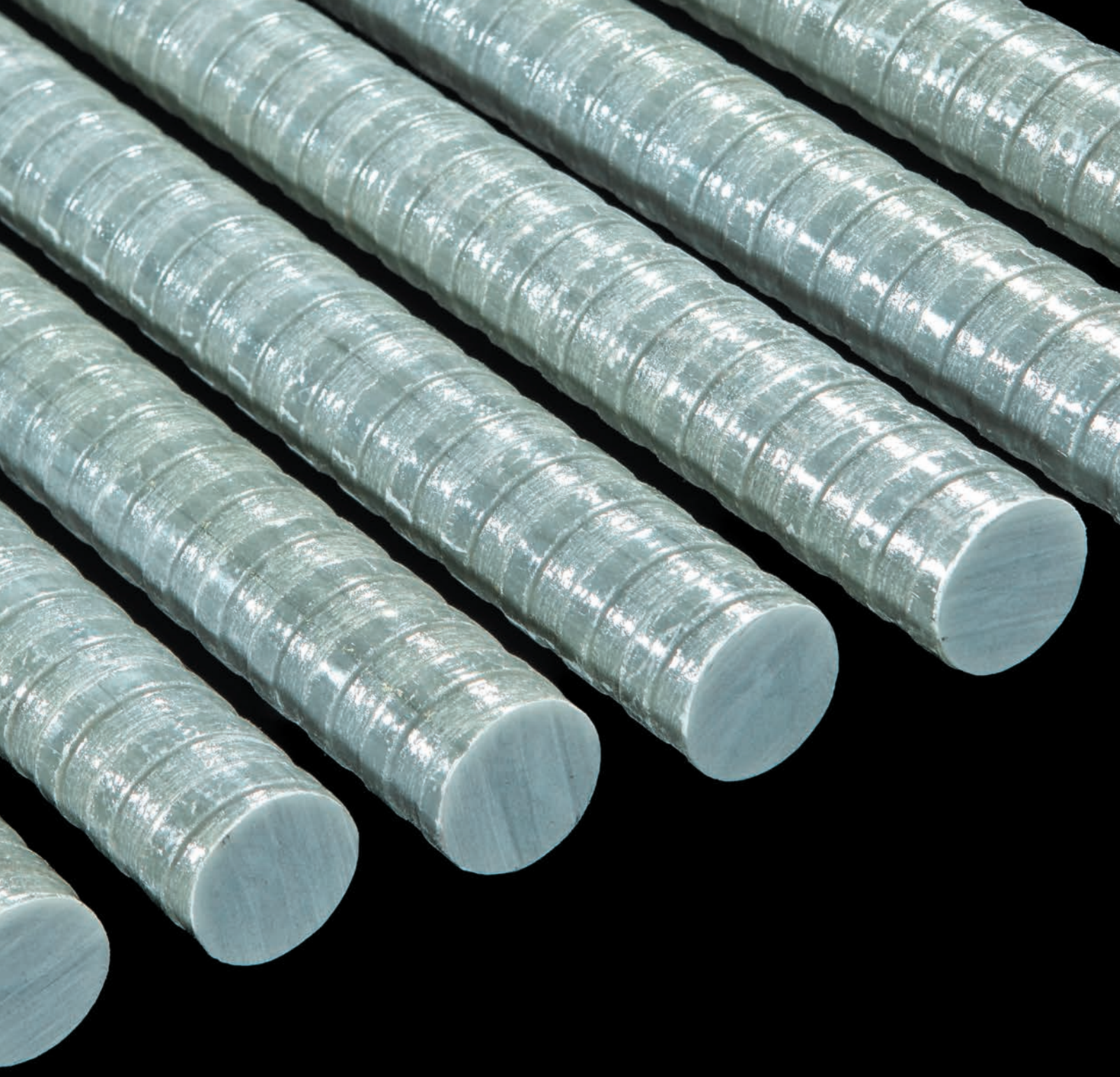

mateenbar™

Leading the World in Durable Fibreglass Rebar

ABOUT MATEENBAR™

MATEENBAR™ is a high performance glass-fibre reinforced polymer (GFRP) rebar. It is the proven solution to corrosion, replacing steel rebar for concrete reinforcement.

Mateenbar™ is designed for engineers and government agencies looking to achieve the best economic, performance, and environmental outcomes on their projects.

Fibreglass Composites for Stronger Structures

The drive to deliver sustainable and lasting infrastructure has seen engineers increasingly look to glass-fibre reinforced composite products to provide an alternative to traditional materials such as steel and timber.

Tested and Ready for your Project

- High performance at a competitive price point
- Lightweight for easier handling and economic to transport
- Tested and quality assured
- Compliant with engineering standards globally

Mateenbar™ is EPD Certified

EPD certification gives professionals the information required to make informed decisions that support both structural integrity and sustainability goals.

Developed and Manufactured in New Zealand

Mateenbar™ concrete reinforcement is manufactured in Gisborne, New Zealand (for NZ, Australia, and the Pacific Islands) in North Carolina, USA, (for North America) and Dammam, Saudi Arabia (for the Middle East and Europe).

September 2025

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GFRP COMPOSITES

The Material Solution for Durable Infrastructure

GLASS-FIBRE REINFORCED POLYMER COMPOSITES (GFRP) are corrosion-resistant, lightweight, and deliver long life. They are used in projects where materials such as steel and timber often fail over time.

Why are GFRP Composites replacing traditional materials?

GFRP composites have a unique combination of mechanical properties. Even in the most challenging and corrosive environments, they provide exceptional resilience, ensuring performance.

Our sustainable composites are used in infrastructure projects across the globe – from bridges and tunnels, to ports and seawalls.

Potash Plant Concrete Slab Replacement, Jordan

Advantages of using GFRP Composites

Whole of Life Savings
- Design life is 100+ years
- Zero maintenance cost

High Tensile Strength
- Twice the tensile strength of steel

Corrosion-resistant
- Exceptional longevity in salt water environments
- Does not rust or leach

Highly Chemical Resistant
- Exceptionally resistant to a wide range of chemicals

Non-electromagnetic
- Non-conductive and electro-magnetically neutral

Non-magnetic
- No interference with sensitive enquipment

Sustainable Infrastructure Solutions (GFRP compared to Steel)

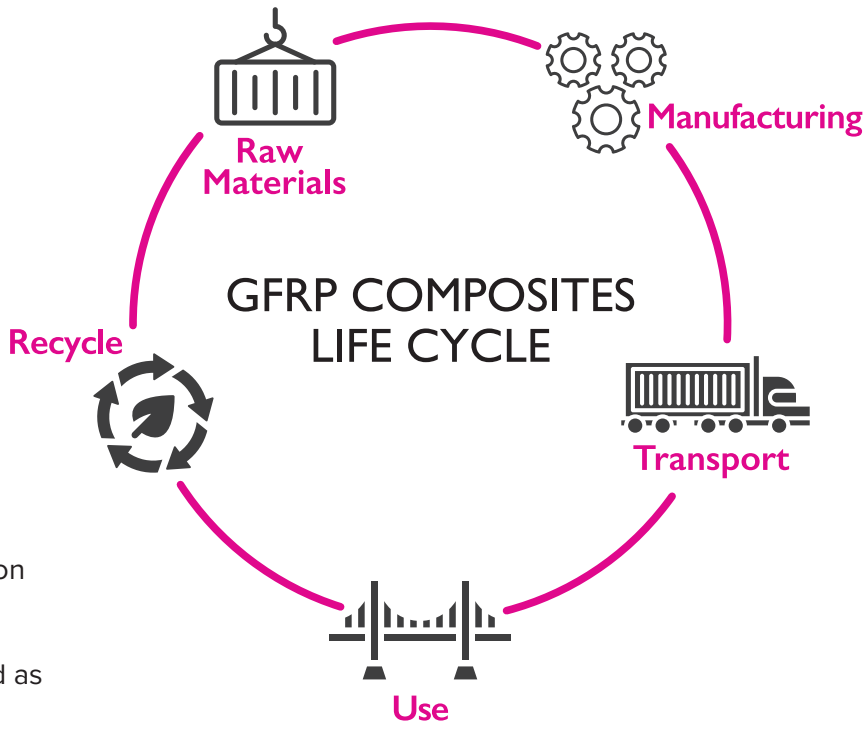
Raw Materials
- GFRP Composites have a 15% lower carbon footprint than steel*

The Manufacturing Process
- Lower heat, water, and energy used
- Lower CO_2 emissions
- Process efficiency = minimal waste

Distribution
- 4 x lighter than steel
- More product per truckload
- Less fuel required for transportation

Use
- Increases asset life cycle by as much as four times
- Zero maintenance required
- Seawater can be used in concrete production

Recycle
- GFRP Composites can be crushed and used as aggregate in concrete



*Comparison based on steel rebar manufacturing

Lightweight
- 4 x lighter than steel
- Faster installation, reduced injury risks, and lower transportation costs

Easy to cut and install
- Cut on-site using standard cutting tools

Low Thermal Conductivity
- Maintains excellent thermal insulation values

No Thermal Cycling Impact
- Thermal expansion coefficient almost identical to concrete

Highly Durable
- Over 100 year retention of strength and modulus in high pH environments

Low Environmental Impact
- 15% lower carbon footprint than steel

mateenbar™

The proven solution to corrosion, replacing steel rebar for concrete reinforcement

Harkers Island Bridge,
North Carolina, USA

Twice the tensile strength of steel

Over 25 years proven global service

International codes and standards

Applications

Mateenbar™ glass-fibre reinforced polymer (GFRP) rebar is designed for heavy load applications. It offers an extended asset lifespan in the most challenging and corrosive environments.

Corrosive and Chemical Environments

- Bridge decks and approach slabs
- Roads
- Underwater, coastal and offshore
- Drainage arch and box culverts
- Marine precast sea walls
- Sewage treatment plants
- Desalination plants
- Industrial and agricultural facilities

Thermal Insulation

- Energy efficient buildings

For non-conductive/non-magnetic performance

- Hospitals
- Airport compass calibration pads
- Power plants and transformer sites
- Light Rail

Easy and safe to cut

- Tunnels (soft eyes)
- Mining

Deep Tunnel Stormwater System, Dubai

Rail Detection Loops (Australia, UK and Qatar)

Bends and Stirrups

All bends are factory made and delivered to exact specifications. A variety of shapes, stirrups, and bespoke bends can be produced.

Request our shape literature for available bend and shape geometries.

Sydney Harbour Ferry Wharves, Australia

MATEENBAR™ SAVINGS

Cost Savings and Sustainability across the Asset Life Cycle

Sustainability is achieved by balancing environmental, economic, and social needs – ensuring what is produced today will provide a lasting and productive future.

Mateenbar™ delivers positive outcomes for asset owners, communities, and the environment.

Economic Prosperity

- Longer life cycles. Mateenbar™ requires no expensive maintenance and preventative corrosion measures
- Design guides and codes have been improved over time. In recognition of the high performance of modern GFRP rebars, the quantities required for reinforcement have been reduced
- Design and manufacturing of GFRP rebar has been optimised and it is competitively priced
- Eliminating the risk of corrosion in infrastructure results in savings across the entire asset life
- Less maintenance (e.g. roadwork) reduces economic losses through delays and business interference
- 4x lighter than steel means less tonnage to transport

Social Responsibility

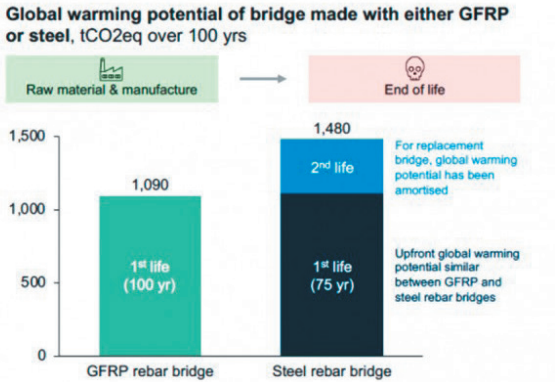
- Mateenbar™ is 4x lighter than steel, making it easier to install, and decreases injury risk to workers
- Robust infrastructure, particularly roading and bridges, allows supply chain companies and communities to travel safely and freely without delays

Environmental Savings

- Mateenbar™ does not corrode or cause concrete spalling
- No rust or chemical leaching
- Long-lasting structures result in reduced environmental damage
- Requires less concrete coverage
- GFRP composites have a 15% lower carbon footprint than steel (comparison based on the manufacturer of steel rebar)

Bridge Life Cycle Study

A research project conducted by the Florida Department of Transport and the University of Miami – consisting of a 100-year life-cycle study of a 57m x 18m bridge.
It showed a composite-reinforced bridge reduced global warming potential by 390 Tonne or 26%.



Design codes and standards

Design standards make it easy to switch from designing with steel to designing with GFRP Rebar.

Australia: AS 5204:2023 Fibre-reinforced Polymer Bars

USA: ACI CODE-440.11-22: Building Code Requirements for Structural Concrete Reinforced with Glass Fiber-Reinforced Polymer (GFRP) Bars; AASHTO LRFD: Bridge Design Specifications for GFRP-Reinforced Concrete Bridge Decks and Traffic Railing

Europe: FIB Task Group 9.3 - Bulletin 40 - FRP Reinforcement in RC Structures

Middle East: ACI 440.1R; ACI CODE-440.11-22: Building Code Requirements for Structural Concrete Reinforced with Glass Fiber-Reinforced Polymer (GFRP) Bars

Canada: CAN/CSA S806: Design of Buildings with Fibre Reinforced Polymers, CAN/CSA S6: Canadian Highway Bridge Design Code

Technical Data

Mateenbar™ 46 (ASTM D7957, ACI 440.6, CSA-S807 Grade I)

	Units	#2 (6mm/0.23in)	#3 (10mm/0.39in)	#4 (13mm/0.51in)	#5 (16mm/0.62in)	#6 (19mm/0.74in)	#7 (22mm/0.86in)	#8 (25mm/0.98in)	#10 (32mm/1.25in)
Guaranteed tensile force	kN	27	59.2	97	130	182	241	297	437
	kip	6.1	13.3	21.8	29.1	40.9	54.1	66.8	98.2
Elastic Modulus	GPa	46.8							
	ksi	6670							
Guaranteed transverse shear capacity	MPa	150							
	ksi	21.8							
Weight	g/m	97	170	315	415	590	780	1030	1680
	lb/ft	0.07	0.114	0.211	0.278	0.395	0.524	0.692	1.128
Nominal cross-sectional area	mm^2	32	71	129	199	284	387	510	819
	in^2	0.049	0.11	0.20	0.31	0.44	0.60	0.79	1.27
Outer diameter (including ribs)	mm	8.2	10.3	14.0	16.0	19.0	21.8	25.0	31.4
	in	0.323	0.406	0.551	0.630	0.750	0.860	0.985	1.240
Primary Materials	Epoxy Backboned Vinylester and Corrosion Resistant E-CR Glass								

Mateenbar™ 60 (ASTM D8505, CSA-S807 Grade III)

	Units	#2 (6mm)	#3 (10mm)	#4 (13mm)	#5 (15/16mm)	#6 (19/20mm)	#7 (22mm)	#8 (25mm)	#9 (30mm)	#10 (32mm)
Guaranteed tensile force	kN	27	71	129	199	284	387	510	600	735
	kip	7.2	16.0	29.0	44.0	64.0	87.0	115.0	134.9	165.2
Elastic Modulus	GPa	60								
	ksi	8700								
Guaranteed transverse shear capacity	MPa	180								
	ksi	26.1								
Weight	g/m	97	185	315	476	702	960	1252	1575	2050
	lb/ft	0.07	0.12	0.21	0.32	0.47	0.64	0.84	1.06	1.37
Nominal cross-sectional area	mm^2	32	71	129	199	284	387	510	645	819
	in^2	0.049	0.110	0.200	0.310	0.440	0.600	0.790	1.000	1.270
Outer diameter (including ribs)	mm	8.2	10.8	14.0	17.2	20.6	24.1	27.4	30.8	35.0
	in	0.315	0.425	0.551	0.677	0.807	0.949	1.087	1.213	1.378
Primary Materials	Epoxy Backboned Vinylester and Corrosion Resistant E-CR Glass									

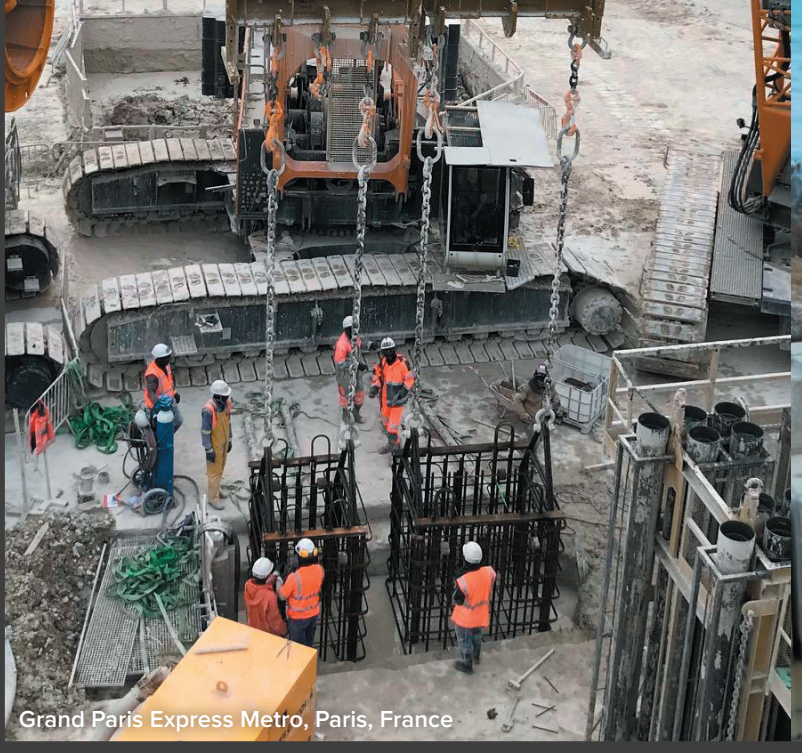
The data herein applies to straight bars only. For data on Mateenbar™rebar bends, please refer to the Mateenbar™ rebar bends data sheet.

All Mateenbar™ products have been tested according to ASTM, ACI, and/or recommended CSA methods. Mateenbar™ products are sold subject to Pultron Composites' standard warranty, and nothing herein shall expand or extend such warranty. The data contained herein is considered representative of current production and believed to be reliable. Pultron Composites reserves the right to make improvements in the product and process, which may result in benefits and/or changes to some physical and mechanical properties. For more information, visit pultron.com.

Please contact our team for information on the material properties, shape availability and dimensional limitations of bent bars.

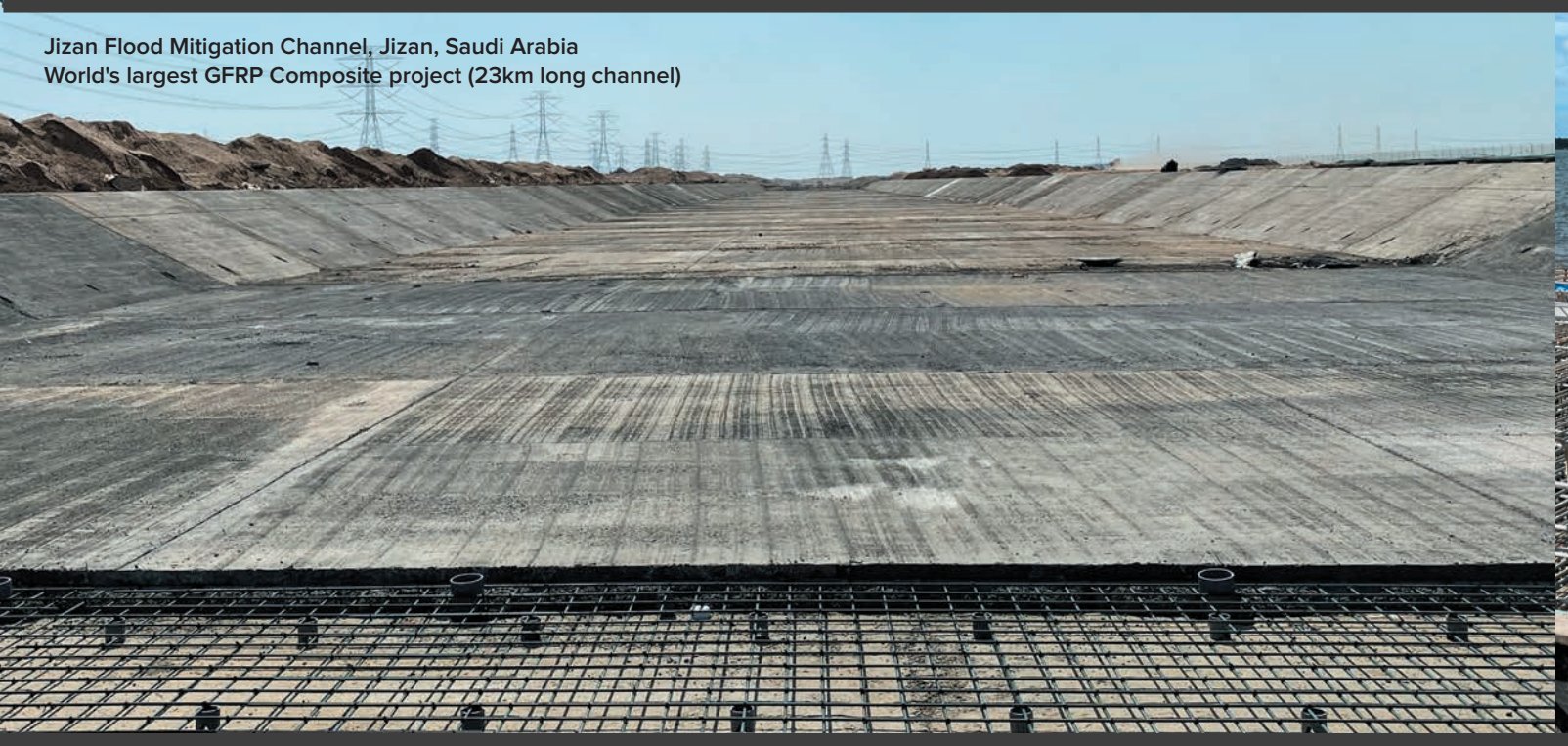
ANZ Revised: 13 August 2024

Kwinana Desalination Plant, Perth, Australia



Grand Paris Express Metro, Paris, France

Jizan Flood Mitigation Channel, Jizan, Saudi Arabia
World's largest GFRP Composite project (23km long channel)



M12 Motorway, Sydney, Australia

Eastland Port Upgrade, Gisborne, New Zealand

Post-earthquake State Highway Seawall, Kaikoura, New Zealand

Low Battery Seawall, South Carolina, USA

Rotterdam Port upgrade, The Netherlands

School Development, Marshall Islands

Mātai Medical Research Institute, Gisborne, New Zealand

mateenbar™

Leading the world in durable fibreglass rebar

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