



# Utility Solutions

BLUEY TECHNOLOGIES



## SPECIALISED ENGINEERED PRODUCTS BACKED BY KNOWLEDGE + KNOWHOW

Bluey Technologies is a supplier of engineered construction products for major civil engineering infrastructure works. We have the engineering edge and experience to help you specify, plan and manage projects seamlessly from beginning to end.

Our collaborative approach means you have a committed and agile partner by your side throughout the entire project.

While we like to think outside the box, our continued focus is always to ensure the job gets done to the highest standards, not only making your life easier but lowering the whole-of-life cost of your project.

# Utility Solutions

## MARINE INFRASTRUCTURE

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### PILE JACKET GROUTING

BluCem HE80	EARLY STRENGTH GROUT
BluCem LH60	DEEP POUR ENGINEERED GROUT

### TIDAL ZONE REPAIRS

BluCem HE80	EARLY STRENGTH GROUT
BluCem HB50	HIGH BUILD CEMENTITIOUS MORTAR
BluCem HB55	SPRAYABLE SHOTCRETE

### STRUCTURAL REPAIRS

BluCem HE80	EARLY STRENGTH GROUT
BluCem HB50	HIGH BUILD CEMENTITIOUS MORTAR
BluCem HB55	SPRAYABLE SHOTCRETE

### NON-CORROSIVE REINFORCEMENT

BluGeo GRP60	GRP CONTINUOUSLY THREADED SOLID BAR
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For almost twenty years, Bluey has offered a range of marine grouts and repair solutions for major coastal infrastructure projects. In utilising our innovative products, contractors ensure the longevity of our coastal infrastructure for generations to come.



### PILE JACKET GROUTING

An effective method for the repair of coastal piles is to use a pile jacket system and a reliable underwater grout. These repairs can take place above or below the waterline. The method involves encasing a deteriorating pile with a jacket or formwork and filling the voids with an underwater grout.

- Wide range of grouts and mortars
- Formulated for use in harsh marine environments
- Anti washout
- Long pump life
- Engineered cements, additives and selected aggregates

### TIDAL ZONE REPAIRS

Products from the BluCem range are a popular choice with contractors carrying out repairs in tidal zones due to their exceptionally high early strength development. This allows the grout to remain fluid during placement at low tide, while ensuring a solid, high-strength grout as the tide returns.

- Marine-grade grouts, mortars and shotcrete
- High chloride and sulphate resistance
- Suitable for new structures and rehabilitation works
- Based on CSA cement technology
- Compatible with structural concrete elements
- Fast, reliable turnarounds and early strengths

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## MARINE INFRASTRUCTURE

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### STRUCTURAL REPAIRS

In the presence of aggressive environments, reinforcing steel in concrete may corrode and damage the surrounding concrete. Such circumstances require engineered cementitious technology to repair the damage and extend the useful life of the structure.

Bluey offers:

- Detailed surface preparation procedures
- Leading structural repair products
- High early and ultimate strength grouts
- Modulus compatible with concrete
- Eliminating stress concentrations
- Negligible rebound shotcretes
- Minimal wastage and clean up



### NON-CORROSIVE REINFORCEMENT

One of the most effective ways to protect marine environments is through the minimisation of elements which will corrode in harsh coastal environments.

Bluey has developed a range of innovative reinforcing solutions which have been specifically designed to withstand the effects of chloride attack, resulting in structures with a longer service life and less maintenance.

#### **BluGeo GRP60 – GRP Continuously Threaded Solid Bar**

- Glass-fibre reinforced polymer range
- Ideal for use in ground anchoring, reo mesh and rebar in harsh marine environments
- Robust, lightweight and extremely durable
- Corrosion resistant, without compromising performance or longevity
- +100 year design life for all required applications
- Easy to cut and handle
- No hot works required





### NON-CONDUCTIVE STABILISATION

**BluGeo GRP60** GRP CONTINUOUSLY THREADED SOLID BAR

### LOW THERMAL RESISTIVITY GROUTING

**BluCem LH60** DEEP POUR ENGINEERED GROUT  
**BluCem EA55RM** LOW THERMAL RESISTIVITY CEMENTITIOUS GROUT

### WIND TURBINE HIGH STRENGTH GROUTING

**BluCem HSI20** ULTRA HIGH STRENGTH GROUT

### GROUND ANCHORING

**BluGeo GRP60** GRP CONTINUOUSLY THREADED SOLID BAR  
**BluGeo LP Rock Bolt** DCP LOW PROFILE STEEL RIGID ANCHOR  
**BluGeo SW-PTF** MULTI-STRAND PERMANENT GROUND ANCHOR



Two decades of experience working on numerous energy projects have given us in-depth knowledge and knowhow, enabling us to deliver specialised construction products to our industry partners.



### NON-CONDUCTIVE STABILISATION

Electrical systems are made safe by connecting an 'earth cable' to the ground so that any fault voltage is neutralised. If there is a fault in the earthing system, these voltages will seek proper earthing through conductive materials such as steel and saltwater, leading to them becoming live with dangerously high voltages.

In 2011, we introduced BluGeo GRP60, a glass-fibre reinforced polymer bar which is non-conductive and has an extremely high load-carrying capacity.

#### **BluGeo GRP60 – GRP Continuously Threaded Solid Bar**

- One quarter the weight of steel
- No sheathing required
- Reliable single stage grouting process
- Highly durable and corrosion resistant
- Eliminates stray currents.

### LOW THERMAL RESISTIVITY GROUTING

Power cables emit high thermal heats, due to the voltage passing through them. When grouting these conduits, a product must be selected which remains cool during placement (to avoid damage to the conduit and cables) and allows the grout to effectively transmit the heat of the cables during its service life.

BluCem LH60 and BluCem EA55RM are deep pour engineered grouts specifically designed to produce low heat during hydration and throughout their service life.

- Ideal for deep pour and conduit grouting
- Low heat of hydration
- Ultra low thermal resistance – increases HV cable capacity
- Highly flowable – can be pumped long distances

### WIND TURBINE GROUTING

Ever-increasing demands for renewable energy have seen wind become a prominent source of power generation in many parts of Australia.

Engineered with extreme precision, these giant turbines generate almost unimaginable loads and require massive support structures to hold them in place. BluCem HSI20 is an ultra-high compressive strength grout designed for these installations.

#### **BluCem HSI20 – Ultra High Strength Grout**

- Highly fluid and self-compacting
- Dual shrinkage control
- Ultra high strength  $\geq 120\text{MPa}$  at 28 days
- Low permeability
- 100 year design life

### GROUND ANCHORING

Ground anchors are stressed (active anchorage) to prevent structural movement. Commonly referred to as tension anchors, they are ideally suited for strong rock conditions.

Bluey has been supplying a range of multi-strand ground anchor systems for more than a decade, including:

- Permanent multi-strand anchors – these fulfil their function for the duration of the working life of a structure and require comprehensive corrosion protection
- Temporary multi-strand anchors – temporary anchors with a working life of up to 2 years
- Removable multi-strand anchors – temporary anchor (working life up to 2 years) with the strands being removed at the end of the working life





# Utility Solutions

## WATER AND WASTEWATER

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### CORROSION PROTECTION LININGS

<b>BluCem ZeoGlass</b>	ACID RESISTANT SHOTCRETE CONTAINING RECYCLED AGGREGATE
<b>BluSeal AKS</b>	CAST-IN HIGH DENSITY POLYETHYLENE SHEET

### SEWER REMEDIATION

<b>BluCem ZeoGlass</b>	ACID RESISTANT SHOTCRETE CONTAINING RECYCLED AGGREGATE
<b>BluSeal AKS</b>	CAST-IN HIGH DENSITY POLYETHYLENE SHEET
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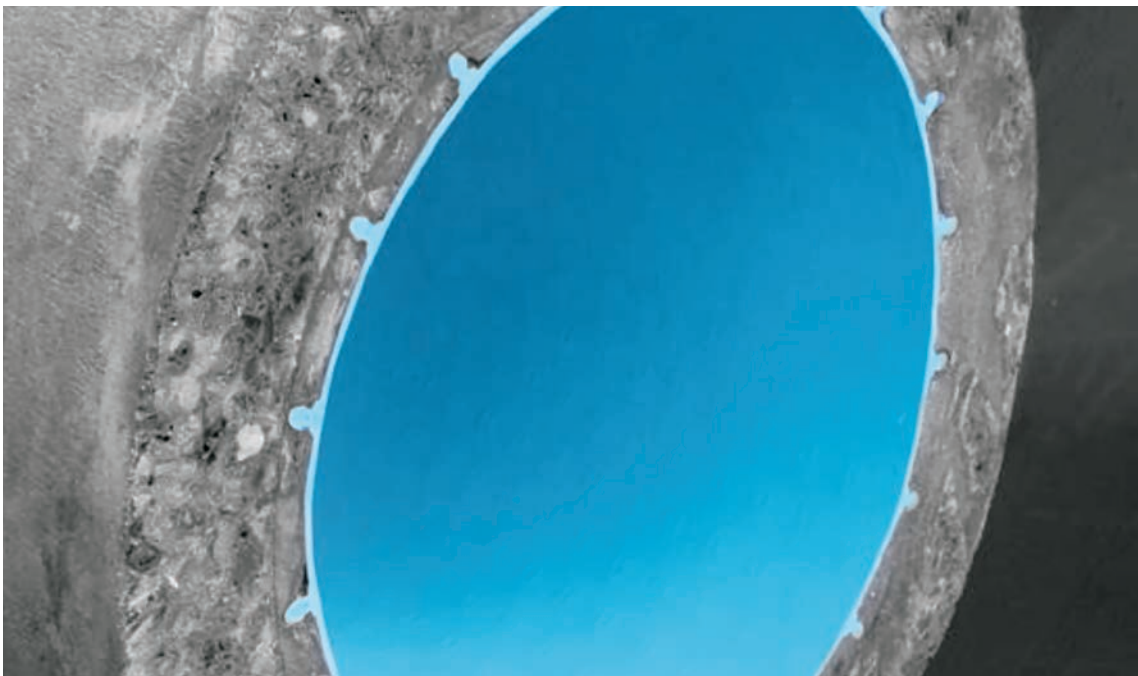
### GROUND STABILISATION

<b>BluGeo GRP60</b>	GRP CONTINUOUSLY THREADED SOLID BAR
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### MANHOLE REMEDIATION

<b>BluSeal AKS</b>	CAST-IN HIGH DENSITY POLYETHYLENE SHEET
<b>BluCem ZeoGlass</b>	ACID RESISTANT SHOTCRETE CONTAINING RECYCLED AGGREGATE

Bluey been a market leader in specialist sewer repair products for more than a decade. We work with civil engineers in sewers, desalination plants and wastewater treatment structures to ensure they operate smoothly and efficiently.



### CORROSION PROTECTION LININGS

Concrete wastewater assets have traditionally been lined with epoxies and wet applied coatings. Whilst effective, spray applied linings require a high degree of surface preparation and can require multiple applications to achieve a design service life of 10-25 years.

Bluey provides a corrosion protection liner, BluSeal AKS, that is able to resist Hydrogen Disulphide gas and other corrosive gasses, offering a 50-100 year design life.

### BluSeal AKS – Anchor Knob Sheet

- Cast-in-situ HDPE membrane
- Corrosion protection lining system
- Resistant to chemical and mechanical impact
- Fully welded homogeneous lining
- Low maintenance
- Time saving and reliable installation
- High anchor pull-out strength
- Resistant to almost any chemical or mechanical trauma
- 100 year design life

# Utility Solutions

## WATER AND WASTEWATER

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### SEWER REMEDIATION

Bluey has developed an innovative cement binder, (ZeoCem) for use in highly corrosive sewer environments. The proprietary binder is very low in alkalinity and does not induce any form of Alkali Silica Reaction or Alkali Aggregate Reaction. The ZeoCem binder which is present in BluCem ZeoGlass does not lose compressive strength, displays excellent resistance to food acids (citric and gluconic) and has the added benefit of providing alkali passivity to facilitate the protection of steel reinforcements.

#### BluCem ZeoGlass – Acid-Resistant, Shotcrete

- Containing Recycled Aggregate
- High acid resistance
- Low drying shrinkage
- High compressive and bond strength
- High flexural strength
- >60% recycled raw materials
- 50 year design life in sewers



### MANHOLE REMEDIATION

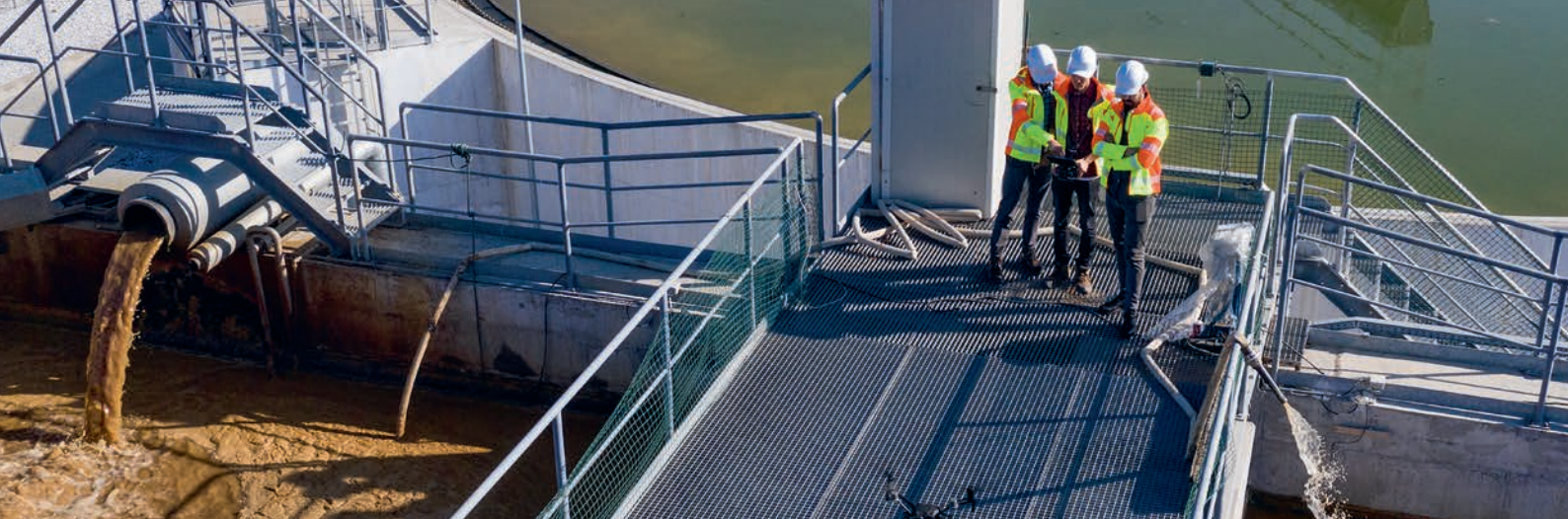
For over 15 years, BluSeal AKS has set the benchmark in manhole remediation and protection, earning a reputation for its outstanding durability and resistance to chemically aggressive environments.

#### BluSeal AKS – Anchor Knob Sheet

- Factory formed liner - no pinholes or defects
- Allows concrete vapour transmission
- Doesn't won't delaminate in underground applications
- Applied at concrete casting
- No 28 day curing unlike spray coatings
- Highly robust – Minimal scouring and impact damage
- +100 year design life







## We deliver...

- Products developed for civil engineering
- Product technical knowledge
- Site application knowhow
- A collaborative approach
- Economical solutions for large projects



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Our products have Government and Regulatory Authority approvals across Australia and New Zealand.

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