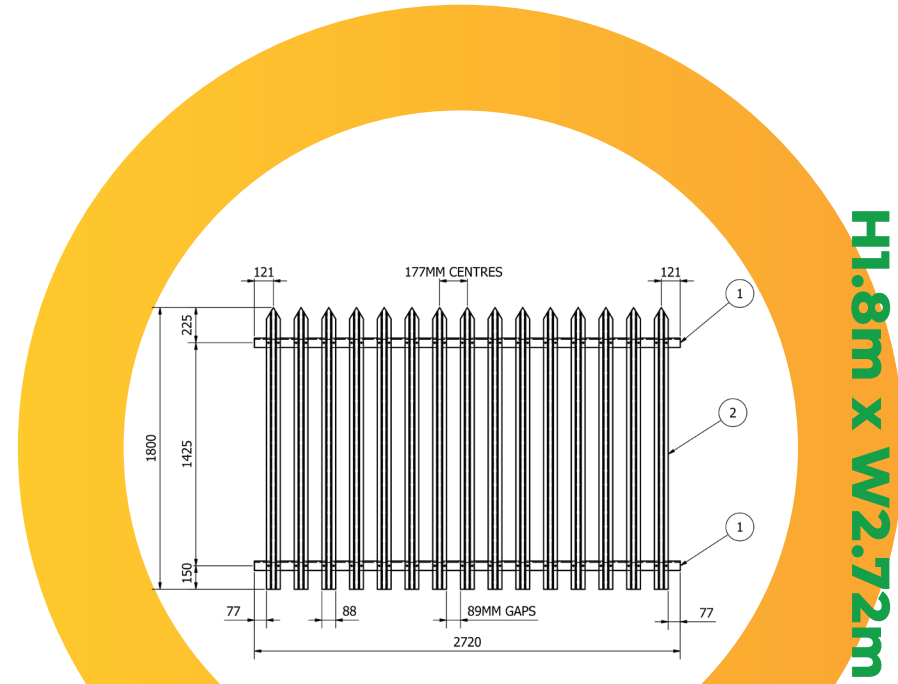
Designed for gas containment, GRP enclosures offer exceptional strength, impact resistance, and corrosion protection in critical infrastructure applications.

### GRP Water Treatment Fencing

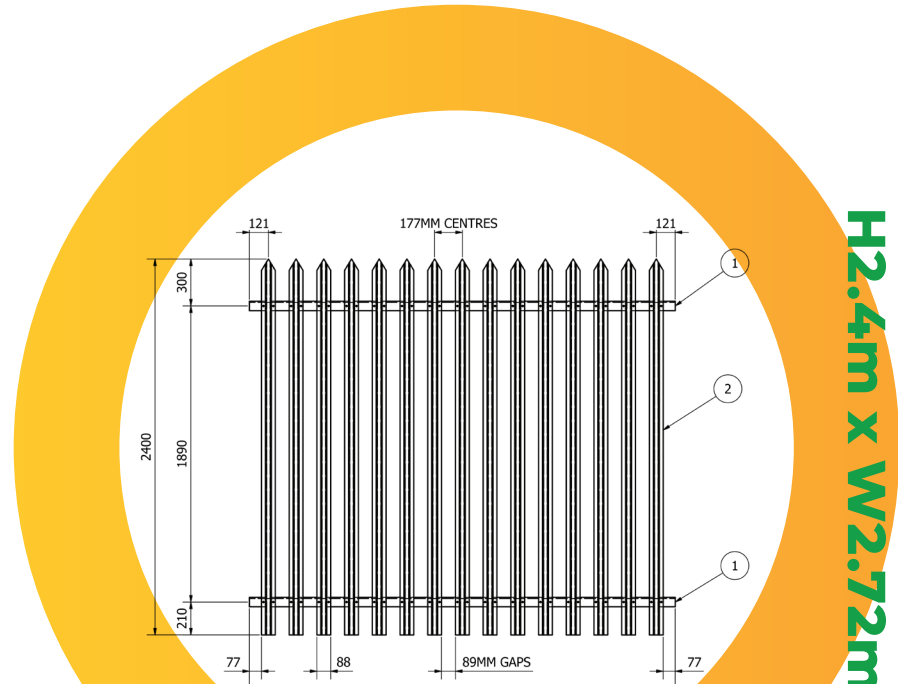
Ideal for wastewater and water treatment facilities, GRP fencing offers corrosion resistance, durability, and low maintenance in moisture-rich environments.



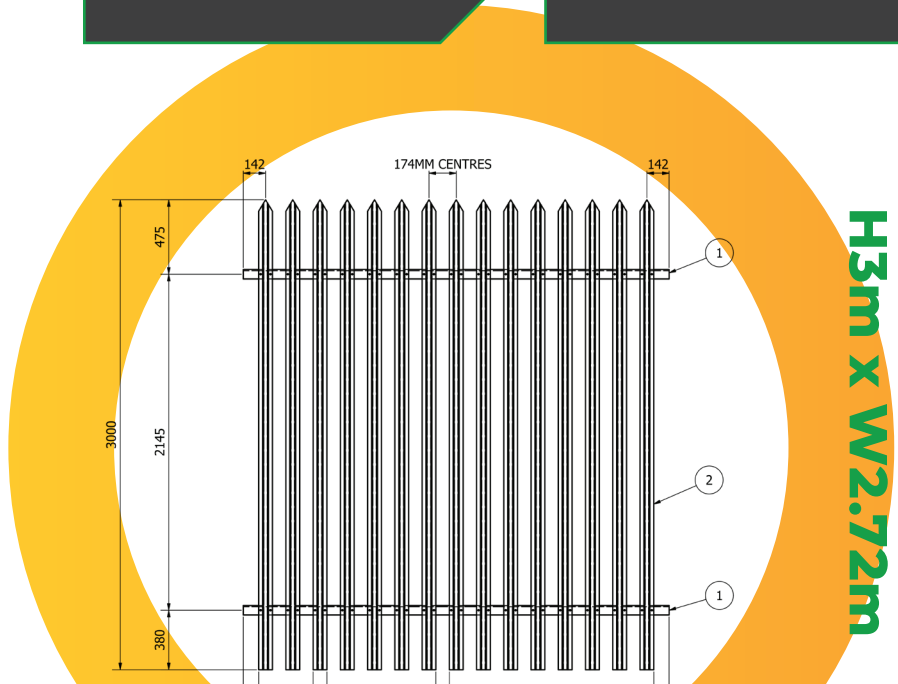
# GRP Palisade Fencing



H1.8m x W2.72m



H2.4m x W2.72m



H3m x W2.72m

# 3 x Standard Sizes

## Compliance & Performance

**CERTIFIED STANDARDS**  
BS 1722-12:2016  
GRP pales meet durability and reliability requirements.

**PULL-OUT TESTED**  
BS 1722-12:2016  
Independently verified for secure and compliant installations.

## Fence Panel Features

- 1

**Cost-Efficient Kits**

Fence panels are supplied in kit form, reducing high carriage costs and simplifying transport logistics.
- 2

**Pre-Drilled Components**

All profiles and posts are pre-drilled for easy on-site assembly, eliminating the need for jigs.
- 3

**Embedded Posts**

Embedded posts include GRP rebar, providing a secure concrete key for enhanced stability.
- 4

**Surface-Mounted Options**

Posts can be supplied with a metal foot and end cap for surface-mounted installations.

| Standard Fence Panels |            | Standard Post Lengths (mm) |                 |
|-----------------------|------------|----------------------------|-----------------|
| Height (mm)           | Width (mm) | Embedded                   | Surface Mounted |
| 1800                  | 2720       | 2325                       | 1800            |
| 2400                  | 2720       | 3125                       | 2400            |
| 3000                  | 2720       | 3925                       | 3000            |

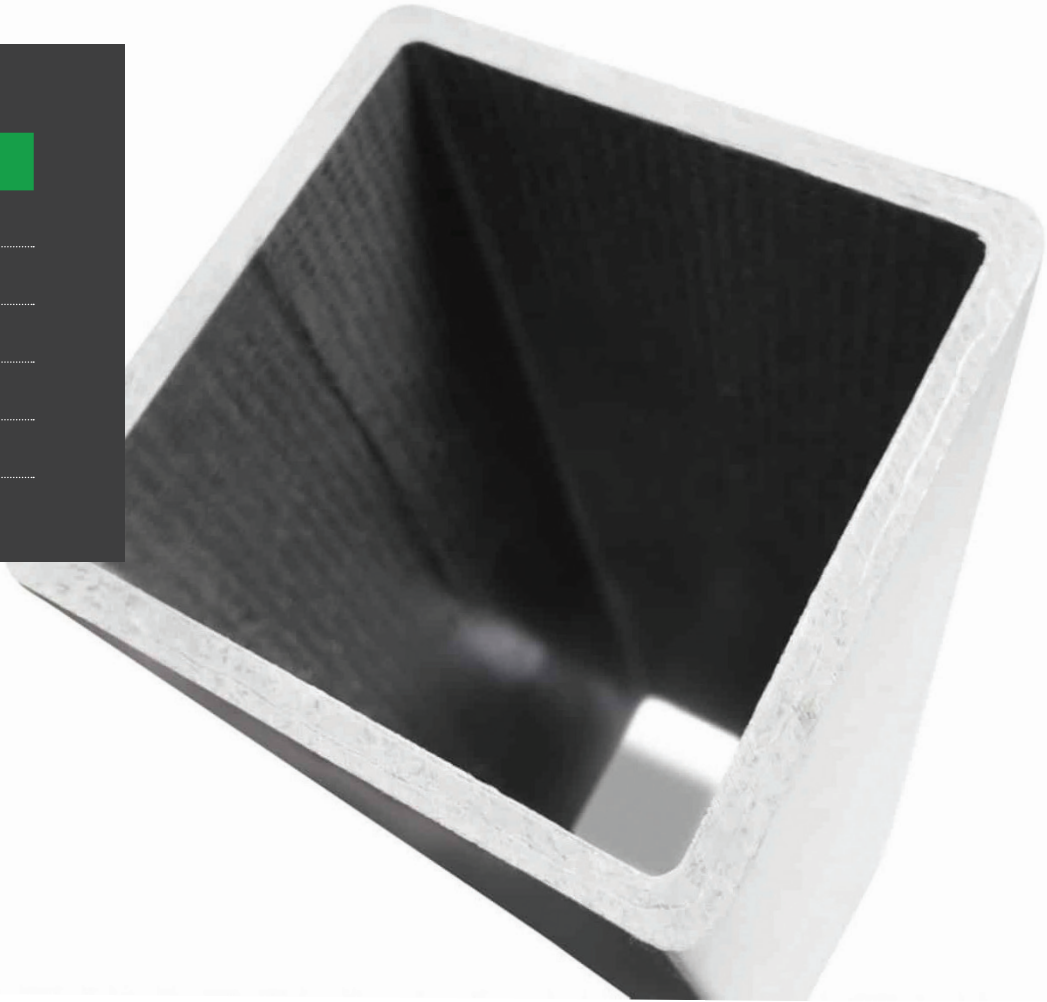


# GRP Palisade Gates >

| Double Gates |           | Single Gates |           |
|--------------|-----------|--------------|-----------|
| Height (m)   | Width (m) | Height (m)   | Width (m) |
| 1800         | 4000      | 1800         | 1000      |
| 2400         | 4000      | 2400         | 1000      |
| 3000         | 4000      | 3000         | 1000      |
| 1800         | 6000      | 1800         | 1200      |
| 2400         | 6000      | 2400         | 1200      |
| 3000         | 6000      | 3000         | 1200      |

## Resin Options

- Fire Retardant to BS476
  - Pt7 Class 1
  - Pt7 Class 2
  - Chemical Resistant
- UV resistant for durability
  - Low toxicity
  - Low smoke
  - Moisture Resistant



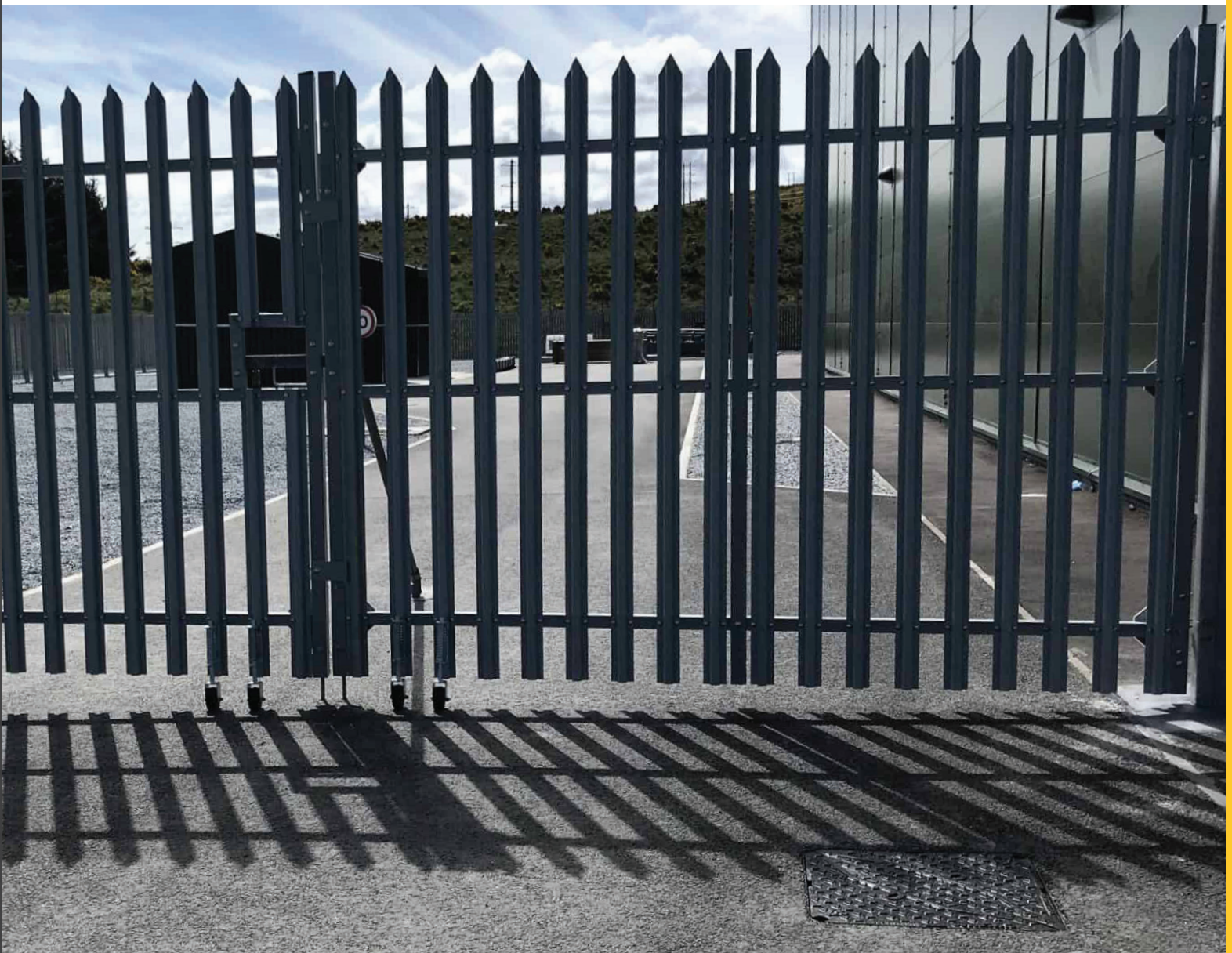
## Accessories

**Hinges**  
Enable smooth and dependable gate movement with ease.

**Latches**  
Offer secure, reliable closures for gate systems.

**Drop Bolt**  
Adds stability and ensures robust locking performance.

**Support Wheels**  
Facilitate effortless movement of heavy, large gates securely.





# GRP Mesh Fencing & Gates

## Standard Panel Options

| Fence Panels |            | Post Lengths |                 |
|--------------|------------|--------------|-----------------|
| Height (mm)  | Width (mm) | Embedded     | Surface Mounted |
| 2000         | 3000       | 2625         | 2000            |
| 2400         | 2000       | 3125         | 2400            |
| 3000         | 3000       | 3925         | 3000            |

## Key Features

- Customisable Sizes
- Lightweight Design
- Non-Conductive
- Radar Transparency

- Electromagnetic Transparency
- Corrosion Resistance
- Exceptional Strength
- Low Maintenance



## Applications

### Machine Guard Fencing

Protects industrial machinery with strong, durable barriers.

### Electrical Enclosures

Non-conductive safety fencing for high-voltage areas.

### EMI-Compatible Fencing

Interference-free fencing for sensitive electronic equipment.

### Platform Safety Fencing

Secures elevated walkways, platforms, and mezzanines.

### Chemical + Harsh Environments

Corrosion-resistant fencing for chemical plants and facilities.

### Radar-Friendly Solutions

Ensures uninterrupted radar signals at sensitive sites.

### Utility Infrastructure

Protects utility areas with reliable, low-maintenance fencing.

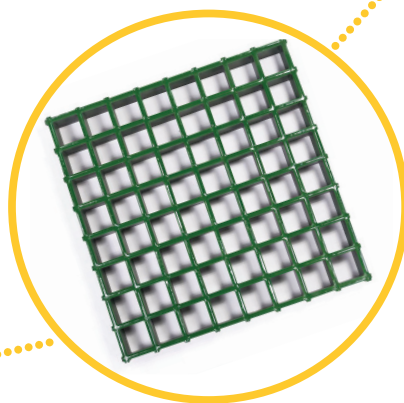
### Customised Panels + Gates

Tailored to meet specific industrial and commercial needs.



Engineered Composites

# GRP MOULDED GRATING



## Built for Strength and Safety

GRP moulded grating and anti-slip flooring deliver exceptional performance in harsh environments. Combining corrosion resistance, impact strength, and minimal maintenance, these lightweight systems ensure reliable safety with anti-slip surfaces. Easy to install without heavy equipment, they provide a durable, cost-effective alternative to galvanised steel.

## Open-Mesh and Solid Top GRP

Open-mesh GRP grating provides ventilation, drainage, and slip resistance, ideal for walkways and platforms. Solid Top GRP grating resists spills, is easy to clean, and handles heavy loads, making it perfect for industrial applications.



### Corrosion Resistance

Withstands harsh environments for long-lasting performance.

### Anti-Slip Surface

Minimises slip hazards, enhancing on-site safety.

### Easy Installation

Lightweight panels simplify and speed up assembly.

### Fire Retardant

Certified to ASTM E 84 for enhanced safety.



# GRP Grating Specifications

| Available Stock Grating Panels |                |                 |              |                   |                   |
|--------------------------------|----------------|-----------------|--------------|-------------------|-------------------|
| Thickness (mm)                 | Mesh Size (mm) | Panel Size (mm) | Colour       | Weight (kg/panel) | Surface           |
| 25                             | 38x38          | 1200x3660       | Grey + Green | 55                | Gritted Anti-Slip |
| 38                             | 38x38          | 1220x3660       | Grey + Green | 85                | Gritted Anti-Slip |
| 38                             | 38x38          | 1000x4000       | Grey         | 76                | Gritted Anti-Slip |

| Expedited Delivery Grating Panels |                |                 |        |                   |                   |
|-----------------------------------|----------------|-----------------|--------|-------------------|-------------------|
| Thickness (mm)                    | Mesh Size (mm) | Panel Size (mm) | Colour | Weight (kg/panel) | Surface           |
| 25                                | 38x38          | 1220x3660       | Yellow | 55                | Gritted Anti-Slip |
| 38                                | 38x38          | 1220x3660       | Yellow | 85                | Gritted Anti-Slip |
| 38                                | 38x38          | 1220x3600       | Green  | 85                | Meniscus          |
| 50                                | 50x50          | 1220x3660       | Grey   | 72                | Gritted Anti-Slip |

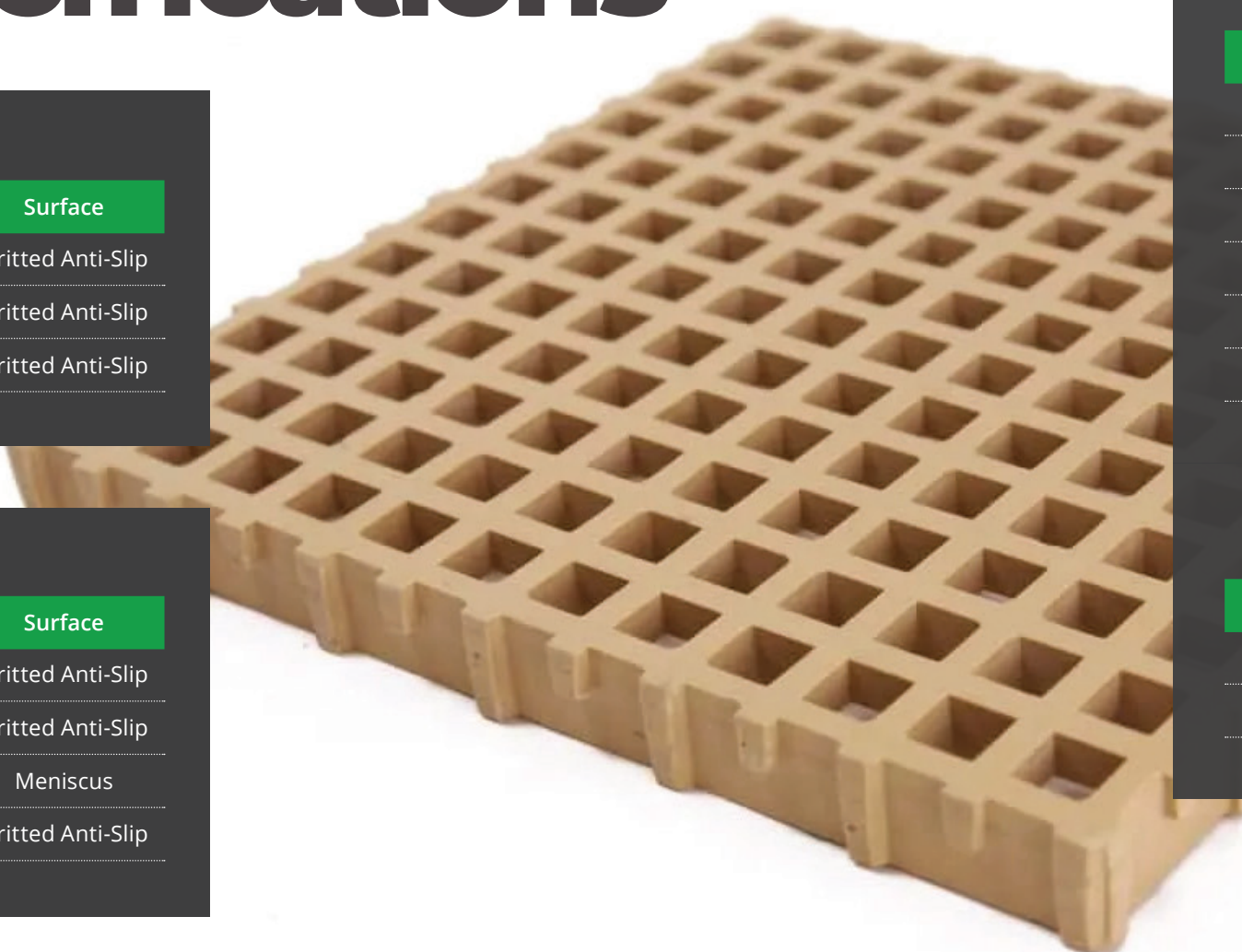
| 38mm x 38mm Mesh<br>with 32mm Open Hole* |                   |                 |
|------------------------------------------|-------------------|-----------------|
| Thickness (mm)                           | Weight (kg/panel) | Panel Size (mm) |
| 25                                       | 55                | 3660x1220       |
| 25                                       | 25                | 2026x1035       |
| 25                                       | 37                | 3017x1035       |
| 38                                       | 85                | 3660x1220       |
| 38                                       | 38                | 2026x1035       |
| 38                                       | 57                | 3017x1035       |

| 50mm x 50mm Mesh<br>with 42mm Open Hole* |                   |                 |
|------------------------------------------|-------------------|-----------------|
| Thickness (mm)                           | Weight (kg/panel) | Panel Size (mm) |
| 50                                       | 90                | 3660x1220       |
| 12                                       | 22.5              | 3660x1220       |

| Mini Mesh Grating<br>14mm x 14mm Mesh<br>with 12mm Open Hole* |                   |                 |
|---------------------------------------------------------------|-------------------|-----------------|
| Thickness (mm)                                                | Weight (kg/panel) | Panel Size (mm) |
| 14                                                            | 50                | 4047x1247       |
| 30                                                            | 84                | 4047x1247       |
| 38                                                            | 119               | 4047x1247       |

| Solid Top Grating<br>50mm x 50mm Mesh<br>with 42mm Open Grid |                   |                 |
|--------------------------------------------------------------|-------------------|-----------------|
| Thickness (mm)                                               | Weight (kg/panel) | Panel Size (mm) |
| 50                                                           | 143               | 3660x1220       |

| Stair Tread Panels<br>38mm x152mm Mesh |                   |                 |
|----------------------------------------|-------------------|-----------------|
| Thickness (mm)                         | Weight (kg/panel) | Panel Size (mm) |
| 38                                     | 35                | 3660x572        |



\* The 'Open Hole' dimensions refer to the clear space between mesh bars.



# GRP Grating Finishes



## Standards & Certifications

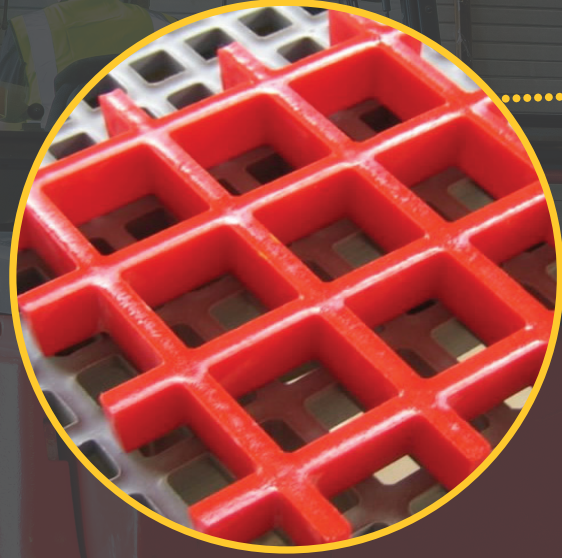
- **Safety Standards:**  
UK and EU standards compliant.
- **Fire Retardant:**  
Certified to ASTM E 84 standards.
- **Access Compliance:**  
BS EN ISO 14122 certified.
- **Flooring Standards:**  
Adheres to BS 4592 regulations.
- **ISO 9001 Certified:**  
Ensures quality and customer satisfaction.
- **RISQS Audited:**  
Certified for railway safety and performance.

## Surface Finishes for GRP Grating

Our GRP grating features two surface finishes – Gritted Anti-Slip and Meniscus – each designed to enhance safety, performance, and suitability for specific applications.

### Gritted Anti-Slip

The gritted finish features coarse grit bonded to the surface, providing exceptional slip resistance. Ideal for wet, oily, or high-traffic areas like industrial walkways and platforms, it ensures safety in high-risk environments by delivering enhanced traction.



### Meniscus

The meniscus finish offers a smooth, curved surface with moderate slip resistance, prioritising easy cleaning and maintenance. Perfect for hygiene-critical environments like food processing or cleanrooms, it combines durability with practical upkeep for demanding industries.

Both surface finishes are expertly designed to meet specific challenges, ensuring GRP grating remains a versatile and reliable solution for a variety of applications.



## Typical Applications

Industrial Flooring

Walkways & Platforms

Trench & Drain Covers

Maritime Decking

Chemical Plants

Train Stations



Engineered Composites

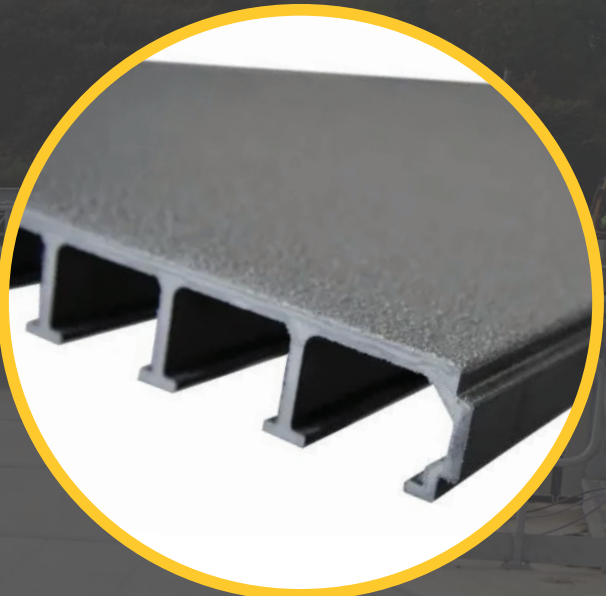
# GRP INTERLOCKING



# FLOORING

## DECK500 GRP Flooring

DECK500 is a durable GRP interlocking flooring system, 500mm wide, with a tongue-and-groove joint for secure, sealable connections. Ideal for harsh environments, it excels in the water industry as odour control covers and water penetration protection for treatment plants, offering a reliable anti-slip surface for industrial use.



## Technical Specifications

The data below is derived from full section modulus measurements in accordance with EN 13706, Annex D.

| UDL Loading        |       |       |      |      |      |
|--------------------|-------|-------|------|------|------|
| Span (mm)          | 750   | 1000  | 1250 | 1500 | 1750 |
| Deflection (L/200) | 3.75  | 5.00  | 6.25 | 7.50 | 8.25 |
| Load (kN/m²)       | 42.73 | 18.03 | 9.23 | 5.34 | 3.36 |

| Centre Point Loading |       |      |      |      |      |
|----------------------|-------|------|------|------|------|
| Span (mm)            | 750   | 1000 | 1250 | 1500 | 1750 |
| Deflection (L/200)   | 3.75  | 5.00 | 6.25 | 7.50 | 8.25 |
| Load (kN/m²)         | 10.02 | 5.63 | 3.61 | 2.50 | 1.84 |

## Key Features

**Robust**  
Built to handle heavy loads with long-term performance.

**Anti-Slip**  
Designed to enhance safety in demanding environments.

**Adaptable**  
Ideal for industrial walkways, mezzanines, and water treatment covers.

**Secure**  
Tongue-and-groove design for a firm, watertight fit.



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# GRP/FRPREBAR



## High-Performance GRP Rebar

Fibre Reinforced Plastic (FRP) rebar is an innovative solution designed for high-strength, long-lasting performance in construction applications. Made from glass fibre and vinyl ester resin, it ensures durability and corrosion resistance, making it a reliable alternative to steel in harsh environments. The advanced design enhances bonding with concrete, delivering superior mechanical grip and extended service life.

### Key Features

#### Reinforced Fibre Core

Comprised of 70% glass fibre by weight, ensuring maximum tensile and structural strength.

#### Vinyl Ester Resin

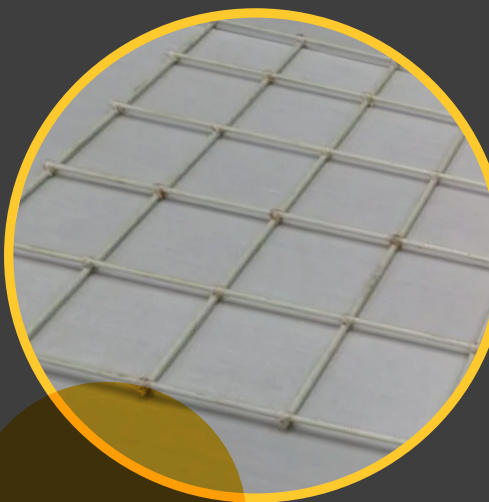
Offers unmatched resistance to corrosive chemicals, ensuring superior long-term durability.

#### Helical Surface Design

Creates a secure mechanical bond with concrete without damaging the core.

#### Proven Longevity

Tested to ensure a 50-year service life under recognised standards.



“

**GRP Rebar is customisable up to 11 meters with helical or sanded finishes.**



GRP/ FPR Rebar  
.....

50 Year  
Service  
Life



GRP/ FPR Rebar Technical Specifications  
.....

| Diameter (mm) | Cross Section (mm <sup>2</sup> ) | Density (g/cm <sup>3</sup> ) | Weight (g/m) | Ultimate Tensile (kN) | Ultimate Tensile Strength (Mpa) | Ultimate Shear Strength (Mpa) | E-modulus (GPa) |
|---------------|----------------------------------|------------------------------|--------------|-----------------------|---------------------------------|-------------------------------|-----------------|
| 3             | 7                                | 2.2                          | 18           | 13.5                  | 1900                            | >150                          | >40             |
| 4             | 12                               | 2.2                          | 32           | 18                    | 1500                            | >150                          | >40             |
| 6             | 28                               | 2.2                          | 51           | 36                    | 1280                            | >150                          | >40             |
| 8             | 50                               | 2.2                          | 98           | 54                    | 1080                            | >150                          | >40             |
| 10            | 73                               | 2.2                          | 150          | 72                    | 980                             | >150                          | >40             |
| 12            | 103                              | 2.1                          | 210          | 99                    | 870                             | >150                          | >40             |
| 14            | 134                              | 2.1                          | 275          | 117                   | 764                             | >150                          | >40             |
| 16            | 180                              | 2.1                          | 388          | 149                   | 752                             | >150                          | >40             |
| 18            | 248                              | 2.1                          | 485          | 189                   | 744                             | >150                          | >40             |
| 20            | 278                              | 2.1                          | 570          | 225                   | 716                             | >150                          | >40             |
| 22            | 355                              | 2.1                          | 700          | 270                   | 695                             | >150                          | >40             |
| 25            | 478                              | 2.1                          | 970          | 342                   | 675                             | >150                          | >40             |
| 28            | 590                              | 2.1                          | 1195         | 432                   | 702                             | >150                          | >40             |
| 30            | 671                              | 2.1                          | 1350         | 450                   | 637                             | >150                          | >40             |
| 32            | 740                              | 2.1                          | 1520         | 504                   | 626                             | >150                          | >40             |
| 34            | 857                              | 2.1                          | 1800         | 540                   | 595                             | >150                          | >40             |
| 36            | 961                              | 2.1                          | 2044         | 585                   | 575                             | >150                          | >40             |
| 40            | 1190                             | 2.1                          | 2340         | 640                   | 509                             | >150                          | >40             |



GRP vs Traditional Materials

Material Comparison: Performance, Maintenance and Cost

|                              | GRP                                                                 | Steel                                                        | Aluminium                                                    | Timber                                                       |
|------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| Corrosion Resistance         | Excellent Resistance: Performs well in harsh chemical environments. | Low Resistance: Prone to rust and corrosion; needs coatings. | Low Resistance: Requires anodising or protective coatings.   | Low Resistance: Warps and rots; needs regular treatment.     |
| Weight                       | Lightweight: Up to 80% lighter than steel and 30% than aluminium.   | Extremely Heavy: Needs heavy lifting for manoeuvring.        | Lightweight: One-third the weight of steel.                  | Variable: Dependent on size and application.                 |
| Slip Resistance for Flooring | Extremely High: Grit finish ensures safety in wet/oily areas.       | Little to None: Major safety risk in slippery conditions.    | Little to None: Slippery, especially when wet.               | Limited: Requires coatings for reliable slip resistance.     |
| Conductivity                 | Non-Conductive: No earthing required.                               | Conductive: Earthing is essential.                           | Conductive: Requires earthing for safety.                    | Non-Conductive: Naturally insulated material.                |
| Strength                     | High Strength-to-Weight Ratio: Stronger than steel for its weight.  | High Strength: Relies on heavy mass for structural support.  | Low Strength: Not suitable for heavy loads.                  | Size Dependent: Large sections needed for strength.          |
| Impact Resistance            | High Resistance: Maintains shape under impact.                      | Medium to Low: Deforms under heavy force.                    | Low Resistance: Bends easily under pressure.                 | Moderate: Can deform under impact.                           |
| Fabrication                  | Easily Fabricated: Cut with simple tools; lightweight to handle.    | Complex: Requires welding and heavy tools.                   | Complex: Needs welding, brazing, or joining.                 | Easy Fabrication: Shaped using hand tools.                   |
| Maintenance                  | Maintenance-Free: 50-year design life.                              | High Maintenance: Rust, damage, and costly repairs.          | Frequent Maintenance: Needs repairs and repainting.          | High Maintenance: Prone to decay, rot, and insect damage.    |
| Cost                         | Long-Term Savings: Minimal maintenance for lower lifecycle costs.   | High Lifecycle Cost: Cheap initially, but costly long-term.  | High Lifecycle Cost: Low initial cost, frequent maintenance. | High Lifecycle Cost: Needs regular treatment and repainting. |
| Ergonomics                   | Good Comfort: Slight give reduces worker fatigue.                   | Poor Comfort: Rigid; causes worker fatigue.                  | None: Provides no ergonomic benefit.                         | Good Comfort: Naturally soft underfoot.                      |
| EMI/RFI Transparency         | Transparent: Does not block EMI/RFI signals.                        | Interferes: Blocks signals, causing disruptions.             | Interferes: Blocks EMI/RFI transmissions.                    | Transparent: Allows seamless EMI/RFI transmissions.          |
| Aesthetics                   | Colour Added: Fade-resistant and maintenance-free.                  | Painted or Dyed: Requires repainting for durability.         | Painted or Dyed: Needs repainting to maintain appearance.    | Primed and Painted: Regular repainting is essential.         |





### MARKET EXPERTISE

Our industry knowledge enables us to deliver tailored GRP and FRP solutions that meet diverse sector demands. We take pride in providing innovative, durable, and sustainable products, ensuring long-term performance and reliability for every application.



### GLOBAL PRESENCE

From our headquarters in Chester, UK, Engineered Composites Ltd is a trusted partner for high-quality GRP and FRP pultruded composite solutions. With decades of experience, we've built a reputation for excellence across the UK, Europe, the USA, South Africa and China.



### TRUSTED PARTNERSHIPS

If you're interested in exploring supply partnerships or need our expertise in other regions, we invite you to contact us. With a commitment to quality and collaboration, we provide reliable GRP and FRP solutions worldwide.



# Our Global Reach

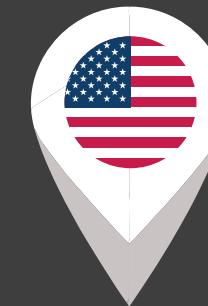
**Innovation drives our success, delivering GRP solutions that set new standards through advanced technology and sustainability.**



**UNITED KINGDOM**



**EUROPE**



**USA**



**SOUTH AFRICA**



**CHINA**





## Trusting Partnerships .....

# What Clients Say

**Our dedication to delivering high-quality GRP solutions has earned the trust of industry leaders across a wide range of sectors.**

Engineered Composites delivers reliable, high-quality products backed by strong client trust. Our partnerships are built on innovation and excellence, providing tailored solutions that exceed expectations and foster long-term success across diverse industries.



**WILL AUSTIN**  
HARVIGLASS  
.....

We've been using Engineered Composites services for over 10 years and long may it continue. Professional at all times and no issues with quality or prices. Great range and availability, would highly recommend them.



**KENNY GRIEVES**  
KGSS  
.....

Fantastic company to deal with, they always respond really quickly, have incredibly fast despatch times and provide consistently high quality, innovative GRP products. As a company, we couldn't ask for more, thanks Engineered Composites.



**SEE MORE REVIEWS**  
FROM OUR SATISFIED CLIENTS  
.....

Discover how Engineered Composites Ltd supports businesses with high-quality GRP and FRP solutions. Scan the QR code to explore client reviews, success stories, and industry insights on LinkedIn.



Discover  
the GRP  
Advantage



# Key Info

## Q Difference between GRP and FRP

A GRP (Glass Reinforced Plastic) and FRP (Fibre Reinforced Plastic) are often used interchangeably. Both refer to composite materials reinforced with fibres, but GRP specifically uses glass fibres, making it lightweight, strong, and resistant to corrosion.

## Q What is the Composition of GRP?

A GRP is composed of high-strength glass fibres embedded in a resin matrix, such as polyester or vinyl ester resin. The resin provides durability and chemical resistance, while the glass fibres deliver exceptional tensile strength and rigidity.

## Q What is GRP's Design Life?

A GRP products have an expected design life of up to 50 years when used in accordance with recognised standards. They are resistant to corrosion, chemicals, and environmental wear, ensuring long-term performance with minimal maintenance.

## Q How Easy is GRP to Install?

A GRP products are lightweight, making them easy to handle and install without heavy lifting equipment. Standard products are stocked and ready for delivery, while bespoke solutions can be manufactured and delivered promptly to meet project needs.

## Q Do you offer Bespoke Orders?

A Yes, bespoke GRP products can be tailored to meet specific dimensions, colours, and finishes. Lead times vary depending on order complexity, but we aim for efficient production and delivery to minimise project downtime.

## Q What are GRP's Key Benefits?

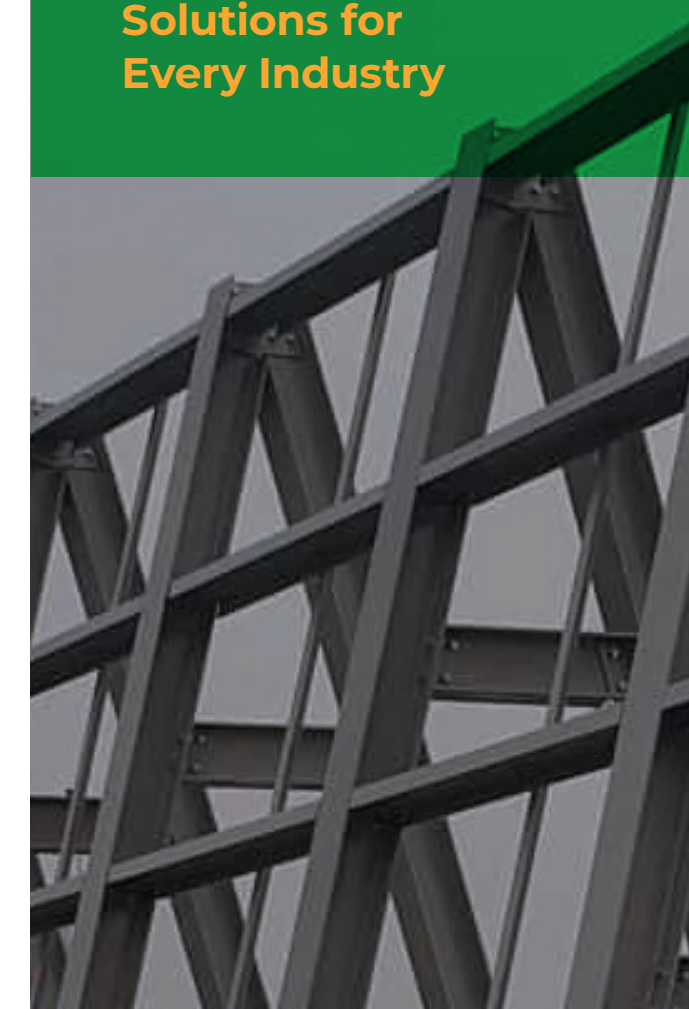
A GRP surpasses traditional materials like steel, aluminium, and timber with its high corrosion resistance, making it ideal for harsh environments. Its exceptional strength-to-weight ratio ensures durability without added bulk, while its low maintenance requirements and long design life make it a cost-effective choice. Additionally, GRP's non-conductive and slip-resistant properties enhance safety across various applications.

## Q What Are GRP's Common Applications?

A GRP is widely used across industries, including construction, transportation, utilities, and marine sectors. Its versatility makes it ideal for walkways, platforms, fencing, handrails, water treatment facilities, and industrial applications.



**Tailored GRP  
Solutions for  
Every Industry**





# Get In Touch With Us



Reach out today for expert advice and bespoke GRP solutions tailored to meet your specific project requirements and industry standards.



+44 (0) 1244 676000



[engineered-composites.co.uk](https://engineered-composites.co.uk)  
[info@engineered-composites.co.uk](mailto:info@engineered-composites.co.uk)



Unit B4, Borders 2 Industrial Park,  
River Lane, Saltney, Chester, CH4 8RJ