



CLIENTS | PEOPLE | PERFORMANCE

BUILDINGS AND STRUCTURES



GHD IS AN INTERNATIONAL PROFESSIONAL SERVICES COMPANY. OUR PEOPLE DELIVER INNOVATIVE SOLUTIONS BY COMBINING TECHNICAL SKILL AND EXPERIENCE WITH AN UNDERSTANDING OF OUR CLIENTS' OBJECTIVES AND ASPIRATIONS.

GHD's highly skilled, experienced and committed structural engineers pride themselves on their innovation and creativity when balancing the functional with the natural environment. They deliver highly functional, cost-effective and elegant structures of technical merit by applying well-planned construction methodology.

Our reputation is built on our ability to provide economical designs that focus on constructability, simplicity, innovation and technical excellence.

YOUR NEEDS

We look beyond traditional approaches to develop highly functional, cost-efficient alternatives. We do this from the outset by building teams with a shared understanding and focus on what our clients seek to achieve. This emphasis creates a successful project foundation, supported by a commitment to achieving financial certainty and on-time delivery.

GHD delivers economical structural solutions to meet clients needs by:

- ▶ Carefully selecting founding systems
- ▶ Challenging design criteria
- ▶ Innovating structural systems
- ▶ Assessing construction methods
- ▶ Applying commonsense

OUR SOLUTIONS

BELMONT PUMP STATION, PERTH

GHD has long been an active player in the design of specialised water retaining structures in concrete and steel. In Perth, the fast track delivery of the 250-megalitres per day Belmont Pump Station earned our project team praise from the Water Corporation of Western Australia.



Belmont Pump Station, Perth



Construction of Koroit Milk Powder Building, Victoria



The Carlton Brewhouse, Yatala



SORELL CAUSEWAY BRIDGE, TASMANIA

GHD was engaged to deliver services for the Sorell Causeway, a 460-metre long two-lane bridge to carry the Tasman Highway across Pitwater. The 25.5-metre long spans used a prestressed concrete trough girder built from match cast units glued together and erected span by span. This was the first use of this form of design and construction in Australia.

MANJUN POWER STATION, MALAYSIA

An AUD133 million coal receival system was designed by GHD to service a new 2,100 megawatt power station for a private company which will own, build and operate the system. Works included a marine jetty, ship handling facilities, and a materials handling system of ship unloaders, conveyors, transfer stations and samplers.

BILAL SUITES, DOHA

GHD was the principal consultant for the 20-storey Residential Tower in Dubai. This high quality serviced apartment building utilises a post-tensioned fat plate slab design to provide an economical structure while at the same time minimising columns and allowing the architects greater freedom.

CBH GRAIN STORAGE CELLS, PERTH

GHD designed a number of 19,000 tonne, 16-sided grain storage facilities using precast, prestressed concrete panels for wall units with a steel roof system. The system is also

being used at the Kooragang Island storage facilities in NSW, where the design has been modified to incorporate timber piles due to varying ground conditions.

JP MORGAN INVESTOR SERVICE CENTRE, ADELAIDE

GHD delivered the design for a new office and call centre building on two levels over underground car parking. The building structure comprises a steel frame with post-tensioned slabs on Bondek to overcome the prohibitive cost of formwork.

KOROIT MILK POWDER BUILDING, VICTORIA

The new Milk Powder Dryer Building for Murray Goulburn met tight construction deadlines by each floor being pre-assembled on the ground and lifted into place, with a maximum lift of 110 tonnes.

NORTHERN WATER FEATURE, OLYMPIC PARK, SYDNEY

A scenic attraction of the Olympic Boulevard at Homebush Bay is the Northern Water Feature, which doubles as an environmentally friendly stormwater reclamation system. Located at a former landfill, the feature captures stormwater runoff, which is thoroughly cleaned through newly created wetland ponds, polished through a rain filter system, and recycled through a 10-metre high fountain at the other end of the boulevard. GHD oversaw the clever marriage of engineering and environmental initiatives while converting a dump site into a major feature of the Public Domain.



Construction of Sorell Causeway Bridge in Tasmania



Water feature in Sydney Olympic Park



Southport Olympic Pool, Gold Coast

TOWNSVILLE BULK SUGAR TERMINAL, QUEENSLAND

GHD designed the world's largest bulk sugar storage shed, measuring 360 metres long, 112 metres wide, and 30 metres high, with a storage volume of over 400,000 tonnes. The shed comprises 50-metre span steel trusses supporting gantries and aluminium roof sheeting. The floors, reclaim tunnel and five-metre high sugar retaining walls are all post-tensioned to provide a low maintenance storage surface. Ground improvement techniques were used to avoid piling and minimise construction costs.

CITY CENTRE DOHA, QATAR

GHD was the Principal Consultant for the AUD333 million development of the largest shopping mall in the Middle East, with over 126,000 square metres of lettable space and a total built up area of 300,000 square metres. GHD also delivered the masterplan for a 400-room hotel, four office towers and four residential towers.

RAAF BASE TINDAL AND DARWIN COMMAND AND OPERATIONAL FACILITIES CENTRE, NORTHERN TERRITORY

GHD worked closely with the contractor and the Department of Defence in the design and construction of 11 earth covered, blast resistant structures. Innovative utilisation of upper void spaces for plant and sleeping areas maximised the value for money of these facilities.



ABOUT GHD

GHD is an international professional services company. Our people deliver innovative solutions by combining technical skill and experience with an understanding of our clients' objectives and aspirations.

With more than 6500 people in a network of 100-plus offices throughout Australia, New Zealand, Asia, the Middle East, the Americas and Europe, we serve clients in the global market sectors of infrastructure, mining and industry, defence, property and buildings and the environment.

Central to our clients' prosperity and GHD's success are forward-thinking engineers, architects, planners, scientists, drafters, project managers, economists and supporting staff. Our people embrace the core values that have sustained the company since inception – **Teamwork, Respect and Integrity.**

Established in 1928, GHD is ranked as one of the world's leading engineering, architecture and consultancy firms. We are dedicated to our clients and their stakeholders, to being a responsible corporate citizen and to improving the quality of life around the world.

We contribute to the goals of sustainable development and are committed to managing the social, economic and environmental impacts of our operations and assisting our clients to manage theirs in the provision of our technical consulting services. We recognise innovation as the key to realising this objective.

As a member of the World Business Council for Sustainable Development (WBCSD), GHD actively participates in the public debate on the role business has to play in managing climate change, energy, development and ecosystems.

GHD operates under a Practice Quality Management System that is certified to AS/NZS ISO 9001:2000 and our Environmental Management System (EMS) is accredited to international standard ISO 14001 by NATA Certification Services International (NCSI).

For more information, visit www.ghd.com.au



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