

Projects:

Kwinana Railway
Extension & Yandi
Iron Ore Mine



Prefabrication saves time, money & effort on WA construction projects



PREFAB

Prefabrication of steel reinforcement offers benefits for a wide range of construction elements including:

- Piles and piers
- Ground beams
- Raft and pad footings
- Beams
- Columns
- Slabs
- Stairwells
- Core walls
- Tilt-up panels
- Precast concrete components

OneSteel Reinforcing demonstrated the effectiveness of prefabrication on two recent projects in WA.

Kwinana Railway Extension Project

Working on behalf of precast concrete manufacturer, Geocrete, OneSteel Reinforcing prefabricated 600 11m long x 2m wide curved reinforcing cages for precast concrete Tech Span Arches for the Kwinana Railway Extension Project in Perth. The project, which involved the construction of four railway underpasses using the Tech Span Arches, was built by Thiess Contractors. The extension provides direct city access for residents in Perth's rapidly expanding southern suburbs.

Geocrete opted for OneSteel Reinforcing's prefabricated solution because of the complexity of the steelfixing involved and to help it meet the tight construction schedule.

Because the steelfixing could take place under factory conditions using a specially designed jig, OneSteel Reinforcing was able to accurately prefabricate the complex

curved reinforcing cages at the rate of about six per day. Each assembly incorporated 1.3 tonnes of reinforcing and were handled by a special lifting brace.

Yandi Iron Ore Mine

Issues such as the remote location of the site, the high cost of delivery and labour, as well as the potential for delays due to steelfixing errors, convinced builder Frankpile to opt for prefabricated pile cages for its remedial piling works at Yandi Iron Ore Mine in the middle of WA.

The 12m long pile cages, to be used for ground stabilisation under an existing earth retained wall, were prefabricated at the rate of six units per day, totaling around 24 tonnes of reo. Because the 230 pile cages had to be transported more than 2100km (entailing five round trips of 4200km), stringent quality control procedures were put in place to ensure there would be no problems on site and a special anti-crush brace was designed to ensure the pile cages were not damaged during the long journey.



Project:

Prefabrication of
Reinforcement



Superior bending and rebending makes 500PLUS Rebar ideal for prefab



REINFORCING SOLUTIONS

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Prefabrication of steel reinforcement offers a host of benefits to builders.

It takes the steelfixing of major structural components such as piles, ground beams, pad footings, columns and beams off the critical path, enabling builders to take advantage of the many benefits that modular construction offers.

500PLUS Rebar's superior bending and rebending characteristics, and excellent weldability with no pre-heating required, makes it the ideal choice for prefabrication.

Prefabricating steel reinforcement elements speeds construction and reduces construction costs on projects of all types and sizes.

With the majority of prefabrication work taking place under factory conditions using specialist machinery, quality is guaranteed and delays due to inclement weather are minimised.

Specially engineered reinforcing meshes and BAMTEC carpets can also be custom-designed and prefabricated to further streamline construction and reduce costs.