



Geraldton Engineering Group Civil / Structural / Mechanical Design of Rio Tinto Fuel Facility at 6 Mile Fuel Facility, Dampier

Design Engineering (as "Wilkie") was commissioned by Geraldton Engineering Group to provide civil, structural and mechanical engineering design and detailing services for a new, heavy and light vehicle refuelling facility for Rio Tinto at 6 Mile Fuel Facility in Dampier, Western Australia.

OUTCOME

- Design of new vehicle pavement slabs
- Design of new concrete footings for an existing 110kL Diesel Tank
- Design of piping, buried services and pumping layout for the new facility

BACKGROUND

Rio Tinto is a global mining and metals company working in more than 40 countries. The existing fuel facility at 7 Mile which services trucks and small vehicles was becoming too congested with increased safety risks. A new facility at 6 Mile was proposed to be designed and constructed to resolve the issues at 7 Mile. Geraldton Engineering Group (GE Group), a Western Australian construction company, in partnership with Wilkie Civil Engineering, provided the engineering and design services for the project.

PROJECT OBJECTIVES

The construction of a new refuelling facility at 6 Mile, Dampier for Rio Tinto, to relieve congestion and mitigate safety risks at Rio Tinto's existing fuel facility at 7 Mile. The new facility was to include new vehicle pavement slabs and associated services and pumping facilities.

CHALLENGES

To incorporate the use of an existing 100kL tank from another mine site to tie into the new installations, making the layout and arrangement of the facility a challenge.

OUR APPROACH

The team at Wilkie began working on providing a preliminary design and general arrangement layout drawings for the facility which were then sent to the client for approval. Wilkie provided recommendations to the client for possible changes to the proposed layout, which ensured the design would be most efficient to fit in with the client's needs. Once the preliminary design and key changes were approved, Wilkie began finalising the engineering design calculations and produced engineering design drawings for the contractor.

Meetings with the client GE Group and the end user Rio Tinto were conducting regularly intervals including organising the HAZOP meetings to ensure that all the key project information was communicated effectively between all the parties involved. Designs were required to comply with all the relevant regulatory and Australian standards including Rio Tinto Iron Ore project specifications.