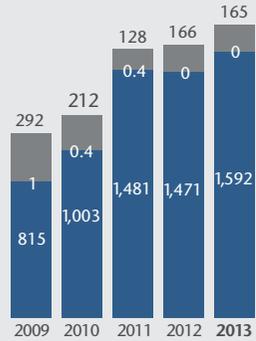




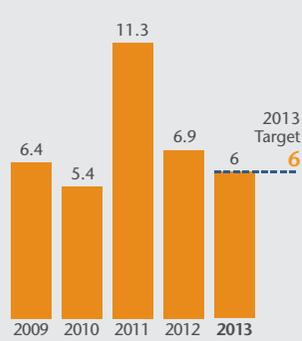
Group Turnover by Region US\$ millions

■ Hong Kong & Macau
■ Mainland China
■ Singapore



Group turnover is expected to remain strong in Hong Kong, and we see growth in Singapore with several new projects secured.

Accident Incident Rate per 1,000 workers



The Accident Incident Rate (AIR) was reduced by 10% (our 2013 target). In 2014, we will include LTI (Lost Time Injuries) together with AIR as our primary measures.

Greenhouse Gas Emissions tonnes CO₂ equivalent



In 2013, the most significant action taken to reduce greenhouse gases was to start large-scale use of locally made Euro V B5 biodiesel in Hong Kong. (Diesel accounts for 59% of our emissions.)

Employment by Regions monthly paid staff and daily paid workers

■ Hong Kong & Macau
■ Mainland China
■ Singapore



The retention rate of monthly staff over the past three years has improved and is in the top three of the industry. Over 80% are permanent contract staff. Direct employment of daily paid workers is expected to continue increasing in Hong Kong as we invest more in key skills training.

Scope of the Report

Gammon Construction Limited is a private company jointly owned by Jardine Matheson, an Asian-based conglomerate, and Balfour Beatty, a leading global infrastructure business. The principal activities of Gammon are civil engineering, foundation works, building construction, electrical and mechanical installation, manufacturing and supply of fabricated steel, manufacturing and selling concrete and rental of plant and machinery. This report covers the operations of the company and its subsidiaries in Hong Kong & Macau, Mainland China and Singapore for the 2013 calendar year.

Our Brands



Civil, foundations, building, E&M and construction services covering plant and equipment, concrete technology and steel fabrication



Public-Private Partnership business



Engineering design services

Front cover

Imagine the ability to coordinate all the details of a complex roof structure or façade mullion before committing to moulds and fabricating mock-ups. Gammon is doing just that with the use of 3D printing along with our own i720° and Building Information Modelling. Shown on the cover is a prototype for the Hong Kong International Airport Midfield project.



An online version of this sustainability report is available on our website. Gammon self-declares this report to a GRI Application Level of C+.

For more information please visit www.gammonconstruction.com

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Chief Executive's Statement

The business environment remained strong for Gammon during the year, with orders in Hong Kong and Macau increasing by 24% and in Singapore by 81%. In 2013 we increased our investment in people by 15%, strengthened our BIM capabilities and, with our greater focus on productivity, continued to build our in-house capabilities as we returned to more self-performing work.

One of the greatest challenges of managing our increased workload is the chronic shortage of skilled labour. In my view, the importation of labour under the Supplementary Labour Scheme is a short-term solution only. The current practice in Hong Kong of fast-tracking semi-skilled labour to perform skilled jobs is not working; instead, we need long-term skills training programmes that benefit both the industry and society.

Hiring our own labour offers another solution, and we now directly employ about 3,000 workers in Hong Kong. However, we need at least double that number.

Another concern I have is safety. At Gammon, we continue to be firmly focused on safety and committed to Zero Harm. Although our Accident Incident Rate improved 10% in 2013, that is not enough. Bold commitments are needed, and in this report we discuss those commitments that address the top four fatal risks. Honest implementation and visible leadership, without shortcuts, are key.

However, change must happen across the industry. To that end, two leadership forums on safety were held in 2013 with all the major players in the Hong Kong construction industry. I was pleased with the genuine momentum that was created and the actions agreed upon.

I was also pleased with the awards Gammon received during the year for outstanding performance in green procurement and environmental leadership, as well as controlling environmental emissions. Ultimately, though, we must link our environmental practices with profitability by winning more work, increasing our productivity and creating greater value for clients.

Technologies such as 3D scanning and 3D printing are very promising for our vision of a sustainable future, because they provide more accuracy and detail earlier in the construction process, and combined with Building Information Modelling can benefit planning, design, fabrication and assembly. With a 3D scanner, we can reduce the time needed to survey a tunnel profile from one hour to just one or two minutes, with much greater accuracy and detail. Gammon is also using these tools to survey difficult-to-access areas, such as an operating railway.

I remain optimistic that we can overcome the sustainability challenges we face, but only if the industry works together. By combining quality, productivity and safety, we can achieve a sustainable future that benefits us all.



Thomas Ho
Chief Executive
Gammon Construction Limited
March 2014



Derek Smyth, 1947–2013

We mourn the loss of Derek Smyth, who served as an Executive Director of Gammon until 2008 and was retained as a consultant until his unexpected death in October 2013. After his retirement, he continued to serve the industry by leading the drafting of the Hong Kong Construction Industry Vision 2020. He was also one of the initiators of Gammon's sustainability programmes that prepared us for our future as a sustainable business.

Stakeholder Engagement

Gammon engages stakeholders throughout the year to identify issues of material interest to our stakeholders as well as those issues that have a direct impact on our business.

Our focus in 2013 was on our clients, the supply chain, our staff and workforce. Clients provided detailed feedback through review reports, such as the Contractor Performance Rating (CPR) by the Works Bureau and Housing Authority Performance Assessment Scoring System (PASS), as well as our yearly client survey. These assessments allowed us to evaluate our performance and benchmark ourselves against our competitors. Through the feedback we received, we were able to understand our clients' priorities and satisfaction levels.

With our suppliers and subcontractors, we hosted four workshops in Hong Kong, one in Shenzhen and one in Singapore. We also conducted semi-annual vendor appraisals and an annual supplier survey.

With our workforce, we held ongoing dialogues through two Safety Stand Downs, a frontline safety committee, regular site management/subcontractor meetings and focus group meetings.

The following are some of the key issues that were raised:

- innovation
- sustainable procurement
- safety management
- waste management
- carbon footprint
- development of our people
- training programmes designed to bring new blood into the industry

The materiality exercise also informs and updates our Roadmap 2020.

Implementing Roadmap 2020

In 2013, Gammon moved beyond planning and into the implementation of our Roadmap 2020. Progress was made in all of the six strategic areas we have identified.

The Roadmap is governed by the Executive Directors who are responsible for setting metrics and carrying out internal reviews on a half yearly basis.



Insights from our Management Team



Gilbert Tsang
Executive Director

In Hong Kong, over 30,000 additional construction workers will be needed to work on new infrastructure projects in the years to come. To tackle the labour shortage, Government, clients and contractors must work closely and tirelessly to formulate a sustainable approach to recruitment and development of workers.

At Gammon, we have pioneered working with the Construction Industry Council and partnered with some of our subcontractors to scale up the Contractor Co-operative Training Scheme. Training semi-skilled workers and implementing mentoring schemes are also part of our people development strategy.



Nigel White
Executive Director

The key to operating a sustainable business depends on integrating sustainability with profitable business practices. Our track record is proving that this is indeed possible. Many of our successful tenders have been not solely on offering the lowest price, but by introducing innovative new construction methods and materials that benefit our clients while minimising our impacts on the environment.

Taking this route not only gives us a strong competitive advantage but helps us maintain the momentum we have created towards a sustainable construction industry.



Yu Sai Yen
Executive Director

Through our Roadmap, we are demonstrating industry leadership by adapting our skills and developing expertise to provide new solutions and services.

Clients entrust us to successfully introduce new ideas, methods and skills, such as for the rail sleeper replacement for SMRT Trains Ltd in Singapore or the craftsmanship needed to conserve Hong Kong's Central Police Station.

Other innovations we have introduced, such as the green treatment of marine mud, which is now a specification in government tenders, continue to show that Gammon initiatives lead the market.



Derek So
Director

Improving productivity and reducing lifecycle impacts requires a fundamental shift in thinking towards new and more innovative ways to design and construct projects.

To meet the objectives of our Roadmap, we are offering clients more alternative designs, methods and materials that reduce our impacts. For example, we are encouraging the industry to adopt a carbon assessment tool for temporary works and recommending the use of modular E&M components.

Another tool, Building Information Modelling (BIM), is already a mature technology in the USA and holds great promise for increasing quality, productivity and waste reduction.

Zero Harm

- Practical training and coaching programmes launched
- Sharing safety practices
- Zero Harm continues
- Bold Commitments reinforce safety leadership



Zero Harm has proved to be an effective management system for construction safety. But leadership and consistent implementation at the work front remain the key to success.

Seven years ago at a Gammon worksite in Macau, a construction crane was lifting a heavy load when a sudden shift in weight caused a rigger to be trapped underneath. The first to arrive at the scene, Leung Siu Hung, immediately took charge of the situation while other workers stood by frozen in shock.

This was a life-changing event for Leung, a highly experienced rigger and crane operator. Realising the accident could have been prevented, he developed a passion for teaching and coaching riggers on the frontline.

“I felt a duty to share my experience with the industry,” Leung said. “As I got older, I wanted to make a personal contribution to the Hong Kong construction industry and reduce accidents.”

Gammon tapped into the passion Leung feels and engaged him to train and test 500 riggers over a nine month period. He exceeded this target, with 979 riggers benefiting from his coaching.

Even though many riggers came to the course with the credentials necessary to work in the industry, some lacked practical on-the-job training and had not been tested with real-life scenarios.

Tony Small, Director, said, “We chose Leung because he has considerable operational experience and is held in high esteem by all of his colleagues. We were fortunate to persuade him to take nine months of his time to move into this role.”

During the course, the riggers were given a preliminary test then intensive practical training in lifting work operations. This was followed by another practical test.

The feedback from the riggers who took the course was overwhelmingly positive, and even those who were already qualified said they learned a great deal from it. Overall, they felt they have increased their skills, knowledge and confidence to lead safe works onsite.

On the left:
Pristine in Dongguan achieved over 6.2 million accumulated accident free hours in 2013.

On the right:
Gammon won the Workplace Safety & Health Performance Award in Singapore, which was presented by the Workplace Safety and Health (WSH) Council and supported by the Ministry of Manpower.



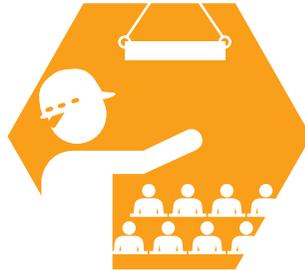
The success of the programme has convinced Gammon to invest in additional training and testing, such as carpentry for both direct and subcontractor workers, in order to develop a more highly skilled, safer workforce.

No Secrets in Safety

Gammon has long been committed to sharing best practices in safety that might influence the industry. That is why in 2013 the company invited every member of the Hong Kong Construction Association to attend the annual Gammon Safety Conference for the first time.

Why does Gammon open up its events? Or invest in training workers when there is no direct economic benefit? Tony Small said, "For a very simple reason — we share the same workforce and share the same challenges. Gammon cannot do it alone; we need others in the industry to add to our efforts."

Recent statistics show that the industry in Hong Kong has more than 170,000 workers* active on



Rigger Skills Training
979
participants
Original Target
500
participants

construction sites. All construction companies share that core workforce, who via subcontracting regularly move from one job and one contractor to the next. This is different from Singapore and other parts of the world, where imported labour tends to work for one contractor. "If we are going to influence safety performance on our sites, we have to influence the workforce who are working for us," Tony said.

"We are all brothers on site. The training gives us confidence that we can all be leaders in safety."

Leung Siu Hung
Sub Agent

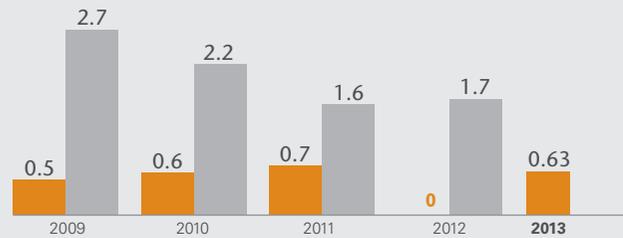


* Q3 2013, Census and Statistics Department, HKSAR Government

Accident Frequency Rate Singapore

per 1 million man hours worked

■ Gammon ■ Industry*



* Ministry of Manpower, Singapore Government
Industry figures for 2013 not available

Accident Incident Rate Hong Kong & Macau

per 1,000 workers

■ Gammon ■ Industry* ■ Hong Kong Construction Association



* Labour Department, HKSAR Government
Industry & Hong Kong Construction Association figures for 2013 not available

Top:
Leadership Forum.
Following the Hong Kong Industry Zero Harm Declaration.



Bottom:
Stand Down event.
Nearly 15,000 staff, subcontractor workers and joint venture partners participated in the Stand Down to reflect on actions to improve safety and ensure that complacency has no place on Gammon sites.



As a company concerned about safety, Gammon also participates in events such as the Construction Safety Week at Kai Tak aimed at promoting accident-free worksites and a caring culture in the construction industry. This event was attended by Leung Chun Ying, Chief Executive of the Hong Kong Special Administrative Region, who led more than 30,000 construction workers in a pledge to achieve zero accidents on construction sites.

Growth of Zero Harm

In 2009, Gammon launched Zero Harm with its focus on eliminating risks that lead to accidents. This mindset shifts and strategy continues at

Composition of Gammon's Workforce

Direct Workers (Hong Kong & Singapore):	3,091
Subcontractor Workers (Hong Kong):	7,015
Subcontractor Workers (Singapore):	513

Gammon, and its key elements — visible leadership, the layered protection model, and safety culture — remain in place. In May 2013, the Zero Accident approach was adopted in a Hong Kong industry declaration during Safety Week, which shows that the industry is undergoing a real shift in mindset.

Appreciation for Zero Harm is also beginning to be felt across Gammon's many operations. In Singapore, Gammon received several awards from the Land Transport Authority for the Balfour Beatty-Gammon JV Bishan's Ulu Pandan project. These included a Certificate of Excellence Award, a Certificate of Excellence for Workplace Safety and Health Management, and a Certificate of Recognition for more than 250,000 accident-free man-hours. The Singapore operation also received the Annual Safety Award 2013.

“Senior leaders across the industry are recognising the need for visible leadership at every level, and we are now beginning to see a real shift in mindset.”

Tony Small
Director



From 2011 to late 2013, Gammon recorded the longest period with no fatalities — 22 months — during which there were 92.7 million fatality-free hours. Tragically, however, one female worker was killed by a reversing vehicle in October 2013.

Leadership is Key

According to Gammon Chief Executive, Thomas Ho, Zero Harm as a system is good, but leadership and consistency of implementation at the work front is the key to long-term success. When failures do happen, it is essential to take responsibility and learn from them.

Tony Small echoes this thought. “Senior leaders across the industry are recognising the need for visible leadership at every level, and we are now beginning to see a real shift in mindset.”

Part of that new mindset is reflected in the training and coaching programme launched with Leung Siu

Hung. This programme, which will be extended to other trades, will continue to teach and test a new generation of workers while imparting the values of Gammon’s safety culture.

In the meantime, Leung has plans for his retirement as he is now approaching 60 years of age. Unlike other workers who take it easy, he will continue his passion for teaching and is now planning to go out on his own to train workers in Shenzhen and other cities in Mainland China. What started as a passion has now become his mission.



Bold Commitments to Zero Harm

In 2012, Gammon launched its bold commitments — a set of guidelines designed to embed Zero Harm in the workplace and “make safety personal”.

These include leadership initiatives such as the Directors Safety Workshop, the Saturday Site Walks and on-site management reviews of all serious incidents within 48 hours.

Greater planning is also called for to review and identify projects or activities subject to immense programme pressure, and to develop mitigation measures.

Other commitments specify how electrical works should be handled and subcontractors are chosen, while continuing events such as the Gammon Stand Down and annual Safety Conference are the Company’s main forums for industry engagement.

● Top Risks ● Bold Commitments

- Working at height
- Replace ladders and kung fu platforms

- Struck by plant & machinery
- Set up Fatal Zone “Red, Locked & Continuous Barriers”

- Electricity
- Ratio of Registered Electrical Worker to Assistants
- Electrical Safe Systems of Work

- Temporary work
- Apply “Prove it Safe” principle before loading allowed

Prosperous Markets

- Business continues to grow in Hong Kong and Singapore
- Innovation keeps Gammon competitive
- Pioneering modular E&M Systems
- Coping with the challenges of “peak construction”
- Human resources strategies help attract and retain talent



In an increasingly challenging construction market, Gammon is turning to innovative new ways to maintain its competitive edge.

Although cost remains a significant factor in winning construction tenders today, it is not the only one. Successful bids also require leadership, innovation and a commitment to developing a highly-skilled labour force capable of performing the ever-more complex demands of today's construction projects. That Gammon is succeeding in meeting these challenges and it is evidenced in the number of projects that were secured during the year.

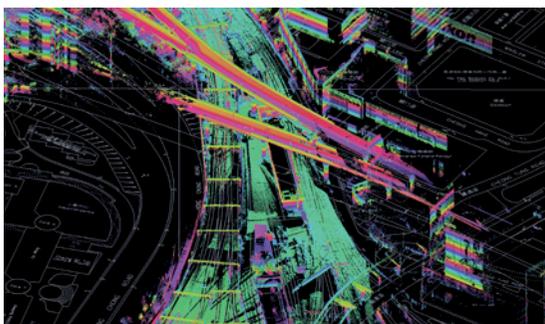
In Hong Kong, Gammon won the HK\$8.66 billion design-and-build contract for the construction of the Southern Connection Viaduct Section of the Tuen Mun-Chek Lap Kok Link. This project, which is the largest single contract ever awarded to Gammon, involves the design and construction of a dual two-lane sea viaduct between the Hong Kong-Zhuhai-Macao Bridge, Hong Kong boundary crossing facilities and North Lantau. More than 1,500 jobs will be created for this project.

Business is also growing in Singapore, where Gammon won two significant contracts in 2013.

One is the HK\$1.06 billion (S\$174 million) design and build contract for the construction of the Mayflower Station on the Land Transport Authority's new Thomson Line and two contracts totalling HK\$0.93 billion (S\$153 million) from SMRT Trains to replace the track system, involving change out of sleepers & third rail system on the North South Line, the Woodlands Extension and supply &



S Iswaran, Minister in the Prime Minister's Office, Second Minister for Home Affairs and Second Minister for Trade and Industry (left) presents the Achievement of Excellence Award in Singapore Sustainability Awards, 2013, to Tan Hee Wee, Director of Gammon (middle).



BIM models with 3D scanning were employed on the Shatin Central Link Contract No 1111 to facilitate accurate site measurements at inaccessible locations.



replacement of turnout bearers/sleepers in the North/South and East/West Line.

A New Dimension in Construction

Gammon is taking construction and surveying to a new level with the advent of 3D printing and 3D scanning.

While 3D printing is still in the early stage as far as construction is concerned, it holds tremendous potential for the industry. A physical 3D printed model, for example, can be used for coordinating all details before committing to moulds and fabricating mock-ups, which helps increase productivity and improve quality.

Gammon is one of the first construction companies in Hong Kong to adopt this technology. Using 3D printing, Gammon can create a prototype of

A Glittering Jewel in Hong Kong's Central District

The Forum

Gammon is known for harnessing innovative methods that promote both sustainability and efficiency. A case in point is The Forum, an iconic new building in Hong Kong's financial district rising five floors and topped by a landscaped roof.

Gammon was there to advise on constructability and recommended a design tailored to ease the building's fabrication and erection, allowing the building to be constructed in a cost-effective manner. Gammon fabricated 1,088 tonnes of steel

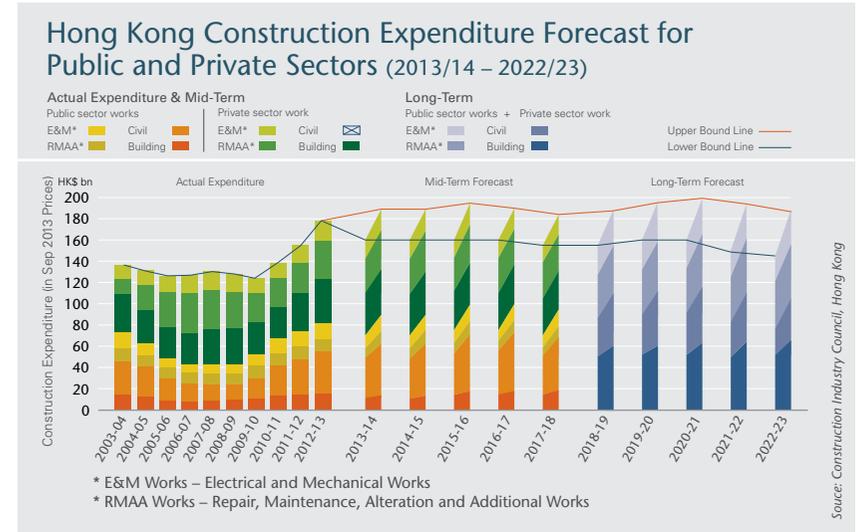
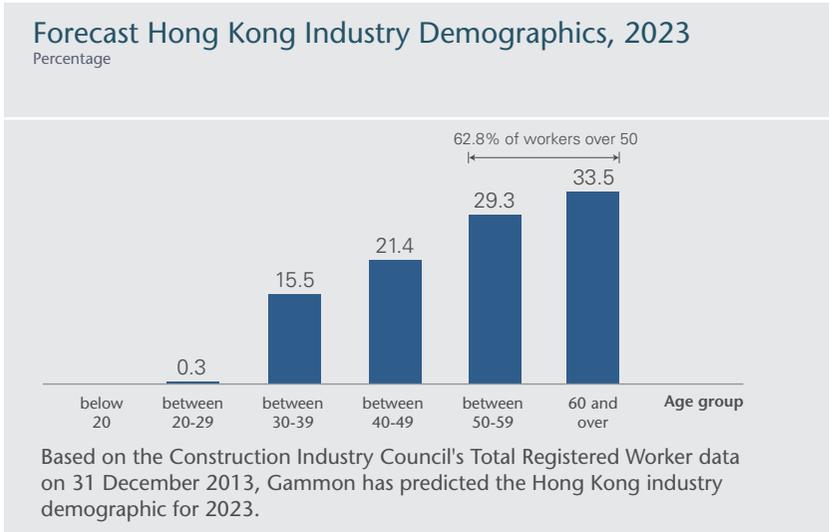
and supplied pre-assembled structures to ensure a perfect fit and fast installation.

Building Information Modelling and RFID tags were also used to improve quality, productivity and safety in the fabrication of steel, material tracking and simulation of the construction sequence.

For the welfare of workers, Gammon provided a walkway for safe access, monitored air temperature for the comfort of workers, and built a mobile elevated platform for safe working at height.



Looking ahead. In five years the mix of works will change, requiring more workers with building skills. As new joiners to the industry need 12 to 36 months of training to develop skills and work productively, a critical shortage can be prevented by fully supporting apprenticeship schemes in the industry today. The current approach of 3 to 6 months training and fast-tracking semi-skilled workers is not effective.



a complex building structure earlier, produce a construction plan and ultimately reduce reworks and delays. As such, it has the ability to improve buildability as well as worker safety.

With 3D scanning, surveying is much faster and more accurate than conventional sighting equipment. Fewer survey personnel are needed and areas that proved difficult to access before can now be plotted with ease. The resulting 3D visual information can then be used to create 2D/3D maps, analysis reports, 3D visual models and even animations.

Projects such as Midfield and the MTR Shatin to Central Link have already benefited from this application. For the Shatin to Central Link, Gammon used 3D scanning technology on the project's north approach tunnels to quickly and accurately capture complex environmental information. The data

was then used for a BIM model that helped the construction team minimise conflicts in the construction programme and reduce workers' exposure to hazardous working conditions.

Ready for a Modular Future

Modular construction is the way of the future. It is a method of building that is greener, more efficient and safer for workers, which is why Gammon sets up a new facility for manufacturing modular components in Dongguan, Mainland China — the Pristine GEM factory — in mid-2013.

With modular construction, components can be constructed off-site, under carefully controlled conditions, in about half the time of traditional methods, with improved quality. It is also less labour intensive, as all components are manufactured within the factory for assembly at the work site.

Modular construction is especially suitable for work sites with limited space, which is usually the case in Hong Kong. As there are fewer site activities required with this method, safety is vastly enhanced and less material waste is created in the work area, both of which contribute to greater sustainability.

Before setting up the Pristine GEM factory, Gammon had already used modularised services on projects such as iSquare and The One in Hong Kong. On both of these projects, modularisation allowed more than 85% of the complex roof assembly to be erected in just five nights, a fraction of the time of traditional methods. Other applications in which modularisation has played a key role include chilling plants and cooling tower plants.

At the new Pristine GEM factory, modularisation is currently being used for fabricating E&M modules. According to Kevin O'Brien, Director of E&M at Gammon, "Until now, we have been relying on our

supply chain to do our modularisation. We now have enough orders to invest in our own factory so we can bring this work in-house and keep the value within the group."

As workloads increase and the demand for more efficient and sustainable construction methods grows, the new facility at Dongguan will continue to give Gammon a strong competitive advantage in Hong Kong's construction industry.

Challenges of Peak Construction

Hong Kong has entered a period of peak construction that will force construction companies to adopt new methods in order to meet the challenges ahead.

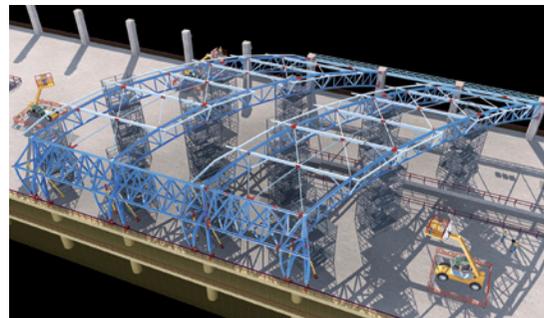
Construction expenditure will remain high, but the nature of the work will change from civil infrastructure projects to more building projects, particularly public housing. As stated in 2013, the Chief Executive of the Hong Kong Special Administrative Region renewed his pledge to increase public housing supply by 36%, including 179,000 public residential housing units and 17,000 Home Ownership Scheme units.

However, this shift will require existing workers on civil projects to gain new skills so that they are capable of handling the work in a safe and competent manner. Gammon has already committed to providing the skills training needed for these works as well as multi-skills training to ensure a more agile labour force. (See Training for a Sustainable Workforce on Page 18.) This will benefit both workers and Gammon by giving them greater flexibility to respond to changes in market demand.

Another challenge is the dramatic rise in the price of construction materials. In 2013, for example, the cost of sand and aggregate rose a dramatic 30%. To mitigate this problem, Gammon would like to see the Building Code updated by the Hong Kong Government so that cost-effective substitutes could be used. For example, instead of sand in concrete mixes, recycled aggregate or crushed glass could be employed as an alternative with no loss in quality.



Priscilla Leung, Chairperson of the Green Council (left), presents the Gold in the Green Purchaswi\$e Award to Susan Siu, Head of Procurement at Gammon, for championing Euro V B5 biofuel derived from cooking oil for use in construction machinery and equipment.



The Midfield Concourse at Hong Kong International Airport was designed using BIM to align the complex roof structure. Resembling an aircraft wing, the roof incorporates an asymmetrical shape that admits natural light while minimising heat gain.

Gammon Façade Team

With the growing demand for curtain walls for building exteriors, Gammon has established a dedicated curtain wall façade team to serve the needs of clients. Comprising 30 members, the team focuses on chronic issues.

The team has already shown its value in improving programme management and reducing abortive works. Working closely with clients, subcontractors and suppliers, the Gammon façade team provides technical support while monitoring quality control and construction progress to ensure projects are completed on time.

Installation involves many details and components are commonly prefabricated offsite. It's not uncommon however to encounter unseen clashes or variations during installation that impact proper fit and finish. Advanced technology such as Building Information Modelling is used to refine the connection details and reduce clashes earlier in the programme.

Although still relatively new to Gammon, the façade project team has assisted five major projects: The Redevelopment of Victoria Park Swimming Pool Complex, Hong Kong Science Park Phases 3a & 3b, No 8 Mount Nicholson Road, the Annex Building at Ko Shan Theatre, and the Midfield Concourse at Hong Kong International Airport.



Environment

- Waste Management Handbook — a new approach for construction teams
- Challenges of Recycling
- Large-scale implementation of Euro V B5 biodiesel started
- Wiser use of resources
- Gammon's Green Concrete



In line with the Hong Kong Government's waste management strategy, Gammon is developing innovative approaches not just to recycle construction waste but reduce it.

On a typical building site today, most frontline construction staff put little thought into waste management, given the more pressing demands of time, quality, budget constraints and worker safety. Even when considering environmental issues, construction and demolition waste usually takes a lower priority than preventing water runoff, dust and noise.

But this is short-sighted. Construction waste generated on all Hong Kong construction sites in 2012 amounted to more than 3,400 tonnes a day*. At the same time, Hong Kong is fast running out of space in our landfills — which Government estimates will be full by 2019 — and exporting waste is not sustainable. Yet new construction spending will remain high in the next 10 years.

For Gammon, this means it is time to change the mindset of relying on inexpensive landfill and focus on reducing the amount of waste generated.

That is one of the challenges faced by Vincent Yuen, General Manager of the Building Division at Gammon Construction and the Company's newly-appointed champion of waste reduction.

To meet this challenge, Vincent was asked to help develop the Company's new waste management strategy. His primary objective was to find innovative solutions for reducing waste and introducing best practices for on-site waste management. The result was a new handbook for operations personnel.

Written for construction people by construction people, the Waste Management Handbook provides a practical approach for recycling and reducing waste. It also reflects Vincent's perspective on waste management as a construction operator rather than that of an environmental specialist.

* Information Services Department, HKSAR Government

“We are now working to incorporate Quantitative Surveying into BIM, which will make ordering materials more accurate and less wasteful.”

Vincent Yuen
General Manager, Building Division



“The handbook serves as a guide for reducing waste at each stage of the construction process,” said Vincent. “It’s already proving very useful for achieving our waste reduction targets. We have also done benchmark surveys of our sites, which will help us measure our progress.”

Gammon’s targets are ambitious by any stretch of the imagination. As building projects contribute more than civil projects, the shift in the market will compound the challenge. By the end of 2018, Gammon aims to reduce the amount of construction waste it disposes in municipal landfill by 30%, with interim targets of 10% by the end of 2014 and 20% by 2016.

Making the Switch to B5

With one of the largest plant and equipment fleets in Hong Kong, diesel currently accounts for 60% of our greenhouse gas emissions. Recognising this, Gammon has been working with suppliers for over two years to switch to Euro V B5 biodiesel. This, along with other initiatives, has helped manage growth without adding to overall emissions.

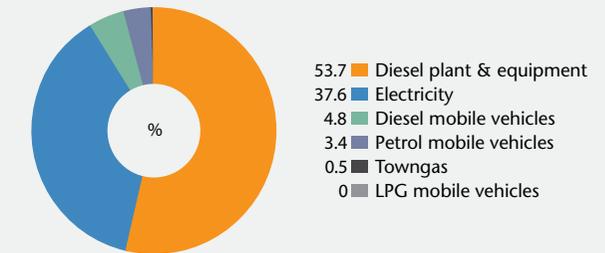
In 2013, we started to replace the mandated ultra-low sulphur diesel (ULSD) with Euro V B5 biodiesel, making us the first and only construction company in Hong Kong to widely use this fuel in plant and machinery.

B5 is a blend of diesel (Euro V) and 5% biodiesel generated from used, locally-sourced cooking oil. Compared to ULSD, Euro V B5 biodiesel can reduce emissions of particulate matters (PM), carbon monoxide (CO) and carbon dioxide (CO₂).

In 2013, we exceeded our 15% target of annual fuel consumption using Euro V B5 biodiesel and aim to achieve a 50% share in 2014.

Greenhouse Gas Profile of Hong Kong Operations, 2013

(tCO₂e/yr)



Our direct and indirect greenhouse gas emissions have also been verified in accordance with ISO14064-1:2006.

Challenges of Recycling

Globally, raw materials and natural resources are rapidly dwindling. Today, almost one quarter of all raw materials extracted from the earth are used in infrastructure, while the world’s increasingly urbanised population is over-stripping available resources.

Materials and waste are key issues, and Gammon is working towards long-term sustainability by making wiser use of resources.

Waste to Landfill/Intensity

■ Singapore (tonnes) ■ Hong Kong & Mainland China (tonnes)*
● Intensity (kg/HK\$1m turnover)



* No construction project was carried out in Mainland China during 2013
+ Estimated by amount paid

In 2013, improved sorting at one recurring maintenance contract was the single most significant action taken to reduce waste to landfill (by 2,094 tonnes).



Leung Chun Ying, Chief Executive of the Hong Kong Special Administrative Region, presents the Hong Kong Award of Environmental Excellence, Gold (Redevelopment of Victoria Park Swimming Pool) to Thomas Ho, Chief Executive of Gammon.



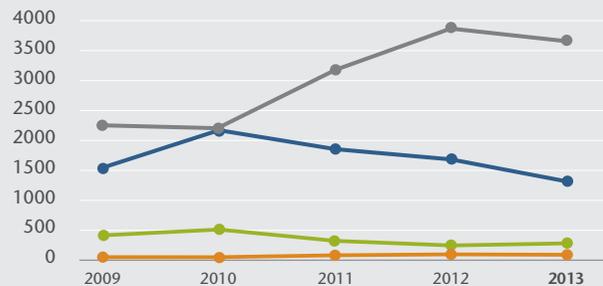
Linda Ho, Chief Executive Officer of the Green Council (left) presents the Corporate Green Governance Award — Corporate Leadership to Shirlee Algire, Group Sustainability & CSR Manager of Gammon.



Gammon received the Green Management Award (Corporate) Silver from the Green Council in recognition of the Company's green development programme and efforts of the environment and sustainability team.

Energy Usage

● CO₂ (e) from air travel (tonnes) ● Electricity (kWh/HK\$1m turnover)
● Diesel (litre/HK\$1m turnover) ● Petroleum (litre/HK\$1m turnover)



The electricity intensity declined 5.2% and diesel intensity declined by 21.8%; thus, our carbon intensity (not shown) also dropped by 16.2%.

Recycling materials such as glass, wood, plastic, metal, concrete, tiles, asphalt and demolition waste is one strategy. This is increasingly being demanded by clients seeking greener credentials as well as society and governments trying to reduce raw materials extraction and lower their carbon footprints.

Many clients are also following green building rating schemes or specifying green objectives in their tenders and contracts. In 2013, 59% of Gammon's turnover was derived from green projects.

But even when clients don't demand it, Gammon looks for opportunities to source sustainable materials and recycle. "We always try to go beyond the requirements set by the client." Vincent said.

The challenge, however, is that Hong Kong, unlike Singapore and other global cities, does not have sufficient domestic recycling capacity for construction and demolition waste nor are there enough local supplies of recycled building materials to go around.

In 2013, the main market for used timber, Mainland China, has tightened its acceptance criteria — even the smallest impurity will cause a shipment of timber to be rejected. This has imposed an extra processing burden on local recyclers.

Density and vertical logistics issues on high-rise residential building projects are also challenges for contractors during construction.

Gammon is seeking solutions to these recycling challenges. But an even greater challenge is changing the mindset of frontline construction workers, who are only slowly coming to recognise they have an active role to play in reducing waste. According to Senior Site Agent, Pang Wing Tung, many workers do not yet see the value of recycling and are more focused on getting the work done as quickly as possible.

"We need to change their way of thinking. But change will come in the same way that safety equipment has become accepted."

Wiser Use of Resources

Gammon is exploring alternative building methods and materials to improve resource efficiency. These include the adoption of reusable steel formwork, scaffolding, modular building components and precast concrete forms.

To get the most value from resources on site, Gammon in Hong Kong actively directs materials for reuse. For example, at the Midfield project in Hong Kong International Airport, a crushing plant was employed to make aggregate from excavated pavement and rock. At Hysan Place in Causeway Bay, excavated rock was transferred for use in other projects as bedding material. And at Science Park in Pak Shek Kok, a sub-base material of sand was mixed with aggregate instead of concrete for the logistics access road. After the project is finished and the access road no longer needed, the material will be used again at another site.

Gammon's Procurement Department also has a role to play. In addition to purchasing recycled and regionally-sourced building materials, they are requesting suppliers to provide more environmentally-friendly packaging.

Henry Cheung, Senior Procurement Manager, said, "A lot of packaging today gets wasted so we are trying to influence our supply chain to adopt packaging materials that can be recycled or reused. At Science Park, we succeeded in having lift contractor take back the wooden packing for recycling and convinced the supplier of the curtain wall to use reusable pallets instead of packaging. We are now looking at other materials that would also be suitable for palletisation."

Henry also mentioned how one major supplier of adhesives, paints and sealants switched from plastic to biodegradable containers at no additional cost. He believes that even though demand for environmentally-friendly packaging is still relatively

low, Gammon can help stimulate the market for this packaging.

"According to our annual Subcontractors and Suppliers Opinion Survey, we've seen that most suppliers are keen to cooperate with us," Henry said.



55%
of suppliers said they were definitely willing to work with Gammon to provide green products.

Better Planning through BIM

An efficient way to avoid waste is to design it out in the planning stages through the use of Building Information Modelling (BIM).

Normally used for clash detection, BIM is now being explored by Gammon as a means of reducing aborted works or double handling to avoid material wastage.

According to Vincent Yuen, an especially promising development is a new Quantitative Surveying module that will be integrated with BIM. "This will give us the ability to order the precise amount of materials needed for a job. Tiles, for example, are typically over-ordered in the industry, and the excess quantities are sent to landfill."

BIM will not only give project managers greater confidence when ordering materials but also help them communicate better in the early stages of a project. "This is the way forward with this powerful tool," Vincent said.

Green Concrete

Compared to conventional concrete mixes, the cement content of Gammon Green Concrete ("GGC") is typically 10% lower. GGC is a family of high-performance concrete mixes that have been developed to minimise carbon footprints and increase durability. It is designed to optimise the packing density of solid particles, including cementitious materials and aggregates, so that the least amount of ordinary Portland cement or cementitious materials can be used.

Supplementary cementitious materials (essentially waste from the generation of electrical power or other manufacturing processes) are also added to further reduce the amount of cement. Both the addition of supplementary cementitious materials and the optimisation of packing density substantially reduce the absorptivity and permeability of concrete, thereby improving the durability of concrete structures such as buildings, bridges and tunnels. Durability is especially important for infrastructure designed to last 50–100 years with minimal maintenance.



Lifecycle Thinking

Globally, clients are concerned about the lifecycle of their projects. In 2013, an independent assessor applied the PAS 2050:2011 Specification for the assessment of the lifecycle greenhouse gas emissions of goods and services to 25 of Gammon's ready-mixed concrete products.

This assessment gives clients confidence in the quality of our products and sets a leading benchmark to further enhance the sustainable credentials of ready-mix concrete.



Unique to Gammon is the practice of recycling at the batching plant. Water and aggregates are recovered from unused concrete and truck washout, while recovered fine aggregates (above left) are recycled locally to make eco pavement blocks. The plant produces zero waste.

Strong Relationships

- Public Relations Officers play a vital role in delivering Gammon projects
- Gammon takes training to a new level
- Direct labour — a solution to worker shortages
- Appreciation for Gammon's culture of caring
- Preventive healthcare for a healthier workforce



Gammon's Public Relations Officers are gaining recognition for their work, both in the community and by their colleagues.

When Cherry Tsang joined Gammon as a Public Relations Officer a few years ago, one of the first things she had to do was trade her high heels for a pair of steel-toed boots. Unlike her previous job in the insurance industry, Cherry's new role would have her trekking long distances, often over steep mountain trails, in remote rural areas of Hong Kong.

Although some of the job requirements were very different from those of the insurance business, the basic skills of a Gammon Public Relations Officer, or PRO, are essentially the same — to manage stakeholder perceptions. In Cherry's case, this means building relationships with the communities affected by the work of Gammon's client, CLP Power Hong Kong Limited, which is upgrading its overhead transmission lines in Hong Kong.

"For much of the work we use helicopters to carry equipment in and out of the sites," Cherry said. "But helicopters produce a lot of noise which can disturb local residents. One of our duties

was to notify the community prior to works and resolve any complaints so we could keep all our stakeholders happy."

In addition to area residents, stakeholders included government departments, district councils, the client and the project teams, who often have different interests. While the public may be concerned about noise issues, engineers are more focused on meeting programme deadlines. This sometimes presents challenges, as construction people sometimes don't understand the concept of public relations or place a high priority on maintaining goodwill in the community.

Iris Lee, a former reporter and colleague of Cherry, agrees. As the PRO for the Reconstruction and Improvement of Tuen Mun Road, she often acts as a go-between for area residents and the project team.

Gammon Social Performance	2012	2013
Graduate Recruitment	135	117
Technician & Craft Apprentice Recruitment, Hong Kong	73	65
Training hours per staff employee	22.8	22.3
Volunteer hours	5,225	4,974
Number of community events	109	126
Scholarships	55	50

“Being involved with this project has helped me change and given me new insights. It’s very satisfying.”

Cherry Tsang
Public Relations Officer



In one case, a resident who works night shifts called saying he couldn’t sleep because of slope works being carried out near his home. After visiting him, Iris immediately sympathised with his situation — “the noise was really loud!” At first, the works crew did not understand the importance of the complaint. But Iris persisted and a noise cover was installed on the equipment at Gammon’s expense, which dramatically reduced noise levels.

While complaints are not everyday occurrences at either of their work sites, both Iris and Cherry recognise the importance of maintaining good relations so that Gammon can build infrastructure in the midst of a living community that needs to keep functioning.

Cherry and Iris work to create understanding for their respective projects by demonstrating the value that these projects bring to the community and showing project teams that community acceptance

is essential. In describing her job duties, Iris said, “We use a variety of communication channels, such as newsletters, site visits, phone calls and personal visits. Our goal is to build long-term relationships with the community and get positive feedback.” PROs are typically on call 24 hours a day to answer inquiries from the public.

By building acceptance for a project, ultimately everyone benefits. For the community, it means improved infrastructure, whereas for the client and project teams it translates into reduced costs and the timely completion of the project.

These are the tangible benefits of the work done by PROs. But there are also intangible benefits. At CLP project, Cherry relays Gammon’s caring values to the workforce, much of which is made up of technical linesmen from overseas. Among her other duties, she tries to enhance communication by teaching basic Cantonese, providing company

news and project updates, and building worker engagement in the community.

Although engineers tend to be practically minded, they appreciate the contributions of the PROs. They have come to recognise the difference that public relations makes on a project and how PROs can clear up misunderstandings in the community that might stand in the way.

“At first, they didn’t think I was a construction person,” said Cherry. “But being involved with this project has helped me change and given me new insights. It’s very satisfying.”

Iris has also changed. “I have learned a lot more about construction. What’s most satisfying to me is hearing the public say thank you and knowing that I have helped improve their lives.”

“There is no silver bullet for winning the talent war. We need to be more versatile, and multiskilling is a sound option.”

Edmond Lai
Director



Top:
On 24 October 2013, 400 guests celebrated Gammon's 55th Anniversary under the theme of Building a Better Tomorrow. Other events held in 2013 included the E&M and BIM conferences, where Gammon exchanged ideas with industry participants.



Bottom:
A new metal scaffolding and metal formwork training programme will equip riggers with the skills needed for system formwork.



Training for a Sustainable Workforce

In Hong Kong, the construction industry faces a persistent labour shortage that is being driven by the increase in construction expenditure. The total value of contracts is projected to reach up to HK\$170 billion over the next five years as new infrastructure and housing projects come on stream in Hong Kong.

Training is one solution to this challenge. Under the Construction Industry Council's Contractor Cooperative Training Scheme (CCTS), Gammon has trained more than 300 workers so far. However, new joiners to the industry, in many cases, are only semi-skilled and still require our full attention after completing the CCTS.

Gammon has therefore adopted a three-pronged approach to meet this challenge: Self-performing, Multiskilling and New Blood Training. It is only through this integrated solution that we can have the desired impact on the industry.

Having a permanent workforce ensures that we have the necessary skilled manpower to take on new projects. The challenge, however, is maintaining the appropriate pipeline of work to build life-long careers.

We have selected 20 experienced riggers from our Building Division to undergo metal scaffolding and metal formwork training so that they will be competent to perform system formwork duties. This is a pilot scheme, with workers being trained in phases.

Through multiskilling, we will have a more productive and flexible workforce suited to the mix of works being performed. It will also reduce the risk of labour shortage, while empowering workers with a broader set of skills that can be used throughout their careers.

The success of this strategy requires the full support of top management and project leaders. It also depends on the concerted efforts of our business units and the supply chain. We have made a good start but need to work hard to sustain it over the next few years.

Feedback on the multiskilling programme has been favourable. When asked whether the scheme might also make Gammon's workforce more employable outside the company, Edmond Lai, Director of Human Resources said, "We need to take a longer term view of this investment. If all players in the industry embark on this journey, the whole industry will eventually benefit from the enriched talent pool."

CSR in Mainland China

In 2013, staff members of the Pristine and Shenzhen offices organised a variety of CSR activities to help the elderly and children in the community and promote a green lifestyle.

In one event, 34 members of the Pristine office of the Dongguan Steel Factory lent their support to Earth Day by organising a green bicycle ride that encouraged participants to reflect on ways to care for the environment. Volunteers from this office also helped underprivileged students by donating books, stationery and moon cakes, and repairing their school desks.

Other activities included a group outing led by Pristine volunteers for left-behind children of migrant parents and a weekend hike by the staff of the Shenzhen office to promote a green and active lifestyle.



A Culture of Caring

As part of our culture of caring, Gammon launched a Site Nurse/Healthcare Leader programme two years ago. This programme continued in 2013, with about 15,000 free health checks carried out for our frontline workers.

Many of the workers, who initially had some reservations about the programme, are now very enthusiastic about the checks and look forward to the regular visits by the site nurses.

Gammon is now taking steps to prescribe an even more effective medicine — prevention. Many of our workers have dietary habits that consist of unhealthy levels of high-sodium, high-fat food. Our

checks found that many workers are at increased risk for heart disease or diabetes, especially those over the age of 50. In an industry where working at height is a common practice, ill health or a heart attack can lead to tragic results.

To encourage a healthier lifestyle, we have been holding workshops on health issues — a total of 41 were held in 2013 — and will investigate the feasibility of launching a more comprehensive programme of preventive healthcare for the future.

In 2014, we plan to introduce more nutritious food alternatives at three of our canteens in Hong Kong.



“Gammon is now taking steps to prescribe an even more effective medicine – prevention.”

Gammon's Healthcare Leaders, Jo Ling (above) and Elaine Kwan (below), are caring members of the Gammon family. As part of their duties and commitment to the health and wellbeing of their co-workers, they make regular visits to Gammon worksites.

Project Highlights

Cableway and Pedestrian Bridge with Lift Tower at Sentosa, Singapore



Gammon constructed three cableway stations, including all foundation piling, architectural finishes and E&M services, cableway tower foundations and the Siloso Tower Bridge, in this S\$56 million project.

- The bridge project was value-engineered and redesigned by reducing the number of piers in order to minimise disruptions to the surrounding natural environment.
- Construction access was created from demolished materials generated from the early works.
- The access route will be transformed into an eco trail, which will reuse materials removed during the project, including cut trees.
- A busy tourist area, great consideration paid towards outward appearance, signage and hoarding.

Airport Authority Midfield Concourse Works, Hong Kong



For Hong Kong International Airport, Gammon received one of its biggest solo contracts (HK\$6.2 billion) to date for the construction of the new Midfield Concourse. The project includes 20 aircraft stands and associated fixed link bridges, connections to existing taxiways and the extension of the South Runway Road including all E&M works.

- The project team implemented a Use Wisely, Waste Less and Low Carbon Construction strategy for sustainable construction.
- More than 1,000 tonnes of carbon emissions were reduced with an on-site concrete batching plant, an on-site precast fabrication yard and the use of a mechanical steel system formwork that saved 3,500 tonnes of timber.
- More than 70% of the on-site spoil will be reused and 120,000 m³ of inert C&D material that would have been transported to public fill has been reduced.

Redevelopment of Victoria Park Swimming Pool Complex, Hong Kong

In this HK\$930 million project, a new swimming pool complex constructed to the Fédération Internationale de Natation (FINA) standard opened in November 2013. The works also include the building and refurbishment of other park facilities.

- Innovative noise controls and environmental mitigation measures minimised nuisance to the local community.

- Hoardings around trees were designed with extra ventilation for tree health.
- 540 m² of timber formwork and 7,000 m² of bamboo were saved; 1,000 m² of metal fencing was reused from previous projects.
- The project received the Gold Award in the Hong Kong Awards of Environmental Excellence in 2012.



Assurance Statement



ASSURANCE STATEMENT

SGS STATEMENT ON ASSURANCE Gammon Sustainability Report 2013

NATURE AND SCOPE OF THE ASSURANCE/VERIFICATION

SGS Hong Kong Limited (hereinafter referred to as "SGS") was commissioned by Gammon Construction Limited (hereinafter called "Gammon") to conduct an independent assurance of the *Sustainability Report 2013* (hereinafter called "the Report"). The scope of the assurance, based on the SGS Sustainability Report Assurance methodology, included the text and 2013 data in accompanying tables contained in the Report. Data and information of subsidiaries of Gammon were included in this assurance process, which covered China, Hong Kong, Macau and Singapore.

The information in the Report and its presentation are the responsibility of Gammon. SGS has not been involved in the preparation of any of the material included in the Report. Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of verification with the intention to inform all Gammon's stakeholders.

The SGS protocols are in accordance with internationally recognized guidance, including the Principles contained within the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines (2011) for accuracy and reliability and the guidance on levels of assurance contained within the AA1000 series of standards and guidance for Assurance Providers.

This Report has been assured at a moderate level of scrutiny using our protocols for:

- Evaluation of content veracity;
- AA1000 Assurance Standard (2008) Type 1 evaluation of the report content and supporting management systems against the AA1000 Accountability Principles (2008);
- Evaluation of the report against the Global Reporting Initiative Sustainability Reporting Guidelines G3.1 (2011); and
- Evaluation against the AA1000 Stakeholder Engagement Standard (AA1000SES) (2011).

The assurance comprised a combination of pre-assurance research, interviews with relevant management and employees; project site; documentation and record review.

Financial data drawn directly from independently audited financial accounts has not been checked back to source as part of this assurance process.

STATEMENT OF INDEPENDENCE AND COMPETENCE

The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance. SGS affirm our independence from Gammon, being free from bias and conflicts of interest with the organisation, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment, and comprised auditors registered with Lead Auditor of SA 8000, ISO 26000, ISO 14001 and OHSAS 18001; ISO14064 Lead Verifier and GRI-nominated Trainer in Sustainability Reporting.

VERIFICATION/ ASSURANCE OPINION

On the basis of the methodology described and the verification work performed, we are satisfied that the information and data contained within the Report verified is accurate, reliable and provides a fair and balanced representation of Gammon sustainability activities in 2013. Some statements and data within the scope were not assured due to credibility of third party information such as greenhouse gas emission, industrial & government figures and timescale allowed for assurance,

The assurance team is of the opinion that the Report can be used by the Reporting Organisation's Stakeholders.

We believe that the organisation has chosen an appropriate level of assurance for this stage in their reporting.

AA1000 ACCOUNTABILITY PRINCIPLES (2008) CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

- Inclusivity:** Stakeholder mapping, engagement and prioritize of stakeholders and their concerns should be enhanced and clearly presented.
- Materiality:** Materiality issues were stated in Report and drove the Road map of Gammon. However, those materiality issues were stated in Report only and not prioritized. Gammon need to prioritize the seven materiality issues.
- Responsiveness:** Gammon provided good external & internal platforms, such as workshop, survey, Next Generation Stakeholder Panel to response to stakeholder concerns.

GLOBAL REPORTING INITIATIVE REPORTING GUIDELINES (G3.1 2011) CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

- Principles:** Materiality and stakeholder inclusiveness could be enhanced as above.
- Standard Disclosures:** It was found to be satisfactory
- Indicators:** The organization should state disposal method in chemical waste.
Gammon should include formal training hours they provide to daily paid staff and it could consider including the training hours of subcontractors.

The data collection method was comprehensive, reliable and accurate. In our opinion, the Report fulfills the content and quality criteria for GRI G3.1 Application Level C+

AA1000 STAKEHOLDER ENGAGEMENT STANDARD (2011) CONCLUSIONS, FINDINGS AND RECOMMENDATION

- Stakeholder mapping, engagement and prioritize of stakeholders and their concerns should be enhanced and clearly presented. In 2013, Gammon mainly focused on customers, suppliers, subcontractors and staff, but the mapping and prioritizing were not clearly stated. Gammon needs to have other platforms to engage and prioritize other interested parties in coming year.

Signed:

For and on behalf of SGS Hong Kong Limited

Ben Tsang – Senior Director, China and Hong Kong
Systems and Service Certification
27 March 2014
WWW.SGS.COM

Patrick LEUNG, Lead Assurer
Systems and Services Certification



AA1000
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Key Performance Indicator

In preparing the 2013 Report “New Dimensions in Sustainable Construction”, we have made reference to the Global Reporting Initiative (GRI) G3.1 framework and the Construction and Real Estate Sector Supplement for certain sections and performance indicators. We selected key indicators as listed below to provide readers with a quick understanding of our group-wide performance. Comments on the scope and completeness of our reporting can be found in the Independent Verification Statement on page 21 of the print version of our Report.

GRI Reference	Performance Indicators	Units	2009	2010	2011	2012	2013
Safety							
CRE6	Organization operating in verified compliance with OHSAS 18001 ¹	%	100%	100%	100%	100%	100%
LA7	Fatalities	number	1	0	5	0	1
LA7, PR2	Accident/incident rate ²	per 1,000 workers	6.4	5.4	11.3	6.9	6
Economic							
EC1	Group turnover (by region)	US \$millions	1,108	1,215	1,610	1,638	1,757
	Rest of Asia – Mainland China	US \$millions	1	0	0	0	0
	Singapore	US \$millions	292	212	128	166	165
	Hong Kong & Macau	US \$millions	815	1,003	1,481	1,471	1,592
	Active project site	number	101	98	99	100	117
EN1, EN26	Sustainable sourced timber, all sources	% value	81	85	95	99	97
EN26	Forest Stewardship Council Certified	% value FSC	100	100	100	100	100

GRI Reference	Performance Indicators	Units	2009	2010	2011	2012	2013
Social							
LA1	Total monthly-paid staff (by location)	number	2,850	3,474	3,832	4,643	5,069
	Mainland China	number	341	384	386	423	507
	Singapore	number	573	465	374	448	502
	Hong Kong & Macau	number	1,936	2,625	3,072	3,772	4,060
LA1	Total daily-paid workers (all locations)	number	1,806	2,333	2,067	2,440	3,091
	Gender, monthly-paid staff ³	% male	80	81	81	85	83
		% female	20	19	19	15	17
LA1	Total sub-contractor workers (all locations)	number	5,524	5,943	9,411	10,493	7,528
	Hong Kong	number	3,733	4,970	8,923	9,493	7,015
	Singapore	number	1,791	973	488	1,000	513
LA1	Employee by contract type ⁴	% permanent	–	–	–	77.3	80.9
		% contract	–	–	–	22.7	19.1
LA1	Employee by management class ⁴	% director	–	–	–	0.3	0.3
		% managerial	–	–	–	6.3	5.8
		% professional	–	–	–	14.9	13.8
		% supervisory	–	–	–	13.3	10.9
		% technical	–	–	–	54.8	58.8
		% others	–	–	–	10.5	10.4
	Graduate recruitment ^{3,4}	number	52	120	105	135	117
	Technician apprentice recruitment ^{3,4}	number	65	60	51	73	65

GRI Reference	Performance Indicators	Units	2009	2010	2011	2012	2013
Social continued							
LA10	Training hours per employee ^{3,4,5}	hrs/employee	18.2	21.3	22.3	22.8	22.3
LA10	Training by gender ^{4,5}	% male	–	–	–	88.2	85.8
		% female	–	–	–	11.8	14.2
LA10	Training by management class ^{4,5}	% director	–	–	–	0.4	0.7
		% managerial	–	–	–	14.7	16.6
		% professional	–	–	–	27.8	26.0
		% supervisory	–	–	–	22.0	17.7
		% technical	–	–	–	30.4	33.7
		% others	–	–	–	4.7	5.4
SO1	Volunteer hours	hours	1,700	4,741	5,226	5,225	4,974
SO1	No. of community event	number	47	93	106	109	126
CRE8	Sustainability certification, rating and labeling schemes for new construction	number of project	12	17	28	32	53
PR5	Yearly customer satisfaction	%	100	100	100	100	100
	very satisfied	%	27	25	18	17	17
	satisfied	%	61	75	72	70	63
	neutral	%	9	0	8	10	16
	dis-satisfied	%	3	0	2	3	4
Environment							
CRE4, EN16	Carbon dioxide equivalent (CO ₂ e) emissions (Scope 1 & Scope 2) ^{*6,7}	kg/HK\$1m turnover	6,162	8,045	8,060	7,850	6,577
EN17	CO ₂ e from air travel ⁸	tonnes	423	520	331	254	289
EN4	Electricity intensity [*]	kWh/HK\$1m turnover	2,235	2,194	3,229	3,708	3,514
EN3	Diesel intensity	litre/HK\$1m turnover	1,555	2,180	1,864	1,692	1,323
EN3	Petroleum intensity	litre/HK\$1m turnover	58.9	58.3	89.8	105.2	95.9
CRE1	Energy electricity for office ^{*9}	kWh/m ² /month	15.7	16.7	15.7	15.3	15.9
EN8	Municipal water intensity [*]	m ³ /HK\$1m turnover	75.3	89.0	81.1	97.9	91.8

GRI Reference	Performance Indicators	Units	2009	2010	2011	2012	2013
Environment continued							
EN10	Recycle water	m ³	20,721	339,656	2,508,253	2,019,264	2,116,670
	% of recycle		3	29	71	62	63
EN22	Total Waste Landfilled* ¹⁰	tonnes	30,487	26,636	34,286	38,736	34,367
	Hong Kong	tonnes	28,205	25,754	33,100	37,147	32,277
	Singapore*	tonnes	2,281	882	1,186	1,589	2,090 [†]
EN22	Total waste recycled exclude rebar/steel (divert from landfill)*	tonnes	2,560	2,370	2,107	2,759	2,160
	%		8	8	6	7	6
EN22	Total waste recycled include rebar/steel (divert from landfill)*	tonnes	8,522	11,834	10,818	22,160	9,985
	%		22	31	24	36	24
EN22	Rebar/steel recycled*	kg/HK\$1m Turnover	690	998	694	1,519	571
		tonnes	5,962	9,465	8,711	19,401	7,825
EN1	Major materials used (Rebar/steel)	tonnes	–	81,339	73,662	82,890	68,803
EN22	Total inert material to public fill	tonnes	514,188	797,607	954,641	1,507,732	963,632
EN22, EN2	Total direct inert material reuse	% of reuse	34	31	51	47	52
		tonnes	267,279	364,728	995,417	1,350,304	1,048,959
	Hong Kong	tonnes	266,153	364,554	889,696	1,331,386	1,031,646
	Singapore	tonnes	1,126	174	105,721	18,918	17,314
EN28, SO8, PR4	Compliance convictions	number	0	0	1 (HK)	1 (HK)	1 (HK)
EN6	Renewable electricity generated ¹¹	kWh	–	3,760	8,008	7,992	8,873

Footnotes:

1. OHSAS 18001 certification does not include JV projects.
2. Excluded first aid case.
3. Hong Kong Group only.
4. Excluded sub-contractor number.
5. The training record is for Hong Kong & Macau and excluded the daily-paid worker.
6. Based on ISO 14064, added Towngas since 2012.
7. Include the office electricity data into the total Carbon Dioxide equivalent emissions calculation.
8. Only business air travel was counted.
9. Only offices with the electricity meter reported the office electricity data.
10. Non-hazard waste.
11. Renewable energy include solar power and wind power.

* Additional data collected, principally due to year-end account reconciliation.

[†] Estimated by amount paid.

Date	Name of Award	Issued by	Name of Project/Division
GRI Reference 2.10 – 2013 Award List			
02 May 2013	2012 Hong Kong Awards for Environmental Excellence (HKAEE) Gold Award in Construction Industry Sector	Environmental Campaign Committee	Contract No. SST333 – Redevelopment of Victoria Park Swimming Pool
02 May 2013	2012 Hong Kong Awards for Environmental Excellence (HKAEE) Bronze Award in Construction Industry Sector	Environmental Campaign Committee	Contract No. HY/2009/08 – Widening of Tolo Highway/ Fanling Highway between Island House Interchange and Fanling Stage 1 – Between Ma Wo and Tai Hang
28 May 2013	Innovative Safety Initiative Award 2013 Gold Award	Development Bureau, the Construction Industry Council and the Hong Kong Construction Association	Gammon Construction Limited
31 May 2013	Considerate Contractors Site Award Scheme 2012 Gold Award of Non-Public Works Sites – Repair, Maintenance, Alternation and Addition Works (RMAA Works)	Development Bureau & Construction Industry Council	CLP Power Outline Agreement No.4600004284 Transmission Overhead Line Reinforcement, Refurbishment, Uprating and Installation Projects in Hong Kong
31 May 2013	Considerate Contractors Site Award Scheme 2012 Gold Award of Public Works Sites – Repair, Maintenance, Alternation and Addition Works (RMAA Works)	Development Bureau & Construction Industry Council	Highways Department Term Management Contract: 20/HY/2004 Maintenance of High Speed Roads in New Territories East and Hong Kong Island (2005-2013)
30 July 2013	Workplace Safety & Health Performance Award Gold Award	Workplace Safety and Health Council	Gammon Pte. Limited
04 September 2013	15th Annual Safety Award Convention (ASAC) Excellence Award – Major Category (contracts between \$20 million and \$50 million)	Land Transport Authority	Civil & Trackworks for Addition and Alteration Works at Bishan and Ulu Pandan Depots (BBG JV)
04 September 2013	15th Annual Safety Award Convention (ASAC) Construction Environmental Excellence Award – Major Category (contracts between \$20 million and \$50 million)	Land Transport Authority	Civil & Trackworks for Addition and Alteration Works at Bishan and Ulu Pandan Depots (BBG JV)
19 September 2013	Singapore Sustainability Awards Sustainable Business Awards, Large Enterprise Category – Achievement of Excellence Award	Singapore Business Federation	Gammon Pte. Limited
05 December 2013	Hong Kong Green Awards 2013 Corporate Green Governance Award – Corporate Leadership	Green Council	Gammon Construction Limited
05 December 2013	Hong Kong Green Awards 2013 Silver Award of Green Management Award (Corporate)	Green Council	Gammon Construction Limited
05 December 2013	Hong Kong Green Awards 2013 Gold Award of Green Purchasing Award (Corporate)	Green Council	Gammon Construction Limited

GRI Content Index

Global Reporting Initiative (GRI)'s G3 Guidelines constitute a set of universal sustainability reporting indicators. The framework presents reporting areas and principles for organizations to evaluate on sustainability issues and performance.

The table shows where to find information that correspond with each GRI Indicator and provide indications of how the content of the 2013 report are in line with the GRI index.

1. Strategy and Analysis		
Profile Disclosure	Disclosure	Location of Disclosure
1.1	Statement from the most senior decision-maker of the organization.	P.1
2. Organizational Profile		
Profile Disclosure	Disclosure	Location of Disclosure
2.1	Name of the organization.	Inside front cover
2.2	Primary brands, products, and/or services.	Inside front cover
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	Inside front cover
2.4	Location of organization's headquarters.	Back cover
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	Back cover
2.6	Nature of ownership and legal form.	Back cover
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	Inside front cover
2.8	Scale of the reporting organization.	Inside front cover. Also refer to the "Key Performance Indicator Table" under online version – 2013 Sustainability Report. www.gammonconstruction.com
2.9	Significant changes during the reporting period regarding size, structure, or ownership.	No changes
2.10	Awards received in the reporting period.	P.5, P.7, P.8, P.11, P.14 and P.20

3. Report Parameters

Profile Disclosure	Disclosure	Location of Disclosure
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	Inside front cover
3.2	Date of most recent previous report (if any).	Refer to the 2012 Sustainability Report. www.gammonconstruction.com
3.3	Reporting cycle (annual, biennial, etc.).	Inside front cover
3.4	Contact point for questions regarding the report or its contents.	Back cover
3.5	Process for defining report content.	P.2
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance.	Scope of the report. Also refer to the “Key Performance Indicator Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com
3.7	State any specific limitations on the scope or boundary of the report (see completeness principle for explanation of scope).	No specific limitation
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	Inside front cover
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/periods, nature of business, measurement methods).	No significant change
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	Refer to the “Key Performance Indicator Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com
3.12	Table identifying the location of the Standard Disclosures in the report.	Refer to the “GRI Index Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com

4. Governance, Commitments, and Engagement

Profile Disclosure	Disclosure	Location of Disclosure
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	P.2 of this year report. P.7 of online version – 2004 Sustainability Report. www.gammonconstruction.com
4.2	Indicate whether the Chair of the highest governance body is also an executive officer.	P.7 of online version – 2004 Sustainability Report. www.gammonconstruction.com
4.3	For organizations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members.	P.6 of online version – 2008 Sustainability Report. www.gammonconstruction.com. The gender of member didn't mention because is not material.
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	P.2, P.6 and P.18
4.14	List of stakeholder groups engaged by the organization.	P.2
4.15	Basis for identification and selection of stakeholders with whom to engage.	P.2

Economic

Indicator	Disclosure	Location of Disclosure
Economic performance		
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	Inside front cover, P.1. Also refer to the "Key Performance Indicator Table" under online version – 2013 Sustainability Report. www.gammonconstruction.com
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change and other sustainability issues.	P.3, P.10 and P.11
EC4	Significant financial assistance received from government.	No financial assistance received from government
Indirect economic impacts		
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	P.20
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts.	P.20

Environmental

Indicator	Disclosure	Location of Disclosure
Materials		
EN1	Materials used by weight, value or volume.	Refer to the "Key Performance Indicator Table" under online version – 2013 Sustainability Report. www.gammonconstruction.com
Energy		
EN3	Direct energy consumption by primary energy source.	P.14. Also refer to the "Key Performance Indicator Table" under online version – 2013 Sustainability Report. www.gammonconstruction.com
EN4	Indirect energy consumption by primary source.	P.14. Also refer to the "Key Performance Indicator Table" under online version – 2013 Sustainability Report. www.gammonconstruction.com
CRE1	Building energy intensity.	Refer to the "Key Performance Indicator Table" under online version – 2013 Sustainability Report. www.gammonconstruction.com
EN5	Energy saved due to conservation and efficiency improvements.	P.13, P.14. Also refer to the "Key Performance Indicator Table" under online version – 2013 Sustainability Report. www.gammonconstruction.com
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	P.13, P.14. Also refer to the "Key Performance Indicator Table" under online version – 2013 Sustainability Report. www.gammonconstruction.com
Water		
EN8	Total water withdrawal by source.	Refer to the "Key Performance Indicator Table" under online version – 2013 Sustainability Report. www.gammonconstruction.com
EN10	Percentage and total volume of water recycled and reused.	Refer to the "Key Performance Indicator Table" under online version – 2013 Sustainability Report. www.gammonconstruction.com

Environmental continued

Indicator	Disclosure	Location of Disclosure
Emissions, effluents and waste		
EN16	Total direct and indirect greenhouse gas emissions by weight.	Inside front cover, P.13. Also refer to the “Key Performance Indicator Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com
EN17	Other relevant indirect greenhouse gas emissions by weight.	P.13. Also refer to the “Key Performance Indicator Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	P.13 and P.15
EN22	Total weight of waste by type and disposal method.	P.13. Also refer to the “Key Performance Indicator Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	Not transported, imported, exported or treated waste deemed hazardous under Basel Convention Annex I, II, III and VIII.
Products and services		
EN26	Initiatives to enhance efficiency and mitigate environmental impacts of products and services, and extent of impact mitigation.	P.9, P.10, P.13 and P.15
Compliance		
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	Refer to the “Key Performance Indicator Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com

Social: Labor Practices and Decent Work

Indicator	Disclosure	Location of Disclosure
Employment		
LA1	Total workforce by employment type, employment contract, and region, broken down by gender.	Inside front cover. Also refer to the “Key Performance Indicator Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com
Labor/management relations		
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	No significant change
Occupational health and safety		
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and by gender.	P.7. Also refer to the “Key Performance Indicator Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com
CRE6	Percentage of the organization operating in verified compliance with an internationally recognized health and safety management system.	ISO18001. Also refer to the “Key Performance Indicator Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	P.19
Training and education		
LA10	Average hours of training per year per employee by gender, and by employee category.	P.17. Also refer to the “Key Performance Indicator Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com

Social: Society

Indicator	Disclosure	Location of Disclosure
Local communities		
SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs.	P.17. Also refer to the “Key Performance Indicator Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com
SO9	Operations with significant potential or actual negative and positive impacts on local communities.	P.13, P15, P.16-P.17 and P.19
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.	P.13, P15, P.16-P.17 and P.19

Social: Product Responsibility

Indicator	Disclosure	Location of Disclosure
Customer health and safety		
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	Inside front cover, P.6. Also refer to the “Key Performance Indicator Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com
Product and service labelling		
CRE8	Type and number of sustainability certification, rating and labeling schemes for new construction, management, occupation and redevelopment.	Refer to the “Key Performance Indicator Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	P.2. Also refer to the “Key Performance Indicator Table” under online version – 2013 Sustainability Report. www.gammonconstruction.com



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We value and encourage dialogue on our reporting mechanism. Feedback provides insight that helps us to better communicate what is important and of interest to our stakeholders. We encourage questions or comments by contacting environment@gammonconstruction.com.

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