Emerging trends in the ports industry

Dialogue on infrastructure financing

Insights into asset productivity

Emerging trends in the ports industry
A focus on asset productivity

So you can get the most out of your assets, we’re exploring new ways to create efficiency, manage risk, identify obsolescence and optimise renewals.

To sharpen your thinking around asset productivity, contact productivity@ghd.com
Welcome to Issue 137 of GHD NEWS, a publication that highlights our clients’ successes, demonstrates our technical achievements and discusses industry trends.

In this edition, we focus on the theme of asset productivity in relation to helping our clients get the most out of their infrastructure investments.

Maximising the longevity, performance and productivity of assets in competitive conditions is an issue of escalating significance for our clients. In the pages that follow, you’ll find examples of how asset owners are renewing, rehabilitating, extending and/or optimising infrastructure to achieve greater business efficiencies, maximise return on investments and enhance communities. One such example is our work on a benchmarking program with water utilities around the world, which is helping to shape the industry’s approach to asset management.

GHD continues to expand its capabilities in the energy and resources market, having recently completed integrations with Hill Michael Engineering and ProMet Engineers. The first enables us to offer a broader range of services to our clients in the planning, development and operation of electricity supply systems, while the second boosts our offering in process engineering as well as project and study management for minerals.

Also featured is a range of insightful commentary on the issues essential to financing infrastructure projects, emerging trends in maritime transport and port development, as well as discussion around agricultural investment.

Contributing to the communities in which we live and operate is an enduring focus for GHD. Our people’s involvement in a range of causes is showcased here – from helping improve sanitation in Cambodia to building housing for the disadvantaged in the USA and Nepal and participating in community development processes in Australia’s Murray-Darling Basin.

Our solid position in the market allows us to tell a great story and we hope you enjoy reading this issue.

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Mergers broaden energy and resources footprint

GHD continues to expand its capabilities in the energy and resources market, having recently integrated two Australian companies into its operations – Hill Michael Engineering and ProMet Engineers.

According to Ian Shepherd, GHD’s CEO, “Through our combined resources, GHD now has the ability to broaden its service offering in the planning, development and operation of electricity supply systems as well as process engineering, project management and study management services for minerals processing.”

Hill Michael is a well-respected company that has focused on providing strategic engineering services associated with the planning, development and operation of electricity supply systems. Its 50-strong team has been integrated into GHD’s operations in Brisbane, Cairns, Canberra, Launceston, Melbourne, Sydney and Townsville. For more information, contact Joseph O’Brien on +61 7 3316 3970 or joseph.obrien@ghd.com

ProMet Engineers has provided process engineering, project management and study management services to the global mining industry, with specific skills in magnetite and iron ore beneficiation as well as pyrometallurgy and non-ferrous complex metallurgy and beneficiation. Its nine people have joined GHD’s Australian network. For more information, contact Feliciano Sanchez on +61 8 6222 8299 or feliciano.sanchez@ghd.com

Prestigious award

GHD named large firm of the year

GHD was recognised at the 2012 Consult Australia Awards for Excellence with three awards.

We took out the prestigious Large Firm of the Year Award and the Gold Award for Diversity for our Indigenous Services Action Plan and Women in GHD social responsibility initiatives. In addition, we received an Export Award for our involvement in the CoalConnect Alliance with Leighton and KBR.

Speaking of our wins, Ian Shepherd, GHD’s CEO said, “We have always been an avid supporter of Consult Australia and we are honoured to have received these recognitions. We thank our clients and partners for their contribution to helping us achieve these milestone awards.”

Consult Australia is an Australian industry association for consulting companies in the built environment sector, including engineers, architects, project managers, planners, environmental scientists and quantity surveyors, among others.
Smart Seeds

Fresh ideas demonstrate the benefits to future urban development with resilient energy systems and streets that are more socially inclusive.

Smart Seeds, an initiative established by GHD with the support of the City of Melbourne and the University of Melbourne, is helping solve complex urban design and infrastructure challenges.

Launched during the 2012 Melbourne Knowledge Week, Smart Seeds is designed to stimulate creativity and showcase the knowledge that can be applied to adapt and evolve urban infrastructure in a way that will enhance the liveability of Melbourne, the second most populous city in Australia.

As part of the program, 35 students and graduates from eight participating organisations, including GHD, took part in a group innovation competition to solve six real urban development challenges.

The students worked in multi-disciplinary teams to prepare concepts that were presented and evaluated by the judges: Gary Liddle – CEO VicRoads, Tony Kelly – Managing Director Yarra Valley Water, Cheryl Batagol – Chair EPA Victoria and Professor Rob Adams – Director City Design, City of Melbourne.

“This competition certainly produced some excellent concepts but there were two winning entries that stood out in terms of their creativity and strong links back to the community,” explains Jeremy Stone, GHD’s Group Manager – Innovation.

“The judges awarded their prize to an entry that demonstrated a concept for a resilient energy system capable of capturing and storing renewable energy at a localised level, which can be used later when needed. A people’s choice award was also awarded to an entry that showcased ways to improve a problematic area of Elizabeth Street where it intersects with Flinders Street. This included the innovative use of water sensitive urban design as well as shading and safety measures to improve the pedestrian experience.

“Overall, we are delighted with the entries. Plans are already underway to run the competition annually and extend its reach to other cities including Brisbane and Perth. In the meantime, we are helping the winning teams take their concepts to the next level, by facilitating introductions to GHD clients that could benefit from these solutions.”

For more information, contact Jeremy Stone on +61 3 8687 8341, email jeremy.stone@ghd.com or watch a short video highlighting the program by visiting www.smartseeds.org
In the news

01 Most attractive employer
GHD has been named the most attractive company to work for in Queensland, and tenth most attractive Australia-wide by recruitment firm Randstad. The result stems from Randstad’s survey of 7000 Australian job seekers, which ranks companies based on brand awareness and 17 other factors including job security, workplace culture, work-life balance and strong management. This is the second year in a row that GHD has featured in the top 10.

02 Best waste consultant
A survey conducted by Inside Waste Magazine has once again identified GHD as the best waste consultant in Australia. In this year’s survey, GHD was consistently cited as having the most experience across all service categories, ranking first for largest consultants, first for highest value projects, first for highest number of projects awarded, first for best technology and infrastructure evaluation, first for best landfill design and engineering, as well as first for best in tender development and evaluation.

03 Architecture ranking
The release of UK-based magazine Building Design’s 2013 World Architecture List has validated GHD’s place as one of ‘top 100 biggest architecture practices’ in the world. In the list, GHD has achieved first place in the infrastructure category, second in government buildings, fourth in the Middle East region and seventh in elderly living. We also ranked as the second highest revenue earner for Australasia.

04 Business of the Year finalist
Congratulations to GHD’s USA East operations for being named one of the finalists in the CenterState CEO Business of the Year competition in Syracuse, New York. GHD was selected from a pool of more than 40 nominees in the category of 50+ employees. This nomination recognises our contribution to job creation, new investment and community engagement.

05 Export facility success
The Gippsland Resources Infrastructure Development group (GRID), facilitated by GHD, has recently completed the conceptual studies for a 50 million tonne per year export facility in Gippsland, Australia. The facility will include new rail and port infrastructure. Representing 12 private companies in Victoria, South Australia, New South Wales, Queensland, China and Japan, GRID has been instrumental in bringing a number of transport studies and planning work to fruition.
Highway opens

The upgrade to the Great Eastern Highway in Perth was officially opened recently. GHD, as part of the City East Alliance, was involved in the project, which includes a 4.2 km (2 mi) section of the highway featuring six lanes with a central median, on-road cycling facilities and a continuous pedestrian path. During the opening ceremony, GHD was praised for its use of innovative technology.

Geothermal power

Orka Energy has engaged GHD to provide engineering services to develop a 50 MW geothermal project for electricity production in the southern Philippines. Focused on bringing its geothermal experience and technology from Iceland to Asia, Orka Energy is developing assets in China and the Philippines. As part of this project, GHD will work with Orka’s technical advisors to develop the access roads and infrastructure for drilling as well as the concept design for the plant. We will also provide construction supervision for the civil works.

Asset management win

The City of Vaughan, in Canada’s Greater Toronto Area, has selected GHD to assist with the first phase of its corporate asset management initiative. As part of our engagement, GHD will develop a strategy that provides a formal, transparent and structured approach to asset management for all city asset classes. It will support decision making related to asset planning and the allocation of corporate resources.

Safety boost

Smith River Rancheria has engaged GHD in the USA to design much needed safety improvements to a 7.2 km (4.5 mi) section of the US Highway 101 near the Oregon border. These improvements are part of an overall traffic calming strategy intended to reduce vehicle speeds, increase pedestrian and bicycle safety, and pave the way for the design and construction of future intersection improvements in the corridor.

Wastewater upgrade

The West Carthage Water Pollution Control Facilities Management Board in the US state of New York has selected GHD to conduct a grant-funded study for improvements to its wastewater treatment plant. In announcing our appointment, the Board praised GHD’s impressive request for proposal, considerable experience in wastewater plant upgrades and detailed knowledge of grant-funding eligibility.
GHD: As a leading Australian bank, what projects is Westpac financing?

Norman Heavener: We arrange project finance for new build projects, such as greenfield and infrastructure, and operating projects. New build projects typically cover three key sectors – power (e.g. renewable energy, gas fired power stations), natural resources (e.g. small gold producer right up to very large Liquefied Natural Gas [LNG] projects) and infrastructure projects including roads, ports, airports, and social infrastructure such as schools and hospitals. Apart from greenfield projects, we also arrange finance for operating projects that are being privatised or being divested by other equity owners or organisations.

GHD: The last few years have been challenging for financing infrastructure projects. What's changed?

Norman Heavener: Thankfully, a lot of what we do in the infrastructure sector is not too GDP sensitive. Infrastructure generally continues to be built irrespective of economic conditions, and there is currently a trend towards greater private sector involvement, which we expect to continue. Unprecedented changes in the global financial market have flowed through to impact infrastructure financing in most developed nations around the world. As a result, there is a significant reduction in appetite from the capital markets to fund greenfield infrastructure projects. This followed on from the demise of monoline insurers, such as AMBAC, MBIA, FGIC, who wrapped greenfield risks and provided AAA guarantee protection.

There has also been a reduction in financing tenors on offer by the banks. Pre-Global Financial Crisis (GFC), bonds and bank debt, in some instances, were offering financing solutions for projects of up to 20 to 30 years. Today, most common financing tenors are for a period of three to seven years, with only relatively few isolated examples of longer tenors still being provided, such as the LNG sector. This reduction in tenor does not represent a credit decision but rather the high costs for banks to provide long tenor financing. Banks are similarly unable to match funding with long tenor financing.

GHD: What are some of the trends in infrastructure financing?

Norman Heavener: We are seeing an ongoing trend towards greater private sector involvement and procurement of projects through Public Private Partnerships (PPP). Governments, particularly in developed nations, are increasingly seeing value in what the private sector brings to the table, such as innovation, discipline and risk mitigation.

Today, the bank market is the primary financing source for greenfield projects. Where the projects are very large, particularly in the natural resources sector, we generally see the export credit agencies leading the financing. In the PPP sector, governments are increasingly providing part of the funding, particularly for larger projects.

GHD: What are the risks banks consider when financing projects?

Norman Heavener: Patronage, construction/contractor, and refinancing risks are a few of the key elements banks examine.

Patronage risk is particularly challenging when it is a greenfield project and there is no proven patronage. This risk has been evident in the toll road sector where patronage forecasts have been over-optimistic, resulting in many toll roads going into receivership. Going forward it is expected that debt or equity financiers will not accept naked patronage risk for new toll road projects. If these are to be financed, there will be a need for greater sharing of this risk with government.

Construction/contractor risk is another area of significant focus, particularly in the PPP sector, where the equity contributed is generally relatively small. In the current economic environment, it is very competitive to both win...
the work and to obtain the skilled resources to deliver it. In recent years we have seen construction contractors losing money on the contracts they have won. Accordingly, banks are looking for relatively strong balance sheets in order to support the construction delivery process.

Finally, you’ve got refinancing risk, which has increased in a post-GFC world. This is often the case for large projects with big bank groups where some of those banks may no longer be active. In saying that, well-performing projects are unlikely to have any material refinancing issues.

**GHD: Superannuation and pension funds are increasingly dipping their toes in financing infrastructure. Is this beneficial?**

**Norman Heavener:** Superannuation funds have recognised that the infrastructure asset class is capable of producing predictable long-term cashflows with strong consumer price index linkages, and as such, is a good investment hedge to support the payments to its members. In our experience, there is no shortage of equity support from superannuation funds for good infrastructure projects. Ongoing support from these superannuation funds, as well as other offshore pension funds, remains critical to the private sector funding of infrastructure projects.

**GHD: What is the key to success in obtaining project finance?**

**Norman Heavener:** To the extent that relatively high leverage is sought for a project, banks look for highly predictable and robust cashflows. We are more interested in cashflows than we are in asset valuations, as project cashflows is the means by which we assess the ability of a project to repay its debt.

Apart from projects having a sound credit story and an acceptable financing return – in a post-GFC world – banks have a greater focus on the broader business opportunities and the sponsor relationships involved in the project. It is no longer an option to just earn sufficient returns. Part of our consideration in financing a project is the business cross-sell opportunities, such as interest rate or FX hedging, transactional banking and deposits. This can either be directly related to the project’s financing or indirectly linked through the business via sponsor relationships.

**GHD: What is the outlook for infrastructure financing?**

**Norman Heavener:** There is increasing demand for private sector whole-of-life financing solutions for infrastructure projects via PPP, and the recycling of government capital through privatisations.

New infrastructure is being built to support the growth in the resources sector around the world, including ports and rail. For this reason, the current pipeline of infrastructure projects looks as good today as at any time previously. The appetite for financing these projects with both debt and equity remains relatively strong. In terms of debt financing, we expect – at least for the short to medium term – that banks will continue to be the best funding source for greenfield projects. We also expect proven operating projects that are capable of achieving investment grade profiles to access the capital markets, which can offer longer tenor financing solutions.

**GHD’s perspective**

In light of Norman Heavener’s insights, we canvassed the perspective of senior GHD leaders.

**Rob Knott**, GHD’s Organic Growth Leader says, “The GFC has not diminished the demand for infrastructure across the world. It has changed the landscape of how that infrastructure is to be funded and owned, and our expectation for greater productivity and return on investment. High debt levels have forced many governments to contract their own direct investment and this is understandable. However, they have to eventually find other avenues to facilitate investment in infrastructure or they will govern a reduction in the standard of living of their constituents, which will impact electoral outcomes.”

**Phillip Bradley**, GHD’s General Manager – Finance says, “Communities will always demand better health facilities, cleaner water supplies, improved education and accessible transport. If governments can’t fund what is required, then they need to find ways to allow the private sector to do this. They understand this, yet finding a way to move to greater private sector involvement without being perceived as ‘giving away the farm’ takes time.”

**Chris Hertle**, GHD’s Global Market Leader – Water says, “This transition to greater private sector funding has some way to go. We are optimistic that the private and public sectors are collectively developing improved funding models that support increasing investment with acceptable risk profiles to both the public and private participants. An example of this is the recent completion of the Mundaring Water Treatment Plant in Western Australia under a PPP model, in which GHD was involved as part of the ACCIONA TRILITLY JV with Brookfield Multiplex Engineering and Infrastructure, Lloyds Bank Corporate Markets and the Royal Bank of Scotland. In all our projects, we work closely with private and public participants to inform the funding and risk allocation debate.”
Tell us about yourself?
I’ve been working with the City of Barrie (City) for almost eight years. Five years ago, we embarked on an asset management journey and prepared an organisation-wide plan for all city-owned assets. We developed a strategy and implementation plan, and that’s when we engaged GHD to assist us with the initial policy, business framework and procedures. We are now two years into the implementation and it is progressing well. We are a small group, but we coordinate all the asset management activities across the City, as well as the capital planning and capital budgeting activities.

What prompted the City to turn to asset management for answers?
One of the biggest challenges we face is trying to balance the large demand for our services with a very small supply, and spread that small supply as best as we can. We realised we needed better knowledge to allocate the limited capital funds we have to the right projects, while at the same time sustaining service levels across the City. Asset management was the answer.

Two years on, what are the outcomes?
By far the biggest outcome is that we have made sound decisions to deliver the right projects. The rationale behind our decision making is sound because all those decisions are based on good analysis and accurate data. As a result, we have improved the accountability and transparency we provide to our residents. After all, it’s their tax dollars that fund our salaries and determine the work that we’re recommending. We want to ensure that those tax dollars are utilised in the most efficient way they can be, and that’s why our asset management approach is so valuable – it gives us the confidence we need to make critical decisions.

What’s the true benefit and real value that the City has derived from working with GHD is that we’ve partnered together to achieve a common goal.

What’s the key to the City’s success?
We have been extremely focused on our asset management activities and managed early on to get organisation-wide support for our objectives. Municipalities tend to be very siloed, so at the onset we worked closely with GHD to communicate to our people that we are all on one side, working together towards a common goal to provide the best service we can to our constituents. The second key to our success is that we have aligned our business planning to our capital planning processes. This is a very service-based approach that begins and ends with the community in mind, and that’s why we’ve been so successful.

What’s the future direction of the project?
Well, the ultimate goal for us is to ensure that everything is managed in the most efficient and effective way possible. In getting there, we have some work to do on the data management side and also around some of our business processes. We also need to continue working towards tying the different levels of our asset management approaches together. That is, ensuring that at an operation level, we’re marching in the same direction as the strategic level.

What’s your tip for working with consultants such as GHD?
Be as open and honest as you can and approach it as a partnership. The true benefit and real value that the City has derived from working with GHD is that we’ve partnered together to achieve a common goal. Two years on, GHD has a deep understanding of our business. The team is familiar with our people and processes, but more importantly they understand our challenges, strengths, and weaknesses. On the flip side, we can leverage GHD’s specialist knowledge in asset management. This partnership approach with GHD has served us well.

What’s next on your agenda?
I certainly see myself continuing on and advancing our asset management practices for the City. We’ve come a long way, but we still have a fair bit of work to do. We have assembled a tremendous team and their achievements are shining through. They see that they’re making a difference and are committed to advancing our asset efforts. That’s what the future holds at this point.
A project to benchmark water utilities around the world is providing meaningful comparisons on how assets are managed across the industry.

The Water Services Association of Australia (WSAA) engaged GHD to undertake an Asset Management Process Benchmarking study in association with the International Water Association.

This study included 37 participants from water and wastewater utilities from around the world, including Australia, Canada, New Zealand, the Philippines and the United States of America.

Utilising WSAA’s Aquamark Framework, the study examined key asset management processes that are required to maintain the supply of reliable water and wastewater services. It provided opportunities to identify leading asset management practices and to share information for the benefit of all participants.

Brenton Marshall, GHD’s Project Director says, “Today, utilities are faced with environmental impacts, increases in energy prices and ageing infrastructure. For many, capital spending is tight, so the focus is on how to get the most out of their assets. Common questions are: how long do we maintain the assets, and when do we rehabilitate, regenerate or repair them?

“In the Americas, asset management programs have matured rapidly in recent years, while in Australia and New Zealand they’re a standard part of business operations. That’s why this benchmarking project is so powerful; it allows the participating utilities to see how they rank in terms of their counterparts, while detailing the types of the practices that are working and delivering improvements.

“Overall, the study showed that significant innovation has taken place in the water industry in recent years. This is in response to a heavily constrained economic climate, with utilities focused on affordability and value for money. Asset management practices are maturing to drive greater operational efficiency and robust investment decision making.”

For more information contact Brenton Marshall on +61 3 8687 8325 or email brenton.marshall@ghd.com
For the past five years, GHD has been working alongside key water utilities and government agencies in the US state of New York to protect drinking water.

New York City (NYC)

Today, NYC boasts excellent water quality that requires minimal treatment before it is distributed to citizens. This outcome was achieved through comprehensive watershed regulations that protect a network of interconnected water supply reservoirs.

Jerry Hook, GHD’s Operating Centre Manager – USA East comments, “Our work on the Yorktown Heights Wastewater Treatment Plant has helped to protect the water quality in the watershed that services southeast NYC. This plant discharged 9.46 MLD (2.5 MGD) into streams which fed water supply reservoirs, making it the largest discharger into the NYC watershed reservoir system. In 2007, we investigated and implemented improvements at the plant.”

As a result, the facility, which was originally built in 1963, was upgraded to meet the stringent requirements of the NYC Department for Environmental Protection. The upgraded and modernised site now features a new advanced treatment facility that includes biochemical oxygen demand and ammonia removal, chemical precipitation for phosphorus removal, sand filtration, membrane microfiltration and ultraviolet disinfection, all designed by GHD. A large (7.57 ML/2 MG) equalisation tank was also constructed to normalise flow through the plant.

“The result of the upgrade was extremely beneficial to NYC,” adds Jerry. “It is the equivalent of providing a completely new plant that returns very high quality, pathogen-free water to the watershed. We designed the plant with an emphasis on energy conservation as well as reliability, cost containment and simplicity of operation. In addition, timely delivery contributed significantly to positive public perception.”

Rockland County

Northwest of NYC, GHD is also working with the Rockland County Sewer District to improve water quality and recharge the Ramapo Aquifer from which communities in Rockland County and downstream New Jersey source water. Urban development in the region has seen a growth in housing, mostly served by septic tank systems which were performing poorly and creating both aesthetic and health concerns.

Rockland County Sewer District teamed with GHD to develop a concept that replaced the septic tank systems with a collection system that captured wastewater for advanced treatment to recharge the Ramapo River Aquifer. A depletion of reservoir and groundwater levels in the area (due to drought) placed increased pressure for the speedy delivery of a solution. As a result, an Advanced Wastewater Treatment plant was commissioned, with GHD acting as Owner’s Engineer and providing technical support throughout the project.

“Our team completed the detailed design and provided engineering during construction of all the collection systems discharging to the plant, which has a capacity of 5.67 MLD (1.57 MGD) and utilises membrane processes that convert effluent to near drinking water quality standards,” says Jerry.

“When the entire project is completed in 2016, the Rockland County communities will continue to benefit from improved public health protection and a more climate resilient drinking water supply.”
Guiding the long-term planning of municipal works in Canada through geomorphology

The City of Toronto and the City of Ottawa have embraced a unique approach to managing watercourses and adjacent infrastructure.

With GHD’s assistance, the City of Toronto developed Geomorphic Systems Master Implementation Plans (GSMIP) to identify and prioritise infrastructure at risk and restoration projects within the watershed. As part of an implementation schedule, preferred restoration solutions and cost estimates were established.

Paul Villard, GHD’s Manager – Geomorphology in Canada offers, “By using this detailed information in the context of channel alterations and natural evolution, the City of Toronto was able to implement more effective intervention strategies. This enabled us to protect assets and restore watercourses with the confidence that these solutions addressed the underlying cause of instability and fit within the overall vision for the watershed.

“GSMIP also enabled individual sites to be addressed discretely while providing a tool for budget forecasting. Today, the City of Toronto has achieved a more informed and holistic approach to the management of its assets.”

Following Toronto’s lead, the City of Ottawa worked with GHD to implement the GSMIP concept to access baseline data for one of their urbanising watersheds – the Bilberry Creek.

“One of the key deliverables and value-added elements of the proposed geomorphic work plan was the development of an interactive mapping application with a user-friendly, stand-alone interface,” explains Paul. “It provided a link between available spatial data and the City’s end users, allowing them to access the tabular data, site photos and corresponding spatial information with ease.

“The benefits realised by the City of Toronto and City of Ottawa in using geomorphology are great. Overall, it has reduced emergency works and mitigated the risks to infrastructure assets and private property, thereby delivering cost savings.”

“GSMIP also enabled individual sites to be addressed discretely while providing a tool for budget forecasting.”

For more information on GHD’s geomorphology services, contact Paul Villard on +1 905 814 4373 or email paul.villard@ghd.com
GHD has assisted the Melbourne Water Corporation to replace a section of its oldest sewer network, first built around 1894. The existing main, which had significantly deteriorated, needed to be replaced to continue providing essential services to the city’s growing inner north population, and reduce the risk of failure associated with ageing infrastructure.

As principal consultant, GHD provided design management, structural and civil design, geotechnical and hydrogeological analysis, durability assessments, tunnel lining design, hydraulic capacity analysis, planning and statutory approvals, environmental investigations and management, odour control design, preparation of contract documentation and construction phase services.

The new sewer, known as the Melbourne Main Sewer, consists of 2088 m (6850 ft) of driven, segmentally lined sewer. It is one of the most challenging soft-group tunnelling projects ever undertaken in Australia, with the new sewer tunnels excavated in difficult geology – beneath the city, the Yarra River and through densely populated suburbs.

Malcolm Dixon, GHD’s Project Director says, “Everything about this project is big! We used a 164 tonne (361,558.2 lb), 100 m (328 ft) long earth pressure balance tunnel boring machine to cut the 3 m (9 ft) diameter tunnel. We added a further 1.9 km (1.3 mi) system of branch and reticulation sewers to reconnect the new main sewer. And, we created seven new 15 m (49 ft) deep vertical access shafts along the entire length of the sewer that provide improved accessibility for maintenance and monitoring.

“Now fully commissioned, Melbourne’s new main sewer provides three times the capacity of the original sewer and is designed to service the central business district and inner suburbs for the next 100 years.”

Delivered on time and on budget, the project has been widely recognised for its technical innovations. It received the 2012 Victorian Earth Award for projects over AUD75 million and was named New Installation Project of the Year in 2012 by the Australian Society of Trenchless Technology.
Asian food bowl trends

Agricultural investment opportunities

With Australia and New Zealand positioned to contribute to Asia’s food security debate, a challenge exists to establish a robust and sustainable path for agriculture in the region. The question is: how do we maximise the return on our agricultural assets and minimise the impact on the environment, while making the most of foreign investment, and meeting client needs?

Murray Smith, GHD’s Principal Engineer for Regional Water says, “By 2050, the worldwide demand for food is expected to increase by 77 percent. Australia currently produces enough food to feed a nation almost three times our size, and we have a good reputation for safe and stable food systems.

“While we are well positioned to increase our exports and capitalise on rising demand for commodities such as beef, wheat, dairy, sheep and sugar, we need to address some of the impediments that threaten to restrict potential.

“For example, the widespread adoption of sustainable farming practices and integrated crop management is needed. Additionally, increased investments in technology, equipment and machinery are required as well as enhancements in processing, transportation and logistics.”

To this end, GHD has been working closely with government agencies, agriculture companies and research organisations in Australasia, to find ways to further develop and feed rapidly growing populations.

“We recently completed a project for a leading Chinese sugar producer evaluating the feasibility of 15,000 hectares of sugar cane development in the Kimberley region of Western Australia,” adds Murray.

“As part of our work, we examined ways to optimise farm design and proposed suitable irrigation systems, while considering sugar mill designs for cane processing and co-generation facilities for power. We also investigated the harvest, farm input costs, machinery, labour, accommodation, quarantine requirements as well as transportation options including port facilities at Wyndham.

The results of our analysis assisted our client in making an informed decision on the project’s feasibility.

“To maximise the value we deliver to clients, GHD continues to form strategic relationships with key stakeholders. For example, we have recently established a memorandum of understanding with one of the largest Australian agricultural companies. As part of our agreement, we are leveraging our operations and established relationships in China to identify commercial organisations wanting to partner with our client to develop agricultural projects in Australia.

“GHD is well-positioned to advance the food bowl debate. We can help our clients achieve strong project outcomes due to the breadth and integrated nature of our services. From agricultural production systems to irrigation and transportation, GHD has it covered.”

For more information contact Murray Smith on +61 7 5413 8178 or email murray.smith@ghd.com
“Our approach is to seamlessly implement water loss management initiatives with social, financial and environmental objectives. This helps our clients reduce water loss and achieve operational cost savings.”

Given the global scarcity of water, it’s no surprise that the effective management of water resources is garnering considerable attention.

GHD has considerable experience in water efficiency, having completed numerous projects with private organisations, water utilities and municipalities to address all aspects of water loss reduction and water system efficiency improvements.

Edgar Johnson, GHD’s Service Line Leader – Water Efficiency says, “In times of constrained budgets for capital projects, private and public organisations are focused on improving the efficiency of existing water systems and processes. Our approach is to seamlessly implement water loss management initiatives with social, financial and environmental objectives. This helps our clients reduce water loss and achieve operational cost savings.”

Recent examples of GHD’s innovations includes:

• Developing a unique Wastewater Metering Code of Practice for a utility regulator in the Middle East that takes a whole-of-life approach to the management of assets
• Delivering a forensic audit of the apparent water losses for the Guam Water Authority with an investigative analysis of back-office operations and the assessment of metering assets; resulting in the identification of 30 key findings and prioritised recommendations for improvements
• Creating methodologies for various urban water utilities to assess and estimate water and financial metering errors; this information is enabling a targeted reduction of approximately AUD4 million per annum attributed to a utility’s metering errors
• Providing water audit services to the Savewater Alliance in Victoria, Australia, which is helping reduce water losses for small to medium sized businesses
• Undertaking an audit of nearly 170 non-residential premises in Wagga Wagga, Australia as part of a return-to-sewer investigation to minimise their trade effluent costs

Edgar adds, “Today, achieving water efficiency is an essential part of maximising the value of scarce water resources. The key is to reduce losses.”
GHD has contributed to the upgrade of Melbourne Water Corporation’s (MWC) Thomson Dam 7.4 MW Hydro Power Station.

MWC undertook this project to enable the generating system to meet current standards for connection of generating assets as part of its renewal of the Electricity Generation Connection Agreement with power network service provider, SP Ausnet.

Tony Llewelyn, GHD’s Project Director explains, “Part of the challenge was that the hydro-generator had been out of service for an extended period. This was the result of the Thomson Dam water level falling below the minimum level for generator operations during the extended drought experienced in Victoria recently.

“In addition to the High Voltage (HV) equipment upgrades, MWC replaced the existing hydro-generator Programmable Logic Controller (PLC) and associated Weir PLC. A system to control the new HV equipment and the dam and weir outlet valves was installed. The instrumentation and DC power supplies were also replaced to extend the operating life of the facility and improve the management of river release flows.

“Overall, the asset upgrade delivered more than just compliance and commercial benefits,” says Tony. “The site is much quieter now when the generator is supplying the river since the regulating weir has been operating again.”

As the generator is at the end of a continuous power line in mountainous and heavily forested areas, there are frequent faults on the power network that require the generator to stop. The upgraded installation has reduced operator attendance by providing automatic restart after these power outages.

Construction and commissioning of the upgraded installation was completed in December 2012.

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Upgrade extends asset life, achieves compliance and benefits environment
GHD: What is the state of play in the ports industry?

David Anderson: One of the most important issues we face is dealing with a substantial increase in port activities, not just today but well into the future. As an industry, the question is: how do we successfully handle growth, while at the same time retaining a competitive edge in light of high terms of trade and tightness in labour markets as well as infrastructure and regulatory constraints.

In Australia alone, we’re looking at seven to nine percent growth in container volumes and similar numbers for commodities exports over the next decade. That level of growth is challenging, particularly in terms of increased pressure on our ports and supply infrastructure.

Part of the solution lies with greater planning, asset management and investment. In essence, we need to coordinate investments in our supply chains to optimise port throughput, and we need to plan for better landside access to get goods in and out of ports more efficiently. This can be tricky for large cities with ever-growing urban sprawl, although dedicated rail infrastructure and well-priced road systems are a good solution.
In addition, we need to look at the way we manage infrastructure, and create a regulatory environment that promotes private investment. With port ownership usually in the hands of governments, investment in new or expanded infrastructure is often constrained by political forces, governance issues and regulatory risk. And that’s one of the reasons why we’re seeing greater investment in the private management of ports.

GHD: Privatisation of ports is a growing trend. How is this impacting industry?

David Anderson: Because many governments are facing budget deficits and increased demand for services, privatisation is gaining momentum as a way to generate revenue or pay for infrastructure improvements. Now that many ports have to upgrade their facilities to accommodate greater trade, larger vessels and increasing port security, privatisation is also seen as one of the avenues to address the growing demand on trade.

Government-owned and operated ports face a range of issues including less flexible operating structures. On the other hand, private ports have a mandate from their shareholders to act with agility and commercial aggression in extending their supply chain, which is driving productivity and delivering benefits to customers. State governments have difficulty in providing governance models that enable their ports to deliver total commercial performance.

GHD: Getting goods in and out of ports efficiently remains an issue of global significance. What’s the solution?

David Anderson: In short, it’s about greater integration – achieving seamless links between ports, roads and rail. It’s also about increasing political awareness and community understanding of the importance of freight in relation to trade. The two go hand-in-hand, which is why we need integrated planning.

In addition, we need to examine our supply chains. In many instances, you’ll find a collection of supply chains with lots of small partners and no strategic view of the long-term. Collective action is required around supply chain planning, and improvements are warranted. Ultimately it comes down to how we manage our infrastructure, how we price it and how much we invest in new technologies.

One of the ways we are trying to address this in Australia is with the National Ports Strategy, which was endorsed by the Council of Australian Governments in July 2012. We are using this as a platform to drive improvements and to examine future infrastructure investments in alignment with a coordinated plan that delivers on our economic goals.

GHD: What can Australia learn from the rest of the world?

David Anderson: The local ports industry could benefit from greater adoption of smart technologies for freight management and transparency. This is the norm in Europe, where smart technologies are used to track the movement in freight at any point along the supply chain in real-time. We can also benefit from fostering stronger relationships between ports and local communities. You just have to look at cities like Rotterdam, where there’s an incredible bond between the port and local community, as their joint evolution is beneficial to both groups. Finally, we need to focus on minimising our impact on the environment, particularly lowering our dependence on energy and improving the management of our water resources.

GHD: In an ideal world, how would you like to see ports operating?

David Anderson: Removing some of the roadblocks to competitiveness would go a long way to improving port operations. We have to think about the future viability of the ports industry because it is intrinsically linked to our trade performance. This means we have to harness opportunities to improve transportation links, land planning and supply chains. The imperative to make the industry as economically, socially and environmentally efficient as possible, is the key to our prosperity.

For more information, visit www.portsaustralia.com.au
Streets in many parts of Canada and the USA are being transformed with roundabouts. Once unique to Europe, these circular intersection points are increasingly being adopted in the Americas to reduce congestion and accidents.

USA
In Lincoln, Nebraska, GHD was engaged to address an increase in traffic resulting from the West Haymarket Redevelopment – a 400 acre project designed to revitalise the downtown and haymarket districts. With 7000 planned parking spaces and a 16,000 seat arena forming part of the development, the solution was required to cater for an influx of vehicles, particularly during event periods.

Jedidiah Munroe, GHD’s Project Manager says, “In collaboration with Olsson Associated, our team optimised the roundabouts for safety and capacity – without impacting the overhead bridge’s support and piers – with university parking lots, and the adjacent railroad’s right-of-way.

“We also conducted a safety audit to document and analyse different designs to achieve the safest option within the project’s constraints. And, we looked at innovative ways to help key stakeholders understand the process. This included a visual simulation which assisted employees from the City of Lincoln and Nebraska University to observe the operations of the closely spaced roundabouts, which are located next to the University’s football stadium.”

Canada
Some 1500 km (932 mi) north-east, in the Canadian city of London, GHD has delivered an equally impressive result, by replacing two closely spaced T-intersections, which were split by one of the most heavily used rail corridors, with a single roundabout.

Colin James, GHD’s Manager – Canada says, “Busy conditions on the railway line had led to ever-increasing congestion. An earlier study proposed various alternatives, however a roundabout intersection allowed for a shorter overpass structure and saved approximately AUD4 million in construction costs.”

As part of this project, GHD undertook preliminary roundabout design and detailed design review, in consultation with the lead consultant, Declan.

“All roundabouts in North America are on the rise, and with good reason,” adds Colin. “Research from the US National Highway Traffic Safety Administration has shown that by eliminating the need to come to a complete stop at an intersection, roundabouts can reduce accidents by 40 percent and injuries by 80 percent.”
Tourism boost

In Puerto Williams, Chile, the world’s most southern city, GHD has developed a proposal to address the growing need for tourist-related infrastructure. The objective? To transform the area into a stopover city for cruise ships and capture a growing slice of the tourism dollar.

While Puerto Williams is the gateway to Antarctica, just 2000 tourists visit annually, roughly equivalent to the town’s population. This is in stark contrast to the Argentinian town of Ushuaia – located just 40 km (24 mi) across the Beagle Straits – that welcomes more than 200,000 tourists and 250 cruise ships every year.

Engaged by the Chilean Ministry of Public Works, the Department of Port Works Regional Government and the National Fund for Regional Development, GHD has examined ways to upgrade existing naval port infrastructure in a cost-effective manner. The proposal recommends reinforcing the existing dock for exclusive use by the Chilean Navy, and developing a new site enabling cruise ships up to 240 m (787 ft) to dock without tendering.

GHD’s Project Director, Paula Arias offers, “Our team provided detailed engineering and ship maneuverability studies, developed piping works (for drinking water and fuel supply), studied soil mechanics and oceanography, prepared an environmental impact statement and conducted an underwater archeological inspection.

“Architectural services were also provided and a proposal was developed for facilities catering to passengers, customs, police, the Agriculture and Livestock Service and administrative staff. Community stakeholders were consulted throughout the process. On the whole, they are supportive of the initiative, which will provide considerable opportunities for economic growth.”

Construction is expected to commence in 2015.

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Every single Australian coin in the pockets of 23 million Australians is produced at the Royal Australian Mint located in the capital, Canberra. In an effort to make the production, cultural and historic significance of the Australian currency more accessible, the Mint asked GHD to redesign the existing heritage facility.

Alongside aesthetic adjustments, GHD contributed to the provision of an eight tonne roped goods lift for transferring coins to the basement vault, and construction of a new secure basement vault and access tunnel system.

GHD’s Project Director, David Bell offers, “The new facility considers the function of the building, whilst respecting the original façade. It was important to create a space where all employees could come together under one roof, seamlessly. This objective extended to the harmonious operation of the technical output of the facility.”

Preserving the heritage of the building was paramount to the project objectives. The Mint is an iconic building in Canberra. Sharing the history of the space and welcoming the public into the area was a key priority.

David adds, “The overall design seeks to renew and enhance the public journey through the building. Visitors are made aware of the cultural and historic significance of coins through the introduction of a contemporary education centre and viewing gallery.”

In terms of the benefits of the redesign, Dr Prabir De, Director of Operations for the Mint explains, “In the first three months after opening, the Mint reached its yearly quota of visitor numbers. We’re delighted with the renewed public focus on Australia’s currency. Operationally, the new facilities are streamlining currency production processes and enabling our people to collaborate more effectively.”

The refurbishment of the building included a major overhaul or replacement of its engineering services, installation of present-day coin production machinery, and compliance with current building code and occupational health and safety requirements.

David concludes, “A 4.5 star NABERS* rating has been achieved for the office areas. The design incorporated the fundamentals of the Green Star rating system that are embedded in GHD’s design and documentation.”

* National Australian Built Environment Rating System (NABERS)
In the US state of California, a small property developer is benefiting from the environmental remediation of its property portfolio, which includes 15 shopping centres. Seven of these contained dry cleaning facilities and had documented releases of chlorinated solvents, which were historically used as part of the dry cleaning process.

Seeking to improve environmental and compliance outcomes, the developer engaged GHD to perform investigations of the dry cleaning facilities, commission remediation activities, and work closely with regulatory agencies overseeing the projects.

Mark Dockum, GHD’s Job Manager says, “We performed soil remediation (soil excavation activities) at two of the sites and successfully negotiated closure of these sites with the regulatory agencies. Various remediation technologies including Soil Vapour Extraction (SVE) and Air Sparge (AS) for soil as well as in-situ Enhanced Reductive Dechlorination (ERD) for groundwater are currently being completed at several of the other sites.

“The remedial methods used in this project, in particular SVE, AS and ERD, are excellent technologies that allow for remediation of the various media without the removal of soil and/or groundwater, and are at the forefront of industry practices.”

Over the course of the project, GHD was commended by the regulatory agencies for the quality of its work, and ability to provide excellent technical interpretation of the data and clear communication of schedules/progress at each of the sites. This seamless delivery has meant that the investigation and remediation activities have proceeded at a much faster pace than most projects.

Once the projects are completed, the developer will have boosted the value and versatility of its property portfolio and will hold environmentally unencumbered properties allowing for unrestricted future use.
Yap Island – also known as the Island of Stone Money – is one of the many tiny islands that make up The Federated States of Micronesia, located about 1300 km (807 mi) east of the Philippines. Due to its remoteness, Yap is highly dependent on imported diesel fuel for power generation. With rising transportation costs pushing the prices of oil and diesel to unsustainable levels, the island sought alternative energy sources.

As a result, GHD was engaged by the Asian Development Bank to support the development of a power system that would reduce the island’s dependency on diesel fuel by 32 percent.

Working alongside the Yap State Public Services Commission, GHD examined the feasibility of renewable technologies including a 300 kW solar power system and a 1.4 MW wind farm, as well as a range of energy efficient diesel generators.

GHD performed a comprehensive wind resource assessment of the proposed wind farm on the ridge above the principal town, Colonia and estimated the annual energy production. A photomontage was also prepared for the purposes of an environmental impact assessment. One of the options suggested the use of wind turbines that could be folded down flat on the ground ahead of an approaching typhoon, which are a particular risk in that part of the Pacific.

For the solar component, GHD identified a number of public buildings, such as schools and hospitals, which would be suitable for photovoltaic installation.

“As the introduction of solar power systems and wind turbines would change the operating characteristics of the existing power system, we recommended additional monitoring, control and power protection equipment be installed to support the electrical stability of the power system,” explains Bob McKelvey, one of GHD’s team members. “A 2 MW medium speed diesel generator was also proposed to operate at periods of low loads to improve efficiency.

“The financial analysis we carried out based on preliminary costs suggests that substantial fuel consumption reductions and costs savings could be realised by commissioning the solar, wind and high-efficiency small diesel components.

“Overall, the outcomes of the study have demonstrated substantial economic and environmental benefits to the community.”

The feasibility of this project is still being considered by the Yap Island Government.

For more information, contact Bob McKelvey on +64 9 370 8234 or email bob.mckelvey@ghd.com
A series of new initiatives undertaken by GHD at Colbun S.A.’s Nehuenco Power Plant, near the city of Quillota in Chile, are delivering operational efficiencies and cost savings.

The Nehuenco Power Plant facility consists of three separate gas-fired plants – two combined cycle and one simple cycle (all dual fuel) – which were converted to diesel-fired operation due to a lack of natural gas in the region.

The asset management initiatives, which included an assessment of all systems within the power station’s three facilities and the application of a unique Failure Mode, Effects and Criticality Analysis (FMECA) methodology, led to the creation of a spare parts manifest that allowed Colbun S.A. to more easily manage its inventory of spare parts.

Over a 13-month period, thousands of pieces of equipment were examined and a large number of spare parts were identified as necessary.

Jorge Astudillo, Colbun S.A.’s Project Manager, says the quality of work completed by GHD at the plant left a positive impression on employees.

“We now know which spare parts need to be kept in stock, in order to keep the power plant operating at peak efficiency,” Jorge said. “This means we can plan strategically when purchasing spare parts and estimate forward budget requirements much more easily. As a result, we have streamlined our purchasing processes and maximised savings.”

GHD has a long-standing relationship with Colbun S.A. It has previously conducted a similar initiative for another five of its hydropower plants and helped solve a challenge with a gas turbine.
With the establishment of the Australian Government’s Carbon Farming Initiative (CFI), there are now opportunities for saleable carbon credits to be generated in the land sector, including through reforestation projects.

As a result, Indigenous communities are showing interest in reforesting their lands to benefit from broader economic and social opportunities.

Previously, GHD was commissioned by the Department of Sustainability, Environment, Water, Population and Communities to raise awareness amongst Indigenous people about carbon trading. Initially, this was done by hosting a series of workshops around the country that provided valuable information on the technical, legal and financial issues involved.

Following on from this, our team completed studies to assess the feasibility of establishing a CFI reforestation project for four Indigenous communities – Gunditj Mirring Traditional Owners Aboriginal Corporation in southwest Victoria, South West Aboriginal Land and Sea Council in Western Australia, Yalanji Aboriginal Corporation in the Wet Tropics of Far North Queensland and Umpila Land Trust and Cape York Institute on the eastern side of the Cape York Peninsula.

According to Sue Salvin, GHD’s Project Director, “The feasibility studies are extremely beneficial in highlighting the opportunities and challenges of establishing a CFI reforestation project. We spent time in each of the communities to better understand their broad objectives for their country and to investigate the practicalities of planting trees. We then developed planting plans for each community and calculated potential revenue from carbon trading, as well as potential costs.”

The results of these studies have been presented recently at a number of conferences including, ‘Climate Change Mitigation with Local Communities’ and ‘Indigenous Peoples’ hosted by the UN University and the Intergovernmental Panel on Climate Change.

For more information, contact Sue Salvin on +61 2 6564 7721 or email sue.salvin@ghd.com
Floating in Cambodia

A young engineer is making a difference

Living and working amongst the floating and flood affected communities of Tonle Sap to improve sanitation is proving to be a rewarding experience for Gabrielle McGill, one of GHD’s process engineers.

Gabrielle was recently appointed as an Engineers Without Borders (EWB) Australia field volunteer to Live and Learn Environmental Education – a non-government organisation that is based around the world. In Cambodia, Live and Learn works to reduce poverty and promote sustainable development. One of its current projects is to trial low-cost sanitation options within the floating communities that occupy the Tonle Sap Lake, Cambodia’s largest freshwater lake.

In partnership with EWB, Live and Learn is hosting Gabrielle in Cambodia for a year. She is the fourth EWB volunteer to assist the Tonle Sap community. One of her tasks is to build biodigester prototypes, which she hopes will provide a sanitation and energy solution for the community.

Commenting on this initiative, Gabrielle says, “Improving sanitation is essential to reducing the impact of water-related diseases. The Khmer people at Tonle Sap have been extremely supportive of our work. They are determined to improve the wellbeing of their community and are incredibly innovative. They certainly prove that ‘where there is a will, there is a way’.”

In addition to helping develop different biodigester designs, Gabrielle is looking at furthering the work of previous volunteers to encourage community use of ecological sanitation latrine systems, and raising sanitation awareness in the community.

Gabrielle adds, “At the moment there are a number of prototypes in the community, as well as a large experimental site, and the results are quite positive. We are still undertaking tests to work out the most effective ratio for the production of biogas and pathogen treatment.”

Gabrielle will return to Australia later in 2013 and is encouraging other engineers to get involved in supporting this and other projects through EWB.
For many years now, GHD has engaged in a broad range of community-based initiatives with Engineers Without Borders Australia including the annual Murray-Darling Basin study tour. The trip provides participants with an opportunity to learn about Aboriginal culture and history first-hand from Traditional Owners, and apply this to their personal and professional lives through a reconciliation plan.

This year, GHD sponsored two participants – Leila Macadam, one of our civil engineers, and Kasi Buckworth, a university student from the Yorta Yorta Nation in central Victoria, and the first Indigenous participant. During the whirlwind tour of four states in two weeks, the group visited a range of communities and examined various opportunities to restore river flows and achieve ecological and cultural objectives.

In Nepal and the USA, GHD’s people have recently contributed to Habitat for Humanity, an international non-for-profit organisation that is focused on building homes for the disadvantaged.

GHD has a long-standing relationship with Habitat for Humanity, having previously participated in similar projects in Australia, New Zealand and across Asia.

**Pictured above left:** In the US town of Harrisburg, Pennsylvania, a team of GHD Young Professionals participated in a local project. Matt Alford, Howard Butler, Benjamin Segal and Jen Miller spent a day landscaping and cleaning one of three new homes.

**Pictured above right:** In Kavre, Nepal, Yin Fung Lee, one of our New Zealand Young Professionals spent 20 days assisting with a global village project known as Everest II. Alongside a contingent of 400 volunteers from around the world, Yin Fung helped to finish the construction of 35 new homes.
RANKINGS

BUSINESS REVIEW WEEKLY (BRW) AUSTRALIA
2012 GHD ranked 37th in the BRW Top 500 Private Companies Listing

INSIDE WASTE MAGAZINE
2013 Best waste consultant in Australia

RANDSTAD AUSTRALIA
• 2013 GHD ranked most attractive company to work for in Queensland
• 2013 GHD ranked 10th most attractive company to work for in Australia

TRENCHLESS TECHNOLOGY MAGAZINE
2012 GHD ranked 16th in the Top 50 Trenchless Design Firms in the US

WORLD ARCHITECTURE LIST – BUILDING DESIGN MAGAZINE
• 2013 GHD ranked 1st in infrastructure category
• 2013 GHD ranked 2nd in government buildings category
• 2013 GHD ranked 4th in Middle East region
• 2013 GHD ranked 7th in elderly living category
• 2013 GHD ranked 2nd in revenue for Australasia

RECOGNITION

AUSTRALIA DAY HONOURS LIST
2013 Former GHD Chairman, Clive Weeks, was awarded an Officer of the Order of Australia (AO) for his contribution to engineering and infrastructure in Australia

ENGINEERS AUSTRALIA
2012 GHD’s CEO Ian Shepherd was named one of the top 100 most influential engineers in Australia

CONSULT AUSTRALIA
• 2012 Large Firm of the Year Award
• 2012 Gold Award for Diversity

CAREERTRACKERS
• 2012 Trailblazer Award
• 2012 Overall Corporate Plus Award
• 2012 Business Supervisor of the Year Award – Jill Hannaford
• 2012 Academic Excellence Award – Charlee – Sue Frail
• 2012 Business Supervisor of the Year Award – Peter Dunn
• 2012 Community Award – Devyn Jackamarra

PROJECTS

AUSTRALIA
ALICE SPRINGS POWER NETWORK UPGRADE
2012 People Choice Award (NT) – Engineers Australia

4 MORT STREET, CANBERRA
2012 Best HVAC, Refrigeration Retrofit or Upgrade – Australian Institute of Refrigeration, Airconditioning and Heating

COALCONNECT ALLIANCE
2012 Export Award – Consult Australia

COTTER DAM DISCOVERY TRAIL
2012 Design Award – Australian Institute of Landscape Architects

HARDENED AND NETWORKED ARMY, EDINBURGH DEFENCE PRECINCT
2012 Excellence in Research, Innovation, Policy or Education Award (SA) – Stormwater Industry Association

NATION BUILDING ECONOMIC STIMULUS PACKAGE
• 2012 Project of the Year – Australian Institute of Quantity Surveyors
• 2012 Government Project Award – Australian Institute of Quantity Surveyors

ONE COMMUNITY, ONE MOB INTEGRATED SOCIAL AND MASTER PLAN, SOUTH KEMPSEY COUNCIL
• 2013 Commendation – National Planning Institute of Australia
• 2012 Public Engagement and Community Planning Category (NSW) – Planning Institute of Australia

SWANSEA BRIDGE CATHODIC PROTECTION
2012 Merit Award – Australian Concrete Repair Association

TWEED SHIRE COASTAL HAZARDS DEVELOPMENT CONTROL PLAN
2012 Best Planning Ideas Award, Small Project Category (NSW) – Planning Institute of Australia

MIDDLE EAST

EMIRATES ALUMINIUM SMELTER, ABU DHABI
2012 Steel Design Award (NSW/ACT) – Australian Steel Institute

USA

MALHEUR NATIONAL WILDLIFE REFUGE – FISH SCREENING AND PASSAGE PROJECTS
2012 Engineering Excellence Honor Award – American Council of Engineering Companies of Oregon
01 Winning performance
GHD’s dragon boat team was successful in winning both the Industry Challenge and Minor Final at the 2013 Chinese New Year Festival in Sydney. This is the sixth year in a row that GHD has participated in the annual competition which sees more than 3000 paddlers compete. More than 40 GHD people were involved, including a support crew made up of friends, family and colleagues.

02 Adjunct Professor
The University of Queensland has named Chris Hertle, GHD’s Global Market Leader – Water, as an Adjunct Professor in the Advanced Water Management Centre. The title was awarded to Chris as formal recognition of his significant contribution to the work and activities of the university, from which he received an honours degree in Chemical Engineering in 1983.

03 ICEC appointment
Andrew Harfield, GHD’s Principal Commercial and Cost Manager in NSW, has been named Deputy Director (Standards & Professional Development) for The International Cost Engineering Council (ICEC) Region 4. Andrew has more than 13 years’ experience in the commercial and cost management of major building and infrastructure projects.

04 Planning leadership
Simone Fogarty, one of GHD’s principal planners, has been appointed by the South Australian (SA) Government to a five-person independent panel charged with leading the comprehensive review of the SA Planning System. Simone has more than 25 years’ experience as an urban and environmental planner in SA. She has a background in infrastructure planning, strategic and policy work, and major project approvals.

05 Education award
Larry Brown, a professional engineer from our Harrisburg, PA office in the USA has received the 2012 Educational Outreach Award from the Central Pennsylvania’s Engineers Week Council. Larry was chosen as the recipient of this award for tirelessly promoting careers in science and engineering to PA’s youth for the past 20+ years.

06 AILA fellowship
Scott Graham, GHD’s Service Line Leader – Landscape Architecture, has been awarded a fellowship to the National Board of the Australian Institute of Landscape Architects (AILA). He was selected for his ongoing commitment to landscape architecture, both through his practice leadership and his contributions to the Institute.
07 Future leader award

Suzanne Moulis, one of GHD’s landscape architects, has won the 2012 Future Leader Award of Excellence from the Australian National Association of Women in Construction (Canberra Chapter). The award celebrates the achievements of women working in the property and construction industry. Other GHD women who have won this award include Anita Borella and Bianca Hummel.

08 Regional contribution

Nick Killin, GHD’s Business Development Manager for Newcastle, has received the 2012 Harvey Knox Award from HunterNet, an industry network of manufacturing, engineering and consulting companies located in the Hunter Region of NSW in Australia. The award recognises Nick’s long-term contribution to HunterNet and its training arm, the Group Training Company.

09 ITS engineer recognised

Alexander Chapman, one of GHD’s transport engineers, has received the 2012 Intelligent Transport Systems (ITS) Australia Young Professional Award. A member of our ITS team in Adelaide, Alexander has more than five years’ experience in the design of ITS solutions, as well as other traffic and transport projects. As a recipient of this award, Alexander will attend the ITS World Congress in Tokyo in October 2013.

10 Water excellence

Mike Rodd, one of our principal water engineers, has won the Canberra Division Professional Engineer of the Year Award for 2012. He was chosen for excellence in the design and management of a range of projects involving the investigation, design and documentation of major pipeline and pumping systems for urban and mining projects, including major water supply transfer systems.
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