



CLIENTS | PEOPLE | PERFORMANCE

ENVIRONMENTAL IMPACT ASSESSMENT AND APPROVALS



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 is recognised for our ability to manage and prepare solutions for a wide range of environmental issues. Our environmental and community planning specialists, engineers and scientists work closely together to understand the complex environmental and social impacts of new developments. With this understanding, we are able to develop mitigation measures and integrate them into the design, construction and operational components of your project.

YOUR NEEDS

ENVIRONMENTAL IMPACT ASSESSMENTS (EIA)

GHD focuses on the identification of potential environmental constraints and opportunities in the early stages of the project, allowing environmental factors to be reflected in the development of the project and mitigation measures to be devised to minimise potential impacts. In doing this, community acceptance is maximised and costs are significantly reduced.

An EIA involves a range of diverse factors such as human and health issues, social networks, community consultation, economic expectation, visual and landscape issues, heritage and archaeology, flora and fauna, water quality, air quality, noise and vibration, geology and soils, energy resources, waste management and transportation. Management of these potential impacts enables us to demonstrate that the project is environmentally sustainable and offers an acceptable balance of environmental, social and economic implications.

APPROVALS

GHD has the experience and skills to assist you during the statutory approval process. Total environment planning uses a holistic and proactive approach, where GHD remains involved in projects after the completion of the environmental assessments. This streamlines the approvals process as we are able to use the knowledge accumulated through undertaking the environmental assessments to respond to consenting authorities and stakeholders in a detailed and timely fashion.

OUR EXPERIENCE

Our team has extensive experience in the preparation of environmental impact statements (EIS) for a wide range of projects including major infrastructure developments such as sewage treatment plants, highways, airports and industrial facilities. Our international experience is diverse and our multidisciplinary range of skills allows us to tailor a package to meet your requirements.

SOUTH ARM OF THE HUNTER RIVER, AUSTRALIA

To enable future expansion of port facilities, GHD undertook an EIS which assessed the potential impacts of proposed dredging on the south arm of the Hunter River. A comprehensive range of impact studies was undertaken, including odour and air quality impacts, hydrology and water quality, groundwater systems, aquatic ecology, geology and soils, traffic, transport, access and socioeconomic impacts, revealing significant contamination of the river sediments. Our solutions – based on a comprehensive sampling, analysis, testing and validation program – included innovative cement stabilisation treatment methods.



EIS site visit, Saudi Arabia.



Site for extension to Christmas Island Airport, WA, Australia.



Collecting water samples at Shoalwater Bay.



MAJOR WASTEWATER AUGMENTATION, AUSTRALIA

The proposed augmentation of Brisbane's second largest wastewater treatment plant required an EIS to assess potential water and air quality impacts on the local waters and neighbouring residential areas. GHD prepared 2D and 3D water quality models of the Brisbane River to demonstrate that the new 82 megalitre per day plant would improve water quality due to improved discharge standards. The models were used in the community consultation process as well as negotiations with the Queensland Environment Protection Authority. Odour mitigation and downgrading of the old plant also resulted in an improved odour footprint.

KHALIFA LANDSCAPE PROJECT, QATAR

The Khalifa Sport City landscape development project involved the landscape and external works component of the overall Khalifa Sports City Project. GHD assessed the potential environmental impacts of the project and prepared an environmental impact report (EIR) to summarise results of the assessment. The EIR addressed environmental impacts and described procedures to manage and minimise these impacts, and was prepared in accordance with the Environmental Impact Assessment Policy and Procedures guidelines issued by the State of Qatar's Supreme Council of the Environment and Natural Reserves (SCENR).

ELECTRICITY SUPPLY AUGMENTATION PROJECT, AUSTRALIA

GHD prepared the feasibility study, concept design and EIS for Energy Australia. The project involved construction of a 1.3-kilometre tunnel for electricity cables through the southern part of the Sydney CBD. A team of planners and engineers prepared the EIS, enabling mitigation measures to be incorporated into the design of the tunnel in a timely way. GHD also prepared the representations report, sought approval from the Minister for Planning and responded to extra queries raised during the approval process.

COLD ROLL STEEL MILL, AUSTRALIA

Protech Steel required an EIS that met with the principles of ecologically sustainable development to assess the environmental, economic and social effects of the proposed Cold Mill Facility on Kooragang Island in Newcastle. Work involved high-level discussions with Planning NSW regarding the consent conditions and Protech Steel regarding developing the project description, concept design and tender process.

NATIONAL HIGHWAY ROUTE, ALBURY-WODONGA, AUSTRALIA

This complex study required the preparation of an Environmental Effects Statement and EIS that met the requirements of the Victorian, New South Wales and Commonwealth legislation. In addition to a detailed analysis of environmental planning, engineering, economic and social issues, a comparative option analysis was undertaken, as well as a comprehensive community consultation program.



Preparing EIS for large infrastructure projects.



Dredging of the South Arm of the Hunter River, NSW, Australia.



Electricity Supply Augmentation Project, Sydney CBD, NSW, Australia.

COFFS HARBOUR REGIONAL AIRPORT UPGRADE, AUSTRALIA

We addressed the potential impacts of upgrading the airport including noise, air quality, aboriginal archaeology and cost/benefit analysis. The upgrade involved widening and lengthening the runway as well as expanding the terminal building to cater for aircraft such as 767s. We also undertook extensive community consultation as part of the process.

ALUMINIUM PROJECT, ARABIAN GULF, SAUDI ARABIA

In order to finance a multi-billion aluminium project, the Saudi Arabian mining company, Ma'aden, required a detailed EIA as part of the project feasibility study. GHD assessed environmental impacts associated with the proposed Az Zabirah bauxite mine and associated alumina refinery, smelter, power station and port. The project was serviced in-house, utilising GHD's specialist EIA, air quality, water quality modelling and hydrogeological resources. This project was one of the first to apply the Equator Principals, developed by leading financial institutions, which outline the level of environmental assessment required prior to financial commitment.

SHIP DISMANTLING AND RECYCLING PROJECT, PHILIPPINES

GHD prepared an EIS for the proposed waterside and landside ship dismantling and recycling facilities in the Batangas, Philippines. There was strong resistance from the community to the project when GHD inherited the study, however, proper representation with community leaders, and the conduct of a perception survey, made it possible to get community approval. The EIS included an Environmental Management Plan and an Environmental Risk Assessment. After reviewing the EIS and the results of the public hearing, an Environmental Compliance Certificate was granted.

CHRISTMAS ISLAND AIRPORT EXTENSION, AUSTRALIA

GHD undertook investigations and reporting requirements for the environmental approval process for an extension to the Christmas Island airport, involving work on groundwater, soils and karst systems, flora and fauna, hazardous chemicals, emergency response, noise impacts and operations. The resulting EIS, published for public comment and assessed by Environment Australia, led to approvals for the extension being granted. Christmas Island is noted for its unique fauna and the EIS included a number of detailed strategies for minimising the impacts on this fauna, both in the construction and operation phases.



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 6000 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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