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# GHD TRAFFIC AND TRANSPORT



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 Traffic and Transport Group has extensive experience in planning, design and management of all facets of traffic engineering and transport planning projects. GHD leads through innovation, experience, reliable service and world-class technology.

#### OUR CAPABILITY

GHD's Traffic and Transportation Group provides the specialist consultancy services for local governments, government traffic and transport authorities and private clients.

#### TRAFFIC AND TRANSPORT STUDIES

- Local area and arterial road traffic management, transport demand studies and integrated transportation studies.

#### TRAFFIC IMPACT ASSESSMENTS

- Traffic and parking assessments, evidence for development proposals, traffic management advice, access design and intersection analysis.

#### TRAFFIC AND TRANSPORT MODELLING

- Network and route development using strategic network modelling, micro-simulation and intersection modelling.

#### PARKING STUDIES

- Car park design, parking supply and demand analysis, parking feasibility analysis, parking policy and automated system planning/design.

#### STRATEGIC ROUTE PLANNING AND FEASIBILITY STUDIES

- Strategic analysis of road projects, highway route and corridor evaluation, tollway studies and freight analysis.

#### TRAFFIC MANAGEMENT STUDIES

- Regional traffic planning studies, traffic management plans, haulage route assessments and area-wide schemes.

#### PUBLIC TRANSPORT ANALYSIS

- Bus priority, light rail and busway planning, intermodal interchanges, patronage analysis, transport modelling, economic analysis and feasibility assessment.

#### ROAD SAFETY AUDITS

- Traffic accident investigations, road safety studies and accident data analysis.

#### BICYCLE AND PEDESTRIAN PLANNING STUDIES

- Bicycle network plans, demand surveys, behavioural analysis, pedestrian safety audits and access studies.

#### OUR EXPERIENCE

##### WOOLLAHRA TRAFFIC AND TRANSPORT STUDY, NSW

GHD reviewed the existing traffic and transport system in Woollahra to identify deficiencies in parking, traffic management and public transport services. The study provided a strategy for the entire Woollahra LGA to address future transport needs and



Busway planning



Micro simulation modelling



Transport planning



parking provisions with the long-term objective of reducing travel demand.

#### [GREATER SUVA TRAFFIC AND TRANSPORT STUDY, FIJI](#)

GHD provided the strategic basis for traffic and transport planning in the Greater Suva Urban Area to the year 2030. The traffic and transport demands of the area outlined a revised strategic road network plan in the context of existing and future land use.

#### [HAMAD GENERAL HOSPITAL AND RUMAILAH HOSPITAL, QATAR](#)

GHD examined the traffic impacts of proposed expansions to both Hamad General Hospital and Rumailah Hospital, the two largest hospitals in Qatar. The study required the exclusive provision for emergency vehicle access to both hospital sites, design of an internal road network plan, future traffic and parking demand analysis and traffic modelling.

#### [INTEGRATED TRAFFIC MODEL FOR AUCKLAND, NZ](#)

This research project involved GHD developing an integrated approach to traffic signalisation and management across urban/motorway interfaces using modern traffic models at selected test sites in the Auckland region.

#### [M2 MOTORWAY TRAFFIC MODELLING, NSW](#)

This study included the future traffic assignment on the M2 road corridor using EMME/2 as the network modelling tool. Intersection performance was assessed using SCATES based on the traffic modelling projections and recommendations were made on favoured treatments for the study route.

#### [SURFERS PARADISE TRAFFIC MANAGEMENT PLAN, QLD](#)

GHD undertook micro-simulation modelling to establish optimum design solutions for the Surfers Paradise Traffic Management Plan. This study included the microscopic traffic simulation of various options to examine the interaction between all road users including vehicles, public transport, cyclists and pedestrians.

#### [SOUTH SYDNEY PARKING STUDY, NSW](#)

GHD conducted an audit of existing on-street parking facilities to determine current parking supply and demand for resident parking precincts. GIS technology was used to capture electronic data suitable to assist in a strategy to bring aerial photographic maps, cadastral plans and signage information into one electronic database. The captured data formed the basis for reviewing parking regulations and management within South Sydney Council LGA.

#### [CBD CAR PARKING SUB-STRATEGY, QLD](#)

GHD completed a parking sub-strategy for the Cairns Transport Strategy. The sub-strategy included a review of the current parking supply and demand in Cairns CBD and recommended policies to achieve ecological sustainable goals and to meet community and business expectations.

#### [CHARLESTOWN BYPASS TRAFFIC ASSESSMENT, NSW](#)

Working closely with RTA officials, GHD provided a network analysis of the proposed bypass using TRANPLAN and TRANSTEP. Outputs from the study included updated traffic projections, benefit cost analyses, modelling of proposed intersections and interchanges, and traffic impact on the regional road network.



Traffic signal design



Bikeway planning



Interchange design

### PETRIE-KIPPA-RING PUBLIC TRANSPORT STUDY, QLD

GHD undertook a transport planning and impact assessment study for a proposed public transport corridor connecting Petrie and Kippa-Ring. The study examined options for routes and transportation modes. GHD managed all aspects of the study including community consultation, transport modelling and economic analyses.

### WEST WANNEROO TRAFFIC MANAGEMENT STUDY, WA

This project included an evaluation of the existing traffic conditions, working group meetings with representatives of the community, a public display, and recommendations for a traffic management plan. A comprehensive report was prepared, and the study completed in a short time frame to meet client needs.

### SHANGHAI METROPOLITAN TRANSPORT, CHINA

GHD was commissioned to undertake a traffic management study for the Inner City Ring Road in Shanghai. The study involved a review of existing traffic flows and intersection conditions, identification of access problems, conflict areas and access constraints, projection of traffic growth and an evaluation of options for improvements.

### SCORESBY INTEGRATED TRANSPORT STUDY, VIC

GHD undertook the design and costing for the Scoresby Integrated Transport Study. The project comprised a 32 kilometre stretch of motorway, four transit links (light rail, busway and smart bus) and six intermodal transportation interchanges for heavy and light rail, busway, local bus and 'park and ride' interchanges.

### MURDOCH BUSWAY PLANNING, WA

GHD completed concept development and planning for a busway through Murdoch University and adjacent land to connect to a new railway station over a freeway. GHD's concept development provided options for improved access to bus and train services.

### ROAD SAFETY AUDITS

GHD has accredited road safety auditors on its teams. Recent road safety audits include:

- ▶ Kwinana Freeway Busway, WA
- ▶ Maltby Bypass Western Interchange, VIC
- ▶ Maroochydore Road, QLD

### BICYCLE AND PEDESTRIAN PLANNING STUDIES

GHD conducted Bicycle and Pedestrian Planning studies for:

- ▶ Olympic Park Pedestrian and Transport Access Investigations, NSW
- ▶ Bunbury Transport Vision 2030: Pedestrians and Cycling Network (Bunbury Council), WA
- ▶ Gold Coast City Bike Network Study (Gold Coast City Council), QLD

All GHD offices operate under a Practice Quality Management System that is certified to AS/NZS ISO 9001:2000.



## 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](http://www.ghd.com.au)



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