

# Sharing Our Journey Sustainability Report 2005



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# Introduction

# The construction industry is pivotal to the fostering of long-term sustainable development.

Economic growth and development drives all aspects of the construction industry through new infrastructure, urban buildings and regeneration, yet at the same time presents potential environmental, social and economic impacts to project proponents, the service providers and the wider public. Through the promotion and implementation of industry best practice and innovation, Gammon is committed to embracing sustainable business practices.

### **Verification Statement**

The Business Environment Council (BEC) was commissioned by Gammon Construction Limited (Gammon) to provide a verification statement for its 2005 Sustainability Report "Sharing Our Journey" (the report). BEC conducted sample checks of the data and claims in the report through document and data review, interviews with responsible personnel, and visits to selected sites. Our findings are set out as below.

#### Completeness of the report scope

"Sharing Our Journey" provides a comprehensive and balanced account of Gammon's commitment to sustainability across its core business activities and locations in which it operates. The report also exhibits the increasing reach of the "quadruple bottom line" approach in working with business partners and the wider community to address social, health and safety, environmental and economic considerations. We encourage Gammon to continue its embrace of Global Reporting Initiative (GRI) principles, and in particular to further engage stakeholders to help define the content, performance indicators and presentation of future reports.

#### Adequacy of data

The relevance and clarity of the report's presentation of economic and business, social, health, safety and environmental performance is considered adequate for a broad audience of readers. The selected case studies provide a representative overview of Gammon's sustainability challenges across different business operations and locations, and the responses that the Company has made to these. The selected indicators provide a sound basis for performance benchmarking given prevailing construction practices, but will need continual refinement over time as consensus on sustainability within the industry evolves.

#### Accuracy of data

The information presented in this report is consistent with the documents and data reviewed, interviews conducted and sites inspected during the verification process. Recommendations to clarify minor ambiguities identified during verification have been incorporated into this report. Existing data and information management systems are considered both effective and reliable.

#### Opinion

BEC considers this report an accurate and reliable presentation of Gammon's initiatives and achievements towards corporate sustainability in 2005.

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Business Environment ##### Council

Kevin Edmunds Deputy Director Business Environment Council

# **Scope of Report**



# 'Sharing Our Journey' covers our performance and progress for the year 2005, marking the third year of reporting on our efforts towards sustainable best practice.

This year's Report is themed to demonstrate the progress we are making in working together with our customers, stakeholders and the community at large in engendering a mindset of sustainability and innovation within our projects and activities. The case studies cited in this Report bring this agenda to life and demonstrate the shared success that sustainable best practice brings when working in the live environment given the close interlinkage between our activities and the communities and environment within which we operate.

Following on from our 2004 Sustainability Report, the Global Reporting Initiative (GRI) Guidelines 2002 have again served as a framework for what and how we report. This enables us to benchmark our performance against global trends, as well as identify and track internally how we have progressed in establishing global standards and aligning our own current practices with them. The following pages present our performance and progress for the 2005 calendar year and relates to all areas of the Gammon Group's operations (referred to hereinafter as Gammon) as follows:

- Hong Kong, where we primarily trade as Gammon Construction Limited, which includes:
  - joint venture projects;
  - the Gammon Technology Park which includes offices, workshops, a geotechnical laboratory and vehicle and plant maintenance facility;
  - plant and equipment;
  - concrete batching plants;
- Mainland China, where we trade as Gammon Construction (Shanghai) Limited and Gammon Construction (China) Limited;
- Singapore, where we trade as Gammon Pte. Limited and Gammon Construction Limited (Singapore Branch);
- Macau, where we primarily trade as Gammon Building Construction (Macau) Limited;
- BBE&M Limited, our electrical and mechanical contracting services company;
- Lambeth Associates Limited, our engineering consultancy;
- Entasis Limited, who undertake interior contracting and the supply of high quality construction products; and
- A steel fabrication plant in Dongguan, China trading as Pristine.

# **Chief Executive's Statement**



# We hope this report illustrates how Gammon seeks to deliver best practice given the close interlinkage between construction, our communities and the environment.

As development pressures grow across Asia, construction activities are interlinking ever closer with our communities and the environment. Operating in congested and busy urban settings or in close proximity to sensitive habitats and environments requires sustainability considerations to be given absolute priority in construction. We therefore hope that this Report, our third sustainability report, serves to illustrate how Gammon seeks to deliver best practice given the many challenges we face, and how we are striving to be the industry partner of choice.

As a service provider, the extent of control and ownership we have for sustainability issues varies dependent upon the nature of activities, the form of procurement and the duration of our involvement. Embracing sustainable development principles therefore requires the contribution of all stakeholders. By reporting, we not only want to be open and transparent, but we also hope that we can demonstrate the need for industry-wide cooperation and partnering and to maximise and enhance sustainability opportunities.

For Gammon's part, we have made good progress during 2005 with respect to integrating sustainability best practice across our business. We have reinforced our corporate governance through standardisation of our Group project risk management process and extending certification to our management systems to our mainland China business. We continue to promote responsible procurement and partnering and are delighted to have received recognition for our sustainability and environmental performance through several prominent awards in Hong Kong.

Despite our good and encouraging progress in these areas, our 2005 performance has been marred by the tragic fatalities we have suffered. These accidents serve to illustrate the high-risk nature of our business and that we must never be satisfied whatever our performance statistics suggest. We remain fully committed to the zero accidents vision, and will learn from all incidents to ensure we can deliver the highest standards of safety on our sites.

We would again invite your feedback, and we look forward to the challenges we face in sharing our journey with you as we continue to embrace sustainability.

03Ho

Thomas Ho Chief Executive Gammon Construction Limited March 2006

# About Gammon



# We position ourselves to foster long-term sustainable business practices in all regions in which we operate.

Gammon is a private limited company ultimately owned equally by the Jardine Matheson and the Balfour Beatty groups. Established in Hong Kong in the late 1950s, we have since expanded our presence both in Hong Kong and within South East Asia, where today we operate out of offices in Hong Kong, mainland China, Singapore and Macau. Our Macau operations re-commenced in 2005. We also have completed projects and have Group companies incorporated in Malaysia, Thailand, Vietnam, the Philippines, Taiwan and Indonesia, although no construction activities were undertaken in these countries in 2005.

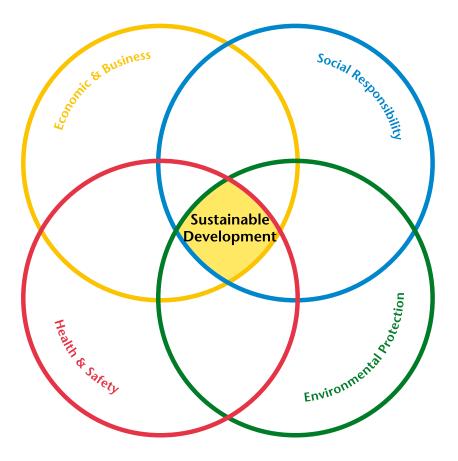
Gammon's business interests cover design, project management and construction services for buildings, civil engineering, foundations, electrical and mechanical, maintenance of infrastructure and interior refurbishments and fit out. We also have comprehensive support services including a large fleet of plant and equipment, a concrete batching business and a steel fabrication service provided from workshops at the Gammon Technology Park in Hong Kong and Dongguan, mainland China.



# **Corporate Sustainability**



To Gammon, sustainability is guided and managed through our 'Quadruple Bottom Line'.



# Sustainability at Gammon

Our approach and interpretation of sustainability is guided by the 1987 World Commission on Environment and Development's definition of "Meeting the needs of the present without compromising the ability of future generations to meet their own needs". Translating this to our activities, sustainability to us is the pursuit of our long-term economic and business goals in an environmentally and socially responsible manner.

As introduced in our previous sustainability reports, our experience and working approach to sustainability is not just about the traditional triple bottom line of Economic, Social and Environment, but also involves a fourth facet, Health and Safety, representing the Gammon 'quadruple bottom line'. Construction is a high-risk and people intensive industry, and consequently, we demand and aim to deliver at all times the highest possible standards of health and safety to protect workers, staff and the general public. The importance we attach to health and safety across our business necessitates that health and safety is a cornerstone of our sustainability framework.





# **Delivering on Sustainability Commitments**

We use the Balanced Scorecard approach to help align our broader corporate strategy with our sustainability commitments. A Group Balanced Scorecard is set annually, defining the Group's objectives and targets for the year and the weightings attributable to each facet of performance. These are then cascaded down the business through department and region-specific Balanced Scorecards. We can then measure and express our sustainability initiatives on a continual basis to track accountability of objectives and results.

#### **Achieving Recognition**

Gammon was proud to win the 2005 Hong Kong Awards for Industries: Environmental Performance Award, which recognises company-level best practice in pollution prevention, waste reduction, use of resources, legal compliance and staff and community engagement. In addition, we also won three project awards – the Grand Award for Nam Wan Tunnel, a Gold Award for Castle Peak Road Improvement Work and a Certificate of Merit for the Landmark East – at the Hong Kong Eco-Business Awards 2005. In response to the awards, Gammon's Chief Executive Thomas Ho commented: "Environmental protection and sustainability are core business imperatives for Gammon, and the company is proud to receive prestigious recognition of its advances and achievements in this area."



# **Ownership**

As a service provider, our ability to integrate and deliver on our sustainability commitments varies across our operating activities. Where we have long-term involvement or ownership of assets, this confers to us greater levels of control and enhances the implementation of sustainable practices. The levels of control and ownership are functions of the nature of the project procurement and contractual arrangements. We are strong advocates of promoting procurement processes which enable consideration of the whole project life cycle. Design and build contract arrangements for example provide us with increased flexibility in the delivery of sustainable solutions and, longer-term procurement solutions such as Public Private Partnerships (PPP) or Private Finance Initiatives (PFI) provide even greater opportunities due to the life-cycle approach to asset delivery and management that they create.

#### Innovation

The development and implementation of innovative ideas and techniques is a key component to Gammon's sustainability commitments. Encouraging and fostering innovation is promoted through our Centres for Innovation and Technical Excellence (CITE), which exist across Gammon's major disciplines and work areas. Gammon also runs a regular innovation competition, which is open to our staff and business partners. Sustainability considerations form the key judging criteria. Our 2005 competition attracted 55 entries, with ideas covering a wide range of areas, from safety and the environment to novel design approaches and suggestions to improve efficiency. The winners of the competition included a recycling process for concrete waste and a novel technique for enhancing hydrocarbon biodegradation.

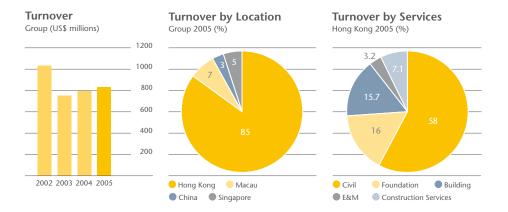
# **Economic and Business**



# The integration of sustainability into our organization supports us in meeting the expectations of our shareholders and customers.

### **Economic Performance**

Hong Kong has remained our core market, contributing to 85% of our business turnover in 2005 with the remaining turnover coming from our mainland China, Macau and Singapore activities. Although a number of our major civil engineering contracts in Hong Kong are nearing completion, we are seeing excellent opportunities in Singapore and Macau as well as in our rail and electrical and mechanical businesses. We enter 2006 with one of Gammon's best ever order books.



We closely track and report on a monthly basis our productivity performance across the Group, enabling us to react accordingly through the implementation of proactive human resources initiatives. We have therefore maintained our productivity in recent years despite the downturn in the South East Asia markets and find ourselves well placed with the skill sets and staff assets required to meet new opportunities and markets.

Mainland China is a growing market for our supply chain for the sourcing of quality construction materials. It is our aim to locally source and procure our products and services where possible, and in 2005, we continued to promote our local China sourcing initiative, increasing our material procurement value from China by over 17% for the year.



#### **Risk Management**

By year-end 2005, our Group project risk management process was standardised and fully operational. It covers activities, financial management, health and safety, environmental and social performance at the project level. The process provides a systematic and consistent methodology in measuring and assessing risk against various impact scales according to project specifics. This enables a logical and consistent means of identifying, analysing, assessing, treating, monitoring and communicating potential risk events. Quarterly reporting is required under this system.

Implementation of the risk process is designed to involve the project team to assess risk and assume its responsibility during the life of a project. It is actioned through risk registers feeding back to the Group Risk Manager, with involvement from the Executive Committee on those areas deemed high priority. The whole process empowers a project's team with the awareness and the tools to manage risk within their sphere of influence.

These procedures are also designed to identify opportunities as part of the management process. Through analysis of risk, we are able to identify project-specific opportunities that may exist for the use of alternative technologies and methodologies, for better efficiencies, cost savings or performance impact.

Systematic risk management brings Gammon closer to sustainability through more efficient and reliable performance, minimising loss exposure in projects, the capability to seek broader outcomes beyond financial benefit and a better, more rounded assessment of opportunities for future actions. Consistent with our brand values, Gammon in effect becomes the customer's risk manager in a project.

#### Converting Risk to Opportunity Deep Bay Link North highway

The Deep Bay Link North highway project in Hong Kong is characterised by a number of challenging railway and noise constraints. At one point along the alignment the construction of the viaduct occurs directly over a live railway line, allowing only 800mm clearance above overhead railway power lines. As the Main Contractor for this construction contract, Gammon needed to overcome these constraints, which were unacceptable to the railway operator when considering the original construction proposal. Further constraints included the requirement for works to be restricted to three hours per night during non-traffic hours.

"By understanding the constraints and risks we were able to identify and design an alternative and acceptable construction methodology by converting a launching girder to a mobile cantilever suspension falsework system," says Rayland Lee, Construction Manager for the project. "This system is prefabricated off-site, significantly reducing the work time above the rail line and offered wider benefits in terms of both cost savings and the reduced disturbance achieved with use of quieter equipment. By ensuring we thoroughly addressed the risk profile, we were not only able to minimise the risks, but to enact a viable alternative solution that was economically advantageous for the client."





### Governance

Our governance structure is vested in the Board of Directors, chaired by a Non-Executive Director (a shareholder representative). The Board is responsible for setting strategy, policies, risk management and financial performance of the business. The Executive Committee (comprising Executive Directors) is responsible for the implementation of strategy and policies at a day-to-day level, and are accountable to our shareholders, the Jardine Matheson and Balfour Beatty groups, via the Board of Directors. All Executive Directors are full-time employees of Gammon or are exclusively seconded to Gammon on a full-time basis, and have specific responsibilities within the Group's operations.

Sustainability governance at a Group level is steered through Safety, Environment, Quality and Risk Committees, based in Hong Kong, supplemented by regional System Review meetings in China and Singapore. Each of these committees is tasked with cascading initiatives and collecting feedback throughout the business and are responsible for monitoring, auditing, analysis and actioning on a continuous basis.

### **Code of Conduct**

Gammon currently follows the Jardine Matheson Code of Conduct. During 2005, we commenced development of our own Code of Conduct which encompasses corporate practices in business ethics, compliance, environmental and social responsibility, employee rights and procurement practices. It is based on a set of key business principles and the frameworks in place for both of our shareholders to the extent they are appropriate to our markets. The Code will become formal policy during 2006 and forms a pivotal support tool to reinforce governance standards across the Group.

# **Culture of Quality**

Sustainability underlies our established corporate aim to deliver a high level of quality to our customers through our brand values of being customer-centric, resource-rich, innovative and risk managers. We engender across our businesses and staff a quality culture through a sense of ownership and pride in our work. Quality is therefore at the core of our values and extends from our management systems and processes to our people and the services we deliver.





# **HSEQ Management Systems**

Gammon's Health, Safety, Environmental and Quality (HSEQ) systems provide effective and consistent management of activities across all of our businesses and functions. As of 2005, with the successful certification of our mainland China operations, all of our regional operations are certified to operate under ISO 9001 for quality management and OHSAS 18001 certification for safety. ISO 14001 for environmental management applies to all regional operations, except for our Pristine works which will seek certification in 2006. Our recently commenced Macau operations operate under Hong Kong's systems. These systems underpin other corporate functions including procurement, human resources, finance and integrated management services. Independent audits for ISO and OHSAS certification are undertaken, and during 2005, over 30 were conducted on our various management systems, representing a 43% increase over 2004. During 2005, we conducted over 65 internal audits.

#### **Certification of Management Systems in China**

Gammon is committed to enforcing consistent high standards of operation across all its regional centres, irrespective of the local market conditions and regulatory obligations. These standards are unpinned by our corporate brand values, our quality culture and a mindset of continuous improvement.

Mainland China, as a developing economy posed a set of new challenges in securing certification for our management systems. Our business in this regional centre comprises three separate and culturally diverse operations, with construction teams in the Pearl and Yangtze River Deltas and our steel fabrication factory, Pristine, in Dongguan. The certification process began with gaining the buy-in of the regional management teams, followed by reinforcement through training of the workforce. We then had to overcome the challenge of standardising our procedures and work processes where previously variations existed due to cultural differences and expectations.

Each of these operations and our collective mainland business now benefit from standardised systems and approaches and the action and enforcement of Group level initiatives can now be more easily integrated into all our China-based activities.

During 2005, we enhanced our management systems through our Enterprise Resource Planning (ERP) system, enabling us to track performance in real time. Through the input of data from sites and offices, it provides the tools to enable analysis of a project in terms of HSE performance. Incidents and accidents are tracked throughout their life, and a mechanism exists for measuring data, comparison analysis, feedback and improvement actions on activities undertaken. The ERP system extends to external performance appraisals of trade subcontractors and suppliers benchmarking their performance against internal standards including those for HSEQ.



# **Social Responsibility**



# We promote socially responsible practices and initiatives to retain our industry leadership role and be the contractor of choice.

### Gammon's Staff

Gammon directly employs nearly 3,600 people hailing from some over 17 different countries. Over 51 different professions and technical backgrounds make up our workforce. As such, our employment policy is to hire the best person for a particular position regardless of sex, creed or ethnic background.

To ensure we have a sustainable workforce, we have in place a number of group-wide human resource programmes. Succession planning being a critical business issue in 2005, we published career development paths for all staff. In 2006, we will establish and implement structured succession planning for the senior management of the business. This process ensures nurturing of our talent across all business regions and activities.

An appropriate life/work balance is actively encouraged. The Gammon Staff Recreation Club organises regular events and activities across the regions and at the end of 2005, we introduced alternative Saturday working in Hong Kong as opposed to the normal practice of a six day week. We measure our performance as an employer of choice through regular Staff Opinion Surveys and open meetings. We encourage dialogue amongst all employment levels and continue to organise regular breakfast sessions for younger employees to share their views directly with senior management. Internal communications using the intranet, notice boards, visits and tours promote staff awareness and the buy-in to our corporate values.

The continuous training and development of our staff is recognised as an essential driver of improvement and knowledge development. The Gammon Academy provides a formal training facility for use by all staff across the Group as well as for subcontractors and business partners on selected courses and programmes. During 2005, 47 separate training courses were delivered by the Academy. Site-based training is delivered through morning assemblies, toolbox talks and classroom sessions, and the Worker Registration Centres facilitate critical training in safety and environmental issues to our workers as well as those of our subcontractors. We also provide annual scholarships for the Master of Interdisciplinary Design and Management offered by the University of Hong Kong. In 2005, three staff won scholarships and commenced the programme and in 2006, a further four staff will participate.

Since the early 1980s we have offered apprenticeships and graduate training in conjunction with professional institutions including the Construction Industry Training Authority (CITA), Hong Kong Institution of Engineers (HKIE), Institute of Civil Engineers (ICE) and Hong Kong Institute of Surveyors (HKIS). In 2005, Gammon awarded completion certificates to nine technician apprentices and 13 graduate trainees.



# Partnering

Gammon promotes the practice of partnering as a key step forward to improve efficiency for the industry. Partnering fosters a shared vision, promoting communication amongst project participants, champions best practice in design and delivery and ultimately improves overall performance. We host regular Partnering Forums to which we invite key industry figures and leaders to debate and promote the need for lasting partnerships within the construction industry. During 2005, we hosted 14 such events with over 100 different companies and organisations attending. In particular, we are strong advocates of the long-term partnering approach to asset delivery and management through procurement methodologies such as Public Private Partnerships (PPP).

#### Partnering to Overcome Challenges

The renovation of the Mandarin Oriental Hong Kong, a prestigious landmark in the core Central business district of Hong Kong, involves new curtain walling to the 26-storey tower and retail podium, reconstruction of guest rooms and the renovation of restaurant, spa and public areas. In addition to a seven-month closure period, the programme constraints include a period when the hotel will be partially open for early occupancy and the construction and refurbishment undertaken within densely utilised and narrow city blocks.

Early-stage involvement on the part of Gammon has helped steward best value in design solutions and the mitigation of negative impacts arising from project delivery. With active involvement in the project for over two years, Gammon leads as the Management Contractor and through the partnering approach, including workshops and mock-up exericises, seeks to ensure an inclusive supply chain process delivering value for money as well as timely and informed decision-making to keep the project on time and within budget. This proactive approach to risk effectively provides a comprehensive risk-based management process to the project on behalf of the customer.

# Applying the PPP Model to Hong Kong's High Speed Roads

In 2005, Gammon commenced a long-term highway maintenance contract in Hong Kong which integrates a Private Public Partnership (PPP) contract approach. The contract is based on clearly stated performance requirements and encourages a real partnership with the Highways Department to deliver better value and service.

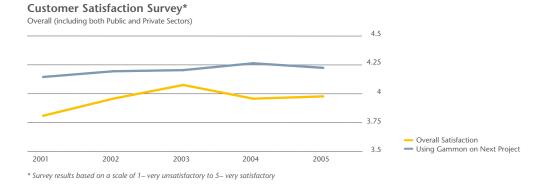
The PPP model adopted provides a long-term approach to the management and maintenance of Hong Kong's highway assets. More strategic, life-cycle based decisions can be made in relation to asset maintenance and management. The longer contract duration also allows greater investment in specialist plant, materials and methods. Although the project has only recently commenced, Gammon has initiated studies looking at the longer term opportunities for promoting innovation, energy conservation and waste management as well as the planning tools to minimize disruption to road users and ensure safety through more effective temporary traffic management measures.





### Customers

Understanding customer needs and expectations is pivotal to corporate strategy and our long-term viability as a business. As primary stakeholders to our business, we continuously engage their interests with the objective to understand current expectations and for our business to respond to future requirements. We undertake a regular Customer Satisfaction Survey to gauge our strengths and identify gaps in our performance. These undertakings provide performance indicators for comparison with annual set targets. We continue to see in the results of these surveys that Gammon's brand values consistently mirror the priorities of our customers, and more importantly, that we deliver in these areas. From our public sector customers in Hong Kong, representing a significant number of our projects, we also gain feedback through the Contractor's Performance, which significantly exceeds the median industry average.





#### Repeat business through Customer Satisfaction

Gammon and Huawei Technologies, a mainland Chinese telecommunications company, have established a long-term working relationship fostered by the mindset of partnering. This relationship, built on mutual trust and open dialogue in understanding each other's expectations helps ensure cost-effective construction solutions are delivered for projects.

Since our first cooperation in 1999 with the construction of Huawei's research and development (R&D) facility in Shenzhen, mainland China, we have since been retained for a series of further projects including alteration and additions works to the original facility. The long-term partnering relationship enables us to fully understand Huawei's asset (the R&D facility) and the expectations of the relevant stakeholders, namely the customer project team, end users and the estate management team. By understanding these expectations and with the knowledge and experience of the Huawei's projects, Gammon is able to fast-track project work resulting in cost-effective construction management solutions.



# **Supply Chain**

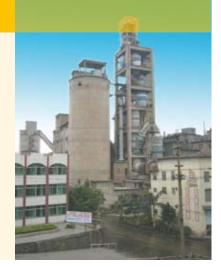
Our approach to supply chain management is underpinned by our brand values to ensure the delivery of high quality products and services and to meet customer expectations in a consistent manner. A comprehensive supply chain system is operated to control and minimise risks by embracing a life-cycle approach, where we take responsibility for the full procurement process from sourcing, negotiation, contract management, testing and verification through to logistics and delivery. By managing risks at all stages of the supply chain, we ensure more effective and efficient control and are able to minimise and eliminate negative impacts.

We recognise the integrity of products is critical to our reputation and a pivotal component to product stewardship. We therefore seek to offer customers better products by working closely with our supply chain on quality, durability and delivery. Our Centres for Innovation and Technical Excellence (CITE) help promote this through development of innovations and techniques in support of best practice.

With suppliers and subcontractors, we seek to engender sustainability as a business ethic in our supply chain management. In 2005, we conducted three Supply Chain Partner Sharing sessions attended by over 40 of our business partners in Hong Kong and Shenzhen, with the aim to discuss partnering issues and to raise standards of management across the industry. We have received excellent feedback from these sessions and are already seeing the benefits through closer cooperation and working together in certain areas. We have also identified the need for our approach to focus on our subcontractors. This is a priority area for 2006.

# Supply Chain Management in Mainland China

Mainland China, although being a major source of construction materials, presents numerous challenges in meeting Gammon's minimum supplier criteria. Security of supply, quality of product and specified standards in safety and environment for factory operations require the hands-on involvement of our Procurement team in this developing market. Gammon undertook a pilot auditing programme with Guangxi Huahong Cement Co. Ltd to initiate a new source for cement supply. Factory visits and audits were undertaken to inspect operations, interview management, review existing environmental practices in regards to community impact, assess the prospects for Government assistance in upgrading the existing facilities and also to inspect their transport and logistics facilities. Subsequent meetings and the formulation of an improvement programme led to the qualification of the company and its Guangxi-located factory becoming a regular supplier to our Macau operations during 2005. Regular audits will continue to assure supplier integrity.





We operate under a policy of responsible procurement across our businesses as part of the supply chain management process, with implementation through a decentralised framework for regional centres. Nevertheless, all offices share a common methodology, which looks beyond price alone in the selection process for suppliers. Consideration is given to health and safety issues, environmental compliance and treatment of workers, through due diligence site and factory visits. In 2005, we commenced unifying supplier information from our regional centres for future consolidation and comparison of data, policy development and actions on best practice for procurement.

In 2005, we also consolidated a mechanism to benchmark the performance of individual trade suppliers and subcontractors working on Gammon projects. This information is now published via our extranet, accessible by our vendors, so that they can understand and benchmark their relative performance against other same trade companies being used by Gammon. This information will also be used for review and discussion to instigate continuous improvement.

### Community

Within the urban areas where we work, we must meet the local communities' and stakeholders' increasing expectations in project delivery. Engaging and educating on the work we are performing continuing through the life cycle of our projects is a priority to us. On and off-site, we closely manage safety, environmental and nuisance factors. For example, during 2005 we undertook a comprehensive appraisal of public risk arising from our activities with a number of areas for action identified.



# A Landmark Challenge

Through active stakeholder engagement and the voluntary adoption of stringent performance standards, Gammon has been able to identify and manage potential negative community impacts arising from the comprehensive upgrade of the Landmark retail and commercial complex. Located in Hong Kong's core business district of Central, the shopping complex poses numerous public constraints to the working strategy, sequence and timing of the works. These include access to the complex, as it remains open to the public throughout the works, the offices adjacent to the side and a new luxury boutique hotel recently opened in the complex itself.

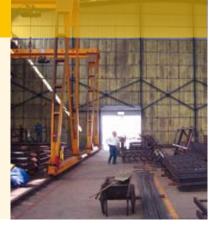
Through regular client and tenant meetings, good planning and effective communications, potential conflicts are anticipated and proactively managed. Forward planning and works sequencing has ensured public areas and work sites are clearly delineated and are safe for pedestrians and general public use and, that disruptions to the heavily congested street level areas are minimised. Nuisance factors to tenants, the existing building and surrounding properties have been reduced with the adoption of stringent voluntary noise and vibration standards. Regular engagement ensures prompt attention to all complaints and enquires on site works. To date, responses from stakeholders have demonstrated that the businesses within the complex have not been markedly disturbed during the works.



#### **Community Responsibility in China**

With the expansion of our Pristine steel fabrication factory in Dongguan, noise generation from the extended production yard posed a potential nuisance impact due to the adjacent location of a hostel. Pristine's management and staff took a proactive and voluntary approach to this potential problem. Following detailed noise assessments, both for day and night-time situations, the results were used for the design and construction of a noise enclosure to ensure that the noise levels at the hostel are reduced to within acceptable standards. Subsequent testing has confirmed this. This exercise was undertaken as part of Gammon's commitment to the Federation of Hong Kong Industries' 1-1-1 Programme aimed at encouraging environmental improvement and stewardship in the Pearl River Delta.

Our commitment to the community reaches beyond our work sites and their impacts. We are a regular contributor and participant in local charities and events. Gammon runs a Mindset programme, which promotes the rehabilitation of mentally ill patients through employment and also works closely with local schools through our staff who volunteer as ambassadors to the Mindset programme. We actively support the construction industry's own charity, the Lighthouse Club, for those affected by construction-related incidents, and regularly support the Community Chest, the Christina Noble Children's Foundation and other charities. Our staff are also regular participants and volunteers in community events that promote social and environmental issues.



#### Mindset at Castle Peak Hospital

During 2005, Gammon sponsored a Mindset project which involved the conversion of the old staff and welfare club at Castle Peak Hospital, Hong Kong, into a multi-functional community centre. The centre, comprising some 7,000 square feet, is open to the Hospital's patients and their family members, serving as a venue and providing facilities for various activities such as vocational training and self-help groups. Gammon undertook the overall management and the renovation service, ensuring effective coordination with all parties involved and successful completion.

Gammon continues to promote and support the next generation of engineering and construction professionals. In 2005, a total of 28 undergraduates from eight universities were selected to join the Gammon University Fellowship. The Fellowships provide personal mentoring, training, site visits, involvement in Gammon activities and priority to a permanent career with Gammon. We have also well-established scholarship programmes with three leading Chinese Universities: Tsinghua University in Beijing, Tongji University in Shanghai and the South China University of Technology in Guangzhou. Eighty one scholarships have been given to students at these institutions providing them the opportunity to complete further education.



# Health and Safety





# As the fourth facet of to our sustainability vision, Health & Safety is managed as a priority function to our business.

### Zero Accident Vision

We do not compromise in creating the best in a working environment, equipment maintenance and staff training to support our zero accident vision. A comprehensive range of initiatives to create a culture of safety that minimises risk, seeks to eliminate accidents and strives for full compliance on sites underpins our vision.

In all operating areas, initiatives are supported by certified safety management systems (to OHSAS 18001 standard), site-specific risk registers, regular training to all staff and on-site management by certified safety personnel. We annually set primary and secondary targets to track our performance in safety. Primary targets relate to issues such as accidents, incident rates and non-compliances, whereas our secondary targets introduce a series of 'near miss' measurables.



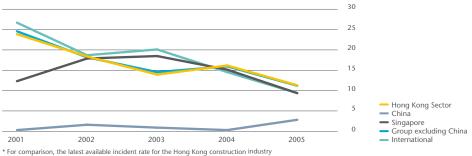
#### Achieving the Zero Accident Vision Sentosa Cove, Singapore

The Sentosa Cove Arrival plaza project is located on Singapore's resort island of Sentosa. The Gammon project team faced safety challenges due to the large area of the project site, the multiple concurrent work fronts, and the required extensive scaffolding to provide working platforms and access. In addition, a culturally diverse subcontractor workforce needed to be managed.

To meet and overcome the safety risks, the project team implemented a comprehensive safety management system, where all supervisory staff and subcontractors were party to its implementation and achieving the project's safety goals. The actioning of an area management scoring scheme (see case study on page 18), which to our knowledge is the first application of such a system in Singapore, proved to be a key component of the site's safety success.

During 2005, the project had no reportable accidents or lost time incidents despite over 380,000 man-hours having been worked.

#### Accident Incident Rates (per 1,000 workers)\* 2001–2005



(For 2004) was 60.3 per 1,000 workers.

In 2005, Gammon achieved its lowest, most improved accident rate ever recorded and the highest levels of compliance to Health and Safety regulations, with 29% and 33% improvements respectively compared with our 2004 performance. Using the Government produced figures for the Hong Kong construction industry average accident incident rate, we rate amongst the top performing companies in our industry. Our performance has been recognised by industry through a number of awards for safety.

Despite these best efforts and performance, construction remains a high-risk business and we have yet to totally eliminate safety risk exposure. In 2005, four fatalities occurred on our sites. Our responses to these accidents have been swift with immediate investigations and reviews undertaken of both management and equipment to understand the apparent disconnect compared with our improved overall performance. The findings of these investigations are not just focussed on identifying the root causes of these unfortunate accidents, but address where and how to eliminate similar situations in future. A series of high-level initiatives will be undertaken in 2006 to further improve site practices and accountability.

# **Targeting High Risk Activities**

Certain activities present higher than usual risks on our construction sites. Based upon our project work and activities to be undertaken, we are continually reviewing areas where we need to be vigilant and reinforce safety messages and expectations. An example, our 'Working at Height Safety Campaign', was launched in 2005 to enhance and promote working at height safety awareness and to reward our sites, workers and foremen for outstanding performance. The Working at Height Charter was signed in June 2005 by Gammon's senior management to commit ourselves to this initiative. It is planned to track the effectiveness of this promotional activity and undertake further campaigns in 2006.

#### **Reinforcing Safety Awareness**

In October 2005, to reinforce safety awareness, we held Gammon's first Health and Safety Family Day in Hong Kong. The day attracted over 700 visitors, including staff and their families, subcontractors, clients and Government officials. In addition to games booths aimed at reinforcing the safety message, an award presentation was held for the winners of the competitions for the Best Safety Site, the Best Safety Foreman, the Best Safety Worker and the Best Safety Slogan.





# **Behavioural-based Safety**

Behavioural-based Safety (BBS) introduces a systematic on-going approach to safety management by observing worker behaviour and safety awareness on site and assessing why workers behave the way they do. Behavioural-based safety is a bottom-up approach focusing on front-line workers, supervisors and middle managers, wherein critical behaviours are identified and targeted for change. These actions include goal setting and open discussion with workers on targets for safety, regular site visits by Directors and senior management to enforce corporate commitment to safety, and the introduction of reward schemes for workers in best safety practices.

In 2004, Gammon embarked on a pilot study with the OS&H Council in Hong Kong, which identified a number of focal areas to improve safety awareness and behaviour. In 2005, we followed up by working jointly with TsingHua University on a further research study. Three of Gammon's major construction sites in Hong Kong were selected to participate in this study and the findings have reinforced the necessity of high level involvement in safety management and the benefits of goal setting. Although the use and application of BBS in the construction industry remains at a preliminary stage of understanding, for Gammon the establishment of the Area Management scheme along with the training of our subcontractor's management are important outcomes of our BBS studies to date.



Safety is both a personal commitment and the responsibility of all workers at all times on site. To bring this understanding to both employees and subcontracted workers, in 2005 we introduced to all of our sites the Area Management scheme. This is a methodology whereby appointed individuals, known as Area Managers, are measured and scored on the performance of their respective site-based teams for Health, Safety, Environmental and Security (HSES) based on observed physical conditions on site. This is achieved by dividing any given site into clearly identifiable areas in which both the Area Managers and their teams are assigned with overall responsibility for HSES.

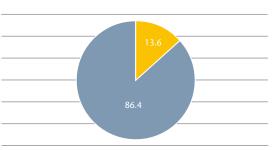
Weekly inspections and scoring of these areas is undertaken by Gammon's safety staff, with the performance results reported back to senior site management for review and action. In addition, an independent auditor carries out periodic audits of all sites to ensure accurate scoring and thus create a more comparative standard across the Company. During 2005, the Area Management scheme was initiated across all project sites inclusive of all our regional operations. This is a significant additional performance monitoring and benchmarking scheme which we believe is unique to the industry.





# Worker Registration and Training

During 2005, we added two further Workers' Registration Centres to our operations, one in Macau and a fourth in Hong Kong, to supplement the existing three. In addition to their function as registration facilities, these centres provide compulsory half-day practical safety and environment training courses tailored to the needs of frontline workers. By the end of 2005, a total of 13,180 workers from Gammon sites and direct Gammon staff had attended our registration centres with over 86% of these being subcontractor workers.



Attendees at Gammon's Worker Registration Centres (at 31/12/05)

Direct Gammon Workers (1,786) Subcontractor Workers (11,394)

# Working with Subcontractors and Suppliers

Gammon acknowledges that in order to maintain consistently high health and safety standards, the training and education of our subcontractors' managers is a critical component of the safety culture and mindset. In 2004, the Gammon Academy launched a full day training course entitled 'HSE Management System for Subcontractors', which was targeted at our subcontractors' senior managers and directors. In 2005, 31 subcontractors' management staff attended this course.

# **Ensuring a Healthy Working Environment**

All Gammon project sites are required to meet minimum standards of health and hygiene, which are inspected routinely during internal audits and when undertaking Area Management inspections. Protection against mosquitoes, rodents and other pests is routinely undertaken.

In response to the potential for Avian Flu, during 2005 we provided Personal Health Protection Kits to each monthly and daily paid member of staff. The purpose of the kit is to act as a prevention measure against the outbreak of the infectious diseases. Furthermore, a health promotion campaign was organized to promote health awareness among staff including recommended personal hygiene training.

# **Environmental Protection**





# We strive for continuous improvement and leadership in environmental protection through innovation and best practice.

# **Managing Impacts**

We tackle environmental matters through our company-wide environmental management systems. By first quantifying and measuring our performance, we are able to implement and adopt appropriate mitigation measures to minimise and mange the impacts of our business activities. We recognise that the extent to which we are able to manage and control these environmental impacts is a function of the delivery and procurement process, the extent of ownership and the actual project specifics. To reach beyond these limitations, we promote partnering, early stage design involvement, buildability studies and other initiatives and means to promote and adopt best practice.

# **Performance Monitoring**

Environmental regulatory compliance represents the minimum expectation for our business. During 2005, we received two legal non-compliances, one for a project site in Hong Kong where an illegal water discharge occurred following the accidental turning off of a control pump, and the second for a noise issue in Singapore. Actions were taken to immediately rectify these problems and to take measures to help ensure no similar breaches in the future.

In 2003 we commenced environmental data collection from our major Hong Kong projects focusing on waste generation, water consumption and energy usage. This programme was extended in 2004 to all Hong Kong projects and in 2005 to all of Gammon's operations, activities, offices, support services and regional businesses. This most recent exercise provides the means to quantify our direct environmental impacts in a comprehensive and coordinated manner for better management and Group target setting.

Performance for 2005	Hong Kong (includes Macau)	Singapore*	China (includes Pristine)	Total
Landfill waste (m <sup>3</sup> )	244,274	7,152	634	252,060
Waste to Public Fill (m <sup>3</sup> )	416,130	No data	No data	-
Electricity Usage (kWh)	19,695,029	459,371	1,766,896	21,921,296
Diesel and Petrol Usage (litres)	26,888,659	873,101	158,390	27,920,150
Water consumption (m <sup>3</sup> )	545,860	15,997	44,313	606,170

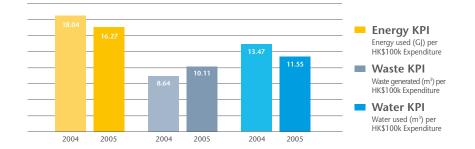
\* Singapore data has been extrapolated for the year based upon August to December returns



# Collaborative Waste Recycling

The Nam Wan Tunnel project generated over 800,000m<sup>3</sup> of rock spoil in excavation waste. With our proactive approach to management, the project team undertook processing of the spoil into reusable material via a Gammon-established sorting facility. Then, through collaborative efforts involving both Gammon and other managed construction sites, the entire volume was successfully distributed across projects in Hong Kong. This 100% recycling rate attracted wide-spread industry attention for best practice with the Gammon team being awarded highest honours at the 2005 Hong Kong Eco-Business Awards.

#### Hong Kong Sector

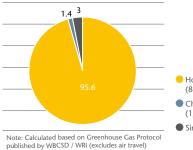


Fundamental to the collection of environmental data is the establishment of Key Performance Indicators (KPI) for our Hong Kong operations, where time series data exists for waste, water and energy usage. In 2005, the efficiency of use of energy and water improved, however waste disposed to landfill increased, therefore partially meeting our 2005 targets. This increase in landfill waste is due to a specific contract requiring substantial excavations and landfill disposal of reclamation soils. With a comprehensive data set now existing for all of the Gammon regions and activities, Group KPI's will be rolled out accordingly in 2006 and beyond. These KPI's will enable performance to be tracked and specific environmental targets to be set in the future.

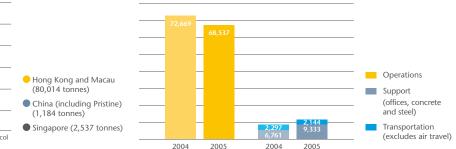
### Taking Responsibility: Greenhouse Gases and Air Pollution

In September 2005, Gammon signed the voluntary Clean Air Charter promoted by the Business Coalition on the Environment (BCE) in Hong Kong. This Charter represents the first steps by the local business community to address the air pollution problems that the greater Pearl River Delta faces. As a signatory, we have established an in-house working group comprising representatives from our different operating units to formulate an action plan to reduce our air quality impacts, which arise from a variety of activities such as transportation, on-site plant usage, electricity consumption and chemicals usage. An important aspect of our plan is to quantify the direct greenhouse gas contribution our business makes as a carbon dioxide equivalent. The 2005 year marks a milestone for enacting the process to measure and report on greenhouse gas emissions across all of our regional businesses.





Comparable Performance (Hong Kong Sector) CO<sub>2</sub> Equivalent (tonnes)



#### Pollution Control through Asset Management

Gammon possesses and manages the largest plant fleet in Hong Kong, comprising over 1,300 pieces of plant assets. To responsibly manage the environmental impacts associated with this fleet, particularly air emissions and noise, we employ a comprehensive Preventive Maintenance Programme (PMP) for each item of plant and equipment. The PMP is managed by a computerised information management system, prompting and tracking to closure necessary maintenance works. Plant performance in the areas of noise generation, exhaust emissions and fuel consumption is also routinely assessed so that the PMP ensures a reliable, well-maintained, quieter, efficient and more environmentally-friendly fleet.







# Promoting Innovation and Green Construction

As a construction service provider, we are continuously promoting innovation in design and construction techniques to drive better environmental performance and efficiencies. At the basic level, all our project sites must adopt and follow environmental and waste management programmes to not only ensure compliance, but also to demonstrate continuous improvement.

Opportunities at the design stage of projects enables environmental principles and intentions to be integrated such as optimising energy efficiency, minimising resource usage and the designing out of waste. The subsequent construction methodologies adopted, or buildability, also forms a key consideration. Precast and prefabricated solutions help reduce on-site impacts such as waste generation and construction planning and methodologies promote environmental savings and benefits. Gammon advocates consideration of these approaches on all projects. We also support schemes which rate and quantify subsequent environmental performance of projects such as the Hong Kong Building Environmental Assessment Methodology (HK-BEAM).



#### Minimising Waste Through Design

The award of the Design and Build Contract for Castle Peak Road in Hong Kong presented an excellent opportunity to embrace and implement environmental and waste management principles at the project design stage. Using Lambeth Associates, our inhouse designers, redesign combined with lean construction techniques enabled a number of innovations and environmental improvements to be made to enhance proposals made at tender stage. The extent of construction activities and materials have been reduced through design changes to the road alignment and pile caps. Seawall design changes reduced the required extent of dredging by approximately 30%. As well, significant waste management gains were achieved through the reuse of 47,500m<sup>3</sup> of dredged materials for reclamation and seawall construction and through inter-project collaboration, 50,000m<sup>3</sup> of residual fines arising from Gammon's Nam Wan Tunnel project were utilised.

#### **Protecting Biodiversity Through Innovation**



Balfour Beatty E&M, a wholly owned subsidiary of Gammon, in joint venture with Balfour Beatty Power Networks undertook several tower line refurbishment contracts during 2005. The majority of tower locations in Hong Kong are situated in the country parks, which impose significant environmental sensitivities. Traditional approaches to maintenance and refurbishment would require the need for access routes and working spaces to be constructed, damaging the local ecology. In response, the Balfour Beatty E&M project team developed an innovative solution to use helicopters as skycranes to remove tower top sections during replacement works, representing a first for Hong Kong. The associated helicopter noise issue was appraised but the localised short-term noise impacts were outweighed by the long-term ecological benefits. This innovative alternative proved very successful, accelerating the project programme and ensuring minimal disturbance of existing vegetation within the parks.



# Life-Cycle Environmental Management

Where we own assets, as with our construction support services in Hong Kong and our Pristine steel fabrication factory in mainland China, we seek to responsibly manage the associated upstream and downstream environmental impacts. All assets are covered by environmental management systems and we employ continuous review procedures to promote and integrate best-practice measures to ensure we go beyond legal compliance. Long-term project and asset management contracts will similarly transfer the ownership and hence opportunities of life-cycle environmental issues to the contracting teams.

### Sustainable Concrete Waste Management

During the concrete batching and delivery process, wastage of some fresh concrete is inevitable. In 2005, we revisited the landfill disposal option to seek a more sustainable solution for waste treatment. As waste fresh concrete ideally lends itself to being recycled, we have investigated and installed a concrete reclaimer at our main batching plant in Hong Kong, which enables physical separation of sand and aggregates from fines through the use of water. Immediate waste benefits from the reclaimer include a reduction by over 60% in the volumes of waste being sent to landfill as well as resource savings through the reuse of aggregates and river sand. These benefits reduce traffic movements associated with transportation of waste to landfills and new aggregates to the batching plant, generating local community benefits of reduced road traffic and air emissions.



# Environmental Management in the Supply Chain

This life-cycle approach is reflected in our strategy for a responsible and accountable sourcing programme. During 2005 we implemented the Procurement Environmental Awareness Programme (PEAP) to introduce best practice to our supply chain through in-house training and external discussions with our business partners. In addition, the PEAP established a framework for assessing and responding to the upstream and downstream impacts associated with the major project suppliers and materials we use. This is an on-going process given the quantity and variation of materials we source.

During 2005, product appraisals of the cement we source has defined the audit protocol we need to follow for a proposed new supplier. Appraisals undertaken jointly with our fuel supplier in 2005 have established an action plan to promote more efficient diesel usage on site as well as identifying opportunities for the use of more environmentally-friendly alternative fuels.

# 2005 Performance Summary

# A summary of our progress with respect to the 2005 targets set in our last Sustainability Report is provided below.

Ecor	nomic & Business	
1	Certification in mainland China of our management systems	Substantially Achieved
2	Standardise group risk management process and provide training	Achieved
3	Simplify internal management and governance procedures through the consolidation of management manuals	Not Achieved 2006 target
4	Implement Human Resource programmes to further improve productivity and staff engagement	Achieved
5	Develop a dedicated sustainability intranet site accessible to all staff	Achieved
Soci	al Responsibility	
1	Build upon Partnering initiatives started in 2004 with strategic business partners through services, vender performance appraisals and opinion surveys	Achieved
2	Continue to promote partnering and sustainability within the wider construction industry	Achieved
3	Improve overall satisfaction of customers	Partially Achieved
4	Continue to promote community engagement on existing and new Gammon projects	Achieved
5	Publish career development paths for all staff	Achieved
Hea	Ith & Safety	
1	Meet Group Primary and Secondary targets for Health and Safety	Not Achieved
2	Implement two new initiatives and programmes to promote the Zero Accidents Vision	Achieved
3	Implement on all Hong Kong sites an Area Management System to manage and control HSE issues	Achieved
4	Ensure that 100% of Gammon and subcontractor workforce on Gammon HK projects have attended the Workers Registration Centres	Achieved
5	Implement transparent health & safety statistics and data recording in China	Achieved
Envi	ronmental Protection	
1	Achieve targets and objectives set in 2005 Environmental Management Programme	Achieved
2	Achieve improved performance with respect to waste generation and resource usage as measured by the key performance indicators	Partially Achieved
3	Extend benchmarking activities to all of Gammon's operations in China, Singapore, Macau and Construction Services	Achieved
4	Implement an energy management and conservation programme	Not Achieved
5	Implement the Procurement Environmental Awareness Programme (PEAP)	Achieved

# Outlook for 2006

#### Gammon has set the following targets at a Group level for 2006 to further reinforce our corporate sustainability commitments.

Ecor	nomic & Business	
1	Update and issue new Gammon Code of Conduct to reflect our shareholders' expectations	
2	Conduct Enterprise Resource Planning user certification to all required staff	
3	Seek ISO 14001 certification for Pristine	
4	Ensure average staff productivity is maintained	
5	Continue to promote and develop relationships for recurring and lifecycle earnings opportunities	
Soci	al Responsibility	
1	Gauge internal staff morale and engagement through conducting Opinion Surveys	
2	Implement structured succession planning for senior management	
3	Increase overall customer satisfaction in private sector	
4	Select strategic partners for each trade for tendering through a systematic assessment procedure	
5	Engage subcontractors for enhanced supply chain management	
Hea	lth & Safety	
1	Meet Group Primary and Secondary targets for health and safety	
2	Implement routine plant and equipment safety checks	
3	Implement measures to enhance the safety risk mangement process	
4	Undertake high-level initiatives involving all levels of management to further improve site practice and accountability	
5	Structured safety training programme for all staff grades	
Envi	ronmental Protection	
1	Achieve the objectives and targets set in the 2006 Environmental Management Programme	
2	Meet performance targets for energy and water usage and waste generation in Hong Kong based on established key performance indicators	
3	Fulfill obligations of BCE Clean Air Charter	
4	Implement a structured environmental training plan for all staff	
5	Implement performance targets across the different Gammon business units and regions	

For further information on this Report and Gammon's sustainability activities, contact our Environmental and Sustainability Manager:

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Further copies of this Report are available upon request and can also be downloaded from our corporate website:

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