

# **Embracing Sustainability**



# **Embracing sustainability**

The concept of sustainable development has existed for a number of years, and the most widely accepted definition is that presented in the 1987 World Commission on Environment and Development report entitled *Our Common Future*. The report defines sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The construction industry has a huge role to play in global sustainability, and as a prominent South East Asia construction company, we believe that it is essential for us to rise and meet this challenge. As part of this on-going commitment, we are pleased to be releasing our first publicly available

sustainability report. Embracing Sustainability is a presentation of our economic, social and environmental performance during the calendar year 2003. The content builds upon last year's HSE Report entitled Staying Ahead on HSE, and covers all of the company's operations. This embraces all operations and support services across Hong Kong, China, Singapore and Thailand. Our support services include Lambeth Associates, our engineering consultancy, Entasis interior contracting and the Construction Services Division based at the Gammon Technology Park in Hong Kong, which manages our plant and equipment and operates three concrete batching plants in Hong Kong and our

steel fabrication plant at Pristine Works in Dongguan, China.

Our report is structured as follows to present the three cornerstones of sustainability, with a section dedicated to health and safety, reflecting its importance within our business and industry as a whole:

- · Our commitment
- · Sustainability in practice
- Economic and business performance
- Social performance
- · Health and safety
- · Environmental performance
- 2003 progress
- Outlook for 2004

Front cover: The Asian Honey Bee, Apis Cerana, is found from the Himalayas to Japan. They play a key role in the region's ecosystems as well as being highly productive and organised.

## Verification statement

The Business Environment Council (BEC) was commissioned by Gammon to provide a verification statement for its 2003 Sustainability Report (hereinafter the 'Report'), which covers the Company's performance in the year 2003 operating under the name Gammon Skanska Limited. BEC conducted sample checks of the data and claims contained in the Report through data and document review, meetings with responsible staff and visits to selected project sites. Our findings are as follows:

### Completeness of the Report Scope

The Report was found to provide a representative account of Gammon's management process and initiatives for corporate sustainability, especially in relation to buildings, civil engineering and foundation works. The Report covers the Company's operations in Hong Kong, China, Singapore and Thailand, and is able to link and reflect Gammon's sustainability commitment across the region.

For future reports, we recommend more in depth presentation of

sustainability programmes and initiatives for their specific areas of business and operations.

### Adequacy of Data

BEC considers the coverage of safety and accident statistics necessary and appropriate, as safety is a key concern for the construction industry. We also consider the inclusion of data related to staff and contractor training, and partnerships with subcontractors, suppliers and clients appropriate and fitting in presenting Gammon's effort in sustainable development.

Gammon have presented an encouraging first-time sustainability report, including some key performance indicators (KPIs) for social and economic performance. For environmental performance, the Report provides a wide coverage of environmental management practices and green innovations, but relatively few KPIs have been included. BEC recommends including relevant indicators in future reports to meet the increasing concern from stakeholders both local and overseas,

and encourages the use of the Global Reporting Initiative's guidelines in this respect.

### **Accuracy of Data**

The systems and processes for gathering the data used in this Report were considered effective. Minor inaccuracies were identified during the verification process, and recommended amendments were made to improve clarity and ensure accuracy. These were subsequently incorporated into the Final Report.

### Opinion

BEC considers the Report accurate and reliable in presenting Gammon's efforts in corporate sustainability. We congratulate Gammon for pioneering sustainability reporting in the regional construction industry.

**Dr Andrew Thomson**Chief Executive Officer
Business Environment Council
5 August 2004



## Our commitment



We have long realised that our business, and the way we do business, has an impact on the economy, society and the environment. We consider that the time is right to expand on last year's Health, Safety

and Environment Report and start a dialogue on how we are integrating the concepts of sustainability into our core business.

Many of Gammon's key customers are already actively committed to sustainability issues and expect nothing less of their contractor. This emphasis is likely to increase as their requirements develop and public awareness and sensitivity intensifies. Our focus on sustainability in construction will help us to strengthen our brand and improve the way we manage risk. This commitment also reinforces our objectives to be both the employer and partner of choice. Employees and partners want to work with companies that share their personal

values, and with which they can grow and develop. If Gammon is to maintain its leading position in the market, we must attract and develop the best employees and work with the best partners.

We very much welcome your views and look forward to playing a leading role in developing an industry sector wide approach to sustainability in the region.

Martin Hadaway **Chief Executive Gammon Construction Limited** August 2004



# Sustainability in practice

## Our mission

Our mission is to develop, build and service Asia's physical infrastructure for living, working and travelling. We aim to be one of the leading providers of construction services in Asia, by focusing on our customers' needs and how we can best use our abilities and resources to add value for them by developing innovative and sustainable solutions and by managing risk. We recognise that being a leading construction contractor entails responsibilities that go well beyond traditional concepts and established ways of working. It is our contention that incorporating sustainability into our activities makes good business sense, enabling us to:

- Strengthen our brand. We want to be recognised as a responsible contractor that is leading the industry.
- · Improve risk management. Minimising and reducing risks through the incorporation of economic, social and environmental considerations into our operations is good business practice.
- Gain respect from our employees and business partners. We believe that people will increasingly prefer to be associated with a socially and environmentally responsible organisation.
- · Help us realise our vision to be the leading provider of construction services in Asia.



## Alignment with our brand values

Our ultimate goal is to deliver a high level of quality to our customers. In this, we mean not only the quality of our built products and service outcomes, but also the quality of the way in which they are delivered in a sustainable, reliable, safe and responsible manner. We believe that we can best deliver the level of quality to which we aspire by concentrating on four brand values, which are naturally aligned to our commitment to sustainability.

- Being customer-centric, focussing on the broader needs of our customers and not solely on the construction process.
- Being resource-rich, able to combine our own extensive local resources with the global resources of our shareholders in a way that puts us ahead of our competition.
- Being innovative, a technology enabled, learning organisation that is committed to finding better ways of doing things that make the most efficient and sustainable use of available resources.
- · Being risk-managers, having the foresight, attentiveness to detail and tenacity to anticipate and effectively deal with the problems and challenges that construction inevitably entails.

### **Balanced scorecards**

Gammon is fully committed to the principles of sustainability and is developing an internal framework to manage and implement these principles. The integration of sustainability into our business, in combination with our core brand values and mission, is driven by our use of Balanced Scorecards. The scorecards document key performance objectives and targets in the four areas considered essential to the success of our long-term business goals. Three of these (Customers & Markets, People & their Future Growth, and Internal Business Processes) are closely related to our responsibilities to society and the environment, whilst the Finance area is related to achieving balanced economic returns. Each region and sector of our business, as well as our staff, work to achieve annual objectives and targets presented in their respective balanced scorecards. These management tools are helping us to build the foundations for our ongoing commitments to sustainable development.

### **Financial**

- **Economic Performance**
- Risk Management
- Governance & Management
- Accountability

## **Internal Business Process**

- Health & Safety Management
- Social Responsibility
- **Environmental Management**
- **Responsibility to Suppliers** and Subcontractors

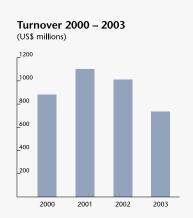
## Customer & Markets

- **Customer Expectations**
- Strong Brand
- **Quality Performance**
- **Industry Leader**

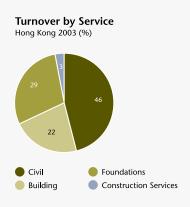
### People & Future Growth

- Training and Development
- Sustaining the Quality of the Organisation's Staff
- Community Relationships
- **Engagement with Employees**

# Economic and business performance







## Our business

Since Gammon was established in the late 1950s, we have grown to become one of the leading providers of construction services throughout Hong Kong and South East Asia. Owned on an equal basis by two major international companies - Jardine Matheson and Balfour Beatty - we are able to deliver a unique combination of local presence, technical capability, financial strength and international expertise. Drawing on these strengths, we are committed to maintaining our position as a market leader. Our main offices in Hong Kong are supplemented by offices in Beijing, Shanghai, Shenzhen, Singapore and Bangkok. In addition to our involvement in many landmark projects in Hong Kong, Gammon has



completed around 250 projects in China and Singapore, together with projects in Thailand, Vietnam, Taiwan, Malaysia and the Philippines.

Gammon sees exciting opportunities in all these markets in the coming years, and we look forward to contributing, at the highest possible

standards, to developing, building and servicing Asia's physical infrastructure for living, working and travelling.

2003 presented a challenging business climate in the region, including a downturn in South East Asia markets and the impacts of the SARS outbreak. These factors have inevitably impacted on our turnover with a decrease to around US\$735 million in 2003. This decrease also reflects completion of a number of major projects in China. However the outlook for 2004 is more promising, with new projects secured in 2003 such as Shenzhen Western Corridor, Nam Wan Tunnel, Deep Bay Link North and Penny's Bay Reclamation Phase II that will contribute significantly to our turnover in 2004/5.









### **Gammon Technology Park**

We have invested US\$30 million in a new construction support facility - the Gammon Technology Park - at the Tseung Kwan O Industrial Estate in Hong Kong. This will provide plant, construction services, fitting out and Academy training support facilities. The Technology Park is the company's biggest single investment in its history. It demonstrates our commitment to and confidence in the local and regional economies.







## Management and governance

Gammon has robust systems in place to ensure effective governance with comprehensive audits and monthly management reporting on financial, productivity, risk, health, safety, environment and people. In 2003, we went live in Hong Kong with an Enterprise Resource Planning (ERP) system (an integrated information technology management platform) to further integrate our business management processes and provide a greater level of real time information for improved control and transparency. It is our responsibility towards our customers, employees, shareholders and other stakeholders that we safeguard and ensure a healthy business environment. We

have clear codes of conduct for our employees and it is important that we ensure that these are understood and implemented.

We have developed a systematic process to identify and assess a wide range of project risks and opportunities during the tendering and execution stage of projects, including those associated with resources, health, safety, the environment and community issues. These systems are supported by good practice measures to ensure compliance with legal and regulatory requirements and to drive performance improvements. In Hong Kong, these include certified management systems for quality (ISO 9001), health and safety (OHSAS 18001) and environment (ISO 14001). Singapore also has an

ISO9001- certified system in place and is in the process of implementing environment, health and safety management systems for certification in 2004. In China, except for the Shenzhen office where we implement the Hong Kong systems, we have similar objectives for 2004 to gain certification of our management systems.

These management systems provide us with the necessary tools to manage sustainability within our business. We are committed to continuous improvement and have established a system of performance measurement and accountability through benchmarking, data collection and verification.

## Sustaining the organisation

### The Quality of the Organisation

The quality of our staff is the lifeblood of our success. We place great emphasis on how we recruit and subsequently develop people for the future of the Company. We have Human Resource programmes in place to monitor the competency of the organisation as a whole in terms of its ability to deliver both committed and anticipated workloads, as well as to plan the sustainability of the Company's human resources through succession planning and risk management. We continually develop and maximise our existing staff skill base, bring in the right new resources where necessary and aim to minimise losses

in intellectual capital throughout the recruitment and staff development processes. These approaches have enabled us to develop one of the strongest and most experienced technical teams in the region.

### **Improving Productivity**

Gammon is taking a leading position in the construction industry by investing in people. We see this as key to increasing our productivity both individually and collectively, and in January 2003 we launched the Gammon Academy. Our investment in management time and facilities in the Academy has been very significant and has resulted in a 50% increase in training opportunities for staff, presenting a unique opportunity to broaden their skills and increase competences.

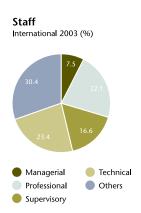
The Academy is being increasingly utilized as a conduit for improving economic, environmental and social awareness across our areas of operation. It marks a major advance in staff development and demonstrates our long-term commitment to supporting the integration of sustainability principles into our business.



# Social performance

Through our involvement in developing, building and servicing Asia's physical infrastructure for living, working and travelling, Gammon makes an important contribution to the

region. We employ 2,000 professional and office based staff together with approximately 1,500 daily paid workforce staff and indirectly engage a further 7,000 personnel through our subcontractors. We therefore have an important responsibility to the communities within which we operate.



### **Customer Satisfaction**

We believe that our commitment to and implementation of partnering, HSE initiatives and sustainability ultimately results in higher levels of customer satisfaction. Our Customer Satisfaction Surveys in 2003 showed continued progress in key aspects of our social responsibility. Attitudes and behaviour, processes and procedures, health & safety, and environmental performance were rated by our customers on a scale of 1 (very unsatisfactory) to 5 (very satisfactory) as illustrated in the following charts.

## Our business partners

### **Customers**

Gammon actively promotes partnering with all customers as an approach to help project participants work more effectively and efficiently together. In 2003, we issued a Partnering Capability Sheet, which helps to detail our experience with partnering and provides guidance on how to ensure its successful application. Recent examples of successful partnering have included the Chater House and Three Pacific Place developments in Hong Kong, the Firmenich project in Shanghai and our relationship with Oiltanking in Singapore.

## **Suppliers and Subcontractors**

We are committed to working with all our subcontractors to raise standards across the industry on critical business issues such as: employment of registered staff; prevention of corruption, bribery and anticompetitive practices; health, safety and environmental performance;



employees' compensation insurance; and fair and on-time payment of subcontractors.

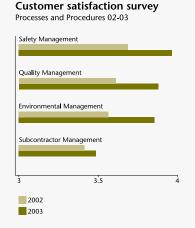
To reinforce this commitment. Gammon initiated a consultation process during 2003 comprising an interactive workshop with subcontractors and video interviews. Five general principles were identified and agreed between Gammon and its subcontractors as follows:

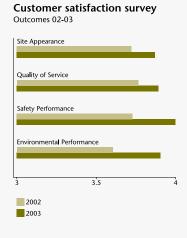
- Compliance with legal requirements in all respects:
- Commitment to conducting business with a high standard of integrity and business ethics;
- Responsibility to respect business partners' rights and adherence to industry best-practice on subcontracting;

Three Pacific Place is a US\$112m, forty storey office tower in the Wan Chai/Central District of Hong Kong. Swire Properties and Gammon signed a formal Partnering Charter to work together to ensure the project's overall success. Through the partnership, each organisation within the project team has been more involved in the decision-making process, helping to eliminate the potential for conflicts associated with more traditional methods of contracting. The Partnering Charter enabled a number of best practice construction techniques to be incorporated such as self climbing formwork, prefabricated building services and fully enclosed perimeter safety screens. The project was also the first development in Hong Kong to make full use of Prolog Manager, an on-line project extranet system, allowing partners to access to key project information at any time from anywhere, thus ensuring transparency of project data and accountability.



## Customer satisfaction survey Attitudes and Behaviour 02-03 Understand/focus on customers needs Caring about customers concerns Trustworthy & reliable Being open with customers Being innovative Ability to anticipate risks 2002 2003





- Remain open-minded in dialogue with all those affected by Gammon's operations and ensure communication in a timely and effective manner; and
- Work together to develop measures conducive to continuous improvement.

This engagement process has helped bring focus to our commitments to improve subcontracting standards. In 2004, we plan to expand our formalised subcontractor and supplier partnerships and we will also be undertaking opinion surveys to solicit feedback for further development and improvement of our strategies.

## Gammon people

Our staff are our future, and we reward and recognise this through the comprehensive benefits programme we offer, as well as performance bonuses. It is important that we protect and maintain the welfare of our staff. We fully respect our staff's views and encourage internal communications and feedback, through various mechanisms such as our Staff Opinion Survey and internal newsletters. We also encourage integration of staff at all levels and we continue with regular staff breakfast sessions for younger employees with senior management.

We also actively encourage and promote personal development and employability training, where staff are able to benefit from our internal training schemes as well as our extensive contacts with training institutions around the world.

We have been offering apprenticeships and graduate training in conjunction with professional institutions including the Construction Industry Training Authority (CITA), Hong Kong Institution of Engineers (HKIE), Institution of Civil Engineers (ICE) and Hong Kong Institute of Surveyors (HKIS) since the early 1980s. In 2003, Gammon awarded certificates to 29 Apprentices and 14 Graduate Trainees. We also have established links with some of the region's leading universities, and actively recruit their best graduates.



# Gammon in the community

### Jardine Ambassadors

The Jardine Ambassadors Programme was formed in 1982 and has raised more than US\$2 million for over 350 charitable projects. Currently, three of Gammon's senior staff are Jardine Ambassadors involved in soliciting Gammon staff support in various community activities. One example of a Jardine Ambassadors programme in which Gammon are involved is MINDSET, a charity founded in Hong Kong in June 2002, which aims to change peoples' attitudes by raising awareness and understanding of mental health issues, as well as supporting individuals, families and organisations in need of help.





### **Gammon University Fellowship**

The Gammon University Fellowship aims at enhancing career opportunities for university undergraduates by providing an effective start to their career development. The first Fellowship was launched in March 2002 and a total of 14 second year undergraduates from various universities in Hong Kong were selected to join this programme with this increasing to 16 in 2003. The scheme aims to provide an interesting and challenging opportunity to learn, at first hand, about current practice in a worldstandard construction business. We

have also been sponsoring an engineer with a Gammon Scholarship through the National University of Singapore.

### Gammon Scholarships in China

We have an established scholarship programmes set up with three leading Chinese Universities:
Tsinghua University in Beijing, Tongji University in Shanghai and the South China University of Technology in Guangzhou. Approximately 100 scholarships are given each year to students from poor or deprived areas to provide them with the opportunity for further education.





## **Community Activities**

Our staff have also been participating in and sponsoring a range of other annual community activities, including the Green Power Hike, the Matilda Hospital Sedan Chair Race, Dragon Boat Races and Oxfam's Trailwalker. In Shanghai, we participated in the Terry Fox Run for charity and donated books to a middle school in a poor area of Anhui province. We also actively promote and support participation by our staff in industry and community-wide sporting events such as football and basketball tournaments. In addition, many of our senior staff and directors take a personal interest in sector wide issues by voluntarily holding offices in a wide range of professional bodies and charitable organisations in Hong Kong and the region.

# Health and safety

We attach the highest priority to the health and safety of our workforce, subcontractors, customers and the public. We continue to implement a comprehensive range of safety initiatives including safety risk assessments at project design, deployment of registered safety personnel on all of our sites, promotion of safe working practices and providing professional advice and training.

## Health & safety performance

Our 2003 Accident Incident Rate has improved compared to 2002, remaining significantly below the industry average, and we are pleased to report that there were no fatalities in 2003 across any of our operations.

China's statistics are not incorporated in the graphs below. During our 2003 internal audits we have confirmed that the 2003 accident incident rate for our China projects is significantly less than that of other regions. We have not incorporated the China data at this stage to avoid distortions in the comparisons illustrated.

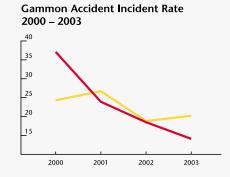
Thanks to initiatives to improve safe working at height and site housekeeping, the number of accidents related to 'falls from height' and 'slips, trips or falls' on same level in Hong Kong have decreased by 50% and 68% respectively compared to 2002. No safety fines or breaches in China or

Thailand were received, although the number of safety non-compliances recorded by the Labour Department in Hong Kong increased in 2003. In Singapore, a slight increase in breaches was recorded in 2003 compared to 2002. We treat these issues with utmost seriousness, and each case has been fully reviewed by internal Panels of Enquiry.

## Safety awareness and management

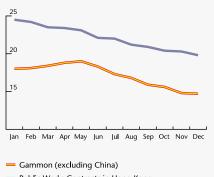
To address safety issues, and bring about on-going improvements, we aim to take actions based on the attitudes and perceptions of all our site staff and subcontractor workers. To help identify areas of focus, in February 2003 we commissioned a safety climate survey in Hong Kong, conducted by the Occupational Health and Safety Council (OSHC) assisted by Beijing's Tsinghua University, to examine the values, attitudes, perceptions, competency, and patterns of behaviour in safety among our staff and workforce, including our subcontractors' workers, site supervisors and management. This survey covered over 5,000 personnel and we believe was the first of its type in Hong Kong. The results have helped to identify areas for improvement, to provoke behavioural changes and to improve the overall safety culture. For example, our 2004 targets show that we will expand the level of training of subcontractors and establish minimum levels of training for their supervisory staff.

As the benefits of our efforts in the latter part of 2002 began to be better recognized amongst our staff and workforce, the Workers' Injury Risk Management programme has been a focus of attention during 2003. This has helped us to sustain a continued decline in the severity of accidents as illustrated below. Furthermore the average cost for accidents managed under this programme has dropped by approximately 60% since 2001.



 Hong Kong operations International operations (excluding China)

### **Accident Incident Rate 2003**



 Public Works Contracts in Hong Kong (Source: Environment, Transport and Works Bureau Internet Site)

## **Gammon Severity Rate** 1999 - 2003 250 200 150 100 50 1999 2000 2001 2002 2003

Hong Kong operations. Days lost per 100,000 manhours

<sup>\*</sup> The Accident Incidence Rate is the total number of reportable accidents per 1,000 workers. A reportable accident is one which results in a period of incapacity exceeding three days.

# Working with our subcontractors and suppliers

### **Recording Performance**

As part of our health and safety management system, in 2003 we started to collect further data from existing and new subcontractors on their Health, Safety and Environment (HSE) policy, procedures and Material Safety Data Sheets. Through improved training and communications, we will work with our subcontractors and suppliers to achieve better workplace safety.

Project HSE performance is assessed in a number of ways, including weekly safety walks, audits and inspections. Collectively, overall performance is reviewed during monthly meetings with feedback provided in monthly HSE reports. From 2003, incidents and accidents are now entered into the ERP system for real-time review and updating by senior staff. The HSE performance of subcontractors is evaluated across the Hong Kong operations using a



scoring system with results published on-line in league tables. Through the ERP and company intranet, site management and procurement staff also have easy access to overall subcontractors' and suppliers' performance reports and monthly HSE results.

During 2003, our tender selection process for subcontractors and suppliers has been expanded to include new requirements on conviction and accident history, HSE performance, HSE policies and management systems.

## **Safety Promotion and Awareness**

The 'How to promote safety culture' and 'Competition and Cooperation'

drama plays arranged at the Project Managers' meeting in June 2003 are innovative examples of how we promote further improvements to the safety culture with our subcontractors. We also encourage subcontractor supervisors to attend designated courses organized by the Gammon Academy.

For several years we have implemented an incentive scheme, which allows each project to nominate subcontractors with good HSE performance for our Best Safety, Environmental and Partner Awards presented at our Spring Dinner as captured in the photo above.



## Safer Measures Seminar in Shanghai

Gammon in conjunction with the Tsinghua University Construction Safety Research Centre, supported by the Ministry of Construction, China, hosted a seminar entitled 'Staying ahead in Construction Health, Safety and the Environment' at the Shanghai International Convention Center in November 2003. Over 120 construction HSE professionals, business partners and customers attended the seminar.

## Workplace hygiene

We signed a Workplace Hygiene Charter in Hong Kong demonstrating our commitment to ensure good standards of workplace hygiene. This was particularly important given the Dengue fever and SARS outbreaks in 2003. We incorporated health risks associated with SARS into our health and safety risk assessment programme and improved welfare provisions, on sites accordingly.





## Rewarded for our efforts

In 2003, we won the Safety Management System Award under the Hong Kong Occupational Safety and Health Award for outstanding achievements in occupational health and safety through implementation of sound safety management systems.

In addition, we won six prestigious awards in the Safe Working Cycle Competition 2003 organized by

the Hong Kong Occupational Safety and Health Council including three Gold Awards for our Three Pacific Place project.

We also won six awards under Hong Kong's Considerate Contractors Site Award Scheme 2003, and our Reclamation Works in North Tsing Yi won the Gold Award in the Site Cleanliness and Tidiness Grand Award for public works. We also won a Silver Award for our Three Pacific Place project.





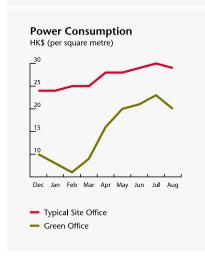
# Environmental performance

With environmental protection becoming a prominent issue, particularly in the densely populated and development-intensive cities of Asia, it is important that we understand and manage the environmental impacts associated with our activities. An integral part of our Brand Values is our commitment to the environment, where we actively promote innovative, leading edge and costeffective environmental solutions across all of our operations. We also actively engage with our customers and business partners to promote environmental awareness.



### **Energy Savings: Tsing Yi Green Office**

At our North Tsing Yi Reclamation project in Hong Kong, we have put environmental thinking and innovation into practice when designing and constructing our project site office. Adoption of energy improvement measures, including the use of skylights to increase natural light levels, a roof planted with grass to serve as an insulation blanket and the reuse of excising materials have cut energy costs during 2003 in the office by approximately 45% when compared to a conventional site office.



## Benchmarking our performance

In 2003, we began more detailed benchmarking of the environmental performance of our projects and established a new set of environmental objectives and targets. A company-wide 'Project **Environmental Performance Data** Form' has been developed for monthly updates from each operational site. The data focuses on our main impacts and identifies areas for improvement such as resource and energy consumption and waste reduction. Benchmark targets have been set and once measures have been validated, these will form part of an Environmental Performance League Table for projects. For benchmarking, we have also begun research into construction practices in other regions such as Europe and North America.

We have evaluated performance in meeting our 2003 environmental objectives and targets and achieved the following:

• To minimise the impacts of noise and smoke fumes from our plant and equipment we needed to ensure they were running at optimum efficiency. To do this we implemented preventive maintenance schedules for all main items of plant in our fleet, records of which are now hooked up to our business management system (ERP) for common user access.

- · To avoid land contamination we targeted to install drip trays under 90% of relevant plant on our sites. By the end of 2003, we had achieved 87%.
- To reduce water consumption we set various targets and managed to confirm that on heavy foundation projects, 100% of the fresh water supplied to site is now recycled.
- To encourage responsible waste management and reduction practices we targeted to participate in Hong Kong in the Environmental Protection Department's Wastewi\$e Scheme on six of our major projects. We are now actively engaged with this scheme on seven projects and have received independent recognition.

We recognise that these are small steps towards improved performance but shall continue to build on the data obtained and experience gained in setting further challenges for 2004. No fines or breaches relating to environmental performance were recorded for 2003 in China, Thailand and Singapore, however we have unfortunately seen a small increase in the number of environmental breaches in Hong Kong. Eliminating these breaches remains a major objective for us.

## Promotion and awareness

We continue to actively raise environmental awareness in the construction sector and amongst the



general public through sponsorship and participation in environmental events, conferences and community outreach programmes. As part of our wider quest to promote innovation, we established an internal **Environmental Innovation Centre in** 2003 to develop new environmental products for construction, to promote environmental best practices, and to identify new business opportunities in environmental improvement projects. The Centre has conducted designs on vegetated noise barriers, is exploring with Shell the opportunities for the use of solar energy and other alternative fuels, and is also compiling industry best-practice notes. Environmental training remains a prominent commitment across our business, where we offer training to all staff levels from formal courses at our Academy through to toolbox talks on site.

We are also working closely with subcontractors and suppliers to improve awareness and promote better environmental performance. In 2003, we started to collect more detailed data from subcontractors and suppliers on their environmental management systems and environmental non-compliance records. In addition, environmental awareness is now included in our Academy training for subcontractors.

### Wastewater Recycling

At the Three Pacific Place project (above) in Hong Kong, an innovative automatic wastewater recycling system was designed and built to reuse treated wastewater for dust suppression. Site runoff and wastewater generated from basement excavation and rock drilling, washing of concrete joints, curing, wheel washing and general cleaning are collected and treated by a wastewater treatment plant, which uses citric acid, a naturally occurring substance. The treated wastewater is then pumped to a refuse chamber for water spraying to suppress dust generation. Results from check meters found that over 90% of fresh water originally used for dust suppression could be saved.

## Pipejacking in Thailand

In 2003, we successfully completed a section of Stage 2 of Bangkok's ambitious wastewater project (right). Our contract works included the installation of 4.4km of sewers using pipejacking techniques and 420 manholes of varying sizes. Drawing on our extensive experience of this type of work, we developed an innovative

technique for installing the smaller diameter pipes, which greatly reduced excavation requirements as well as the size of the access manholes required. Since these manholes were invariably located in congested areas the construction impacts in terms of disruption, noise and dust to the surrounding areas were significantly reduced.



## **Environmental** management on projects

Environmental management is a fundamental consideration in all our operations. We have a number of significant contracts where the sensitivity of the project and its setting requires additional management plans, monitoring, audits and control procedures in order to minimise and mitigate potential environmental impacts. These include several projects in Hong Kong requiring an Environmental Permit as set out in the **Environmental Impact Assessment** Ordinance requirements.



## Hong Kong-Shenzhen Western Corridor (HK-SWC)

In 2003, a Gammon - Skanska International - MBEC joint venture won the contract for the construction of the Hong Kong section of the Hong Kong-Shenzhen Western Corridor. The northern and southern shores of Deep Bay, where this new bridge starts, comprise mud flats with mangroves, which are of significant ecological value. As such, proactive measures have been adopted prior to and during the construction works to reduce damage/contact with the mud flats and to limit additional sedimentation. Measures include the construction of a temporary steel access bridge, the use of cofferdams for bridge foundations and specially made cranes with built in oil drip trays. Ecological works include seagrass and bamboo transplantation, replanting of mangroves, the search and removal of exotic mangrove species and weeds and habitat creation and management.

## Commitment to sustainable **buildings**

The design and construction of sustainable or 'green' buildings is becoming increasingly important, and new tools are being developed to measure and compare the environmental performance of buildings. One such methodology is the Hong Kong Building Environmental Assessment (HK-BEAM) scheme. Our staff and engineers are fully conversant with the scheme, and have worked on a number of buildings and projects which have been or are being assessed.



### One Peking

A recent example of a sustainable building is One Peking, a Grade-A 30-storey office and retail development in Tsim Sha Tsui, which was rated as 'Excellent' in the HK-BEAM assessment scheme. One of the building's many environmental features is an active curtain wall system. The system consists of a triple-glazed façade that is mechanically ventilated and integrated with solar sensors and computer-controlled Venetian blinds, which operate using power sourced from an array of photovoltaic panels located on the rooftop. Apart from the designs of the steel support frame for the photovoltaic panels, we successfully overcame the difficulties of incorporating such an active curtain wall system into a commercial building and met the construction challenges.



### **Environmentally Friendly Housing**

In Chengdu, China, Gammon adopted a wooden frame approach for structures for the Scientific Center of the Chengdu Institute Southwest Architectural Design and Research Institute. The method, initiated by Sweden's Nordic Timber Council AB and developed by the Research Institute, is beneficial in terms of social, commercial and environmental aspects. The goal of this project is to promote building of energy efficient and environmentally friendly structures.

## Winning recognition

Our 2003 environmental performance and initiatives were recognised at a number of award ceremonies in Hong Kong. In particular, we received the Green Contractor Award 2003 - Gold Award from the Architectural Services Department (for Penny's Bay Fire Station and Centre for Youth Development in Chai Wan). Our ability to efficiently manage waste also brought us the Gold Wastewi\$e Logo awarded by the Environmental Protection Department for the Three Pacific Place project. Our North Tsing Yi Reclamation project was awarded the Skanska 2003 Environmental Prize for Innovative Solutions for the

innovative green design and construction of its site office. It also won a certificate of Merit in the Green office Award Category at the 2003 Eco-Business Awards.





# 2003 progress

In Staying Ahead on HSE, we set ourselves a number of challenging Health, Safety and Environment targets for 2003 – progress against these is summarised below.

## Progress against HSE targets for projects across the region

Targets 2003	Hong Kong	China	Singapore	Thailand	
In working towards Gammon's mission of providing a workplace that is without accident or incident, the following goals applied to our projects across the region.					
No fatal accident	Achieved	Achieved	Achieved	Achieved	
Continual improvement in Accident Incidence Rate	Achieved	Achieved	Not achieved	Not achieved	
Continual reduction in breach of statutory					
safety requirements	Not achieved	No breaches/fines	Not achieved	No breaches/fines	
Continual reduction in breach of statutory					
environmental requirements	Not achieved	No breaches/fines	Achieved	No breaches/fines	

## Progress against HSE targets for Hong Kong projects

For our Hong Kong operations, we set the following longer term targets	2003 Progress
Reduce Accident Incidence Rate to 11.6 by year 2005.	On track
Zero breaches of safety legislation by year 2005.	Off track
Zero breaches of environmental legislation from 2003.	Off track
In order to proactively engage sub-contractors, we will	2003 Progress
Ensure that HSE issues are specifically addressed during tender evaluation and on award of contract.	On track
Collate, monitor and disseminate data on sub-contractor HSE performance.	On track
Ensure that HSE terms and conditions in the sub-contract are fully explained.	On track
Ensure that sub-contractor workforce is trained for specific projects.	On track

## Summary of 2004 targets

Economic and business	<ol> <li>Certification of our management systems in China and Singapore, and update our internal control procedures</li> <li>Undertake suppliers and subcontractors opinion surveys regarding business dealings</li> <li>Engage a dedicated Sustainability Manager</li> <li>Implement company wide training on sustainability issues</li> <li>Continue to promote and enhance productivity and staff engagement</li> </ol>	
Social	<ul> <li>1 Improve overall satisfaction of customers</li> <li>2 Work more closely with customers during pre-construction</li> <li>3 Expand strategic partnering alliances and training</li> <li>4 Based upon opinion survey feedback, take actions to improve supplier and subcontractor relationships</li> <li>5 Seek to engage local communities on new projects</li> </ul>	
Health and safety	<ul> <li>1 Implement new initiatives to promote the Zero Accidents vision</li> <li>2 Reduce the Accident Incident Rate to 12</li> <li>3 Reduce breaches in safety legislation</li> <li>4 60 subcontractors' management staff to receive 1-day safety training given by the Gammon Academy</li> <li>5 100% of Assistant Project Managers and above on operational sites to receive safety management training</li> </ul>	
Environment	<ul> <li>Zero breaches of environment legislation</li> <li>Complete audits and quantification of waste generation and water and energy consumption in Hong Kong oper</li> <li>Extend benchmarking to China and Singapore operations</li> <li>Investigate and promote best practice across our operations</li> <li>Promote and support increased environmental performance amongst the supply chain</li> </ul>	

## Outlook for 2004

For 2003, we set a series of challenging targets to promote and progress HSE issues. Much remains to be achieved regarding our balance of economic, social and environmental performance criteria and this will require a concerted effort for years to come. To continue our journey of progressively implementing sustainability into our business, we need to strive for continuous improvement. Our outlook for 2004 therefore requires us to continue to commit ourselves to more demanding and challenging targets.

## **Economic & business** performance

### Management and Governance

During 2004, we plan to extend our existing Prevention of Bribery commitments into an overall Code of Conduct as a company specific development consistent with our Shareholders existing guidelines. We shall also be updating our internal control procedures for procurement, subcontracting and commercial issues. We shall underpin our actions by seeking feedback from our suppliers and subcontractors to assess how they perceive our business dealings in terms of fairness, honesty and integrity. To achieve this we plan to conduct opinion surveys during 2004 and to hold a Partners Forum in Hong Kong to encourage open discussions. Our Singapore and China operations are aiming to achieve ISO 14001 and OHSAS18001 certification.

### **Corporate Sustainability**

Our products and services affect the lives of many people around us and as a major player in the construction industry we have a responsibility to react quickly to the changing environment and continually re-examine developments in construction to promote a more sustainable approach. We have put sustainability firmly onto the corporate agenda and in 2004 we will expand and further implement key performance indicators to monitor and track our progress. We will also engage a dedicated Sustainability Manager and through the Gammon Academy we will begin implementing training on sustainability issues to all staff levels.

### Sustaining the Organisation

The productivity of the organisation and its capacity to perform in the future will continue to be monitored and managed through the implementation and refinement of our Human Resource programmes.

## Social performance

### **Customers and Business Partners**

If we are to succeed in the integration of sustainability into our operations, we need to develop and maintain even stronger relationships with our customers and business partners in order to develop meaningful and shared values. This can only be achieved if there is a high level of satisfaction with our services and relationships, and therefore improvement in this area becomes a key target for 2004.

## Staff Engagement

We will continue to work hard to ensure we provide an enjoyable yet challenging working environment, and that we remain a company our staff are proud to work for. We will continue to engage with our staff and react to their comments, and we will work further to encourage personal development and employability training.

### Community

We will maintain our active support of the Jardine Ambassadors programme, and continue to encourage and promote staff involvement in community activities and events. In 2004, we will also look to greater communication with local communities with any new projects, in order to encourage greater understanding and help forge stronger community links.

## Health and safety

Our attentiveness to the care of injured workers has been very effective in reducing the severity of accidents but to realise our goal to 'provide a workplace without accident or injury' across each and every site requires that we plan and implement new initiatives to invigorate further commitment and urgency into the process. Our 2003 safety culture survey across the workforce was invaluable in giving us some clear indicators of where to apply our resources to effect continual improvement. Objectives have been incorporated within our 2004 targets, including extending our training programmes through the supply chain.

## **Environmental** performance

Several of our environmental objectives for 2004 reinforce the confirmation and completion of the process of auditing and quantifying our environmental performance in order to establish reliable baseline data upon which we can benchmark our projects, set improvement targets and subsequently measure the effectiveness of our actions. We are therefore committed in 2004 to completing this review, concentrating on the focus areas of pollution control, waste management, water management, resources and energy usage and environmental management.



## **Gammon Construction Limited**

28th Floor, Devon House TaiKoo Place, 979 King's Road Hong Kong Tel: (852) 2516 8823

Fax: (852) 2516 6260

www.gammon construction.com

This Report adopts Gammon as an abbreviated form of the company name, Gammon Construction Limited. During 2003, however, the company operated under the name of Gammon Skanska, when Skanska was a shareholder prior to Balfour Beatty's acquisition.