



Rail Sector Product Guide



Composite products including Station Platforms, Ballast Retention, Walkways and many more designed to replace wood, metal and concrete.

...designed for the future

**ACCRUE CONSTRUCTION
MATERIALS INC**

Industrial Rail Marine Landscaping Architectural



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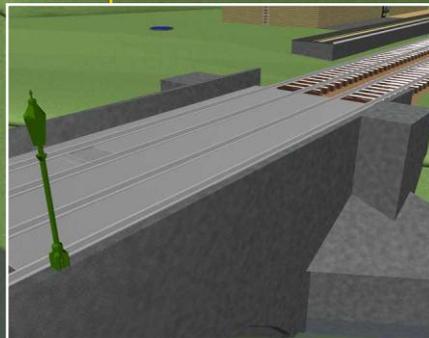
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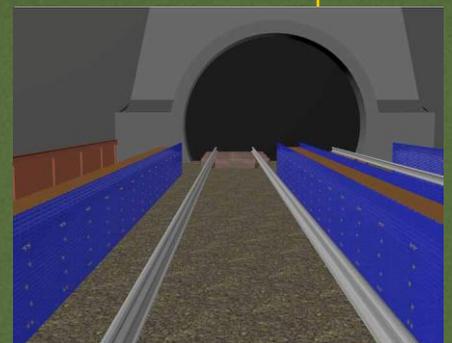
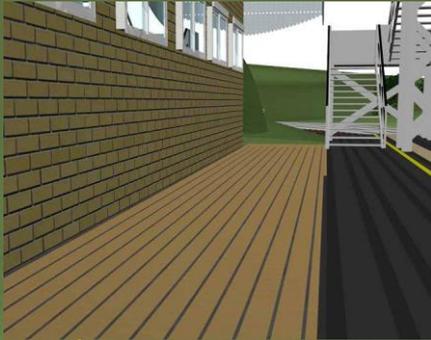


Structural Walkways PAGE 19



Station Platforms PAGE 3





Introduction

The company is a leading global supplier of composite products for flooring, structures and façades, ideal for rail, industrial, marine, landscaping and architectural applications, many of which are hugely eco-friendly.

Incorporated in 1996, it has since supplied a wide range of blue chip organisations with products from the standard range and also with bespoke project solutions.



Dura Platform

The UK headquarters is dedicated to innovation to ensure that it is always at the forefront of composite material technology.

The growing team have extensive knowledge and practical experience of fibreglass reinforced plastic, timber composites and other related emerging materials.

The range of products on offer is vast, from floor walkway grating, through decking, cladding and hand railing to lift risers or trench covers.

All products offer customers a low life cycle cost thanks to their long life expectancy and also low maintenance requirements. All products are sold directly to a wide variety of customers, from a global contractor to a local landscaper. It also sells through a well-established global distribution network.

Vision

To be revered as experts and inventors supplying breakthrough product solutions when compared to traditional materials in scalable project applications anywhere in the world using composite technology.



Open 16mm Dura Plate Ballast Retention System

Mission Statement

Our goal is to provide the best value, ecological composite solutions by really understanding customer needs globally in the industrial, rail, marine, landscaping & architectural sectors and making customers feel great about choosing us.

This is to be done through commercialising pioneering solutions based around composite materials that solve problems on a wide scale, providing lower life cycle costs to the end user.

The fuel for the company is provided by a happy, motivated and empowered team that want to be the best in their profession through constant learning and achievement of stretching life goals.

FRP Composite Technology

Composite products are now becoming more widely specified as the advantages of fibreglass reinforced plastic (FRP) materials in particular are recognized by clients and contractors alike. Whilst traditional materials will always have their place, as the emphasis on speed and durability increase, FRP engineered composite products will become more and more mainstream for specific applications.

We will consider the reasons that many contractors are already choosing FRP for rail projects – quality suppliers can provide mesh structural flooring systems rated to high load capacities that will not rot, fade or warp, never need painting, can be worked on-site and are light enough to be man handled as required and can also offer one of the highest levels of slip resistances ever measured for a walking surface. Further, the material is non-sparking, non-conductive, fire resistant and workable on-site which has contributed to it being used extensively for HCE Ballast Retention System projects with game changing results. Other applications are endless including structural railway platforms that allow drainage, free spanning pedestrian bridge walkways and rapid install modular embankment access stairways.

Lower Maintenance -

Dura products do not require painting and are unaffected by a wide range of chemicals¹, which would otherwise cause degradation to steel, aluminium or wood, therefore providing a cost-effective, low-maintenance alternative.

Adaptable - In addition to our wide range of stock, the choice of resins combined with production processes mean we have the potential to adapt and design new products to meet individual customer requirements.

Dura products are also **non-conductive** and **non-sparking** bringing a host of practical and safety advantages to the table.

Standard Resin Systems

Isophthalic Polyester

A high quality industrial grade, with additional chemical resistance¹ and fire retardant². This is standard across a range of products.

Optional Resin Systems

Orthophthalic Polyester

A general purpose economic resin with good corrosion and chemical resistance¹.

Vinylester**

Enhanced chemical resistance, higher operating temperature and increased fatigue resistance.

Phenolic**

Enhanced fire and smoke properties³, for use in areas where fire resistance, low smoke and toxicity are important factors, such as rail tunnels and off-shore platforms.

¹ Please contact our sales team for further information on our Chemical Resistance guide.

² Fire retardant and self-extinguishing with spread of flame to ASTM E-84 Class 1, 25 or less and BS476 Pt7 Class 2.

³ BS476 Class 0, bs6853 d8.4

** Subject to enquiry



Dura Ballast Retention

Station Platforms

Dura Platform

Dura Platforms are an excellent choice for any platforms applications that are affected by possession time and plant access and are being used more frequently over traditional materials such as concrete and Tarmac. Dura have a wide selection of FRP (fibreglass reinforced plastic) platforms that can cater for both refurbishment or new build projects. The Moulded platform panel systems start at 30mm thick with the option of increasing the thickness depending on the project according to the load and span requirements.

The Pultruded platforms are thicker and can cater for larger spans thereby reducing the substructure work required and are precision engineered to keep the overall weight down. This makes it easier for operatives to handle manually, speeding installation times and thus reducing possessions times. In fact, through careful planning, there is no need to close the station whilst works are carried out in stages. A unique concealed fixing system has been developed to provide a safe and attractive pedestrian friendly surface.

Applications:

- Platforms
- Walkways
- Islands
- Ramps
- Bridges
- Maintenance Bays
- Wash Bays
- Work Stations

Features:

- Corrosion Resistant
- Anti-Slip / Fire Retardant
- UV Stable
- Low Weight
- Non Conductive
- Load Tested
- Long Lasting
- 1-In-40 Fall

Benefits:

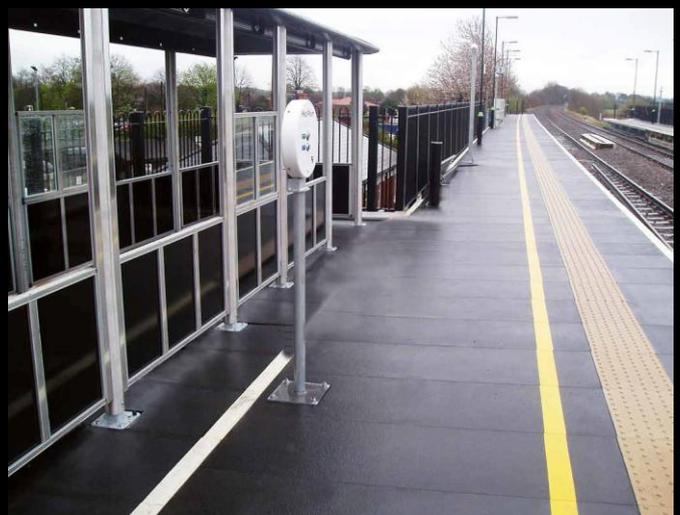
- No Painting / Staining
- Designed To NR Specification
- Retaining Colour And Strength
- Ideal For Manual Handling
- Use In High Voltage, Anti-Static Areas
- Bs6339-1 Heavy Duty Approved
- 25 Year Warranty / 50yr Life Span
- Allows For Suitable Drainage

Product Range:

Moulded System



Pultruded System



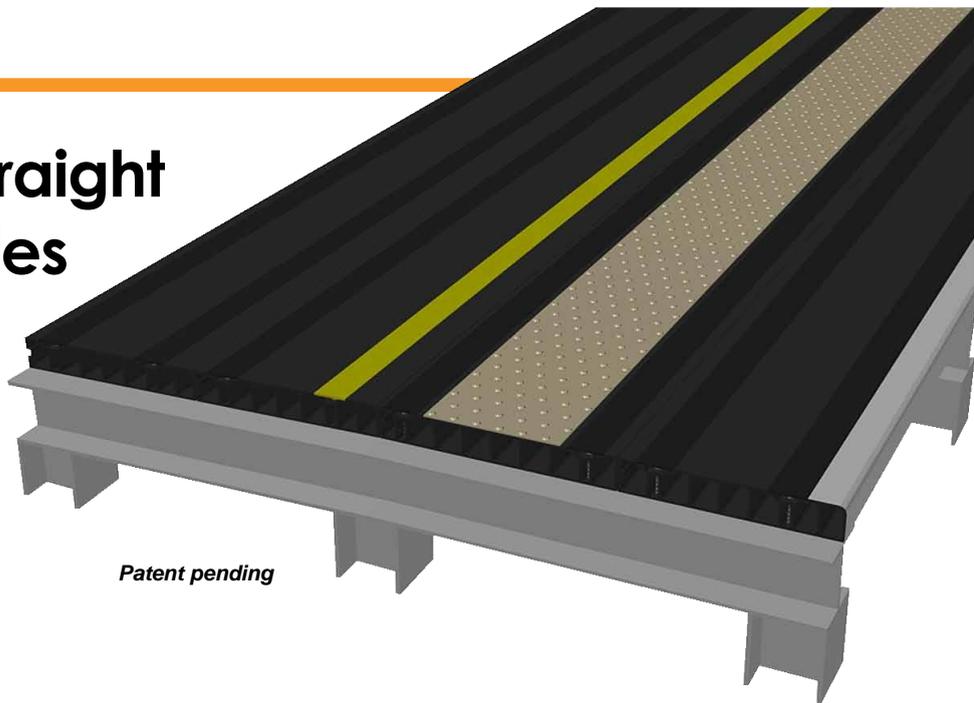
Easy to install...straight or curved modules

Benefits of Pultrusion

The fibreglass pultrusion process provides exceptional strength, toughness and consistency. Pultrusions offer a number of advantages over traditional materials such as steel, aluminium and timber and their use is increasing across a wide range of applications and industries. The almost infinite variety of possible profiles allows a high degree of design.

Why Choose in place of concrete?

Concrete is an extremely strong material, and performs extremely well in compression. However related to this principal quality is concrete's main drawback - namely its weight. Even small slabs can be difficult, if not impossible, to lift by hand, meaning jobs such as fitting concrete trench covers will require a lot of time significant manpower (if not heavy machinery) - all of which can prove costly. What's more, difficulty moving slabs in and out of position will also make maintenance



and routine inspections unnecessarily problematic. Further still, if a load limit is exceeded for some reason, concrete may crack - something that will often lead to a whole site being closed to vehicles because of an inability to guarantee their safety.

Fast & unique fixings system with quick installation times.



HCE Inspection Systems

Dura Ballast Retention

Renowned for their robustness coming as a result of a rigorous testing regime, **Dura Ballast Retention** systems are highly engineered and highly innovative solutions for any type of Ballast Retention, most commonly to allow inspection of Hidden Critical Element (HCE) projects.

Form 3 Approved and using advanced composite technology all various systems have proved time and time again to significantly reduce the on-site real time, allowing for a faster project turn around in comparison to using traditional materials.

A patented and modular universal web stiffener has been introduced to allow real world workability and to shorten supply lead times as a result of reduced componentry. These are just two elements which have been key to minimising the risk of potential problems and dreaded last minute delays.

Applications:

- Hidden Critical Elements (HCE)
- Retention Requirements
- Lockable Hatch Access Points
- New / Old Bridge Structures
- Upgrading Traditional Materials

Features:

- High Load Capability
- Low Weight
- Easy Access Lids/ Hatches
- Rapid Installation
- Fast Bridge Package Delivery

Benefits:

- Network Rail, Form 3 Approved
- Ideal For Manual Handling
- Allows For Quick Inspections Of HCE
- Reduces Track Time
- Suit Last Minute Possessions

Product Range:

Closed 50mm & Grating Lid



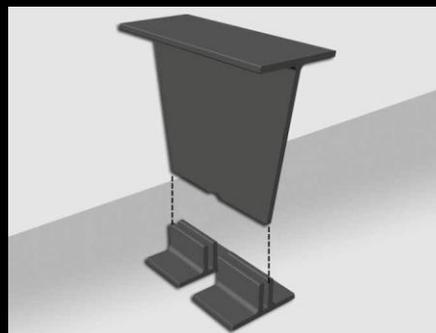
Lids only



Open 16mm Plate System



Modular Web Stiffener



Closed System with Hatches



Hatches



Closed 50mm Dura Grating System: Form 3 Approved



The Fabricated 50mm Grating Web Stiffener system is “The Original Web Stiffener” design with form 3 approval. This system comprises of FRP Gratings with attached Angles and unique Anti Compression Systems. For inspection this system incorporates open mesh lid with 42mm apertures.

This form 3 approved Closed Ballast Board System incorporates the “Type 40 Solid Ballast Boards”. Due to its solid construction we offer a Open Mesh Top Lid system so HCE elements can be inspected easily (Left).

If corrugation is needed the bottom boards can be pre cut by Dura or on-site by contractors. On-site cutting requires jig saw/angle grinder only and is easily workable. Easy face fix system available.

Open 16mm Dura Plate System, no Lid

The Fabricated 16mm FRP Plate and Angle web stiffener system was is a Form 3 Approved System. The web stiffener system its self comprises of FRP Profiles bonded and bolted together. Developed to reduce components, weight and enhance strength it improves install time on-site

and allows easy modification if required. With less components it is easier for all parties quoting, purchasing, fabricating, installing etc to work with.

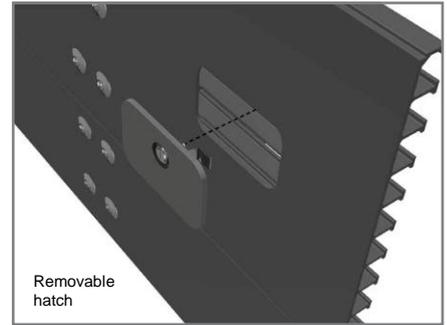
Form 3 approved, Dura Grating Open Ballast Retention Board System consists of open mesh Pultruded Dura Gratings. With its 21.6mm apertures there is no need for inspection hatches

or lids as HCE elements are easily seen through the gratings (Below).

If corrugation is needed then 50mm grating is incorporated (Bottom left). Corrugation can be cut by Dura on-site. On-site cutting requires jigsaw & angle grinder only. Easy face fix system available.



Closed System with Inspection Hatches, no lid



The Form 3 approved Type 40 Closed Ballast Board Retention System consists of, Type 40 Pultruded Dura Slab only, with no intermediate web stiffeners for spans less than 1200mm.

Due to its solid construction we offer a lockable hatch system so HCE elements can be easily inspected.

If corrugation is needed the bottom boards can be pre cut by Dura / on-site by contractors. On-site cutting requires jig saw/angle grinder only. Easy face fix system available.

Lids only

For applications when full systems are not needed, where the requirement only calls for lids or extensions onto existing ballast retention systems, we have supplied 2No systems so far.

Pultruded Grating Lids with a 21.6mm open aperture (Left) or standard Grating Lids with a 42x42mm open aperture (Below).

38mm Pultruded lid



Universal Modular Web Stiffener: Form 3 Approved



Form 3 approved, specifically developed for HCE works. The Modular Web Stiffener System is the latest in highly engineered composite technology. Comprising of a unique 2No part pultrusion system reducing components and weight even further but maintaining the required strength. The reduction in the number of components and weight verses alternatives further improves install time and workability on-site.

Easier and Faster to Install On-site

By significantly reducing the weight and by bonding in the factory, it has not only increased our speed of delivery but has also improved installation time. Based on real site feedback, not only is it easier to handle but the new design also allows easier on-site adjustments.

Improved Fabrication Lead-times

The average bridge package currently takes 2 weeks to fabricate, the design allows the same package to be produced in 2-3 days. As well as investing in the new tooling we have also added significant new machinery including bespoke cutting and bonding equipment to enable this huge speed improvement.

High Strength to Weight Ratio

The design has been created to be a two-part Pultrusion with an advanced glass and roving system. This hi-tech precisioned engineering allows a significant weight saving over current designs whilst retaining a huge safety factor.

With the Modular Web Stiffener System it means that we can deliver urgent materials to coincide with last minute possession or line blockages which can be critical in the real world, making it the ideal choice over current intermediate web stiffeners on the market.

	Closed 50mm Dura Grating System	Open 16mm Dura Plate System	Universal Modular Web Stiffener
Lead Time: (based on 200No)	2 Weeks	2 Weeks	2-3 Days
Number of Components: (Approx)	17	11	2
Install time:	Fast	Fast	Ultra Fast
On-Site workability	Great	Okay	Brilliant
Strength / Approval	Form 3 Approved	Form 3 Approved	Form 3 Approved
Approx Handling Weight (Based on 1mx300mm)	14kg	23kg	16kg
Dura Pre-Fabrication Service offered:	No	Yes	Yes
Approx Price for Pre-Fab Service per web stiffener	£ n/a	£35	£15

Structural Beam Sections

Dura Profiles

Dura Profiles comprises of a range of FRP sections made using pultruded technology that has a range of applications typically to replace steel or wood. Weighing around 50% less than steel, Dura Profile offers equivalent performance for considerably less weight. This results in major cost savings due to more economical transportation, handling and on-site fitting. Supplied as single profiles, flat pack or pre-fabricated structures anywhere in the world, Dura Profile is fast becoming the material of choice for work platforms, ladders, hand-railing, cable trays, flow sub-structures and much, much more.

Applications:

- Work / Public Platforms
- Sub Floor Platforms
- Bridge Decking / Structures
- Ladders / Stair Cases
- Cable Trays
- Handrailing

Features:

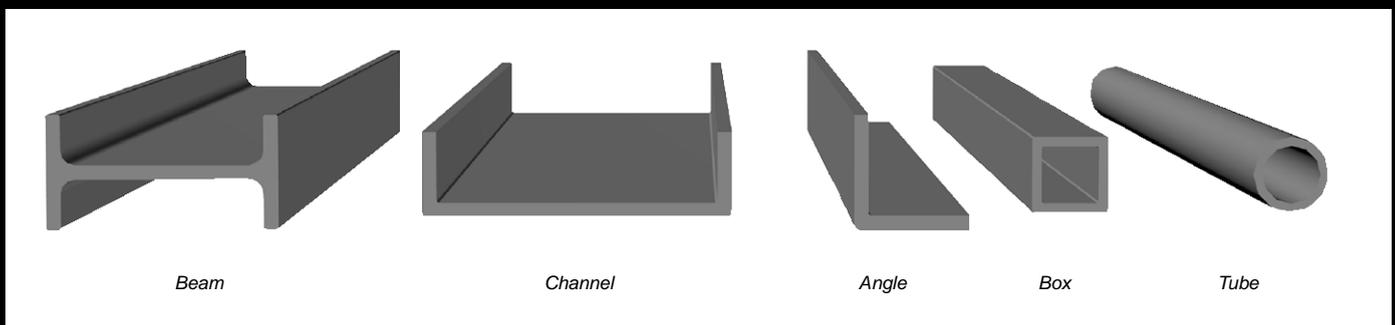
- Corrosion Resistant
- High Strength / Low Weight
- Non Conductive
- Fire Resistant
- UV Resistant
- 25 Yr Warranty / 50 Yr Life Span

Benefits:

- Suitable For Harsh Environments
- Ideal For Manual Handling
- Suitable For High Voltage Areas
- Suitable For Fire Escapes
- No Painting
- Fit and Forget

Standard Range:

Dura Profiles are stocked in various sizes in the shapes shown above and produced using Isophthalic Polyester resins with reinforcements for resistance to harsh environments.



Custom Range:

A wide range of alternative profiles are available by special order to provide cost effective, lightweight solutions for virtually every common application and project, with reasonable lead times.

Custom profile shapes can be produced to meet strict specification, dimension and performance requirements for items such as cable trays, rail point anti-freeze protection and trough lids.



Fabrication Methods

Fabrication methods used with conventional materials can also be used with Dura Profile. The most common form of connections are made by mechanical fasteners. Bonded joints are also an option and selection of the appropriate method will depend on the:

- Distribution of loads within the assembled structure.
- Necessity to disassemble the structure components at a later stage.
- The environmental conditions during fabrication
- The environment in which the assembled structure will be used.

Bolted connections

Bolted connections are the most common method of jointing Dura Profile. Stainless steel (or galvanised) nuts and bolts are used, with washers larger than usual to reduce local compressive stresses. It is good practice for the bolt to be a tight fit in the hole as this substantially reduces local stresses. It is also important that the bolt shank length (un-threaded) is sufficient to avoid threaded sections within the thickness of the joint materials.



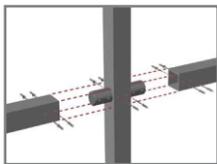
Typical bolt separation distances are:

- Bolt dia x 3 from **end of profile**/x 2.5 from **edge of profile**/x 5 bolt **centre to centre**
- In certain circumstances, FRP nuts, bolts and washers can be specified to suit aggressive environments or for electrical isolation.
- Due to the transverse mechanical properties of Pultruded profiles, the following connections should be avoided.

Rivets

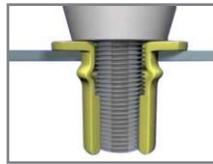
Stainless steel and aluminium riveting is a very effective method of joining Dura Profiles.

Pop-rivets are commonly used in conjunction with back washers to help distribute and minimize local stresses. The assembly should be designed so that the rivets are not in tension.



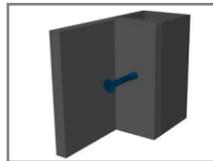
Captive Inserts

Captive Inserts are a fast, blind fixing system suitable for use with all materials. They are of particular use when there is no reverse access and can be installed at any stage of fabrication.



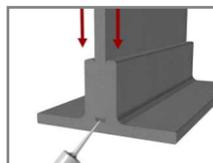
Screw Connections

Self-tapping screws can be used successfully in many applications involving mechanical connections when high-strength fasteners are not required. Self-tapping screws may also be used in combination with adhesives.



Bonded Joints & Preparation

Structural adhesives distribute stress more evenly and are used successfully to join Dura Profile and for sealing joints and exposed surfaces. Exceptional bonds can be obtained as long as the joint is designed to avoid excessive peeling stresses, the surfaces are properly prepared and the correct adhesive is used. Epoxies and toughened acrylics are suitable for use with Dura Profiles.



Preparation

To achieve an optimum bond, the surfaces must be degreased with a suitable solvent. The bonding areas must be abraded until the surface gloss is removed then cleaned of dust and degreased again. The adhesive should be mixed and applied according to the manufacture's recommendations. The bond area should be clamped or mechanically fastened to maintain bond pressure and to ensure that there is no movement until the adhesive has fully cured.

Assembly Methods

Almost all assembly methods used for wood, aluminium, steel or other materials can be adopted to assemble Dura Profiles. The following techniques should be followed:

- Router bits and saw blades should be diamond-coated.
- Carbide tipped drill bits. Speeds should take whole size and thickness into consideration.
- Counter support is necessary when drilling hollow profiles.
- A medium course grinding wheel is preferable to the finer grades.
- 'Lag' screws/bolts are not recommended for fastening Dura Profile.
- Punches work better with a slight shear edge.
- Solvents, such as methylene chloride or acetone should be used to prepare surface for bonding.

It is good practice to seal all exposed edges with a suitable resin sealant.

Work Platforms



Self standing work platform

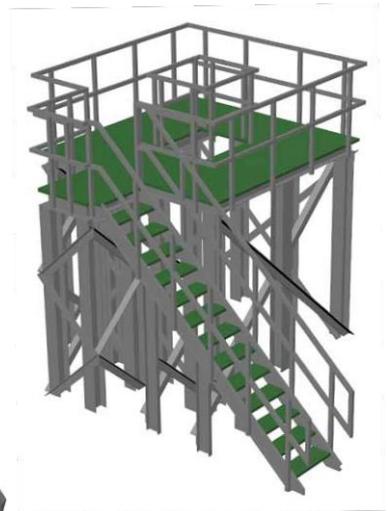
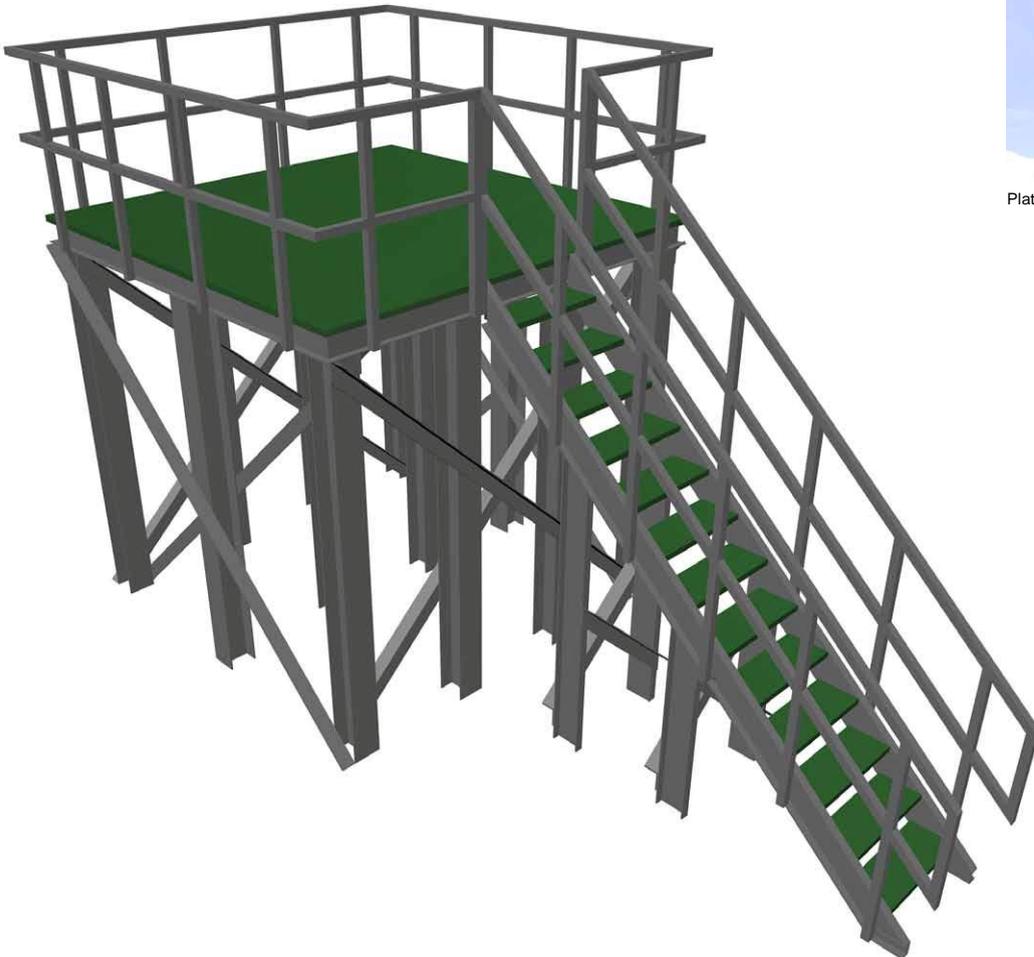
Ideal choice in harsh and hard to access environments



Access Platform and safety handrailing



Platform for maintenance access



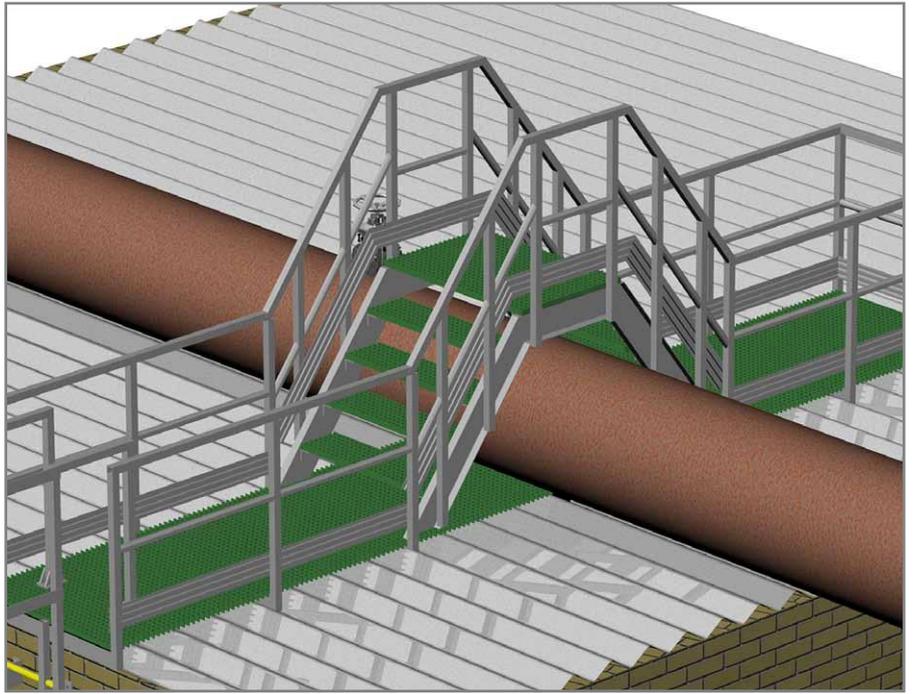
Up & Over Walkways



Up and over structure with safety handrailing



Up and over stairs with grating steps



Roof access walkway

Roof Safety Solutions

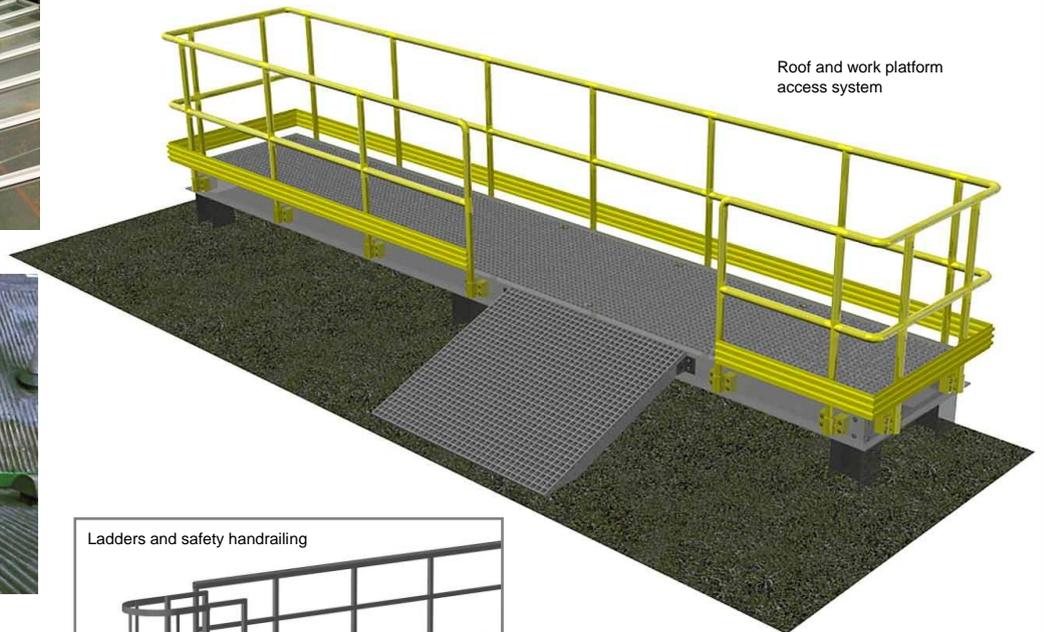
Dura Profile is fast becoming the material of choice for work platforms, ladders, handrailing, cable trays and flow sub-structures



Using Dura Profile supports



Dura Grating walkway and handrailing



Roof and work platform access system



Ladders and safety handrailing

Pedestrian Bridge Structures

Dura Bridge

As many existing concrete and steel footbridges reach the end of their design life, careful consideration must be given to what to how to replace them. Dura Composites can supply highly innovative FRP Pedestrian Bridges that incorporate a number of ground breaking features designed to reduce project costs and installation time. Although Dura Bridge is designed to far exceed its intended load, it is also very lightweight meaning that walkway sections can be fixed into position without the need for major plant and machinery thus reducing possession time and equipment hire costs. Foundations and temporary works requirements will be drastically reduced and on-going maintenance is not required as FRP will not rot, corrode or even lose colour throughout its design life. Dura Bridge can also be designed in modules meaning that even bespoke application lead-times and costs are well controlled.

Applications

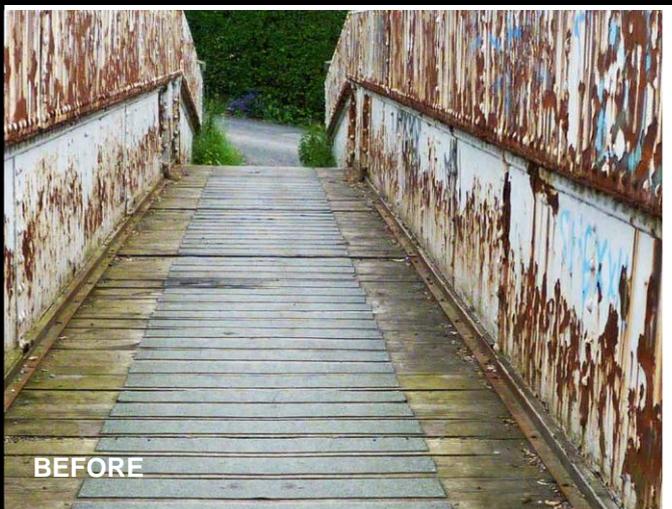
- Rail Crossing
- Water Crossing
- Road Crossing
- Pedestrian Crossing/Access
- Cattle Crossing

Features

- Non Corrosive
- Design Flexibility
- Pre-Fabrication Service
- Up To 18 Meter Spans
- Modular Construction

Benefits

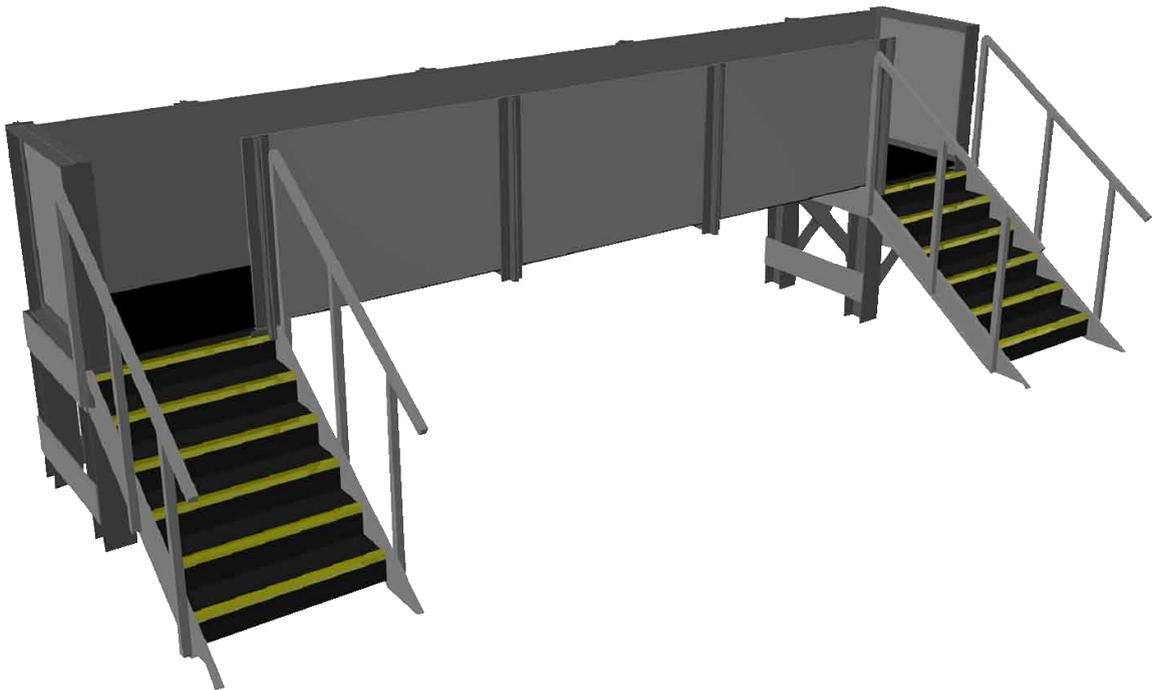
- Low Maintenance
- Mimic Traditional Styles
- Rapid Install / Short Possessions
- Cost Effective
- Customisation Simple



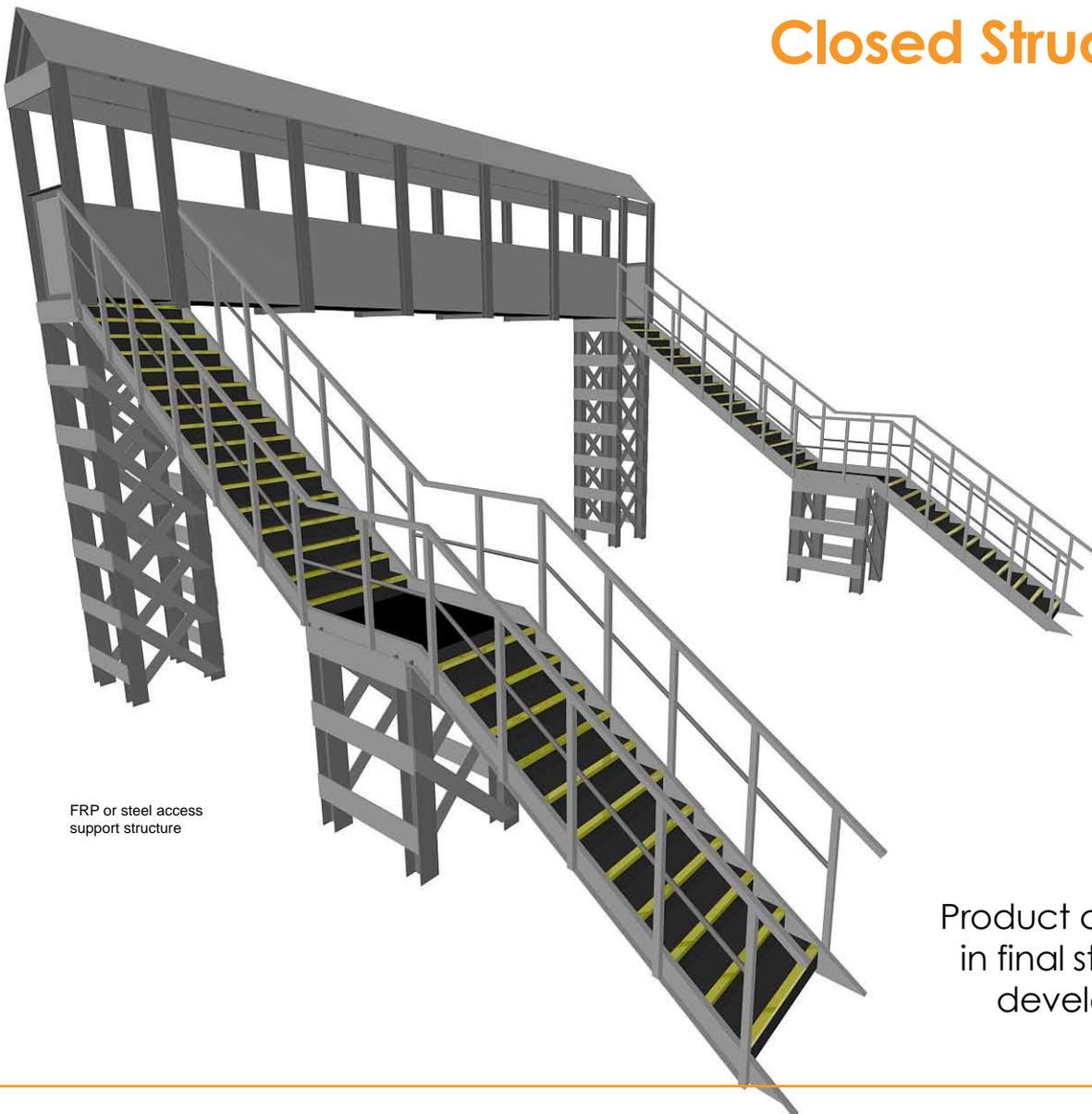
Significant savings are possible due to minimal time and labour required on-site during installation and reduction in components used.



Open Structure



Closed Structure



FRP or steel access support structure

Product currently in final stages of development

Stair Access Systems

Dura Fast Step & Dura Stair Grating

Providing safe stair access for both the public and to works staff is a priority aim for Dura Composites. Dura Fast Step is a ground breaking pultruded FRP rapid install stair system ideal for use on embankments to provide safe access to works staff and also to passengers in the event of evacuation. It is designed as a modular system allowing the contractor huge flexibility both at the design stage and also on-site and features an anti-slip solid surface to cater all types of footwear. Dura Stair Grating is also very versatile and features a quartz embedded anti-slip gritted surface with an open mesh FRP finish to allow light transmittance and major weight savings. Both products are precision engineered and feature permanent hi visibility strips on each stair nose for maximum pedestrian safety. Available with Form 3 Approval, the products can be manually handballed and are available on short lead times to provide maximum workability on and off site allied to fast installation.

Applications:

- Embankments
- Road Access Points
- Field Access
- Signal Boxes
- Work Platforms
- Temporary Access

Features:

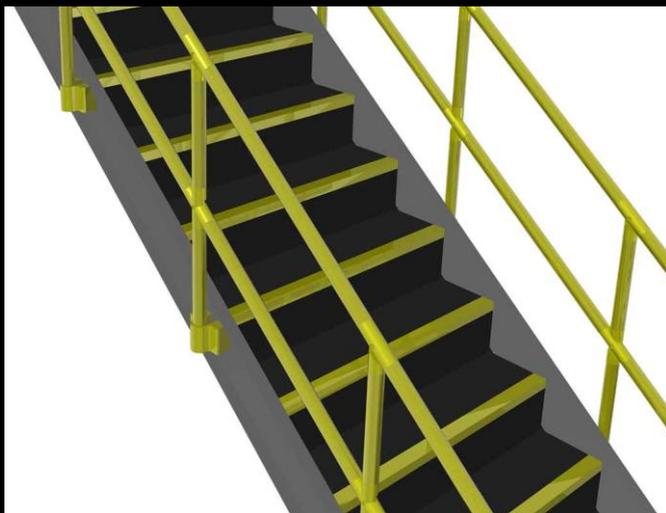
- High Strength To Weight Ratio
- Bespoke Construction
- Pre-Fabricated
- Corrosion Resistant
- Easy To Install With Minimal Plant
- Assembled In Modules

Benefits:

- Modular Systems / Rapid Installation
- Design Flexibility
- Saves On Possession Times
- Can Be Used In Harsh Environments
- Ideal For Manual Handling
- Temporary & Permanent Applications

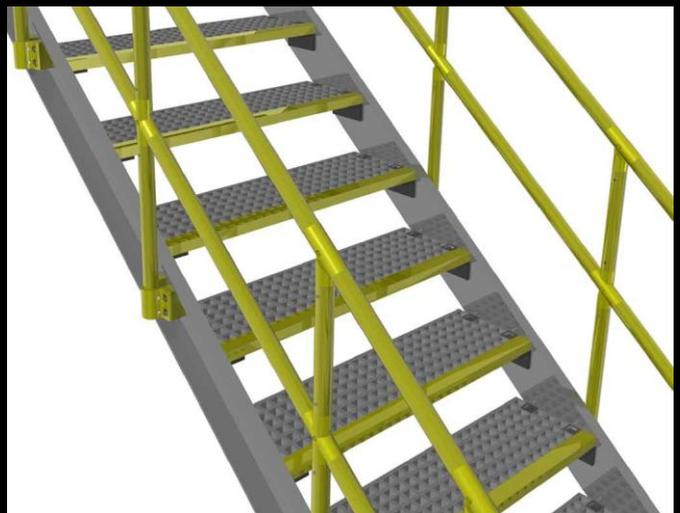
Product Range:

Dura Fast Step



- Embankment Stairs
- Solid Treads
- No Sub-structure

Dura Stair Grating



- Stair Access for all purposes
- Open Mesh Treads
- Provides Sub-structure

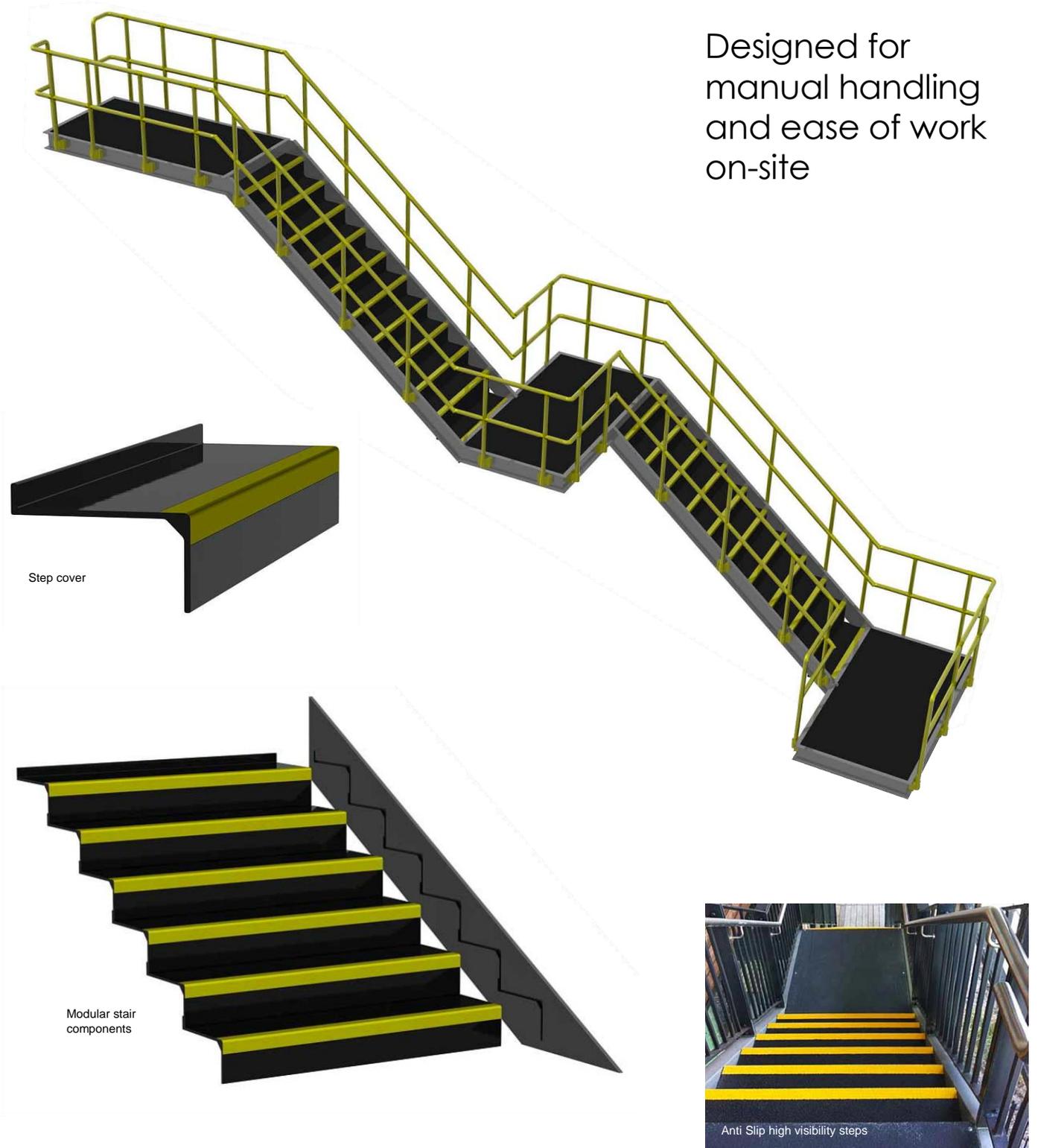
Dura Fast Step

Embankment Access

Bespoke solutions available to suit varying pitch, heights and lengths.

Handrail available in Heavy Duty Tubular or Regular Duty sections.

Designed for manual handling and ease of work on-site



Product currently in final stages of development

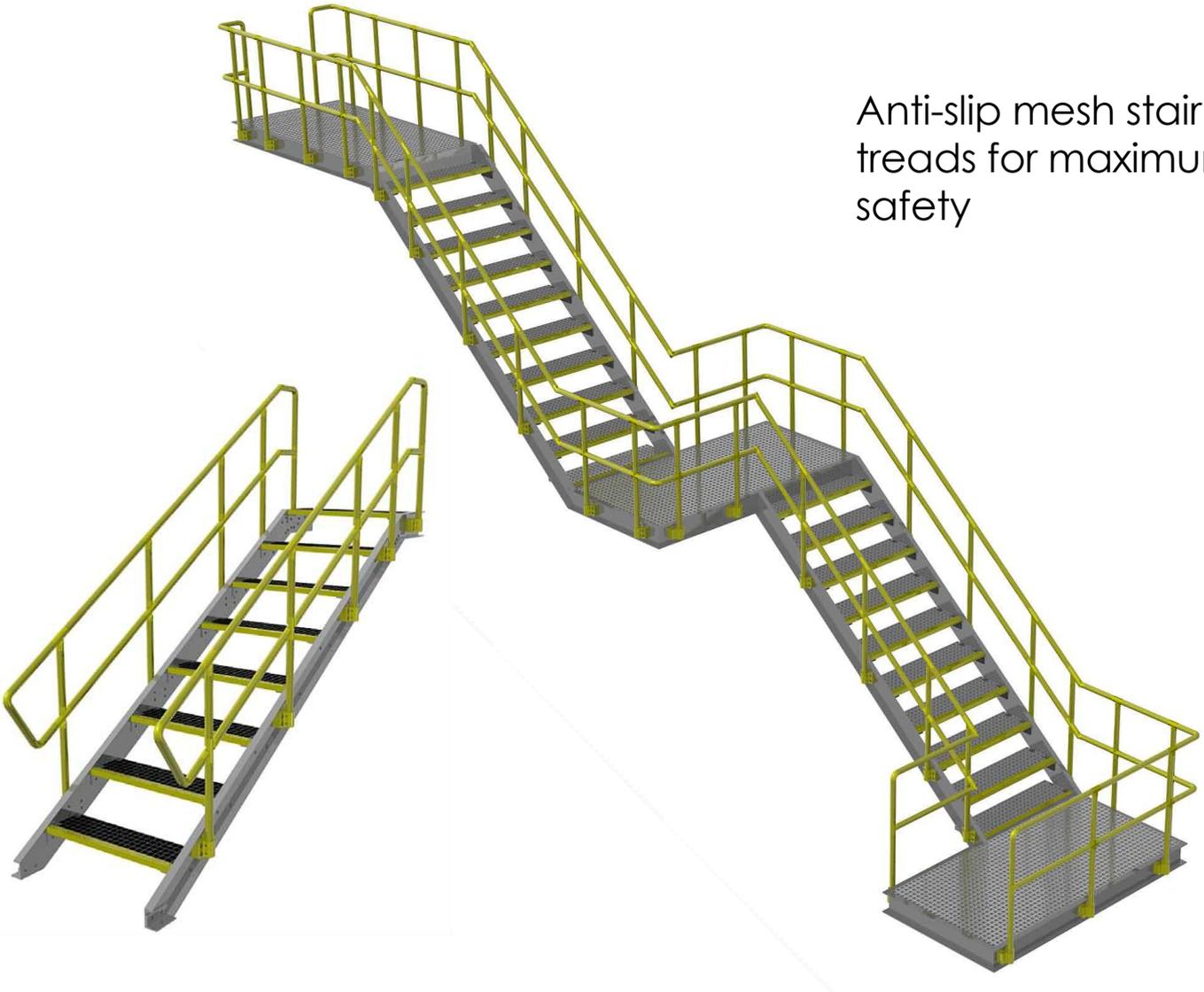
Dura Stair Grating

Multi-Purpose Stair Systems

Bespoke solutions available to suit varying pitch, heights and lengths along with options to have open, solid or shutter type stairs.

Handrail available in Heavy Duty Tubular or Regular Duty sections.

Anti-slip mesh stair treads for maximum safety



Endless Configurations



Structural Walkways

Dura Grating & Dura Slab

Dura Composites is the leading UK supplier of precision engineered FRP composite open grid or solid cover structural walkway products. Both the Dura Grating open mesh and Dura Slab solid surfaced structural walkway products are Form 3 approved and allow contractors to take advantage of their light weight handle ability, their workability using standard hand tools both on and off site, their short lead times, and their rapid installation speeds. Dura are renowned for providing innovative fixing solutions in real-time thus ensuring that site works on projects such as bridge decks operate smoothly and to time-scales required.

Applications:

- Bridge Decks Water
- Crossing Maintenance
- Approach Hazardous
- Areas
- Replace Traditional Materials
- Driver Walkways

Features:

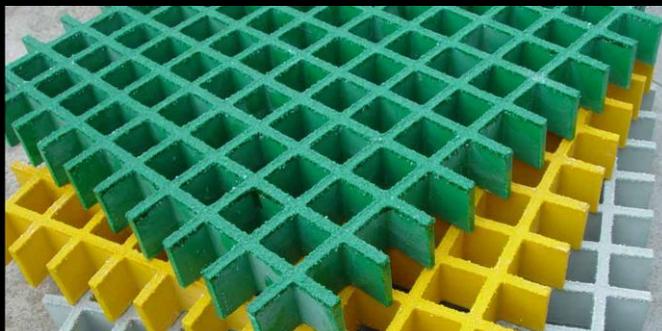
- Low Weight
- Face Fixing Solutions
- Corrosion Resistant
- High Level Of Anti-Slip
- Workable On-Site
- Fire Retardant

Benefits:

- Ideal For Manual Handling
- Rapid/Safe Installation
- Suitable For Harsh Environments
- Reduces Risk Of Slip & Falls
- Cut/Shape With Hand Tools
- Meets NR Specification

Product Range:

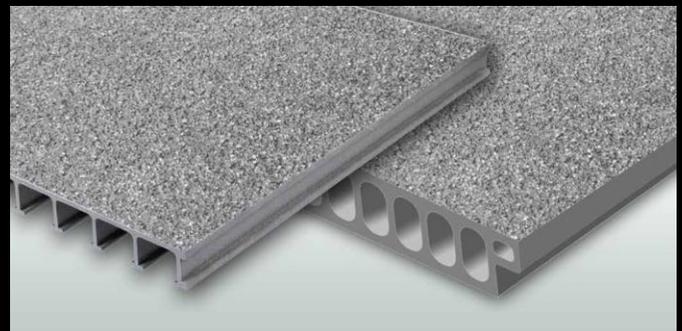
Dura Grating



- Open Mesh Surface
- Ultimate Lightweight
- Allows Drainage

Product	Length	Width	Mesh Size	Weight l/m ²
13	3050mm	1020mm	45mm	5.8kg
13	3660mm	1220mm	45mm	5.8kg
25	3000mm	1000mm	32mm	12.3kg
25	3660mm	1220mm	32mm	12.3kg
30	3000mm	1000mm	32mm	14.6kg
30	3660mm	1220mm	32mm	14.6kg
38	3000mm	1000mm	32mm	19.5kg
38	3660mm	1220mm	32mm	19.5kg
50	3050mm	1020mm	42mm	23.5kg
50	3660mm	1220mm	42mm	23.5kg

Dura Slab



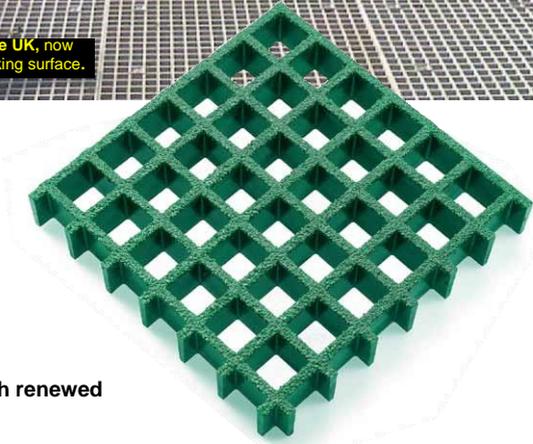
- Solid Surface
- Ultimate Load Capacity
- Interlocking Design

Product	Length	Width	Thickness	Weight l/m ²
Pultruded				
40 Light	3660mm	500mm	40mm	17.2kg
45	3660mm	699mm	45mm	25.0kg
50 Light	3660mm	500mm	50mm	24.0kg
50	3660mm	475mm	50mm	36.4kg
100	2440mm	600mm	100mm	92.2kg
Moulded				
50	Custom	Custom	50mm	44.0kg
74	Custom	Custom	74mm	76.0kg

Dura Grating



The Grand Sluice Railway Bridge UK, now Features 50mm Dura Grating walking surface.



Cookspond Bridge UK with renewed Dura Grating bridge deck



Dura Grating is a moulded non-slip composite flooring grating system constructed from fibreglass as an ideal and cost effective alternative to traditional floor grating materials like mild steel, stainless steel grating, aluminium or wood.

Dura Grating grid flooring is durable, lightweight and chemical and corrosion resistant which makes it ideal for the industrial, chemical, construction and shipping industries.

Non-sparking and non-conductive, light weight easy to handle with the ability to be cut and shaped using simple battery powered hand tools.

Highest Slip Resistance Ever Measured



Case studies



Warden Bridge, South Tyne, UK

Warden Bridge across the River South Tyne has recently been decked with Dura Grating 50mm grey to provide a safe walking surface to allow maintenance access in all weathers. Crucially, it was installed without significant additional equipment keeping possession time to a minimum.

An example of an opportunity presented to Dura where the steel walkway slats are in need of replacement because of their weathered and degraded state, a fixing solution was required that would connect to the structure rather than fix by drilling into the structure.

The solution for the walkways either side of the rail was to raise the Dura Grating by supporting it upon FRP C-Channel profiles which conveniently cleared the bridge rivets and allowed securing of the panels from the face side. The solution for the mid-section was to simply secure to FRP angle profile affixed to the rail timbers.



The Grand Sluice Railway Bridge, Lincolnshire, UK

A beneficiary of a new safe walking surface is The Grand Sluice Railway Bridge in Lincolnshire. Completed in 1885, this Richard Johnson bridge is listed, of national significance, and is still in use.

This particular project required much preparation to ensure that suitable fixings were used to suit not only the particular configuration of the bridge from a structural perspective, but also from a conservational point of view.

The bridge now benefits from Dura grating anti-slip walkways with a bespoke fixing solution.

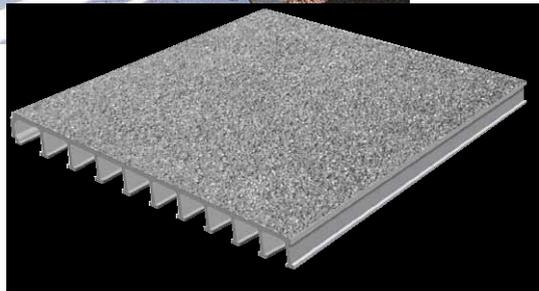
Dura Slab



Lightweight construction for two man lift

Pultruded through a die, Dura Slab exhibits an incredible strength to weight ratio producing a composite flooring structure that is rigid, strong, lightweight, non-corrosive, durable and maintenance free with an anti-slip surface.

Curves can be accommodated



Colour coding for special order

New or refurbishment trench covers and structural flooring

Reading Train Care Depot, UK featuring Dura Slab Type 50



Safety Handrailing

Dura Handrailing

When opting for a composite walkway, it is very often most logical to opt for a similarly heavy duty and complimentary low maintenance safety railing system so that the sub-structure, walkway, treads and railings all have 50 years design lives. There are two versions Dura Handrailing, Regular Duty and Heavy Duty, both allowing the installer to benefit from simple construction and both allowing users to benefit from the surfaces being warm to the touch, non-sparking, non-corrosive and non-conductive. The regular duty system offers maximum flexibility for the most bespoke of projects using pultruded components whereas the Heavy Duty system uses compression moulded components that are not only flush fit but are also modular and of a flush push fit design. It is also designed to withstand 0.74kN Heavy Load classifications at up to 1.2m spans making it ideal for areas where crowding can develop. What's more, both systems can be specified in signal yellow or grey colours that will never need painting, staining or galvanising.

Applications:

- Platforms
- Walkways
- Stairs
- Ramps
- Fire Escapes Roof
- Walk Ways
- Bridges
- Maintenance Bays
- Wash Bays
- Work Stations

Feature:

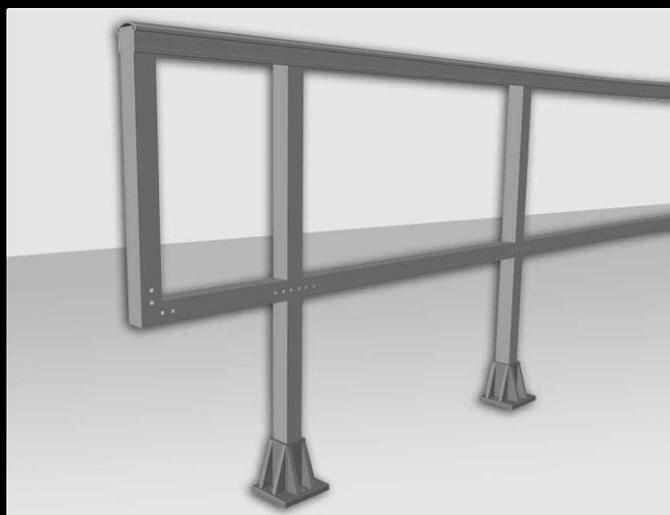
- Corrosion Resistant
- Not Cold To Touch
- Security Fixing Options
- UV Stable
- DDA Compliant
- Lightweight
- Non Conductive
- Fire Retardant
- Load Tested
- Long Lasting

Benefits:

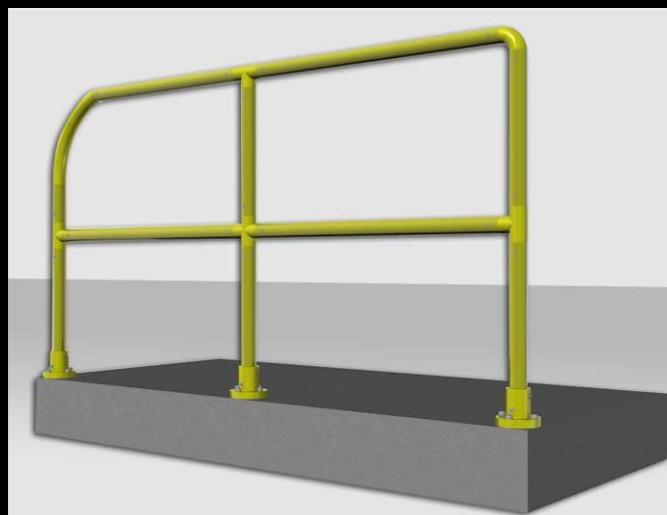
- No Painting / Staining / Maintenance
- Meets Safety Standards
- Theft Proof
- Retaining Colour And Strength
- Equalities Act Friendly
- Easy To Assemble / Easy To Transport
- Use In High Voltage Areas / Anti-Static
- Fire Escape Usage / Bs476 Part 7
- Bs6339-1 Heavy Duty Approved
- 25 Year Warranty / 50yr Life Span

Product Range:

Regular Duty Handrailing



Heavy Duty Handrailing



Regular Duty Handrailing

The Dura Composites Regular Handrailing system is constructed from fibreglass pultruded profiles. Non-conductive, high strength, low weight with low maintenance are a few key features.

The standard fibreglass hand railing colours are grey and safety yellow but bespoke colours can be produced on a longer lead time, dependant on quantity. The top handrail can be ergonomically designed and supplied with end caps to suit. A tubular mid rail and kick plate is available for safety.

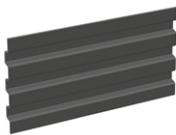
Easily assembled on-site with simple hand tools Dura Composites also offers a pre-fabrication service for supplying sections of 1m or 1.5m lengths.

The FRP handrail vertical posts are 50mm x 50mm square fibreglass pultruded profiles generally secured by either base mounted foot fixings or side mounted foot fixings.

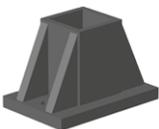
Components:



90 degree elbow



Kick plate



Base foot



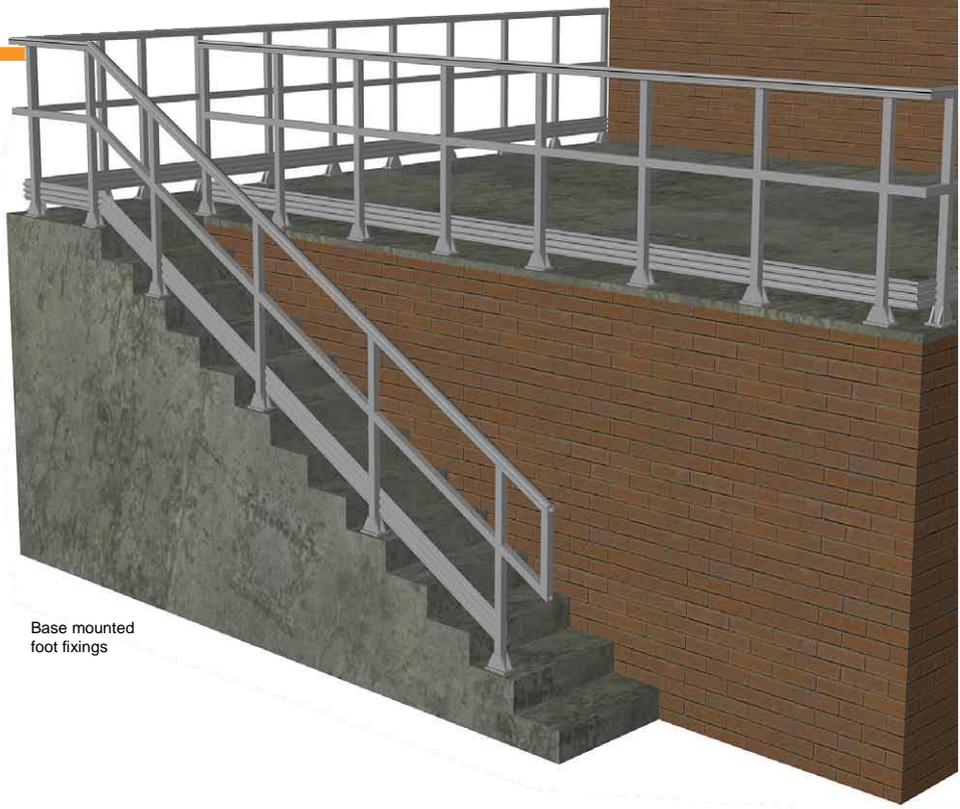
Tube connector



Rail top cover



Side mount



Base mounted foot fixings



Side mounted foot fixings



Works area walkway safety handrailing



Signal Box safety access



Base mounted foot fixings

Heavy Duty Handrailing

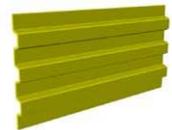
Dura Composites' fibreglass Heavy Duty Handrail System is manufactured using 50mm tubular components for high strength, durable and low maintenance operation. With highly engineered precision compression moulded push fix fittings, it can be fitted with ease on-site using simple hand held tools or supplied pre-fabricated. Ideal for protecting and identifying hazardous storage areas, fuel tanks, chemical stores, bunds, high voltage areas, platform and walk way edges etc.

The FRP Heavy Duty Handrail vertical posts are 50mm diameter fibreglass pultruded round profiles, generally secured by either base mounted foot fixings or side mounted foot fixings.

Components:



90 degree elbow



Kick plate



Base foot



Adjustable elbow



Four way connector



Side mount



Side mounted foot fixings



Warm to the touch surface



Flush top rail for user comfort

Case Study

Rochdale Signal Box, UK Replacement Handrail, Stairs, Landing

Rochdale Signal Box, shown with its temporary stairs, landing and handrailing. Following the original traditional materials removal, due to corrosion and decay, slips, trips and falls were a high risk and the signal box access deemed unsafe (*Top left*).

Below shows the complete Dura Composites Full FRP Solution, including the FRP Handrail, Sub Structure, Treads, Landings etc. The Signal Box is again deemed safe and suitable for purpose (*Bottom left and below*).



Fully Composite FRP Solution Providing:

- Anti Slip BSEN 4592-0 Treads, Landings
- BS476 Part 7 Class 2 Fire Rated
- Warm to touch handrailing
- 50mm BS6339-1 heavy duty handrailing
- 25yr Warrantee / 50yr Life Span
- UV Stable, Anti Corrosive, Maintenance Free
- Provided Flat Pack Light Weight Pre-Assembled Sections due to hard to access site.



High strength, durable and low maintenance tubular components



Exterior Wall Cladding

Dura Cladding

Dura Cladding is made using a highly developed extrusion process and a unique timber and plastic composition. Recycled high density polyethylene polymers, recycled ground hardwoods and specifically engineered additives are harnessed together with high performance coupling agents to provide beautiful low maintenance 87% recycled and 100% Certified FSC® wall cladding. Dura Cladding provides the client with a traditional wood cladding appearance coupled with a 25 year design life and a fraction of the maintenance costs of natural wood. Tested in extreme climates including Eastern Europe and the Middle East, Dura Cladding is suitable for the harshest weather environments suffering from only limited colour fade in the first 3 months.

Applications:

- Offices & Stations
- Private / Public Buildings
- Screening
- Architectural Fascias
- Commercial Premises
- Warehouses
- Display Areas
- Out Buildings & Workshops

Features:

- High Strength To Weight Ratio
- Permanent Colour
- Rot, Splinter, Warp Resistant
- Easy Installation
- Weather Resistant
- Fire Resistant
- Simple Cutting And Site Install
- UV Colour Stable
- 100% Certified FSC®
- No Knots

Benefits:

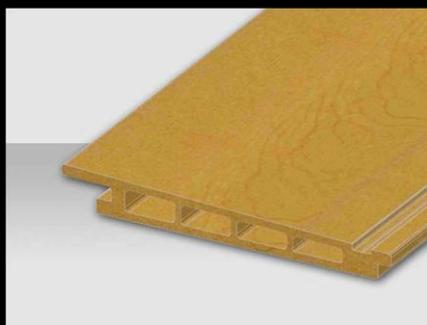
- Easy Handling
- Colour Stable
- No Painting And Staining
- No Specialist Skills Required
- 25yr Warranty, 50yr Life Span
- Euro Class Bfl-S1 Certified
- Only Requires Standard Tools
- Looks Good Through Lifespan
- Eco Friendly
- Few Wasted Planks

Product Range:

Type 150/21 Flush



Type 150 Weatherboard



Type 200/21 Flush



Specifications:

Cladding Profile	Plank Thickness	Plank Length	Actual Plank Width	Maximum Fixing Span	Weight l/m
Type 150/21 Flush	21mm	4800mm	174mm	600mm	2.04kg
Type 150/21 Weatherboard	21mm	4800mm	173mm	600mm	2.34kg
Type 200/21 Flush	21mm	4800mm	225mm	600mm	3.14kg
Starter Trim	21mm	4800mm	60mm	600mm	1.21kg
Top Window Trim	38mm	4800mm	154mm	600mm	2.7kg
External/Internal/Expansion Trim	38mm	4800mm	139mm	600mm	4.11kg
Trim Insert	14mm	4800mm	28mm	600mm	0.24kg
Facia Trim	9mm	3660mm	230mm	-	6.2kg

Colour Options



A colour swatch is available on request

Case Studies

Dura Composites is confirmed as the UK's first composite wood supplier to be 100% Certified FSC®.



Dura Cladding is an ever increasingly popular choice for finishing the outside of commercial and domestic buildings, currently being supplied heavily into the Station Refurbishment Projects Across the United Kingdom. More information can be supplied upon request.

Severn Trent – Shrewsbury, UK

Application:

BAM Construction, Head Office

Type: Flush 150 (Vertical Installation)

Width: 150mm (face cover), 174mm width overall

Depth: 21mm

Centre's: up to 400mm

Fixing: Screw fixing into hidden, pre-drilled oval holes

Colour: Cedar

Key Reasons For Choice:

- Traditional Timber Look
- Low maintenance / Low Life Span Costs
- UV, Colour Stable
- Short Lead Time.



Lanswood Business Park - Essex

Application:

Lanswood Business Park, Offices

Type: Flush 150 (Horizontal Installation)

Width: 150mm (face cover), 174mm width overall

Depth: 21mm

Centre's: up to 400mm

Fixing: Screw fixing into hidden, pre-drilled oval holes

Colour: Cedar

Key Reasons For Choice:

- Traditional Cedar Appearance
- Low maintenance / Low Life Span Costs
- UV, Colour Stable
- 25yr Warrantee.



Ideal for new or refurbishment rail projects



Walkway Decking

Dura Deck

Dura Deck is the UK's first 100% Certified FSC® Wood Plastic Composite (WPC) decking range. Utilising ground breaking extrusion technology, Dura Deck offers the designer and client enviable properties such as UV strength and colour stability, low maintenance, eco-friendly 87% recycled content, anti-rot, anti-splinter and anti-mould whilst offering a 12yr warranty. Dura Deck is available in several designs and colours meaning that it is suitable for café seating areas and walkways in and around stations. Dura Deck products are supplied with a sub-surface fixing system meaning that nails/screws cannot protrude from the surface as with natural wood alternatives.

Applications:

- Feature Areas
- Boardwalks
- Balcony Decking
- Smoking Areas
- Patios
- Public Areas
- Roof And Garden Terraces

Features:

- Natural Wood Look
- Doesn't Rot, Splinter Or Warp
- Up To 25 Yr Warranty
- Concealed Fixings
- UV Colour Stable
- Grooved Boards
- Water Resistant
- 100% Certified FSC®

Benefits:

- Aesthetically Pleasing
- No Painting & Staining
- Easy To Fit
- Prevents Trips And Falls
- No Painting, Staining Or Treating
- Slip Resistant
- Mould / Water Resistant
- Eco Friendly

Product Range:



Specifications:

Product	Plank Thickness	Plank Length	Actual Plank Width	Maximum Fixing Span	Weight l/m
Type 146	22mm	up to 3660mm	148mm	400mm	2.94kg
Type 225	30mm	up to 3660mm	225mm	700mm	5.80kg
Type 295	23mm	up to 3660mm	295mm	600mm	5.88kg
Type 142	28.5mm	up to 3660mm	142mm	400mm	3.10kg
Ancillaries					
Decking B	102mm	up to 3660mm	50mm	1200mm	3.40kg
Fascia	9mm	up to 3660mm	230mm	Infill only	6.20kg

Colour Options



A colour swatch is available on request



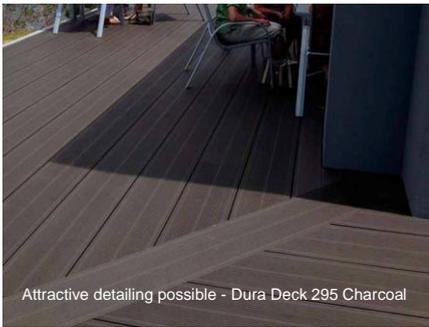
For technical specifications on our Dura Deck range please visit:

Dura Deck installations

Dura Composites is confirmed as the UK's first composite wood supplier to be 100% Certified FSC®.



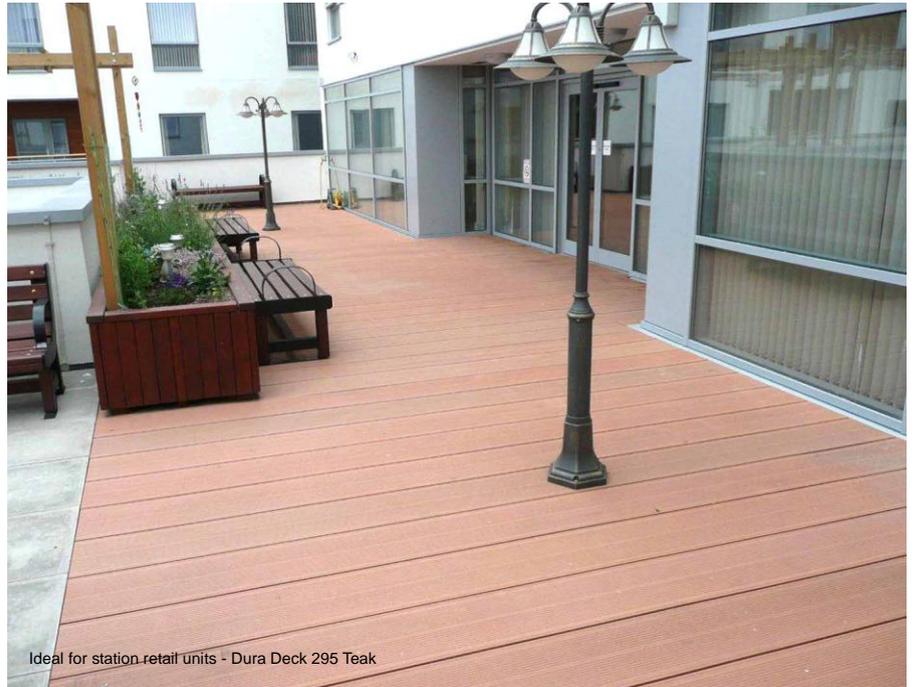
Ideal choice for new or replacement decking projects



Attractive detailing possible - Dura Deck 295 Charcoal



Retains slip resistance during wet weather - Dura Deck 295 Teak



Ideal for station retail units - Dura Deck 295 Teak



Ideal for cafe areas - Dura Deck 225 Charcoal



Allows same level access to shop entrances - Dura Deck 295 Teak



Station Platforms

HCE Inspection Systems

Structural Beam Sections

Pedestrian Bridge

Structures Stair Access

Systems Structural

Walkways

Safety Handrailing

Exterior Wall Cladding

Walkway Decking

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...designed for the future

