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Case Study

Gold Coast Light Rail Infrastructure Upgrade – Parkwood Drive Intersection

Project Background

The Gold Coast Light Rail project is one of the largest public transport initiatives in Australia and the most significant infrastructure development ever undertaken on the Gold Coast. Designed to improve connectivity across the region, the project required innovative engineering solutions to overcome complex construction challenges.

One of the most technically demanding sections was the intersection of Parkwood Drive and the Gold Coast University Hospital. The rail line curved through this intersection with super elevation, making it difficult to place the proposed top reinforcing steel while maintaining clearance from rail holding bolts.

Enviromesh Solution

To resolve the reinforcement challenge, engineers from Aecom and builders from CPB selected **Enviromesh MP47** at a dosage of 6kg/m³. This eliminated the need for a top layer of steel, simplifying construction and ensuring compliance with structural requirements.

The use of **Enviromesh MP47** provided significant environmental, cost, and logistical benefits—especially critical given the intersection's high traffic volume and the need to minimise disruption.

Image Source: www.cpbcon.com.au/our-projects/2016/gold-coast-light-rail

Benefits of Replacing Steel Mesh with Enviromesh MP47

Cost and Time Savings

- Product cost - Significant reduction by eliminating top steel layer
- Labour cost - Reduced handling and installation time
- Overall project time - Faster implementation in a high-traffic zone
- Overall project cost - Lower material and labour costs contributed to total savings

Sustainability & Social Impact

- Reduced steel usage and associated carbon emissions
- Faster installation reduced traffic delays and construction impact
- Improved safety and ease of installation for crews
- Enhanced durability in coastal environments with corrosion-free reinforcement

The Gold Coast Light Rail project demonstrated how Enviromesh MP47 enables smart, sustainable, and efficient infrastructure delivery in complex urban environments.

Performance Benefits

- Corrosion-free reinforcement – ideal for coastal and high-moisture zones
- Reduced repair needs and longer service life
- Safer, easier installation with fewer logistical challenges

Other Benefits

- No steel mesh handling, cutting, tying or welding required
- Fibres added directly at batching plant – easier transport and storage
- Improved workability and access on site – faster concrete placement

Conclusion

The Gold Coast Light Rail Infrastructure Upgrade at Parkwood Drive showcases how Enviromesh MP47 delivers cost-effective, corrosion-free, and time-efficient concrete reinforcement in one of Australia's most demanding urban transport projects. By eliminating steel mesh, the project team achieved faster construction, reduced disruption, and long-term durability—reinforcing Enviromesh's role in modern infrastructure solutions.

Contact Us:

We are here to assist you. Please feel free to reach out via phone or email using the details below. Our team is committed to providing the support and information you require.

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