



PROJECT PROFILE

BP Australia

Design of Upgrades

Kalgoorlie Terminal

Design Engineering (as “Wilkie”) was commissioned by BP Australia Pty Ltd to provide civil, structural and mechanical engineering design and detailing services for the upgrades at BP Kalgoorlie Terminal Western Australia

OUTCOME

- Design and detailing of strengthening/modifications to existing bund
- Redesign and rectification of existing hardstanding at the terminal
- Design of mechanical piping for upgrades to fuel terminal layout

BACKGROUND

BP Australia is part of a global network engaged in the exploration and production of oil and gas products to supply the Australian industrial sector. BP Kalgoorlie terminal’s trafficable hardstanding and bund was found to have non-compliances to Australian Standard AS 1940. Several upgrades to the terminal were required to bring the facility up to current standards. Design was contracted by BP Australia to provide engineering design and detailing services for the project.

PROJECT OBJECTIVES

The upgrades to the existing terminal included increasing the capacity of the bund storage volume and area thus increasing traffic capacity to the terminal. The existing hardstanding had to be strengthened to allow concrete bund walls and had to be strengthened and modified to accommodate access to the terminal. Upgrades to the existing drainage systems under the hardstanding were also undertaken.

CHALLENGES

The new portion of the hardstand was to be tied into the existing sections of the hardstand including the new retaining bund walls. The clayey soil proved to be challenging.

OUR APPROACH

Based on the scope of works and client specifications, Design developed a preliminary design and general arrangement layout drawings of the terminal which included a proposal for the hardstand. Upon approval of the drawings, Design began finalising the engineering design and produced engineering design drawings for tender issue.

Design was regularly involved in technical meetings with the client, provided weekly project status reports and updates the client on the budget, timeframe and deliverables Design also produced construction specifications and provided technical advice during the construction stages of the project. Designs were required to comply with all the relevant regulatory and Australia Standards including BP Australia project specifications.