



2024

TREADWELL™

COMPLETE “Fit & Forget” SOLUTIONS

COMPANY PROFILE

ENGINEERING THE FUTURE IN COMPOSITES

COMPLETE “Fit & Forget” SOLUTIONS



Treadwell History

Treadwell Group is an established name in the Fibreglass Reinforced Plastic (FRP) industry throughout Australia. First established in 1994, we started as a small office and factory in Adelaide, specialising in rubber and industrial flooring, and have evolved to include Fibreglass Reinforced Plastic (FRP) products and solutions that have been successfully installed across Australia and New Zealand.

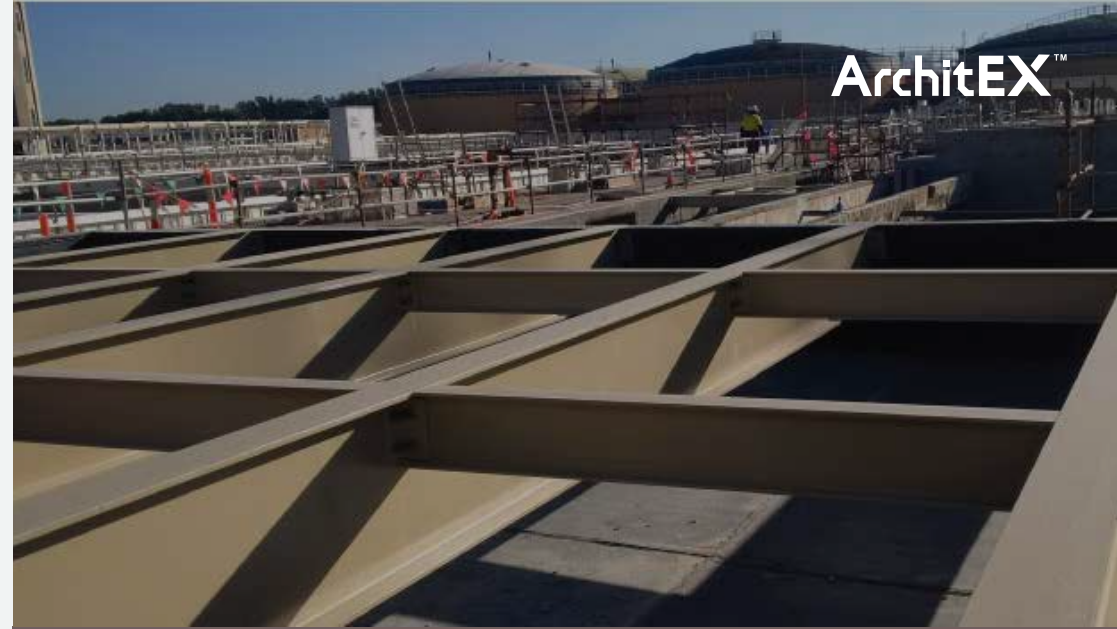
Our presence now includes multiple offices and warehouses in major cities in Australia and New Zealand. The Treadwell team has also expanded beyond these borders into the broader pacific region, and is remotely based in the Philippines, Malaysia and India.

Our Quality Management System maintains consistency to high levels of care to our clients and service and product solutions. Treadwell is ISO9001 certified.



EX-Series®

Treadwell's EX-Series® range of products include a wide selection of FRP grating types, handrails and ladders that can be customised according to the application.



ArchitEX™

Structural Profiles & Structures

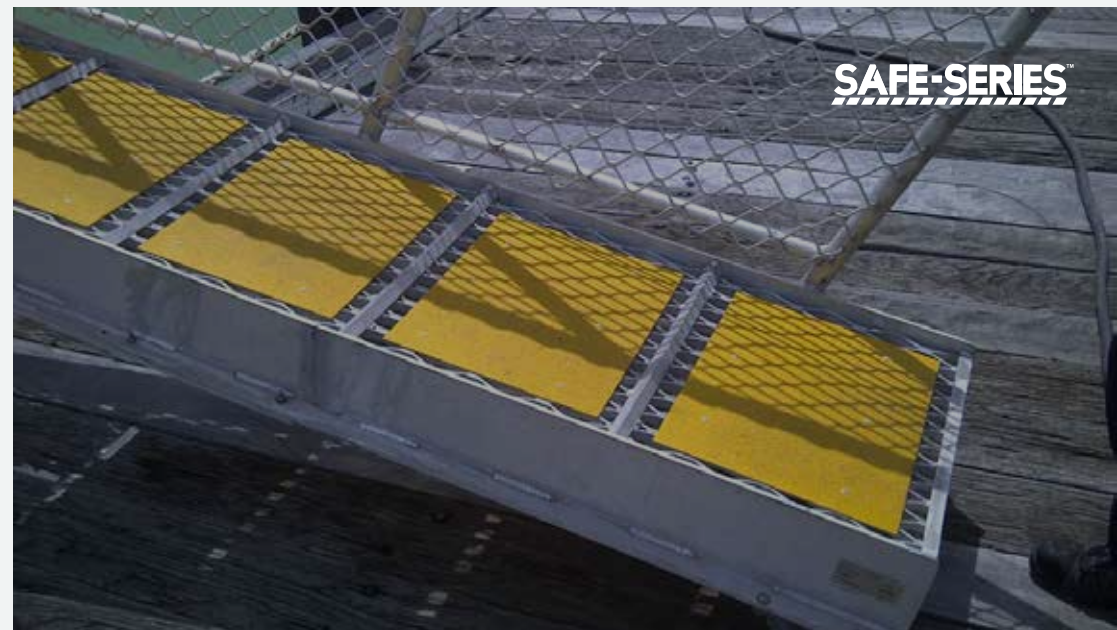
This is our unique range of FRP structural profiles. The complete range of ArchitEX™ FRP solutions boosts the strength of a framework and infrastructure with its columns, beams and more.



EXduro™

Cable & Instrumentation Management

Treadwell offers an assortment of cable instrumentation systems based on the latest technology with the EXduro™ range. EXduro™ encompasses fibreglass cable trays, instrumentation stands & FRP support accessories.



SAFE-SERIES™

Industrial Anti-Slip Solutions

Specialist in a variety of anti-slip solutions for every type of surface application. The encompassing range of SAFE-SERIES™ products is minimalistic, flexible with colours and styles and has the ability to suit any environment.



COMPANY PROFILE

Fibre Reinforced Plastics (FRP) is the revolutionary construction material that has untapped potential to reach out into uncharted territories. Its exceptional benefits provide higher returns unmatched by homogenous products or metallic alternatives, with the added advantage of leaving a smaller carbon footprint on the environment.

Treadwell has been applying excellent engineering strategies and design tactics since 1994 to extend both time and cost-efficient solutions to our clients across the globe.

As we grow from strength to strength over the decades, we have further established our speciality in FRP and provide a diverse range of access and structural solutions that are increasingly being used in waste water treatment plants, public infrastructure, marine, rail, utilities and mineral sectors to name a few.

We keep abreast of the competition and adapt in the ever-changing and demanding FRP industry. We actively pursue for techniques that allow us to create quality FRP solutions, which, in turn, help save time and money, and remain 'Innovators of FRP Technology'.

We cultivate a strong culture of innovation and resourcefulness so that we can implement complete 'Fit & Forget' solutions.





"ENGINEERING THE FUTURE IN COMPOSITES and offering COMPLETE "Fit & Forget" SOLUTIONS



Vision

To disrupt the world of composites as the new fibreglass benchmark globally



Mission

Evolving composite solutions through focus on growth, efficiency and people



Core Values

With a powerful concentration on growth, the Treadwell attitude and our core values are built around

Foresight

Treadwell encourages individuals to look beyond, plan and consider the future rather than react – to achieve growth and success through education, best practices and innovation.

Responsibility

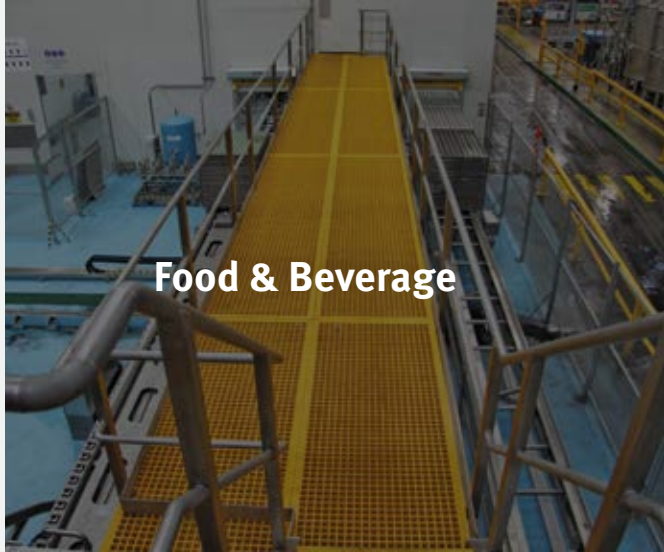
To continually have an obligation towards improvement in our tasks and the stakeholders around us.

Pragmatism

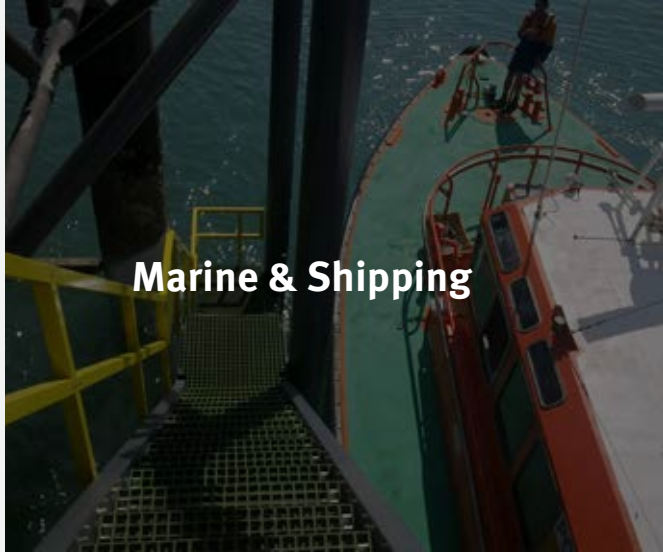
We strive to make the best of everything in the most efficient and cost effective way. We need to adapt and show self initiated behaviour to be successful.

With these compelling principles guiding us every step of the way to excellence, we can help corporations and individuals like you to develop and flourish.





Food & Beverage



Marine & Shipping

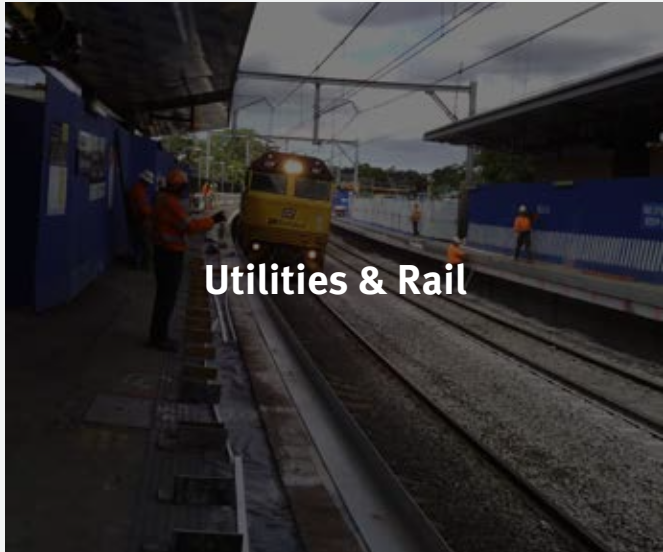


Mining & Mineral Processing

TREADWELL™
COMPLETE "Fit & Forget" SOLUTIONS



Oil, Gas & Petrochemicals



Utilities & Rail



Water & Wastewater

A wooden walkway with a metal grate floor and railings, set against a backdrop of trees and a rocky cliffside. The walkway is made of wood and has a metal grate floor. It is surrounded by trees and a rocky cliffside. The overall scene is bathed in a warm, reddish-orange light.

TREADWELL

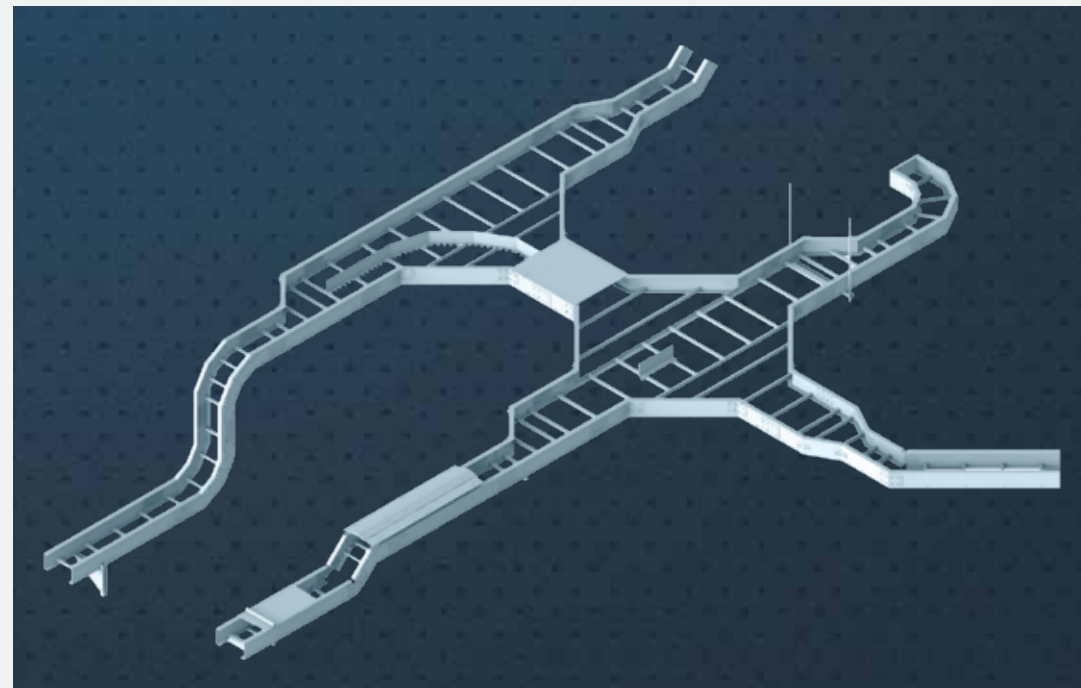
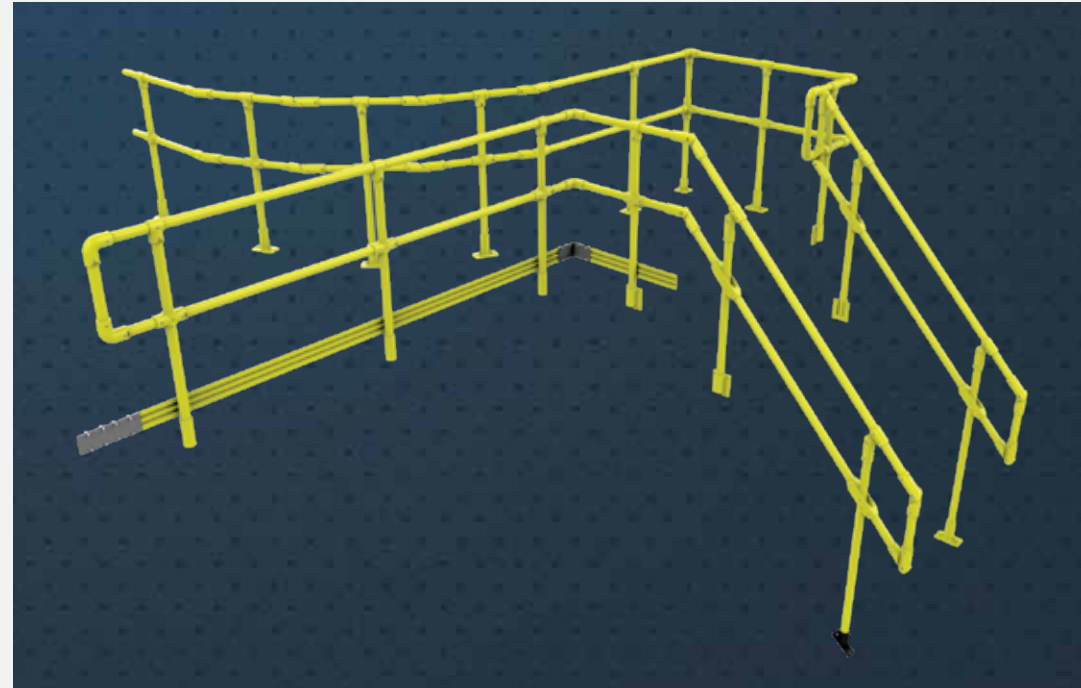
A **MARKET LEADER**
IN THE FRP INDUSTRY.

PRODUCT SYSTEMS EXPERTISE

Treadwell paves the way with product knowledge gained since 1994 to help you with the right product choice, backed up by an extensive product range and library of product information and data to substantiate our recommendations. Our products also adhere to the major AS/ NZ standards for that added peace of mind when interacting with Treadwell.

What we can provide

- Product information
- Case studies
- MSDS
- AS/ NZ certification
- Instructional and project videos
- Product library





LOCAL & GLOBAL SUPPORT

As both a local and global expert partner, Treadwell will provide the highest levels of support to keep your project running as productively as possible.

- We tackle complexity by coordinating and consolidating requirements.
- Our advanced service management assures the consistent global delivery of services and products, along with transparent reporting for project continuity and reduced downtime.
- Wherever your staff are in the world, our high-quality service desk is always there to provide the support they need.

A modern FRP dock structure extending into a harbor. The dock is made of grey FRP panels with yellow safety railings. In the background, several sailboats are moored in the water, and a forested hillside is visible under a grey sky.

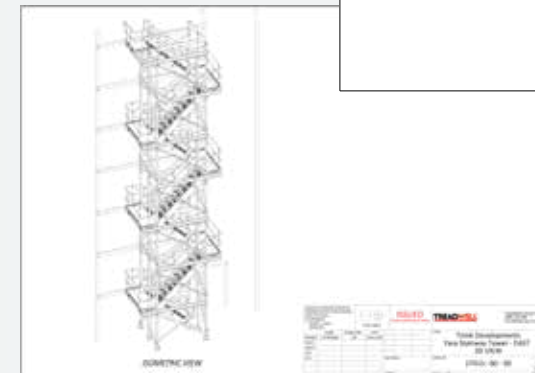
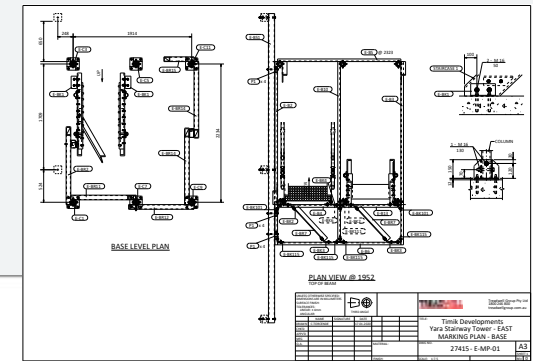
PIONEERING FRP SOLUTIONS

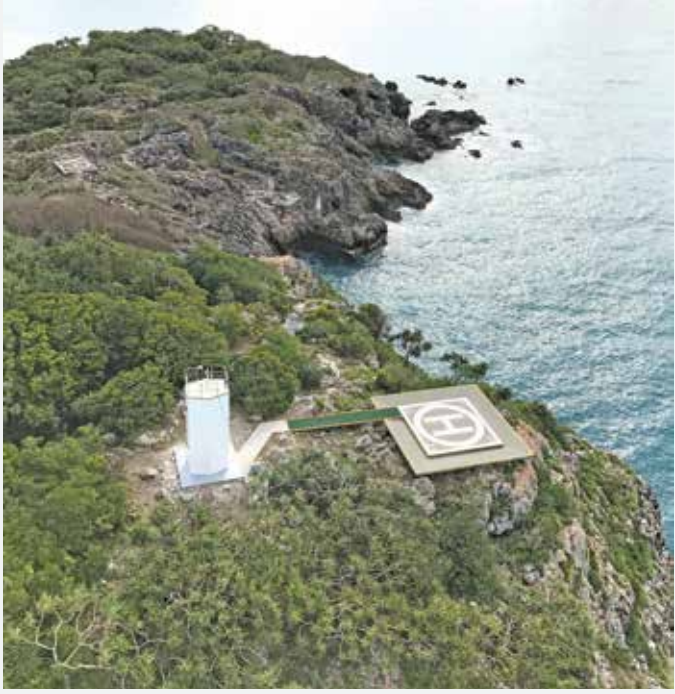
DESIGN & ENGINEERING EXPERTISE

We remain dedicated to leading composites solutions with a progressive future in mind. We have established ourselves to provide expert unbiased advice, ensuring that our clients are offered leading solutions that come from a culture that is forward thinking, responsible and proactive.

Our experienced team of engineers and designers will maximise all FRP components to offer the most cost effective and simplest solution.

- Custom design according to AS/ NZ standards
- Project concept drawings
- Research and development
- Prototypes
- Constraints and specifications considered
- Estimation of lead time based on design
- Sales proposal and estimation package submitted
- RPEQ expertise / sign off on designs





PROJECT MANAGEMENT

Our engineering and project management teams have expertise for planning, scheduling, budgeting, executing and reporting on projects. We plan from your desired result and what is needed to achieve it in the most efficient and cost effective way while maintaining both relevant

standards and product quality.

- Detailed technical planning documentation
- Project concept drawings
- Testing
- Clear, transparent proposals







SUPPLY OF MATERIALS & FABRICATE

Treadwell's production team can pre-drill according to your specifications while giving advice and support throughout. We can pre-fabricate and assemble all structures in our factory to ensure standards and design are correct prior to delivery.



Our solutions are

**RELIABLE, DURABLE
& LONG-LASTING**

TESTING & CERTIFICATION

Treadwell develops our products and systems based on rigorous standards and with ongoing research and development; by practitioners for practitioners.

- Testing
- International and AS/ NZ standards
- Over a variety of industries

SafeEnvironments
MANAGING PROPERTY RISK

NATA
NATIONAL ASSOCIATION OF TESTING AUTHORITIES

**Slip Check to AS 4586-2013
EcoEX Sureline HD**

Report Number: R15355.1
Report Date: 13 December 2017
Total Number of Pages: 3
This Report Replaces Report R15355

NATA Accreditation Number 17139
Accredited for compliance with ISO/IEC 17025 – Testing

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports

Issued by: Safe Environments Pty Ltd
Unit 4, 40 Besemer Street
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Prepared for: Treadwell Group
58 Deeds Rd
North Plympton SA 5037

Approved by: Ryan Voorhees
Authorised Signatory

13 December 2017
AS 4586-2013 Template Rev. 5
R15355.1 - Accelerated Wear, EcoEX Sureline HD

Page 1 of 3
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SafeEnvironments
MANAGING PROPERTY RISK

NATA
NATIONAL ASSOCIATION OF TESTING AUTHORITIES

**Slip Check to AS 4586-2013
GratEX® FRP Mesh/Grating**

NATA Accreditation Number 17139

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APL

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58 Deeds Rd North Plympton
South Australia 5037 Attn: M Philip Bennett

TEST REPORT No. 109950
LABORATORY REF: P109950

CUSTOMER REFERENCE
GratEX® 38mm Thick Square Moulded Mini-Mesh

Sample description as provided by customer
19 mm x 19 mm Aperture Q-Series Yellow with Anti-Slip Surface

TEST METHOD AS/ISO 9239, 1 2003 Reaction To Fire Tests For Floorings Part 1 Determination of the Burning Behaviour Using a Radiant Heat Source, as required by specification C1.10 of the Building Code of Australia.

The test values relate to the behaviour of the test specimen of a product under the particular conditions of the test, they are not intended to be the sole criterion for assessing the potential fire hazard of the product. Clause 9 of AS/ISO 9239 Part 1.

Conditioning as specified in BS EN 13238:2001
Sample submitted Date: April 2015
Test Date: 7/5/2015

ASSEMBLY SYSTEM: LOOSE LAID (Details Below)

Floor covering loose laid over the substrate without underlay or adhesive. Clause 5.3 of AS/ISO 9239 ALLOWS THIS TO REPRESENT AN ADHESIVE ONLY SYSTEM.

Substrate: Non-Combustible
Substrate: 4mm Fibre Reinforced Cement Board to simulate a Non-Combustible Flooring.
The Holding Torque on Specimen Frame was 2Nm.

Initial Test: Specimen 1 Length Direction Critical Radiant Flux 10.96 W/m²
Specimen 1 Width Direction Critical Radiant Flux 11.26 W/m²
Full tests carried out in the Length Direction

SPECIMEN	Length #1	Length #2	Length #3	Mean
Critical Radiant Flux (W/m ²)	10.9	11.0	10.9	10.9
Smoke Development Rate (L/min)	0	0	0	0

The values quoted below are as required by Specification C1.10 Fire Hazard Properties (Items of the Building Code of Australia). The Critical Radiant Flux quoted is the value of Flame-Out (Extrapolation (BCA General Provisions) A1.7).

MEAN CRITICAL RADIANT FLUX 10.9 kWh/m²
MEAN SMOKE DEVELOPMENT RATE 0 percent-minutes

OBSERVATIONS: The samples slightly struck away from the heat source, ignited and burnt an extremely short distance.

M. B. Webb
Technical Manager
DATE: 7/5/2015

Performance B, Approvals
Testing No. 7393
Accredited for compliance with ISO/IEC 17025, 1004 04 09

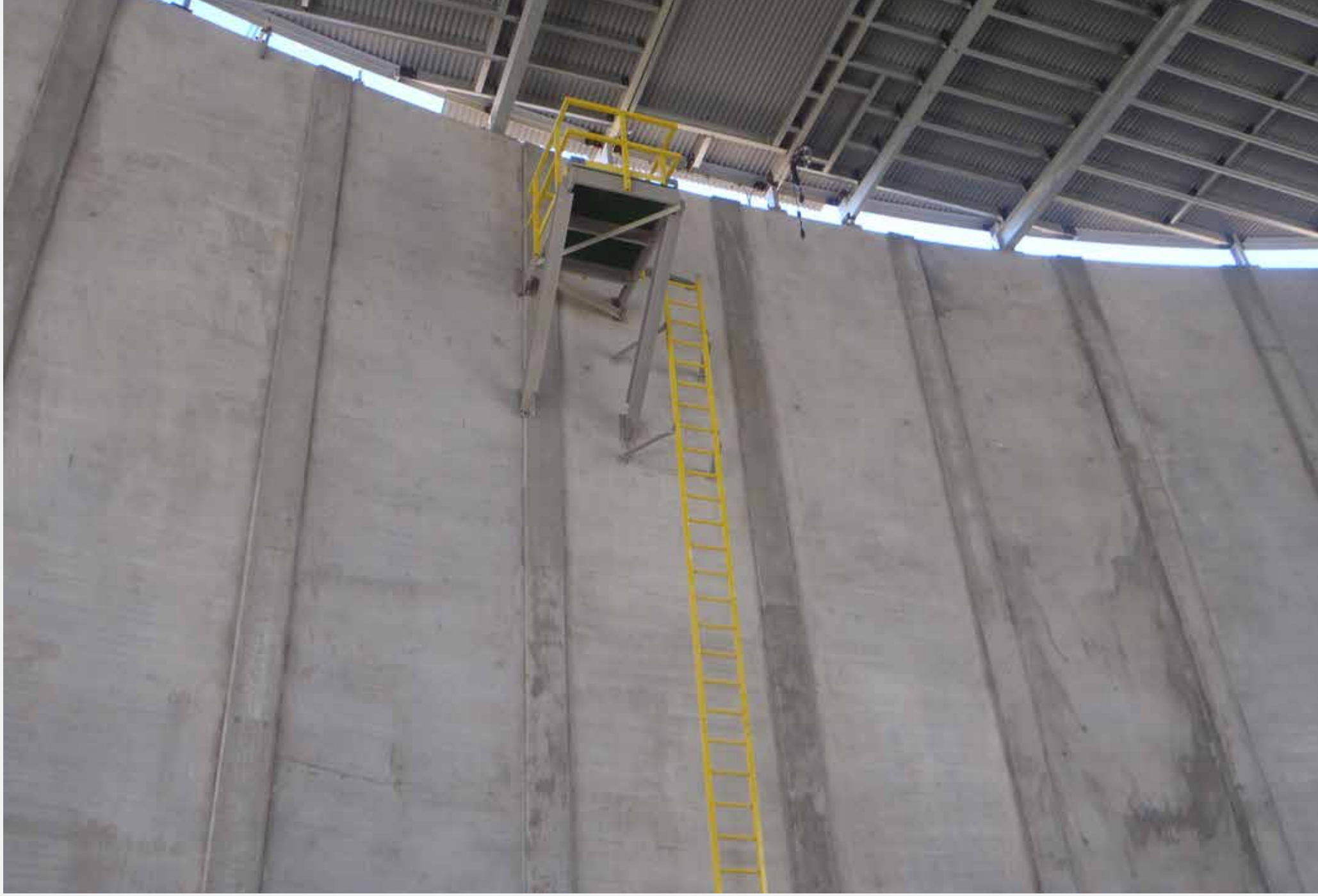
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EXECUTION & DELIVERY

With our own fleet of vehicles, and strategically located warehouses, we are able to deliver your project quickly. Structures can be delivered partially pre-assembled or as a whole depending on scenario. Where required, we will supply clear instructions on how to assemble onsite correctly and supply MSDS information.



EX-Series®



The safe access and egress of personnel is one of the biggest challenges faced across all industries in today's OH&S focused environments. To help you overcome this, EX-Series® products have been developed using Fibreglass Reinforced Plastic composites to provide lightweight, non-conductive, hardwearing, anti-slip access solutions.

EX-Series® products offer huge flexibility in design and engineering, which mean that the Treadwell team is empowered to help you overcome the obstacles and challenges in your particular industry.

The EX-Series® range consist of:

GratEX® is our popular range of moulded FRP grating solutions which feature bi-directional strength characteristics and offers versatility unparalleled by other products in its field.

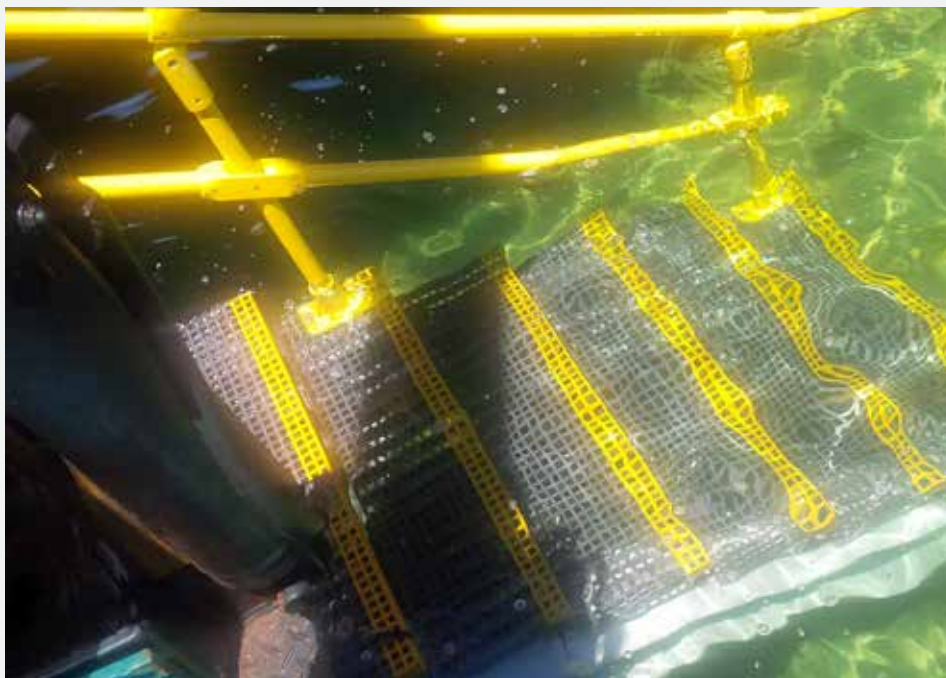
GridEX® is our pultruded FRP grating range which provides fantastic uni-directional strength and higher point loading capabilities.

MoultrEX® is a superb combination of the characteristics offered in both GratEX® and GridEX® products that ensures a fibreglass grating system with high point loading and bi-directional strength.

RailEX® is our patented fibreglass handrail system that is fully compliant with AS1657 and can be designed to suit any structure using our unique adjustable fittings.

LadderEX® is the superior alternative to metallic ladders and cage systems, providing excellent corrosion resistance and electrical transparency.

Treadwell has developed a full range of product and design guides that are the ultimate tool in solving you personnel access challenges. The guides can be obtained for free at www.treadwellgroup.com.au.







ArchitEX™

Structural Profiles & Structures

ArchitEX™ is Treadwell's trademark range of premium pultruded FRP structural shapes and plates. These sections can be used to create structures and buildings entirely from FRP.

To ensure the best optimization of the FRP products Treadwell has, our staff and registered professional engineers, are highly experienced in the unique design requirements of FRP structures and systems. With this extensive experience in joint design, stress analysis and the fabrication procedures of composite assemblies, engineering, design and fabrication by the Treadwell Team represents the ultimate word in FRP structures.

Advanced composite technology ensures that the **ArchitEX™** products and structures will endure a protracted life span with minimal maintenance. By combining the high tensile strength of glass with the durability of plastics, FRP composites have unique physical and chemical properties that inhibit even the harshest of destructive elements. This desirable trait makes **ArchitEX™** FRP structural profiles optimal for applications where there is a strong, corrosive chemical presence or where the product is likely to be exposed to prolonged periods of weathering.

Treadwell holds the largest inventory of beams, columns, plate, angle, channels and hollow sections in locations throughout the region to ensure rapid and accurate distribution on demand. While our stock of **ArchitEX™** profiles is exhaustive, some unique applications require new or redesigned profiles – Treadwell has the capabilities to manufacture these.

ArchitEX™ products are an ever rapidly evolving and expanding range. For further information regarding FRP profiles and structure design, our comprehensive **ArchitEX™** Structural Design Guide is the ultimate tool for you. The guide includes a complete list of all the profiles that are currently available, deflections tables, information on relevant constraints, plus much more engineering data that has been collated into one all-encompassing volume.







EXduro™ FRP systems are the solution to your cable and instrumentation management challenge.

Manufactured with corrosion resistant properties, **EXduro™** FRP is able to withstand corrosive environments. **EXduro™** has been successfully installed in wastewater treatment plants, mining and mineral processing plants, and the oil and gas industry, to name a few.

FRP Cable Management Systems

The **EXduro™** cable ladder range is replete with a full range of splice plates and covers – also fully constructed from FRP. Because of being entirely fabricated from fibreglass, with the exception of the fixings, this product requires very minimal maintenance even in the harshest of conditions.

FRP Instrumentation Management

Produced using high quality vinylester resin, the FRP **EXduro™** Instrumentation Management Systems do not rust, rot or corrode. As these systems are non-metallic and non-conductive, this makes them extremely simple to implement in environments with strong electrical or magnetic presence.







SAFE-SERIES™

Industrial Anti-Slip Solutions

SAFE-SERIES™ is Treadwell's selection of pre-manufactured and ready-for-installation anti-slip products for harsh environments.

Fabricated from FRP composites, anti-slip decks and rung covers are easy to install over existing stairs to create the toughest and most dependable anti-slip surface available.

The **SAFE-SERIES™** product range offers a wide range of anti-slip solutions like decks and rung covers for numerous applications. Proven in many applications, the series is available in various styles and colours to suit any environment.

The products featured in Treadwell's **SAFE-SERIES™** to avert accidental slips and falls include:

- Step coverings equipped with enhanced traction properties.
- Anti-slip rungs and covers for ladders designed for safe treading.
- Anti-slip glow for dark situations to prevent mishaps.
- Multiple stair nosing options furnished with anti-slip properties.
- Anti-slip deck plating.

In addition to anti-slip options, **SAFE-SERIES™** also adopts anti-fatigue mapping.







EcoEX™

Odour Control & Baffle Walling

EcoEX™ FRP products represent a significant and important advancement in odour control systems, particularly relating to the specific processes that are utilised in water and waste water treatment operations. The range includes fibreglass tank covers, ducting and baffle walling.

Fabricated fully from high strength FRP components, the **EcoEX™** range is entirely corrosion resistant and offer unparalleled performance in corrosive environments.

The **EcoEX™** tank cover systems are designed with a low flat profile, flat profile and incorporated access hatches. The cover system panels interlock to provide secure and simple installation and also ensure a firm seal.

EcoEX™ baffle walls offer a longer lifespan than concrete, steel or aluminium alternative while also saving up to 90% of space in a tank that would otherwise be occupied by a 150 – 200mm thick concrete wall. FRP baffle walling systems are also easily reconfigured to accommodate changes in flow requirements.

Applications where **EcoEX™** FRP tank covers, baffle walling and odour control systems might be used are:

- Odour control
- Splash control
- UV screen / algae barrier
- Improved aesthetics







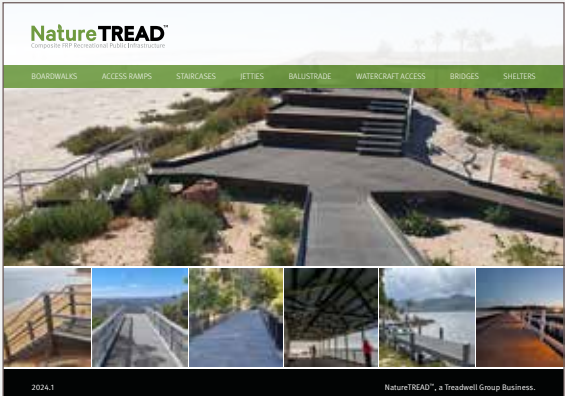
NatureTREAD™ is Treadwell's benchmark FRP composite system for Recreational Public Infrastructure. This system is widely used for boardwalks, viewing platforms, public access, bridges and shelters, to name a few.

This **NatureTREAD™** system is comprised of a vast range of composite products. This allows the team at Treadwell to assist in overcoming any issues or challenges that may arise in your projects.

The **NatureTREAD™** system consists of:

- Grating
- Stair treads
- Structural profiles
- Balustrades

Durable, high-strength, corrosion-resistant and visually pleasing, **NatureTREAD™** extends the design life of public infrastructure.





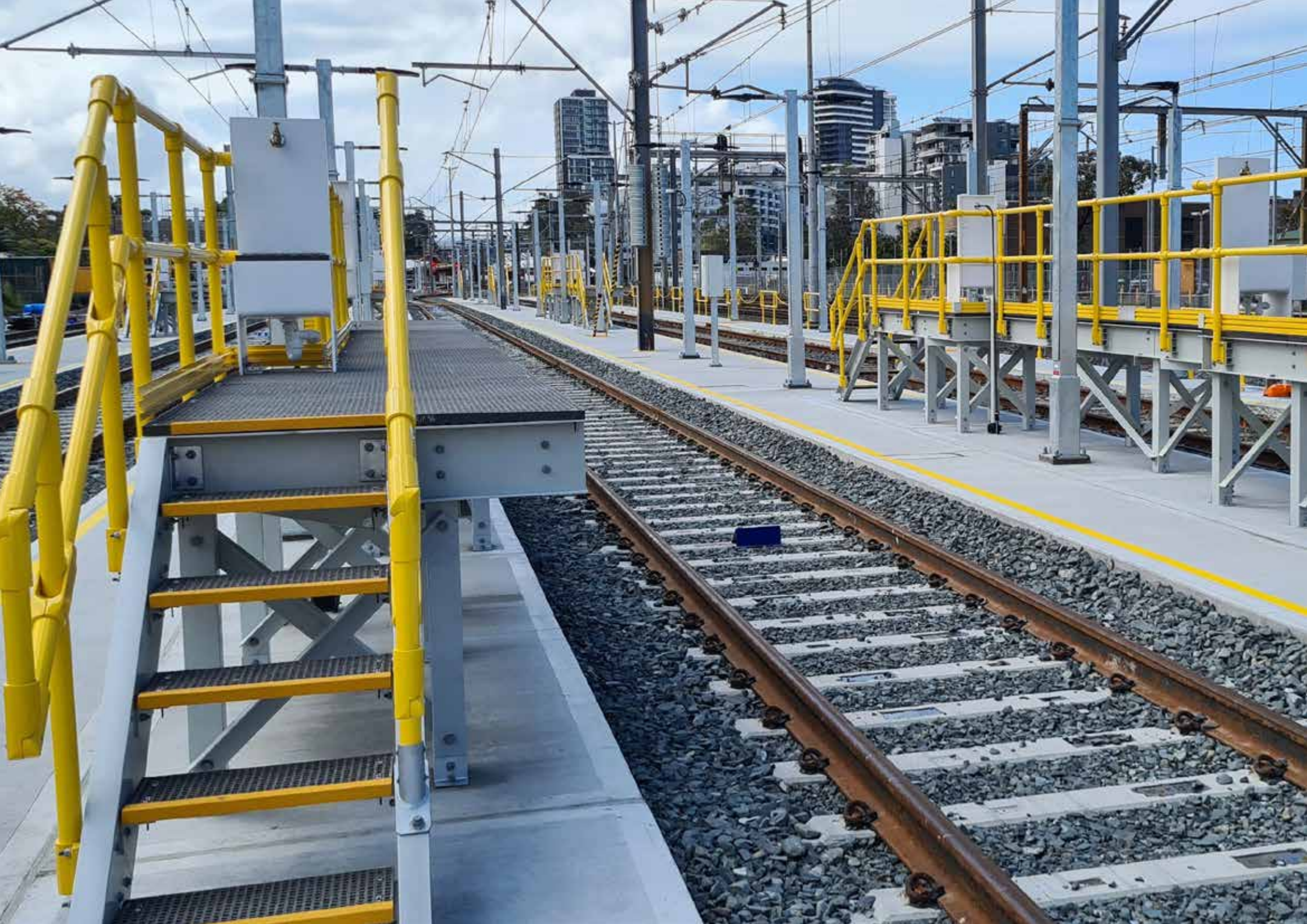


Treadwell's SecurEX[®] FRP Fencing System is suited for a wide range of applications including substations, switch yards, rail corridor, overhead support mast, chemical storage/process, ports and marine, airports, defence, mining and much more.

SecurEX[®] is an excellent investment suited to a large range of sectors, spanning from industrial to architectural. **SecurEX[®]** FRP Fencing System is non-conductive and non-corrosive, making it suitable in electrically sensitive environments. It is ideal around railway signalling equipment, and applications where power, magnetic fields and radio frequency (RF) transmission are critical considerations.

With areas along the coast in mind, **SecurEX[®]** FRP Fencing System can be also applied in areas with high salt & moisture content. Treadwell's composite fencing solution is the perfect choice due to the adaptable designs. Easily bolted down or embedded, it can be fabricated to suit any requirement.







INDUSTRUCT™ solutions feature any combination of Treadwell's FRP grating, handrails, ladders and structural profiles. These access structures are easily installed in elevated, remote, indoor or outdoor locations, and feature corrosion resistant and low electrical conductivity properties.

The access structures under our **InduSTRUCT™** range includes:

- Fixed staircases
- Fixed access platforms
- Fixed stepovers
- Structural stair systems
- Customised structures
- Rail platforms



CASE STUDY

Henley Beach Shelter And Balustrade

One of the liveliest places in Adelaide, the Henley Beach area has over the last couple of years undergone major upgrades including the Henley Square. Long stretches of pristine sandy beach where the jetty sits, picturesque coastal walks, delightful dining and entertainment nearby, with magnificent sunsets draw locals and visitors to this beautiful beach.

Treadwell Group was engaged to assist with the supply of a fibreglass reinforced plastic (FRP) shelter and balustrading system for the construction of the entirely new jetty.

Treadwell assisted throughout the entire project which included design consultancy, material supply & fabrication services.



Project Information

Project Category:	Recreational Public Infrastructure
Scope of Work:	Designing and fabricating the shelter and balustrade
Treadwell Products:	NatureTREAD™ FRP Balustrades ArchitEX™ FRP Structural Profiles

Project Challenges

- Protection of existing landscape.
- Coastal corrosive environment.
- Difficulty in laying out of the structure on the shifting terrain.
- General construction access in a high traffic public area.

Treadwell Solution:



1

As part of the exclusive NatureTREAD™ range, high performance ArchitEX™ FRP structural profiles were specified in building the structure and providing a more sustainable solution over traditional materials.

4

To make the structure aesthetically appealing, the standard colours of the system can be made to match the design team's requirements.

2

The fibreglass beams, columns and associated sections from the extensive ArchitEX™ range are produced from high quality FRP through a pultrusion process, which ensures satisfactory results even in challenging conditions.

5

Being lightweight and easy to install, FRP is very manageable during construction.

3

FRP is simply fabricated and modified on site. This means there is no need for any hot works permit.

6

Given the nature of FRP, any system utilising it is virtually maintenance free, thus keeping maintenance costs as low as possible.

CASE STUDY

SecurEX® Screening

In order to maximise space and prepare for high capacity metro trains, a multi-storey substation was custom designed to be installed in Melbourne's CBD. This would be situated on a narrow strip of land, and had to be constructed within a tight timeframe. Prefabrication technology allowed the substation to be built off site at the same time as the foundation being installed; this saved time and eliminated the potential for weather delays. Consisting of a team of contractors, communication and action had to be precise.

Treadwell was engaged to supply the FRP products for the structure and security perimeter.

Project Information

Project Category:	Substation Utilities Infrastructure
Scope of Work:	Supply SecurEX® FRP Solution
Treadwell Products:	ArchitEX™ Structural Profiles GratEX® FRP Micro Mesh Grating SecurEX® FRP Palisade Panel

Project Challenges

- Major concern on electrical conductivity of the fence due to the proximity to the electrified railway line.
- Required material that was transparent to radio frequency.
- Corrosion issues due to the exposed nature of the site.
- Reduce the need for maintenance.

Treadwell Solution:



1

Treadwell's SecurEX® FRP fencing is suited to a wide range of rail applications, especially in areas where stray electrical currents are a concern.

4

Being lightweight and easy to install, FRP is very manageable during construction.

2

SecurEX® FRP Picket Fence is an anti-climb design, providing an added layer of security around the structure it protects. Easily installed on even and uneven ground.

5

Given the nature of FRP, any system utilising it is virtually maintenance free, keeping maintenance costs to a minimum.

3

GratEX® FRP Micro Mesh grating was selected as it accommodates wind loading concerns while providing a barrier against debris or foreign objects.



CASE STUDY



Reservoir Access Staircase

In 2015, Treadwell was contracted to carry out supply for works for the replacement of the entire roof over the water supply to ensure that it is completely water proof to prevent contamination of the potable water supply. The works also included the installation of access stairs into the reservoir to improve safe access. This was particularly important for when a polyethylene liner is installed in the future.

Project Information

Project Category:	Water storage facility
Scope of Work:	Supply INDUSTRUCT™ FRP Solution
Treadwell Products:	EX-Series® GratEX® FRP Square Mesh Grating EX-Series® RailEX® ROUND FRP Handrails ArchitEX™ FRP Structural Profiles

Project Challenges

- A major challenge was to provide proper safe access to inlet pipes and outlet pits for regular maintenance.
- As the structure would be submerged for long periods of time, the issue of corrosion was a critical one.

Treadwell Solution:



1

Extremely durable INDUSTRUCT™ range (EX-Series® GratEX® Square Mesh Grating and RailEX® ROUND Handrail) engineered and manufactured to comply to AS1657-2013.

4

Being lightweight and easy to install, FRP is very manageable during construction.

2

The comprehensive range of ArchitEX™ FRP Structural Profiles allows for efficient design providing a lightweight structure making installation straightforward.

5

Given the nature of FRP, any system utilising it is virtually maintenance free, thus keeping maintenance costs as low as possible.

3

FRP is simply fabricated and modified on site this means there is no need for any hot works permit.

CASE STUDY

Wagga Wagga Water Treatment Plant

Originally formed in the 1930s, this water treatment plant was incorporated to make reticulated water available to towns and villages in the area.

Over the years, more localities were added. Water supply was established with the Murrumbidgee River with a network of treatment, pumping, storage and pipework installations.

To support expansion plans, a new plant was built. As part of the new plant, a trash screen needed to be installed to prevent debris from the river going into the pipes. Decking was also installed in the chemical bund for potential leaks.



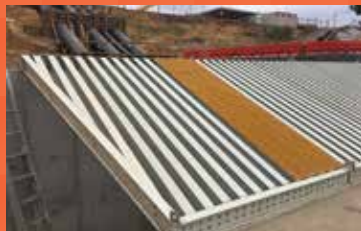
Project Information

Project Category:	Water Infrastructure
Scope of Work:	Supply of FRP products
Treadwell Products:	ArchitEX™ FRP Structural Profiles EX-Series® RailEX® ROUND FRP Handrails EX-Series® GratEX® FRP Square Mesh Grating

Project Challenges

- In a corrosive environment where chemicals and by products are present, the concern was to acquire an alternative that would outlast in these conditions.
- Need to design and engineer a practical sealable rebate or step throughout the facility.
- The cost of maintenance of the facility was a concern once installed as previous materials required consistent attention.

Treadwell Solution:



1

Treadwell's FRP products are constructed from premium resins that include corrosion resistant properties and UV inhibitors.

3

EX-Series® RailEX® ROUND FRP handrails are the choice alternative to metallic handrails and offers electrical transparency while being non-conductive in nature.

2

Treadwell's ArchitEX™ FRP Structural Profiles can be customised to suit the application.

4

EX-Series® GratEX® FRP Square Mesh grating allows for maximum flow through of excess chemicals.



CASE STUDY

Salt / Bitterns Discharge Winch Tower & Bridge

Particular attention had to be paid to the extremely corrosive environment the winch tower would sit in – this meant that the majority of conventional materials would be eliminated for selection.

Our client’s engineering team worked in close conjunction with our FRP design and development personnel throughout the whole project to build a lightweight, corrosion resistant and cyclone rated structure that was capable of supporting a heavy duty winch with a S.W.L. of 5 tonnes. The resulting construction consisted of all members made of Fibreglass, joined together using 316 grade stainless steel bracketry

As it was necessary to have personnel access on the winch, a bridge section was developed to span the 7 metres between a bank of earth and the tower. GratEX® was used to make certain that all personnel accessing the tower would enjoy safe and secure footing in conjunction with RailEX®, Treadwell’s FRP hand railing system.

The structure was fully trial assembled and then partly dismantled and packed into modules to be delivered on time in full.



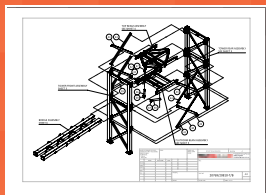
Project Information

Project Category:	ArchitEX™ structural
Scope of Work:	Winch tower at solar salt production facility
Treadwell Products:	ArchitEX™ FRP Structural Profiles EX-Series® GratEX® FRP Square Mesh Grating EX-Seires® RailEX® ROUND FRP Handrail

Project Challenges

- Significant corrosion issues due to the environment and exposure.
- Weight restriction was an issue given the allowable load on sensitive ground.
- Cyclone prone region of Western Australia.
- Stringent structural specifications to support certain weights.
- Remote region which hampers logistics and installation.
- Reduce the need for maintenance to focus on production.

Treadwell Solution:



1

ArchitEX™ FRP columns, beams and other supporting profiles were specified as the skeleton of the structure. GratEX® FRP grating and RailEX® FRP handrail were supplied to provide safe access. Specially formulated resin was categorically determined to withstand the corrosion.

2

The ArchitEX™ profiles were tested to be cyclone rated.

3

Being lightweight and easy to install, FRP is very manageable during construction.

4

Given the nature of FRP, any system utilising it is virtually maintenance free.

5

FRP is high in strength. Based on the resin formula and engineered design, the structure was capable to support the heavy duty winch.



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