

# Innovation for Excellence

Sustainability Report 2015



# Scope of the Report

Gammon Construction Limited is a private company jointly owned by Jardine Matheson, an Asia-based conglomerate, and Balfour Beatty, a leading global publicly listed infrastructure business. The principle activities of Gammon are civil engineering, foundation works, building and façade construction, electrical and mechanical installation, manufacturing and supply of fabricated steel, manufacturing and selling concrete, façades and interiors, rental of plant and machinery. This report covers the operations of the company and its subsidiaries in Hong Kong and Macau, Mainland China, and Singapore for the 2015 calendar year.

G4-3, 4, 6-8, 28-30

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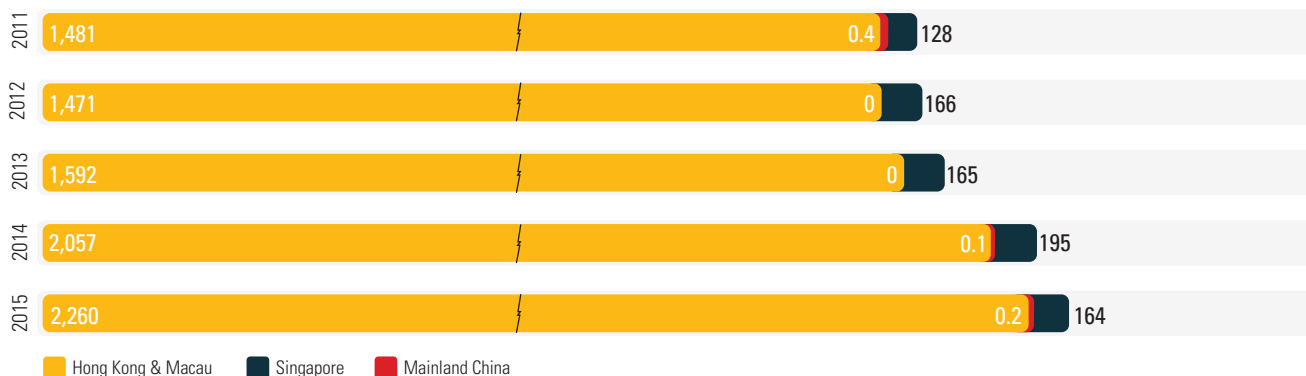
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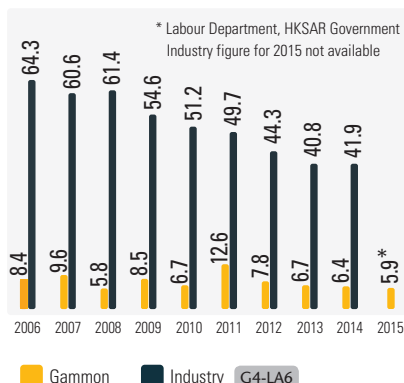
### Group Turnover by Region G4-EC1

US\$ millions

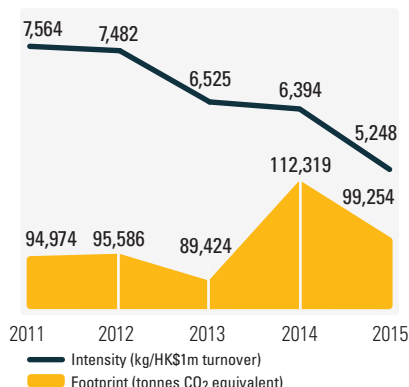


### Accident Incident Rate HK & Macau

Per 1,000 workers

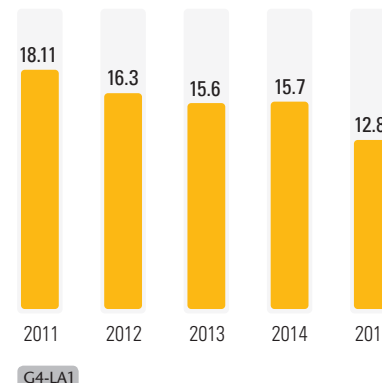


### Carbon Footprint and Intensity



### Staff Turnover Rate Group

%



## 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



Interior fit-out, external façade and general contractor

### Front Cover

Midfield Concourse, Hong Kong International Airport

The complex structure of the roof and asymmetrical ceiling panels required very detailed Building Information Modelling (BIM) to ensure accurate installation. The project was successfully completed on time, ready for the first flights on 28th December 2015.

Our full annual sustainability report is available on our website where you will find an Appendix of previous years' data for our Key Performance Indicators, and an index aligning our report and required disclosures (G4-X) with the Global Reporting initiative (GRI) G4 sustainability reporting guidelines. The report has been verified by an independent third party and details are also provided in the Appendix.



For more information and detailed performance data, please visit [www.gammonconstruction.com](http://www.gammonconstruction.com)



## Chief Executive's Statement

**Thomas Ho**  
Chief Executive  
Gammon Construction Limited

Our choice of 'Innovation for Excellence' as the theme for our 2015 Sustainability Report stems from our desire to innovate in order to address the many challenges our industry faces, both locally and globally.

We must innovate in order to prosper in this increasingly competitive market. Improving efficiencies and productivity through the use of automation, robotics, off-site fabrication and the latest technologies, has been one aspect of our innovation drive. These techniques can reduce the pressure for skilled labour as well as improve safety and excellence in the projects we deliver.

Our people are our most important asset, and getting the most from our human capital requires creative thinking. We must make sure we create the right working environment for staff in which to thrive, so one focus last year was understanding and breaking down barriers in communication across generations. We continue to encourage our project teams and Young Professional Group

to support local communities and charity partners and these activities are wonderful for staff motivation and team work.

Slowing of the market in some sectors has put stress on Hong Kong's construction industry but we cannot be complacent when it comes to our environmental footprint. The issue of carbon emissions came to the forefront last year with the UN Framework Convention on Climate Change meeting in Paris. We must play our part in the global agreement to target for a 1.5°C increase above pre-industrial levels and we have been considering both our operational and embodied carbon footprints. Progressive improvements have been made, for example, introducing B5 biodiesel to our road vehicles, upgrading our office energy efficiency, and producing lower carbon high performance concretes. Collaboration and innovation is required across the industry over the next few years, however, to address the needs for mitigation, adaptation and resilience,

I believe that our business, social and environmental endeavours are demonstrating our Innovation for Excellence and are positioning Gammon to continue to contribute to a more sustainable future for all.



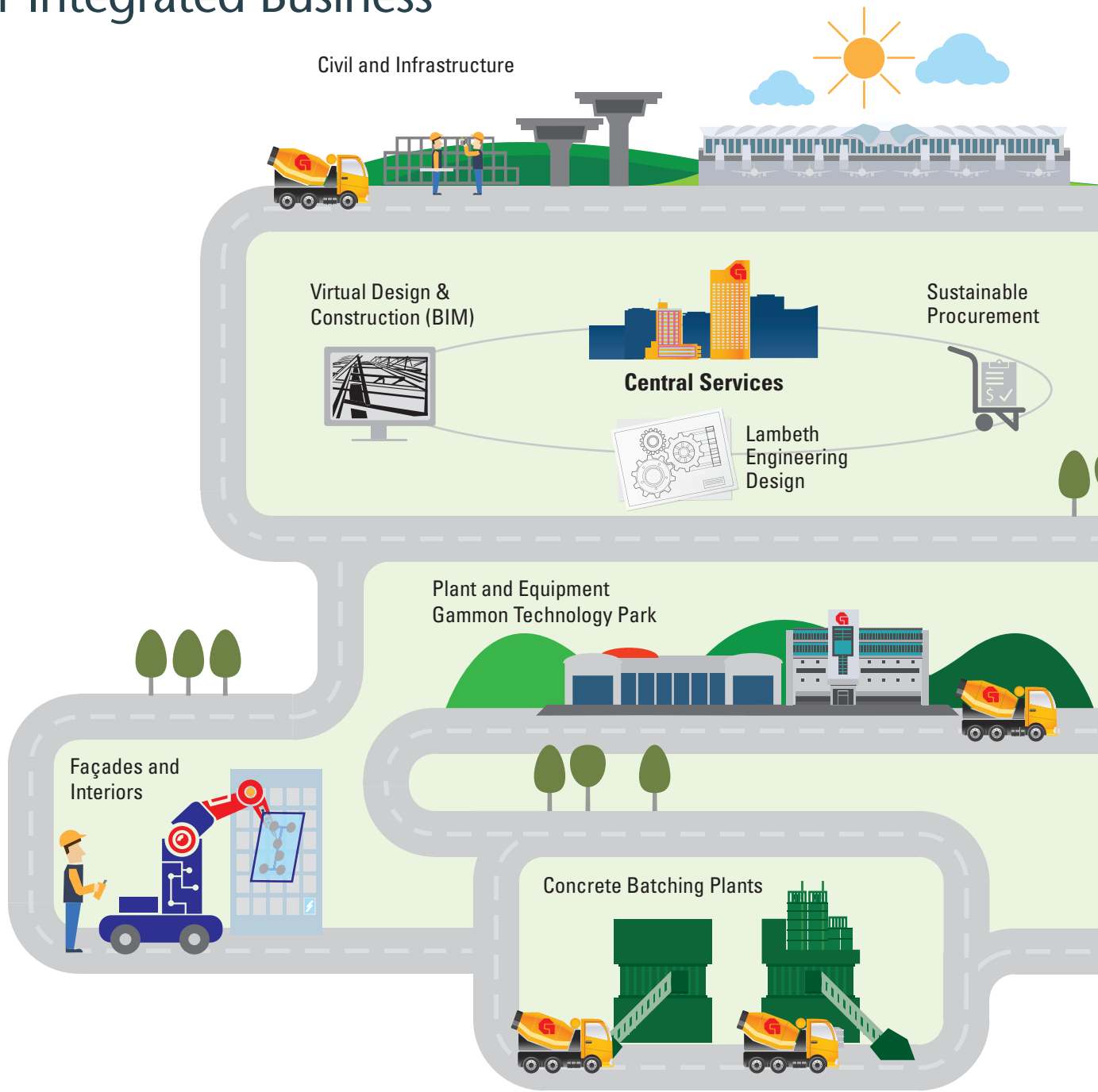
and to reduce heat stress on our workforce.

Whilst our safety record continues to look very good when compared to the industry, tragically we had one fatality on one of our sites. We cannot afford to be complacent and we continue to push strong and visible leadership across our projects. Our innovation in virtual reality safety training is also supporting our desire to achieve greater levels of safety. Whilst not directly involved, the discovery of lead in the water supply in some developments raised many questions across the industry and we have been challenging ourselves to ask tough questions on where loopholes may lie in our systems and where future risks lie.

In the face of uncertainty, I believe that our business, social and environmental endeavours are demonstrating our Innovation for Excellence and are positioning Gammon to continue to contribute to a more sustainable future for all.

# Our Integrated Business

G4-4, 8



## Corporate Governance

Gammon is fully committed to ensuring that it meets the highest standards of corporate governance.



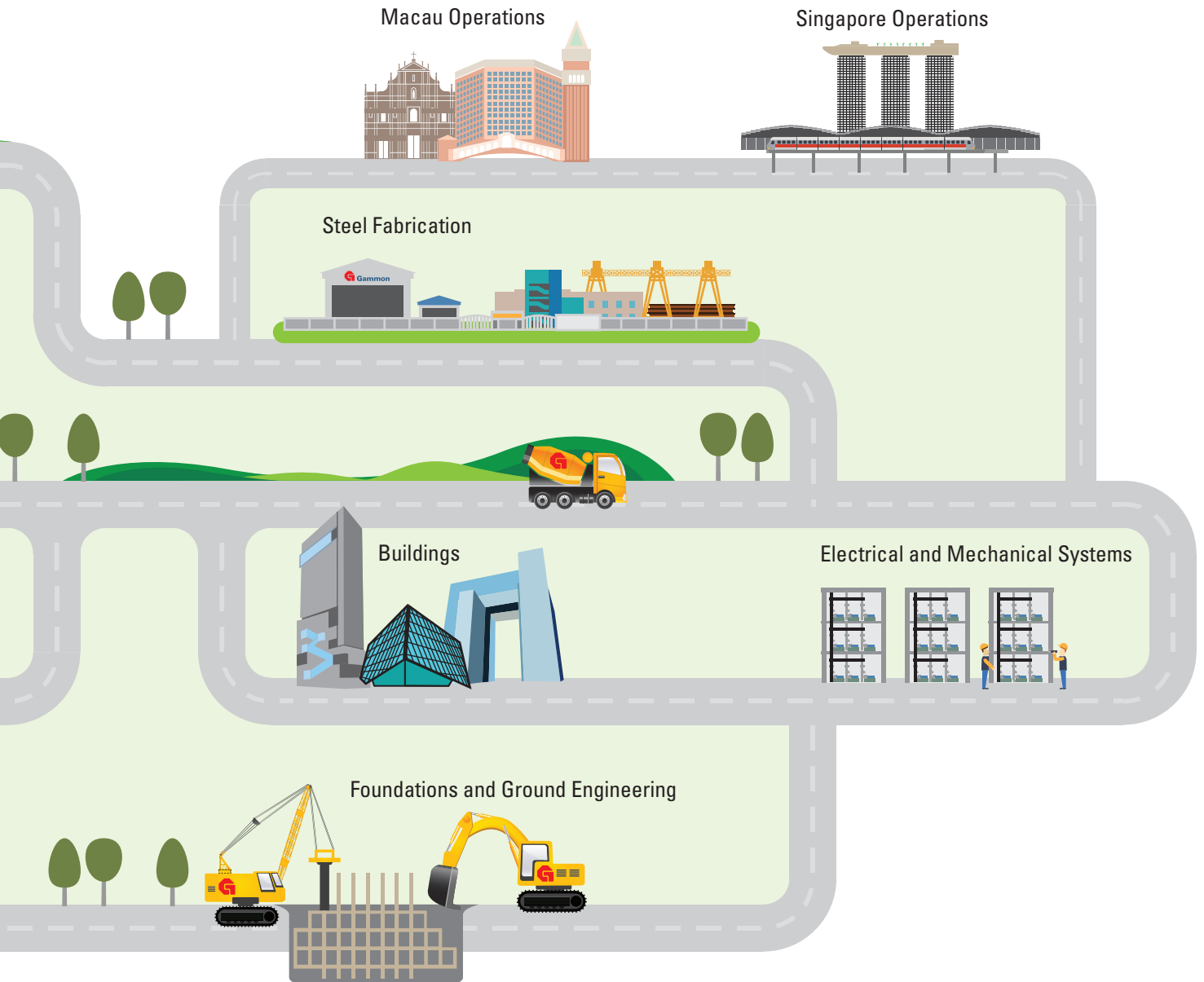
There is a clear governance structure supported by thorough management and reporting systems to ensure effective governance.

It is our responsibility to our shareholders, customers, employees

and business partners that we act with integrity. This not only means complying with applicable legal and regulatory requirements but also encompasses how we treat employees and business partners as well as how we care for the environment. A set of business principles underpins our performance consistent with these beliefs. These cover integrity, ethics, environmental responsibility, legal and regulatory compliance, the rights of our

employees and the communities where we work, and integrating these principles into our daily practice. Guidelines to explain how these principles are translated into practice are detailed in our Code of Conduct. Further information on our governance structure and our decision-making on economic, environmental and social impacts is provided in our online Appendix.

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## Sustainability Roadmap

Our Sustainability Roadmap 2020 is based on a framework of 4 pillars: Zero Harm, Prosperous Markets, Environmental Stewardship and Strong Relationships covering the typical ‘people, planet, profit’ triple bottom line but with the added attention to health and safety which is paramount to our industry. We work on 6 strategic objectives as part of a Sustainability Action Plan.

The Roadmap is governed by our Executive Directors and innovation is promoted extensively to catalyse ideas and action across the Gammon Group.

### 6 Strategic Objectives:

- Expanding Zero Harm to the whole industry
- Minimising our impact on the environment and reducing energy use – use wisely, waste less, emit less
- Procuring products, works and services that are safer and more responsible – safe and responsible procurement
- Optimising design, methods and materials and offering alternatives – reducing energy, offering alternatives
- Ensuring construction is a viable long-term industry valued by society – a caring and energetic workforce
- Adapting our skills and growing expertise to meet stakeholder needs – a leader in sustainable construction

# Stakeholder Engagement

Gammon has engaged with its stakeholders during the year through various channels including: client feedback review reports, client surveys, CEO industry luncheons, supplier workshops, media luncheons, and an internal cross-generation communication survey. These activities help us understand issues of material interest to our stakeholders and guide priorities within the business.

As part of the materiality assessment process this year, Gammon invited an independent consultant to engage with both internal and external stakeholders who either have significant impact on our business or who experience significant impact from our operations.

Through a workshop and online survey, stakeholders were requested to consider Gammon’s most significant safety, economic, environmental and social impacts, as well as to help us identify and prioritise the most important issues to be covered in this report.

## Materiality Matrix and Boundary Mapping

Gammon and the consultant compiled a list of 30 sustainability issues from various sources including previous sustainability reports, internal policies and risks reports, and the GRI G4 indicators. Respondents were asked to rate the importance of the 30 sustainability

issues on a scale of 1 to 6, with 6 as the most important. The results of the surveys are shown below.

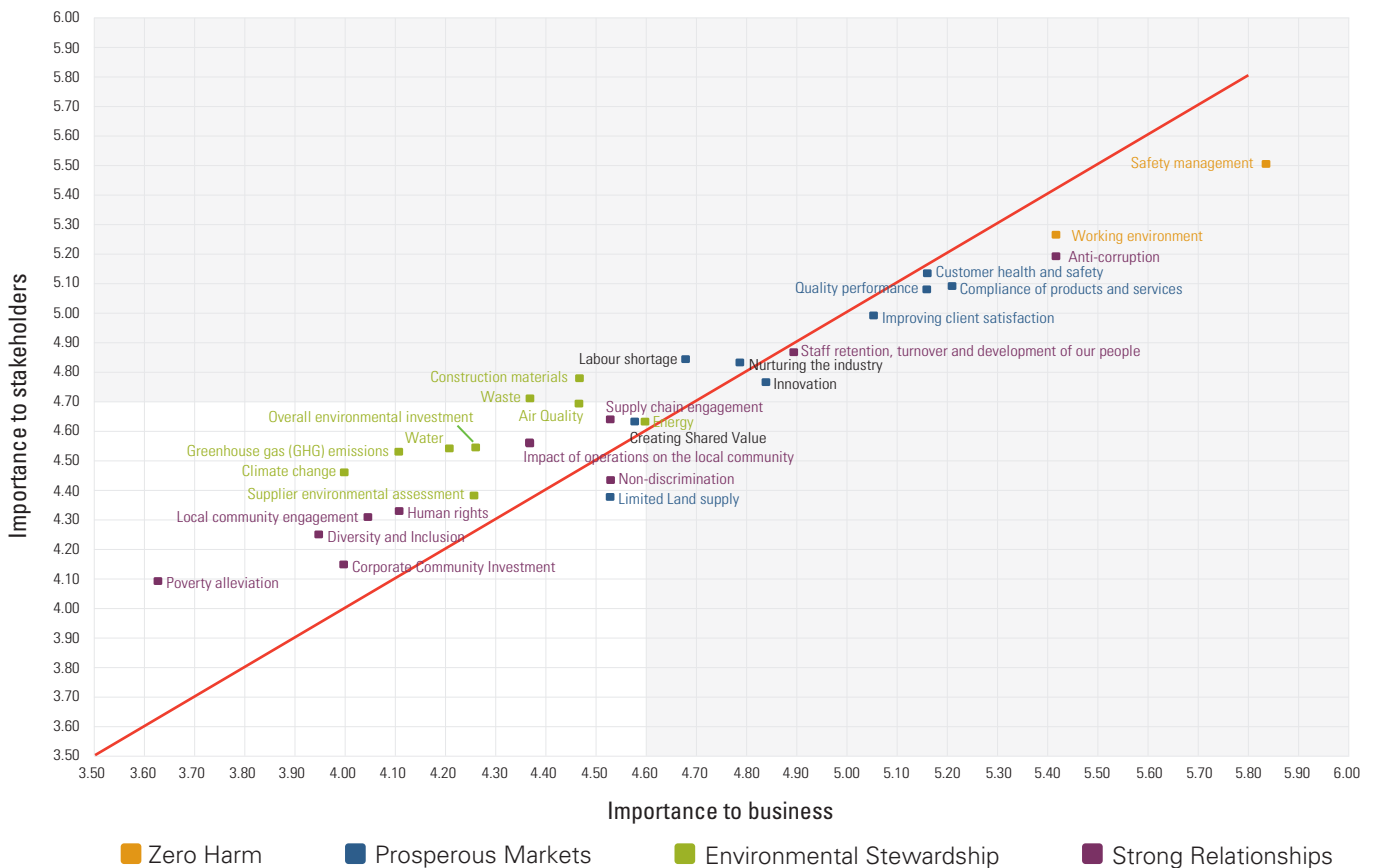
A threshold for materiality was determined and a final list of 14 material issues was validated in a workshop with senior management.

A summary of the engagement process and results from the assessment are provided in the online Appendix. The disclosures required under the GRI G4 sustainability reporting guidance are also detailed in the Appendix and are referenced throughout the report.

G4-18-27

Zero Harm		
1. Safety management	2. Working environment	
Prosperous Markets		
3. Compliance of products and services	6. Improving client satisfaction	
4. Customer health and safety	7. Innovation	
5. Quality performance	8. Leading the industry	
	9. Labour shortage	
Environmental Stewardship		
10. Construction materials	11. Waste	12. Energy
Strong Relationships		
13. Anti-corruption	14. Staff retention, turnover and development of our people	

## Materiality Matrix



# Progress on Sustainability Roadmap 2020



**Gilbert Tsang** Executive Director  
*Use wisely, waste less, emit less*

Construction waste management continues to be a challenge in Hong Kong, with limited recycling opportunities. We have therefore been focussing on material substitution and engaging with suppliers on reducing packaging waste. Unfortunately we have not met our target for direct reuse of excavated material this last year, so much of the inert material had to be sent to public filling sites, resulting in less efficient double handling. We have, however, made progress on reducing our landfill waste disposal intensity. We have continued efforts in energy efficiency and carbon reduction with very pleasing results – our carbon intensity (carbon equivalent per turnover) has reduced by 17.9% between 2014 and 2015, with much of it due to a 18.5% drop in total electricity use as well as wider uptake of B5 biodiesel. We believe we can drive further efficiencies through minimisation of wastage, particularly in major construction materials such as steel and concrete. This will also have a positive impact on our bottom line.



**Yu Sai Yen** Executive Director  
*Reducing energy, offering alternatives*

This last year we have been focussing on increasing efficiency and resource use through standardisation, modularisation and prefabrication for both our temporary and permanent works. These allow us to reduce the carbon footprint of our projects as well as reduce waste and increase productivity. Operation successes have come in the form of standardised edge protection and modular cantilever walkways. We have also been able to prefabricate integrated electrical room control units for hotel rooms in Macau, greatly saving on materials and allowing easy installation. More standardised, self-contained rest areas are also being rolled out which are easily transported and reused on different projects. Whilst precast elements are not common on building projects, we hope that greater uptake will be supported by the industry and supply chain as there can be significant benefits in resource use, efficiency and reduced heat exposure for our workforce.



**Nigel White** Executive Director  
*Safe and responsible procurement*

Selection of materials from more sustainable sources has been a core policy over the last few years. Success has been achieved in a number of notable areas including 100% B5 biodiesel use in our plant and equipment on our non joint venture project sites as well as the introduction of B5 'on the road' in 2015. Government projects will soon follow our lead, mandating B5 biodiesel use on sites later in 2016. We have also been making further efforts in certifying our supply chain such as attaining Construction Industry Council carbon labels for our concrete mixes and supporting our cement supplier with their carbon footprint assessment.



**Edmond Lai** Executive Director  
*Caring and energetic workforce*

People are at the heart of our business strategy. Last year we have focused on "High Performance Caring" – caring and welfare for improvement and results. Mentoring is now the norm for all new staff and we engage with different age and work groups through survey, feedback and on-project engagement. Our "Leading with Care" training conveys fresh thinking for our leaders to learn how best to realise the full power of a multi-generational workforce. We have also been expanding our healthcare promotion and are starting to consider how to optimise the social value we bring to the communities where we work and our charity partners.

# Awards and Recognition

## Company Awards

### Construction Industry Council

#### AWARD

- 1 CIC Innovation Awards Industry Practitioners – 1st Prize
- 2 BIM Excellence Awards 2014 Construction Innovator by BIM



1

### Singapore Building and Construction Authority

#### AWARD

- 3 BCA Green & Gracious Builder Star Award



2

### Asia Sustainability Reporting Awards

#### AWARD

- 4 Winner – Asia’s Best Supply Chain Reporting  
Finalist – Asia’s Best Carbon Disclosure Reporting

### Hong Kong Institute of Human Resource Management

#### AWARD

- 5 HR Excellence Awards 2014 – Grand Award of the Year



3



4



5



6-8



9

## Project Awards

#### AWARD SCHEME

Hong Kong Awards for Environmental Excellence

- 6 PROJECT  
Gammon – Kaden SCL 1111 Joint Venture

#### AWARD

Construction Industry – Gold Award

#### 7 PROJECT

Leighton-Gammon XRL 810A Joint Venture

#### AWARD

Construction Industry – Bronze Award

#### 8 PROJECT

Gammon Concrete Technology Department

#### AWARD

Manufacturing and Industrial Services – Bronze Award

#### AWARD SCHEME

Singapore Land Transport Authority Annual Safety Award Convention

- 9 PROJECT  
Contract 1761 Alteration & Addition Works to Existing Workshop in Bishan Depot

#### AWARD

Certificate of Excellence Major Category – Winner



# Performance Highlights

G4-CRE1, 8

Safety Performance	Environmental Performance	
<p>Accident incident rate</p>  <p><b>Group Target</b> 5.6</p> <p><b>Group Achievement</b> 5.1</p>	<p>Environmental compliance</p>  <p><b>Target</b> 0 prosecution</p> <p><b>Achievement</b> 0 prosecution</p>	<p>Implement ISO 50001 Energy Management System for Housing Authority projects</p>  <p><b>Certification Achieved</b></p>
<p><b>Economic Performance</b></p> <p>Certified sustainable timber</p>  <p><b>Achievement</b> <b>&gt;95%</b></p> <p>Value of green building project work</p>  <p><b>+23%</b> increase compared with 2014</p>	<p>Reduce municipal water usage intensity (baseline 2010)</p>  <p><b>Target</b> 20% reduction</p> <p><b>Achievement</b> 19% reduction*</p> <p>Reduce landfill waste disposal intensity (baseline 2007)</p>  <p><b>Target</b> 30% reduction</p> <p><b>Achievement</b> 35% reduction</p> <p>Diesel use for office electricity</p>  <p><b>Target</b> &lt;8 litres/m<sup>2</sup>/mth</p> <p><b>Achievement</b> 3.9 litres/m<sup>2</sup>/mth</p>	<p>B5 biodiesel use in plant and equipment<sup>+</sup></p>  <p>2013: 29%    2014: 70%    2015: 100%</p> <p>Reuse inert waste to avoid public fill</p>  <p><b>Target</b> 50% reuse</p> <p><b>Achievement</b> 30% reuse*</p> <p>Office electricity use</p>  <p><b>Target</b> &lt;16 kWh/m<sup>2</sup>/mth</p> <p><b>Achievement</b> 14.7 kWh/m<sup>2</sup>/mth</p>

**Note** \* The target for water intensity was just missed and therefore, more focus on water efficiency will be needed in 2016. The target for reuse of inert material instead of disposal at public fill sites was not achieved. This was likely due to the large volume of excavated material available and lack of alternative reception sites.

<sup>+</sup> All Gammon plant and equipment in Hong Kong except joint venture projects.

# Zero Harm



The eighth Stand Down at Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section project. Nearly 16,000 staff, subcontractor workers and joint venture partners participated in the November Stand Down to reflect on actions to improve safety.

## Promoting Excellence through Leadership

At Gammon, we believe that safety is a collective responsibility and as a leader in construction, we have an obligation to drive the industry and push for design and work practice safety excellence. This year, again, Thomas Ho, Chief Executive of Gammon, led a CEO Forum for Safety with representatives from Development Bureau, the Labour Department, the Construction Industry Council and other industry leaders. This year, with around 60% of our workforce coming from subcontractors, the focus was on raising and normalising standards across the industry.

This leadership has been recognised in a number of ways including this small selection:

- 1 million accident free man hours on both the Havelock Station and Mayflower Station projects in Singapore;
- 2 million incident free man hours on the Express Rail Terminus 811B Contract Southern Approach tunnels;
- The highest score ever achieved in Hong Kong for the DNV Independent Safety Audit for MTR (Contract 811B);
- Gold Award in the Workplace Safety & Health Awards for Supervisor Category at the Construction, Safety, Health and Security Campaign 2015 in Singapore; and
- Awards at the Singapore Land Transport Authority Annual Safety Awards.

At our annual Safety Conference, we focused on Challenging Trade Practices, and in addition to 800 colleagues we also had attendance from senior

Government officials, clients, business partners, subcontractors and expert guest speakers.

Our Zero Harm Bold Commitments\* continue to push the boundaries and challenge the industry in terms of what is considered acceptable. We therefore ensure that extra layers of protection and good practice are implemented on our sites to get them closer to our Zero Harm goal.

## Safety Performance and Reinforcement

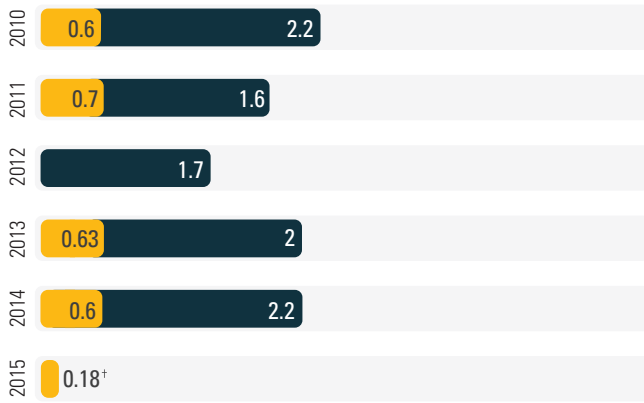
Our target for the Accident and Incident Rate (AIR) in 2015 was set at 5.6 but by the end of the year, the Group bettered the target at a rate of 5.1. Whilst these figures indicate that our efforts are paying off in many areas we, tragically, still had a fatality in 2015 from electrocution on our Harbour Area Treatment Scheme (HATS) 2A project. Detailed investigations by local and overseas experts were undertaken and methods to avoid the recurrence of such an accident are still being considered. There was also a fatal road accident involving, sadly, one of our employees. This was on a public highway, however, and was not directly associated with our construction work.

We continued with our twice annual Company Safety Stand Downs in March and November with all our staff and subcontractors. The 'Prove it Safe' theme this year was reinforced through interactive engagement with our front line workers using videos with clear messages. We also identified 35 new Safety Stars in our Safety Star Awards and continue to incentivise and



\* Our Zero Harm 'Bold Commitments' are our internal standards of safety that go beyond legal requirements or industry norms and challenge trade practices. The implementation of the Bold Commitments is driven by the senior leadership team and they are applicable to all our project operations.

**Accident Frequency Rate** Singapore  
Per 1 million man hours worked



Accident Frequency Rate, Singapore per 1 million man hours worked

Accident Frequency Rate, Singapore Industry per 1 million man hours worked

† Ministry of Manpower, Singapore Government – Industry figure for 2015 not available.



1/ Shatin to Central Link Contract 1111 Hung Hom North Approach Tunnel foundations contract won the Construction Industry Safety Award Scheme.  
2/ Gammon developed a 2D and 3D virtual reality safety training tool which allows a first person experience.

positively reinforce exceptional safety leadership across all our sites. Through coaching and support we are hoping to change mindsets and move away from a ‘blame’ culture and encouraging more ‘near miss’ reporting. There are challenges with variation across sites and companies and therefore we hope to change practices through standards and promotion so a consistent, high standard is the norm.

**Innovation in Safe Construction Methods**

As the first layer of safety protection, design and engineering for safety is at the heart of the Gammon Zero Harm culture. Our engineers continually seek alternative, safer designs and construction methods. A typical example, which was more commonly used this year, is the cantilevered walkway used on our excavation projects. The rapid installation of this walkway allows quick and safe separation of people and plant and is very easily re-used. The curtain wall installation robot and the K-Frame are other examples (see pages 12 & 13).

**Innovation in Safety Training**

Everyone working on our sites undergoes our Zero Harm safety induction training but to further strengthen and reinforce key messages, we have developed a simulated 2D and 3D virtual reality safety training tool based on gaming technology which allows a first person experience (with 3D head-mounted display glasses) as well as engagement of the whole class. Using an appealing, familiar and high-tech mode of media has been very effective and has increased active participation in training.



Our collaboration with the University of Hong Kong and University of New South Wales brought Virtual Reality Technology to our training centre. This has allowed us to challenge traditional training methods so that new entrants to the industry can now experience first-hand risks such as working at height.

**Tony Small**  
Director

## Prosperous Markets



Modular pipe risers are applied at Murray Building from the E&M module production line at Gammon Pristine in Dongguan. The time savings, enhanced safety and improvement in efficiency are substantial.

### Group Market and Performance

In Hong Kong, the market has been mixed over last year and we have continued to see a slower pace in the number of large public works contracts tendered. However, we believe the pipeline remains steady with a number of major infrastructure projects on the horizon. These are likely to include the Kai Tak Stadium, Central Kowloon Route, and the Airport 3<sup>rd</sup> Runway System, as well as further MTR extension work once current major projects are completed. The programme of public housing projects continues and private residential building market remains robust.

Our steel and modular E&M fabrication factory, Pristine, has continued to perform well and has been working on some complex and high profile projects such as the Midfield Concourse, M+ Museum and Harbourfront tower extensions.

Our Singapore business continues to do well and we see a buoyant market ahead with a strong pipeline of civil work, particularly in transport infrastructure and the expansion of the Changi Airport. We will need innovative thinking to stay ahead of our competition.

In Macau, there has been a slowing in new gaming projects but our E&M business has had success working on some of the latest hotel and casino complexes. In order to ensure the workforce meets our high electrical worker standards, a systematic approach to training has been adopted and proved to be successful. We have also been able to modularise elements such as room control units which has improved installation efficiency as well as reduced material usage and transport requirements.

In Vietnam, we have a 25% share in COFICO Construction Joint Stock Company. COFICO is a leading building contractor and its business has been doing well since the market started to pick up from 2014. We see a market of about US\$ 8 billion with an approximate real growth rate of around 5% per year and so are confident that COFICO will continue to raise its standards and grow its business.

### Driving Excellence in Quality and Productivity

The health and safety for operators and users of our finished projects has always been one of our highest concerns and ensuring the quality of our products and materials used has been built into our design, procurement, and construction methods' quality control and checking. After the issue of excessive lead levels in drinking water was discovered in the middle of the year, we worked with our clients to test our projects and no issues were discovered. We will continue to ensure competence in our workforce and ensure our quality plans and inspection procedures are robust. Whilst we wish to be as competitive as possible this is never at the expense of quality or safety.

Productivity improvements are essential for our business to prosper, particularly within the context of labour shortage, an aging workforce, increasing competition in the market and to bring the industry (particularly in Hong Kong) in line with international standards. During last year we have had an increased focus on 'inputs' (e.g. major materials, labour, costs) and their monitoring, tracking and control through key performance indicators, such as safety, wastage of materials, costs, pace of work etc. We continue

## I-Core Development

“i-Core” is a joint research project hosted by a team of post-graduates from the University of Hong Kong and Gammon. i-Core is a standalone, programmable, and extendable electronic circuit that can be implanted into construction machinery, devices, and materials to make them “smart”. Various components such as GPS, GSM, barometer, thermometer, bluetooth and gyroscope etc. can be integrated into one i-Core chip.

For a construction project with a material intensive production line, it can enable enhanced logistics management as materials can be tracked and located in real time from production to installation.

The i-Core chips were tested with pre-cast concrete panels for our Housing Authority project in Tuen Mun.



The use of in-house developed modularised E&M components for the conversion of the Murray Building to a 340-room hotel has ensured quality, reduced waste and increased productivity.

**Kevin O'Brien**  
Executive Director

to increase our direct labour force and are providing more training and multi-skilling to maximise efficiency. Our innovation drive has also emphasised alternative designs using mechanisation, modularisation, automation and prefabrication solutions, which have the potential to reduce programme, risks, wastage, and improve quality and productivity. Examples include our trial with a plastering machine, design and development of the K-Frame for bridge segment erection, and Radio-frequency identification (RFID)/QR codes use for material logistics and installation (see iCore above and case studies on pages 12 to 13).



With our focus on waste reduction and our productivity drive, we are now seeing growing momentum in productivity improvements. This trend is very pleasing both from a business and environmental perspective.

**Patricia Or**  
Executive Director



- 1/ Modular components being fabricated at Gammon Pristine.
- 2/ Our steel fabrication team has demonstrated their capability in design and quality control during installation at the Harbourfront tower extension project.

# Innovation in Action

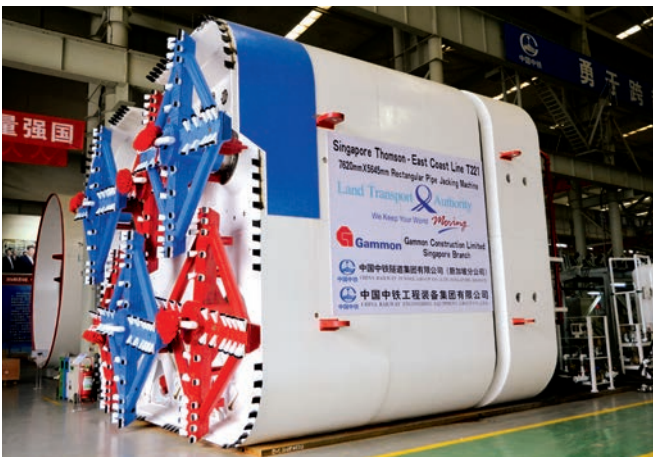
## Façade Installation Robot



In 2015 we brought the first curtain wall installation robot to Hong Kong and have been undertaking trials on one of our projects. This robotic arm reduces manpower requirements, speeds up installation, reduces physical stress on workers, enables the building to become more rapidly watertight and, improves safety to both workers and the public.

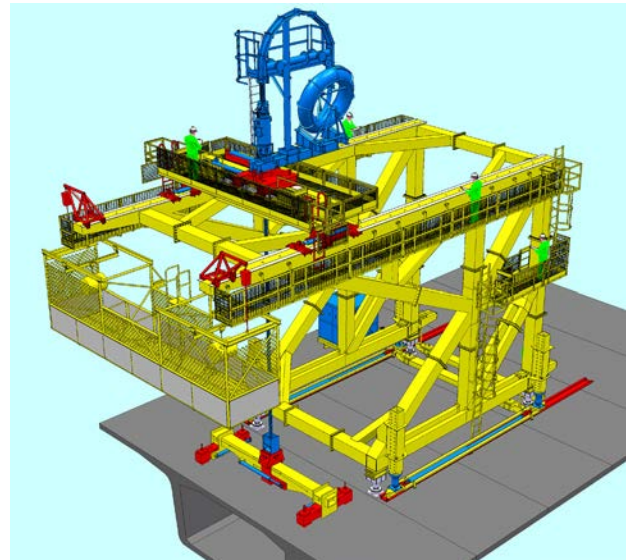
## Rectangular Tunnel Boring Machine

In Singapore, Gammon is building the Havelock Station for the Land Transport Authority as a part of the Thomson East-Coast Line. The original design included a 150m long pedestrian underpass using a conventional cut and cover method that would have involved substantial and complex traffic and utility diversions. Gammon developed an alternative design using the first box jack rectangular tunnel boring machine (TBM) in Singapore. A 30% saving in manpower due to increased productivity has been estimated from this innovation.



## K-Frame

The K-Frame is a new multi-function lifting and installation system for the erection of bridge deck segments which is able to provide the functions of four different types of machine – lifting frame, rear-fed lifting frame, straddle carrier and offloading gantry. This technology enables safer and more efficient construction, reducing time, cost and labour. The development and use of the K-Frame has demonstrated Gammon's ability to take an innovative proposal from concept to design in Building Information Modelling (BIM) through to manufacturing and use on site.



## Mechanised Construction for Concrete Structures

Our 'Mechanised Construction for Concrete Structures' was awarded 1st prize of Local Industry Practitioners at the Construction Industry Council Innovation Award. This method was adopted at our CX Cargo Terminal and Midfield Concourse projects. It replaced the traditional method of concrete structure construction, requiring no timber for falsework, and achieving factory-standard levels of quality, safety, cost control, construction programme and environmental benefits.



## Drones with 3D Photogrammetry

Gammon used drones equipped with photogrammetry to provide accurate photographic surveying and measurement to build up a complete 3 dimensional model of a construction site. This technique has offered many benefits over conventional surveying including improved accuracy, reduced manpower and cost. It also enables collection of survey data from locations that are unsafe or inaccessible for site personnel.



## RFID in Curtain Wall

In the Science Park 3c project, Gammon installed Radio-frequency identification (RFID) chips in the curtain wall panels. Through the use of RFID technology and check points, our project team could track the panel from glass arrival at the manufacture site, curtain wall unit assembly progress, delivery programme, and unit installation on site. This technology allowed clear traceability of critical components and provided real time installation data to the operation team who in turn benefitted from improved material management at this congested site.



Gammon is making strides moving away from traditional and inefficient labour-intensive construction approaches towards a future of greater automation at the cutting edge of digital technology. Challenges including the relatively low adoption rate of tools such as BIM across the industry remain. But these challenges are being overcome as Gammon demonstrates the productivity advantages of digital technology and its ability to deliver added value to customers. What's more, by taking a leadership position as a pioneer in digital technology, Gammon will continue to attract the best young minds and reinforce construction as a viable and attractive career choice for tomorrow's engineers.

**Ian Askew**  
Director



# Environmental Stewardship



*Gammon has accumulated hands on experience in precast construction in both civil infrastructure and public housing projects.*

During 2015 a number of initiatives have been gaining traction particularly in the areas of reducing the embodied carbon in our supply chain and improving environmental performance in our operations.

## Carbon Labelling 1st for Green Concretes

In 2015 we were the first Hong Kong business to receive recognition under the Construction Industry Council's Carbon Labelling Scheme for some of our high performance ready mixed concretes. Of the 10 applications we submitted, we received 6 'Outstanding' and 4 'Highly Commended' provisional labels. The independent verification under the scheme provides our clients confidence in the accuracy of products' carbon footprint when selecting lower carbon construction materials. We are currently helping our cement supplier with their application and will apply for carbon labels for more of our concrete mixes in the future.

## Reducing Carbon in Transport – B5 on the Road

Following our success in bringing in B5 biodiesel for construction plant and equipment, we worked with our fuel partner, Shell, to bring the first B5 biodiesel retail filling pump to Hong Kong in November. Shell retrofitted one of their fuel stations in order to allow us to trial B5 biodiesel in some of our concrete mixer truck fleet as well as make B5 available to the public for greater benefit. We will continue to work with our vehicle suppliers to ensure that greater uptake can be achieved across our mixer and crane lorry fleet. We have also had discussions with our shareholder's businesses to encourage their use of B5 and drive expansion of the supply network in the longer term.

## ISO 50001 Energy Management System

We developed and started to implement an Energy Management System in accordance with ISO50001. This was started on our projects working with the Housing Authority with a view to gradually extending the scope coverage to more project sites. As a result, we refocused our attention on procurement by reviewing and integrating energy efficiency into our Sustainable Procurement Policy and developing an energy purchasing specification.

## Improving Office Environmental Performance

With the expansion of our talent in Shenzhen, a new office was needed. We selected a LEED (Core and Shell) Gold level certified green building and optimised the use of green materials for the office fit out. We used zero emission (formaldehyde and volatile organic compounds) system furniture, FSC certified timber door frames and linings, low / zero emission wallpaper and carpet adhesives and efficiently zoned, T5 and LED lighting panels. To minimise dust levels we also required all carpentry and fabrication to be undertaken off-site.

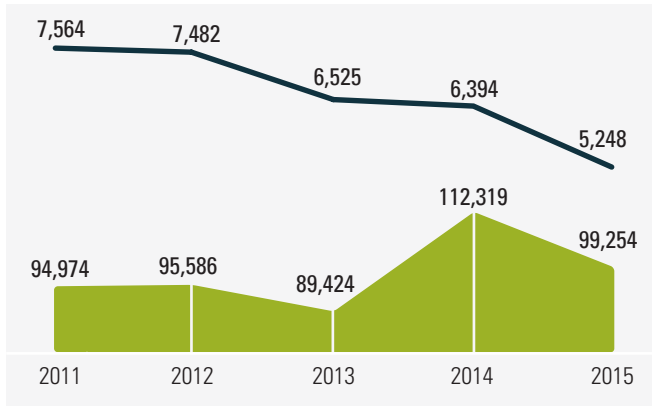
For the Gammon Technology Park we have been optimising the use of our new chiller and investigating smart metering options. Smart meters will be installed in early 2016 and after a trial period we hope to roll out gradually across our site offices for greater energy management.

## CarbonCare® Label Award

Our efforts in energy management and carbon reduction were rewarded again this year with a second CarbonCare® Label. This demonstrated our continued effort to reduce our carbon intensity by 17.4% in 2015 (compared to



### Carbon Footprint and Intensity

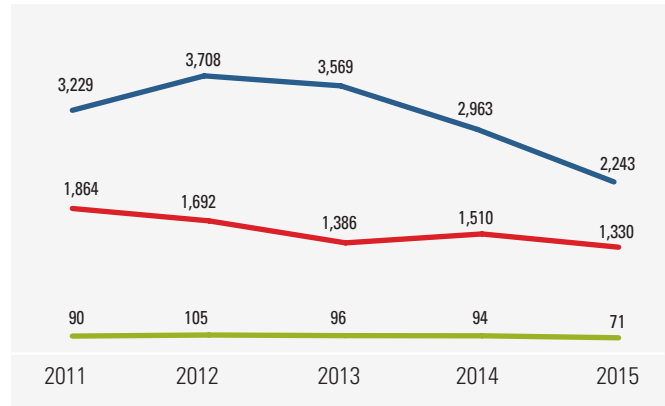


— Intensity (kg/HK\$1m turnover)  
 ■ Footprint (tonnes CO<sub>2</sub> equivalent)

Our Scope 1 and 2 emissions reduced in 2015, with a corresponding drop in carbon intensity.

G4-EN15, 16, 18, 19

### Energy Intensity



— Electricity (kWh/HK\$1m turnover)  
 — Diesel (litre/HK\$1m turnover)  
 — Petroleum (litre/HK\$1m turnover)

Our diesel and electricity use reduced mainly due to completion of 3 projects which were major contributors.

G4-EN3, 5

a base year of 2012). The scope of our label is one of the largest under the scheme as it includes all of Gammon’s operations in Hong Kong (except joint venture projects), the head office in Singapore and the steel fabrication yard in Mainland China. Our greenhouse gas emissions were independently verified in accordance with ISO 14064-1:2006.



Achieved over 17% reduction in carbon emissions.

### Reducing Impacts from Climate Change

Gammon is a member of the Advisory Group for the Business Environment Council’s Climate Change Business Forum (CCBF). We were contributors to the ‘Hong Kong Climate Resilience Roadmap for Business’ report. The report highlights the need to address risks from climate change including extreme weather events and heat exposure. It also advocates greater industry uptake of mechanisation, automation, standardisation and off-site work such as precast/prefabrication, and hot works (e.g. welding, cut and bend) to minimise heat stress. We will continue to explore how we can work with the industry to promote wider adoption of these methods, particularly since other benefits can be achieved in terms of increased productivity and reduced manpower demands in a shrinking labour market.

On our study trip to Dubai we learnt about taking a design in BIM through off-site fabrication and mechanisation and ultimately to installation on site. This approach will be invaluable for coping with projects in Asia as we see a rise in extreme temperatures due to climate change and an ageing workforce.

**Steve Lai**  
 Chairman  
 Young Professional Group



- 1/ Our high performance ready mixed concretes received 6 “Outstanding” and 4 “Highly Commended” provisional labels under the Construction Industry Council’s Carbon Labelling Scheme.
- 2/ Gammon has expanded B5 biodiesel use from project equipment to mixer trucks in close partnership with our supplier.

## Strong Relationships



*Creating a good team spirit across generations is vital for an efficient and productive team and a fulfilling and enjoyable career.*

### Increasing Skilled Worker Numbers

The success of our engagement with subcontractors in the Contractor Cooperative Training Scheme has been recognised through the Hong Kong Institute of Human Resource Management's Grand Award of the Year and Excellent Business Partner Award. Our worker training programmes have since been expanded to join the Construction Industry Council's Advanced Construction Manpower Training Scheme – Pilot Scheme. This will provide structured "on-the-job" training of semi-skilled workers to become skilled workers and so increase the supply of skilled construction workers needed to meet rising demands and maintain standards of quality.

### Overcoming Generational Barriers

In order to get a better understanding of views on communication methods and styles, we undertook a cross-generation survey this year, with some unexpected results. Even with the prevalence of social media and app-based communication, we learnt that our younger staff still prefer the personal touch – face to face communication in small groups. Armed with this knowledge, the senior staff have been focussing on more small discussions with younger team members as well as "reverse mentoring", engaging with members of the Next Generation Panel on Sustainability and working closely with members of the Young Professional Group. We are also rolling out a training programme on "Leading with Care" to provide senior staff with the tools needed for constructive cross-generation communication.

Our many social and recreational activities continue to break down barriers between generations. One example was a large, cross-discipline badminton competition held at our Shenzhen office.

### Reinforcing Integrity

Integrity is one of Gammon's core values and business ethics is fundamental to our success. In 2015 we, therefore, updated our Code of Conduct to clarify requirements under the Prevention of Bribery Ordinance and bring it in line with the new Competition Ordinance. Our Code of Conduct provides the framework for maintaining proper and ethical standards of business conduct and is included in all induction training for new staff.

### Supplier Engagement

Strong and mutually respectful relationships with our suppliers are key to the successful delivery of our projects. We therefore continue to engage with our suppliers in various ways. We held a workshop with our curtain wall supply chain in Shenzhen on our Code of Conduct, the requirements of our Sustainable Procurement Policy, reducing packaging waste, and collaboration on the Hong Kong Green Building Council's Green Product Accreditation and Standards (HK G-PASS). Other supplier workshops were held on reduction of packaging waste but there is still much to do in this area. Having introduced our key suppliers to the Construction Industry Council's Carbon Labelling Scheme, several of them received their awards, alongside several of Gammon's concrete products.

## CO<sub>2</sub> Capture Concrete

Gammon supported research undertaken by the Department of Civil and Environmental Engineering at the HK Polytechnic University into the potential recycling of cement slurry waste from concrete batching plants and fine recycled concrete aggregates from concrete crushing processing. The experiment was conducted using a flow through carbonation chamber. This implies that the technology can also utilise waste flue gas from industrial processes, such as power plants, cement kilns, and landfill gas utilisation plants resulting in carbon capture. There is, therefore, the potential for carbon capture concrete products to be developed, for instance, dry partition wall blocks, which are not only made from wastes, but are also cured by waste CO<sub>2</sub>. The project was awarded 2nd Prize for Local Academia in the CIC Innovation Awards 2015.



## Worker Healthcare

We had over 400 healthcare talks with nearly 10,000 participants on our project sites. We include both our own workforce and our subcontractors' teams in these sessions and topics target key risks such as heat stroke, hypertension, diabetes, high cholesterol as well as promoting exercise to avoid injury and healthy lifestyles. We started to roll out a tailored programme on smoking cessation. We also conducted over 16,000 health checks, particularly targeting the older members of our workforce, and making follow up recommendations if issues were identified.



- 1/ Our Next Generation Stakeholder Panel on Sustainability represents the voice of young professionals interested in sustainability at Gammon and provides views directly to senior levels.
- 2/ Our Procurement Department organised several workshops with our supply chain to work together on reducing packaging waste.
- 3/ Our 'Leading with Care' training programme aims to enhance cross-generation communication and develop positive leadership practices amongst management personnel.
- 4/ A badminton competition was held at our Shenzhen office to enhance cross-discipline and cross-generation communication.
- 5/ Gammon received the Sustained Performance (6 years +) Award and Green Purchasewise Gold Award from the Green Council.

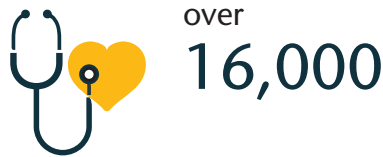
# Contributing Social Value

## Social Performance

Charity donations



Number of health checks in Hong Kong



Group volunteer hours



Health talks and workshops



## Young Engineers Spread Zero Harm in Sri Lanka

In August 2015, 13 of our Young Professional Group members went to Kinniya, Sri Lanka to refurbish a pre-school and rebuild its roof which had been devastated by the tsunami in 2004. The team took the project through planning, to design and building on-site with the help of local villagers. The villagers received safety training and personal protective equipment and embraced the Gammon Zero Harm culture, even training in qi gong! The team was also able to re-use the old roof tiles to create a fence along the boundary instead of barbed wire. In addition to giving back to the local community, the team gained valuable experience and a new perspective of how physically demanding construction work can be!



## Gammon Runners Club



Gammon started the Runners Club in 2009 and has over 220 members. The objective of setting up the Club was to advocate a healthy lifestyle and work-life balance. The Runners Club has regular practices and races that keep every member motivated to run. In addition to promoting the benefits of exercise and healthy living, the Club has participated in 24 community events including the CyberRun for Rehab, Unicef Run, and the 30km Shek Kong Run and has raised nearly HK\$90,000 in the past 6 years.

Members of the Club come from different positions within the company, and the casual atmosphere and common interest encourages interdisciplinary and cross-generation communication during events, resulting in a strong team spirit. Also, the Club stimulates self-discipline in members and helps them face challenges, whether they are in competition or in work.

# Green and Caring Site Commitment



Over the past four years, Gammon has been making concerted efforts to improve the working conditions for our workers. The working conditions on project sites can be physically demanding and, therefore, to raise the standards of welfare, hygiene, environmental performance and, safety standard is important.

Gammon extended the Green and Caring Site Commitment Scheme (G&CSCS) programme to the Concrete and Steel departments in August 2014 and our concrete batching plants at Tsing Yi, Midfield, and Austin all achieved the 'Green

Flag' award in 2015. The Harbourfront steelwork project also attained a Green Flag in 2015. This was a significant achievement as our team is working in a subcontracting role but has been able to drive improvements across the project. Due to the hard work of project teams in 2015, over 90% of our projects achieved a Silver or Green Flag status, with standards improving in site set-up, office, welfare, safety, and care for the environment.

G&CSCS aims to motivate for change through positive reinforcement, so in 2015, about HK\$280,000 in Green Flag cash prizes were given to project teams who achieved Green Flag status. The winning sites receive a flag indicating they represent a model site and have achieved a higher standard beyond that which our client requires or the government mandates.



Whilst much of our progress and achievements in sustainability are evidenced on many sites, we still need to work harder on raising standards, and implementing initiatives consistently across all of our projects.

**Lui Yuen Tat**  
Executive Director

- 1/ Energy consumption is reduced through the use of solar heated hot water for showers at LOHAS Park IV foundation contract.
- 2/ Neat and clearly labelled material storage at Tsing Yi Batching Plant allows good management and prevents unnecessary damage or wastage of materials.
- 3/4 Safe access routes are provided to all workplaces at Tsing Yi Batching Plant including slip prevention matting, designated pedestrian crossings, warning lights, buzzer, and drop bars.



## Success Stories

### Productivity improvements in Singapore

On the Thomson-East Coast Line Mayflower Station project in Singapore, Gammon has implemented two innovative ideas in order to improve productivity on site.

**Carpet reinforcement** – This is a method of laying steel reinforcement bars by rolling them out as carpets instead of individual bars. This method improves productivity by greater than 30%, saving both time and manpower for reinforcement works.

**Concrete canvas** – Concrete canvas was used to construct slopes and drains instead of using traditional lean concrete. The canvas comes as a flexible sheet that can be laid onto any surface, pegged on to the ground and hydrated with water. Once hydrated, the canvas hardens to gain the strength of normal concrete. This method saves substantial time and labour and results in productivity improvements of over 60%.



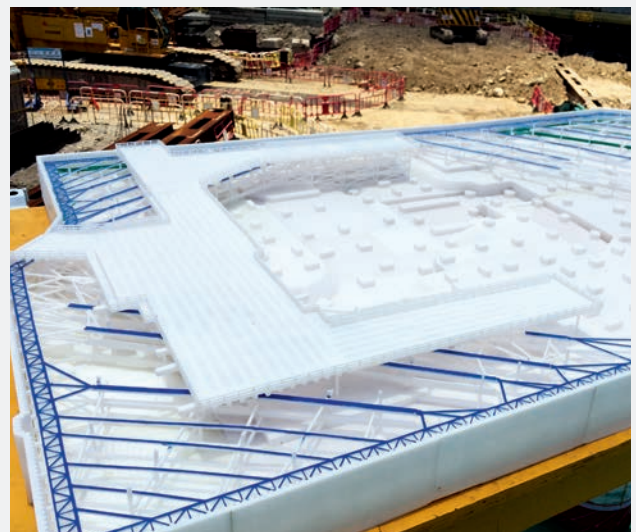
Gammon Singapore, through the Building Construction Authority productivity incentive schemes, has implemented many innovative and value engineered schemes successfully at our mega projects.

**Hee Wee Tan**  
Executive Director

### Temporary Works Modularisation and Innovation on Foundation Works in Tseung Kwan O

For our foundation project at Tseung Kwan O Area 68B2 we introduced modularisation of a prefabricated walkway as part of the temporary works. For the excavation and lateral support works, our latest approach for improved site access is a cantilevered bracket clamped onto the sheet pile wall. However for this project, one sheet pile wall was aligned directly along the site boundary, which did not permit use of this approach. The project team therefore developed a reusable and modular prefabricated walkway system installed on the waling to provide a safe 2m wide walkway and works access along the 200m length northern boundary. All the prefabricated elements were designed with lifting eyes for safe lifting, can accommodate temporary utilities, and are of dimensions that are easily handled during installation

and removal without welding or cutting. Other innovative initiatives on this project included the use of a 3D printed model for better communication with the client and the operations team, as well as drone surveying and photography for enhanced logistics planning.



# Green Building Projects

## Science Park Phases 3a and 3b, Hong Kong

The Hong Kong Science Park Phases 3a and 3b project included the construction of three 8 to 9-storey research and development office and laboratory buildings which continue the vision of exemplary green buildings at the Science Park. All three buildings showcase a green construction approach including sustainable sourcing, low or no volatile organic compound fit-out materials, and minimised construction waste. In addition, the sustainable design included the application and installation of natural ventilation, energy and water-efficient systems and fittings, and renewable energy generated from solar photovoltaic panels.

Within the project, Building 12W achieved the Leadership in Energy and Environmental Design (LEED) Platinum standard, and all three buildings in the project achieved the Hong Kong Building Environmental Assessment Method (BEAM) Plus Platinum level after the final assessment in 2015.



Hong Kong Science Park Phase 3 Main Works Contract for Phase 3a and 3b – BEAM v1.1 Final Platinum.

The following are a selection of our green projects that are ongoing or have been completed in 2015.

G4-CRE8

- 1/ Residential and Commercial Development at 18 Tong Chun Street, Tseung Kwan O, BEAM Plus v1.1 Provisional Gold.
- 2/ WHITESANDS is targeting to achieve BEAM Plus Platinum in 2016.
- 3/ AREZZO is targeting to achieve BEAM Plus Platinum in 2016.



# GRI Content Index

This report has been prepared in accordance with the Core requirements of the Global Reporting Initiative (GRI) G4 Guidelines. The General Standard Disclosures and material Specific Standard Disclosures are presented below with reference to the location in the report, the Appendix (App) or Key Performance Indicators (KPI) summary or a direct answer.

General Standard Disclosures			
General Standard Disclosures	Description	Page	Content Reference
<b>STRATEGY AND ANALYSIS</b>			
G4-1	Statement from the most senior decision-maker of the organisation	1 3	Chief Executive's Statement Sustainability Roadmap
<b>ORGANISATIONAL PROFILE</b>			
G4-3	Company Name	Inside cover	Scope of the Report
G4-4	Primary brands, products and/or services	Inside cover 2 & 3	Scope of the Report Our Integrated Business
G4-5	Location of headquarters	Back cover	Headquartered in Hong Kong
G4-6	Number of countries where the organisation operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report	Inside cover	Scope of the Report
G4-7	Nature of ownership and legal form	Inside cover	Scope of the Report
G4-8	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries)	Inside cover 2 & 3 App p.26	Scope of the Report Our Integrated Business Supplementary Information
G4-9	Scale of the organisation	App p.38 App p.26	Key Performance Indicators Supplementary Information
G4-10	Total workforce by employment type, employment contract, and region, broken down by gender	App p.38-39	Key Performance Indicator
G4-11	Percentage of employees covered by collective bargaining agreements	App p.26	Supplementary Information
G4-12	Description of supply chain	App p.26 App p.38	Supplementary Information Key Performance Indicators
G4-13	Significant changes during the reporting period regarding size, structure, or ownership	App p.28	Supplementary Information
G4-14	Report whether and how the precautionary approach or principle is addressed	App p.28	Supplementary Information
G4-15	Adoption of external charters, principles or initiatives	App p.28	Supplementary Information
G4-16	Memberships of associations and advocacy organisations	App p.28	Supplementary Information
<b>IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES</b>			
G4-17	Entities included in consolidated financial statements and not covered by this report	App p.29	Supplementary Information



## General Standard Disclosures continued

General Standard Disclosures	Description	Page	Content Reference
<b>IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES <small>continued</small></b>			
G4-18	Process for defining the report content and the aspect boundaries	4 App p.29	Stakeholder Engagement Supplementary Information
G4-19	Material aspects identified in the process for defining report content	4 App p.30-31	Stakeholder Engagement Supplementary Information
G4-20	Aspect boundary within the organisation for each material aspect	4 App p.30	Stakeholder Engagement Supplementary Information
G4-21	Aspect boundary outside the organisation for each material aspect	4 App p.30	Stakeholder Engagement Supplementary Information
G4-22	Restatement of information	App p.40	Key Performance Indicator “Notes”
G4-23	Significant changes from previous reporting periods in the scope and aspect boundary	–	No significant changes in the scope and boundary
<b>STAKEHOLDER ENGAGEMENT</b>			
G4-24	Stakeholder groups engaged	4 App p.30-31	Stakeholder Engagement Supplementary Information
G4-25	Identification and selection of stakeholders	4 App p.30-31	Stakeholder Engagement Supplementary Information
G4-26	Stakeholder engagement approach	4 App p.30-31	Stakeholder Engagement Supplementary Information
G4-27	Key topics and concerns raised by stakeholders and the response	4 App p.32-33	Stakeholder Engagement Supplementary Information
<b>REPORT PROFILE</b>			
G4-28	Reporting Period	Inside cover	Scope of the Report
G4-29	Date of most recent previous report	–	The ‘Sustainability Report 2014 – Challenging the Norm’ was our most recent report
G4-30	Reporting cycle	Inside cover	Scope of the Report
G4-31	Contact point for questions regarding the report or its contents	Back cover	The contact email is provided on the back cover
G4-32	GRI content index	–	This report has been prepared in accordance with ‘Core’. This table is the GRI Content Index
G4-33	Policy and current practice with regard to seeking external assurance for the report	App p.51-54	The independent external verification statement from British Standards Institution is provided
<b>GOVERNANCE</b>			
G4-34	Governance structure	App p.33 App p.48	Supplementary Information Organisation Chart
<b>ETHICS AND INTEGRITY</b>			
G4-56	Values, principles, standards and norms of behaviour	–	See our Code of Conduct website: <a href="http://www.gammonconstruction.com/en/upload/doc/sustainability/Code_of_Conduct.pdf">http://www.gammonconstruction.com/en/upload/doc/sustainability/Code_of_Conduct.pdf</a>

## Specific Standard Disclosures

Specific Standard Disclosures	Description	Page	Content Reference
G4-DMA	Disclosures on management approach	App p.34-37	Supplementary Information

## Economic

### Aspect: Economic Performance

G4-DMA	Disclosures on management approach	3 10 & 11	Sustainability Roadmap Prosperous Market
G4-EC1	Direct economic value generated and distributed	Inside front cover App p.38	Group Turnover by Region chart Key Performance Indicators

## Environmental

### Aspect: Materials

G4-DMA	Disclosures on management approach	App p.34	Supplementary Information
G4-EN1	Materials used by weight or volume	App p.39	Key Performance Indicators

### Aspect: Energy

G4-DMA	Disclosures on management approach	14 & 15	Environmental Stewardship
G4-EN3	Energy consumption within the organisation	15 App p.39	Energy Intensity chart Key Performance Indicators
G4-EN5	Energy intensity	15 App p.39	Energy Intensity chart Key Performance Indicators
G4-CRE1	Building energy intensity	7 App p.39	Performance Highlights Key Performance Indicators

### Aspect: Emission

G4-DMA	Disclosures on management approach	14 & 15	Environmental Stewardship
G4-EN-15	Direct greenhouse gas (GHG) emissions (Scope 1)	15 App p.40	Carbon Footprint and Intensity chart Key Performance Indicators
G4-EN16	Energy indirect GHG emissions (Scope 2)	15 App p.40	Carbon Footprint and Intensity chart Key Performance Indicators
G4-EN17	Other indirect GHG emissions (Scope 3)	App p.40	Key Performance Indicators
G4-EN18	GHG emissions intensity	15 App p.40	Carbon Footprint and Intensity chart Key Performance Indicators
G4-EN19	Reduction of greenhouse gas emissions	5 14	Carbon footprint reduction Carbon footprint

### Aspect: Effluent and Waste

G4-DMA	Disclosures on management approach	App p.34	Supplementary Information
G4-EN23	Total weight of waste by type and disposal method	App p.40	Key Performance Indicators

## Social: Labour Practices and Decent Work

### Aspect: Employment

G4-DMA	Disclosures on management approach	App p.34-35 16 & 17	Supplementary Information Strong Relationships
G4-LA1	New hires and employee turnover	Front cover	Staff Turnover Rate chart

## Specific Standard Disclosures continued

Specific Standard Disclosures	Description	Page	Content Reference
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### Social: Labour Practices and Decent Work continued

#### Aspect: Occupational Health and Safety

G4-DMA	Disclosures on management approach	App p.35	Supplementary Information
G4-LA5	Workforce represented in formal joint management – worker health and safety committees	App p.35	Supplementary Information
CRE6	Internationally recognised health and safety management system	App p.38	Key Performance Indicators

#### Aspect: Training and Education

G4-DMA	Disclosures on management approach	9 16 App p.36	Innovation in Safety Training Increasing Skilled Worker Numbers Supplementary Information
G4-LA9	Average hours of training per year per employee	App p.39	Key Performance Indicators

### Social: Society

#### Aspect: Anti-corruption

G4-DMA	Disclosures on management approach	App p.36	Supplementary Information
G4-SO4	Communication and training on anti-corruption policies and procedures	–	100% of governance body members, employees and business partners have received training/communication on Gammon's anti-corruption policies and procedures

### Social: Product Responsibility

#### Aspect: Customer Health and Safety

G4-DMA	Disclosures on management approach	App p.37	Supplementary Information
G4-PR1	Significant product and service categories for which health and safety impacts are assessed for improvement	App p.38	Key Performance Indicators

#### Aspect: Product and Service Labelling

G4-DMA	Disclosures on management approach	4	Stakeholder Engagement
G4-PR5	Results of surveys measuring customer satisfaction	App p.39	Key Performance Indicators
G4-CRE8	Sustainability certification, rating and labelling scheme for new construction, management, occupation and redevelopment	7 App p.39 App p.49-50	Performance Highlights Key Performance Indicators List of Green Building Projects

#### Aspect: Compliance of Products and Services

G4-DMA	Disclosures on management approach	4 App p.37	Stakeholder Engagement Supplementary Information
G4-PR9	Significant fines for non-compliance with laws and regulations concerning the provision and use of product and services	App p.38	Key Performance Indicators

# Supplementary Information

## General Standard Disclosures

### Organisational Profile

#### Sectors and Customers G4-8

The principle activities of Gammon are civil engineering, foundation works, building and facade construction, electrical and mechanical installation, manufacturing and supply of fabricated steel, manufacturing and selling concrete, interiors, rental of plant and machinery.

Our clients include the following:

- Government Works departments and other Government Authorities;
- Transport and utilities providers;
- Commercial, residential and industrial property developers;
- Property and other built asset owners; and
- Other contractors.

#### Total Capitalisation and Product/Service Supplied G4-9

The quantity of our products or services is highly complicated due to the varied and integrated nature of our business. We have therefore provided information on our turnover and number of active projects during 2015 in our KPI table. Our current project listing can be found in our magazine, 'The Record' which is published twice a year and can be found on our website at: <http://www.gammonconstruction.com/en/html/press/publications.html>. We are not able to disclose details of our capitalisation as this information is commercially sensitive.

#### Collective Bargaining Agreements G4-11

The majority of Gammon's employees are based in Hong Kong and Singapore. There is no statutory recognition of collective bargaining agreements in Hong Kong. In respect of Singapore there is statutory recognition of collective bargaining agreements and if applicable to the construction industry any collective bargaining agreements would be complied with. We will endeavour to report the percentage of total employees covered by collective bargaining agreements in Macau, Mainland China and Singapore in the next reporting cycle.

Our Code of Conduct, however, details our commitments to ensure the rights of our employees and provide an avenue to raise grievances. Our Code of Conduct is publicly available and can be viewed on our website ([http://www.gammonconstruction.com/en/upload/doc/sustainability/Code\\_of\\_Conduct.pdf](http://www.gammonconstruction.com/en/upload/doc/sustainability/Code_of_Conduct.pdf)). Employees are allowed the freedom to join any union of their choice and the company will not interfere in this regard. Due to reasons of privacy, we do not take records of who in our company are members of unions.

#### Supply Chain G4-12

Gammon has a structured process and database for managing its Supply Chain. Gammon's Supply Chain Management System includes approvals of subcontractors and suppliers, conducting performance appraisal half yearly, selection and evaluation of preferred/strategic subcontractors and suppliers.

We developed our Sustainable Procurement Policy in 2011 (updated in 2015) which sets out a framework for our procurement process. Our Sustainable Procurement Policy is shown below. It is our policy to act fairly and equally in business dealings with vendors and at the same time to purchase responsibly and obtain the best possible value for money in procuring materials, services, plant and equipment. The following steps summarise our procurement procedures.

#### *Step One – Customer Requirement*

The project and procurement teams will work with the client to understand and capture the specifications and requirements. This will ensure the configuration of the procurement strategy and the key suppliers selection criteria will have the correct characteristics to meet the requirement of the client.



## Sustainable Procurement Policy

### Objectives and Aims

Sustainable procurement means appreciating and managing the social, ethical, safety, environmental and economic value associated with our supply chain and materials selection. We recognise our overall approach and decisions in procurement of products, works and services have major implications on socio-economic conditions and the environment. Improving our procurement performance is an ongoing process and our suppliers, both large and small, are important partners in our journey to become more sustainable.

Our objective is to embed sustainability in our supply chain and procurement processes. We will apply high standards and best practices incorporating the principles of sustainable procurement in the selection of materials, suppliers and subcontractors, taking account of their economic, social, ethical, safety and environmental performance. We aim to reduce and minimise our impacts on the environment and communities through better selection and improved usage of products, works and services. We engage, support and develop our supply chain so it is safer, more socially responsible and has less environmental impact.

### The Policy Statement

Managing and improving socio-economic and environmental conditions in our supply chain is a challenging process requiring the efforts of our employees, our suppliers and subcontractors, and other stakeholders. We will work collaboratively with key suppliers and subcontractors to change practices and strive for sustainability improvements through the supply chain in the following three key areas:

#### Customers & Markets

- Assisting and working with our customers and supply chain partners in delivering sustainability through partnering to achieve our common goals and continually improve performance over time.
- Delivering sustainable solutions and working practices with our supply chain to achieve efficiencies and better value.
- Complying with all environmental legislative and regulatory requirements in the procurement of products, works and services.

#### Responsible Sourcing

- Ensuring our suppliers and subcontractors conduct their business with us adhering to the Gammon Code of Conduct.
- Ensuring sustainability credentials are considered as part of our selection and approval of suppliers and subcontractors.
- Striving to procure products which are ethically and, if practical and possible, locally and regionally produced.
- Ensuring that all relevant employees are aware of the Sustainable Procurement Policy.
- Expecting suppliers and subcontractors to communicate the requirements of this policy to all their employees, suppliers, subcontractors and other stakeholders engaged in their supply chain.

#### Zero Harm & Environmental Stewardship

- Sourcing products and services that improve the safety for our people, contractors, customers and that of the wider public.
- Integrating environmental factors into procurement decisions where external authorities have not established criteria, particularly for plant with significant energy use, such as: replacing disposables with reusable or recyclable materials; supporting eco-labelling practices by buying products bearing such labels in preference to others, buying products with higher energy efficiency, where they are available and provide value for money.
- Avoiding products with harmful substances.
- Evaluating and encouraging the use of products and services based on embodied carbon and transport as well as energy use.

This policy will be made available to all stakeholders. This policy shall be reviewed periodically as we gain knowledge, capabilities and experience.

Thomas Ho  
Chief Executive  
Gammon Construction Ltd.

October 2015

**Step Two – Validation of Suppliers**

A sourcing plan will be determined that will translate the key supplier selection criteria into a procurement strategy that will be utilised to optimise the procurement solution. The project and procurement teams will challenge and question potential suppliers to uncover any financial, technical, safety, environmental and corporate social responsibility issues that might compromise their ability to supply and deliver reliably in the construction stage. Supplier visits are crucial to validate the supplier's capabilities and previous experience.

**Step Three – Request for Quotation Process**

The procurement team will coordinate all the communication, guidance and support to ensure the suppliers understand and can meet the demands of the procurement process. They will prepare and issue tender documentation to ensure an efficient and competitive response from the suppliers. Following receipt of quotations they will assess compliance; evaluate pricing proposals; understand order fulfilment in terms of delivery timings and logistics; conduct risk assessment; carry out factory visits, as needed, by our Quality Engineers to audit the suppliers manufacturing quality systems and control, capacity and capability; confirm safety, environment and social aspects; and develop recommendations related to construction programme and supplier risk management.

**Step Four – Negotiation**

Gammon will initiate and lead the supplier negotiation of contract terms in complying with the requirements of the client. We will collaborate with the Client to develop appropriate negotiation strategies and plans, offer tactical alternatives for effective negotiation, and recommendation.

**Step Five – Product Mock Up and Supplier Approval**

Following the validation of a potential supplier's ability to supply and deliver the products, we will arrange sample delivery and/or mock up in the manufacturing facilities of the suppliers or the site to review design, application and quality. The suppliers and products will be reviewed for acceptance and approval and recommended for translation to specification in the contract document for execution at the construction stage.

**Organisational Changes** G4-13

There have been no significant changes during the reporting period regarding Gammon's size, structure or supply chain.

**Precautionary Approach** G4-14

As stated in our Code of Conduct: 'We shall adopt a precautionary approach in our operations and conduct an environmental review for every new undertaking to identify the significance of impacts associated with the activities under our control. A risk management process will also be applied whereby actions will be taken to identify those potential threats of serious or irreversible environmental damage and to deal with them using best available technology taking into account what is technically feasible and economically viable within our influence and customer requirements.' Our risk management approach covers all elements of our operations including tenders, projects, functions, and corporate level operations. The process forms an integral part of our business management system and is formalised and documented in our Risk and Opportunity Management procedure.

**External Initiatives** G4-15

The list of externally developed economic, environmental and social charters, principles, and other initiatives to which Gammon subscribes or endorses is shown on page 41-45.

**External Organisations** G4-16

Gammon's memberships of external organisations are shown on page 46-47.

## Identified Material Aspects and Boundaries

### Report Content Coverage G4-17

All entities within Gammon Construction Limited (Gammon Group) have been included in the coverage of this report. They include the following subsidiaries:

- Gammon Building Construction Limited (GBCL)
- Gammon Engineering & Construction Company Limited (GECCL)
- Gammon E&M Limited (GEM)
- Gammon Construction Limited – Singapore Branch (GCL – Singapore)
- Gammon Pte. Limited (GPL)
- Dongguan Pristine Metal Works Ltd. (Pristine)
- Entasis Limited (Entasis)
- Lambeth Associates Limited (Lambeth)
- Gammon Plant Limited (Gammon Plant)

### Process for Defining the Report Content and the Aspect Boundaries G4-18

We worked with an independent external consultant to determine Gammon's material issues. The external consultant undertook the following steps:

- A. Identify relevant topics.
- B. Stakeholder workshop
- C. Online surveys
- D. Management workshop

#### **A. Identify relevant topics**

The external consultant started by compiling a list of issues that are relevant to Gammon, its locations of operation, and the construction sector by considering various sources, including:

- Material issues listed in Gammon's 2014 report
- GRI G4 indicators and the G4 Construction and Real Estate Sector Supplement
- Media reports and press releases about Gammon
- Risks identified in Balfour Beatty's Annual Report
- The Sustainable Development Goals
- Global Risks Perception Survey 2014 conducted by the World Bank
- CSR Asia's CSR in 10 research
- Gammon's internal opinion surveys for employees, customers and suppliers and subcontractors

#### **B. Stakeholder workshop**

The external consultant facilitated a two-hour stakeholder workshop that engaged 30 of Gammon's key external stakeholders. Stakeholders were selected based on their understanding of the construction sector in Hong Kong, knowledge of sustainability issues, relationship to Gammon, willingness to participate and the extent to which their views could influence senior management decisions.

Prior to the workshop, participants were sent a briefing note explaining the objectives of the exercise, Gammon's four pillars of sustainability (Zero Harm, Prosperous Markets, Environmental Stewardship, and Strong Relationships) and key questions to consider. The list of relevant issues identified above (Part A) and their definitions was also sent to participants. During the workshop, participants were divided into three groups to discuss the issues under (1) Prosperous Markets, (2) Strong Relationships and Zero Harm, or (3) Environmental Stewardship.

#### **C. Online surveys**

To collect quantitative feedback from stakeholders to prepare a materiality matrix, internal and external stakeholders were invited to rate the importance of a list of 30 sustainability issues. Two online surveys were prepared: one to assess the importance of each issue to stakeholders (the 'importance to stakeholders' survey), and the other to assess the importance of each issue from the perspective of Gammon's business (the 'importance to business' survey). Respondents were asked to rate each issue on a scale of 1 to 6, where 6 is most important.

#### D. Management workshop

The CEO, Executive Directors and Directors were invited to participate in a 1.5-hour workshop. The purpose of the workshop was to present the key findings from the stakeholder workshop, and to review and validate the draft materiality matrix and shortlist of material issues.

#### Issue Boundaries G4-20, G4-21

The GRI G4 framework requires that reporting organisations identify where the impacts of each material issue occur within and outside of the organisation. Gammon worked with sustainability experts to map the boundary for each material issue. All issues are material within and outside of the organisation except for staff retention, turnover and development of our people, which is only material within the organisation.

Material Issue	Within Gammon	Outside of Gammon
1. Safety management	Group	All subcontractors and service providers operating on site
2. Working environment	Group	All subcontractors and service providers operating on site
3. Compliance with regulations	Group	Suppliers, subcontractors, service providers
4. Customer health and safety	Group	Clients, end users
5. Quality performance	Group	Suppliers, subcontractors, service providers, clients, end users
6. Improving client satisfaction	Group	Clients
7. Innovation	Group	Clients
8. Leading the industry	Group	Government, construction industry businesses and organisations
9. Labour shortage	Hong Kong entities only	Subcontractors in Hong Kong
10. Construction materials	Group	Suppliers
11. Waste	Group	Subcontractors, service providers, government
12. Energy	Group	Suppliers, utility providers
13. Anti-corruption	Group	Suppliers, subcontractors, service providers, clients
14. Staff retention, turnover and development of our people	Group	–

## Stakeholder Engagement

#### Engagement Methods and Frequency by Stakeholder Group G4-19, G4-24 to G4-26

We maintain ongoing engagement with key stakeholders through a variety of channels, such as our satisfaction surveys for customers, employees, suppliers and subcontractors.

Stakeholder Group	Engagement Minimum Frequency	Engagement Method(s)
Academic institutions	Annual	Survey, workshops
Clients	Annual	Annual survey, review reports (e.g. Contractor Performance Rating (CPR))
Employees	Annual	Annual survey, Director's workshop, other workshops
Industry associations	Annual	Survey, workshops
NGOs and community	Annual	Survey, workshops
Service providers	Annual	Survey, workshops
Shareholders		Review meetings every 2-3 months
Suppliers and subcontractors	More than annual	Survey, workshops

This year, we also invited the independent consultant to facilitate two stakeholder workshops specifically for the purpose of preparing our Sustainability Report, one mixed workshop for external stakeholders, and the other for Gammon senior management. External stakeholders were selected based on consideration of their relationship to Gammon and their knowledge of the construction industry and/or sustainability.

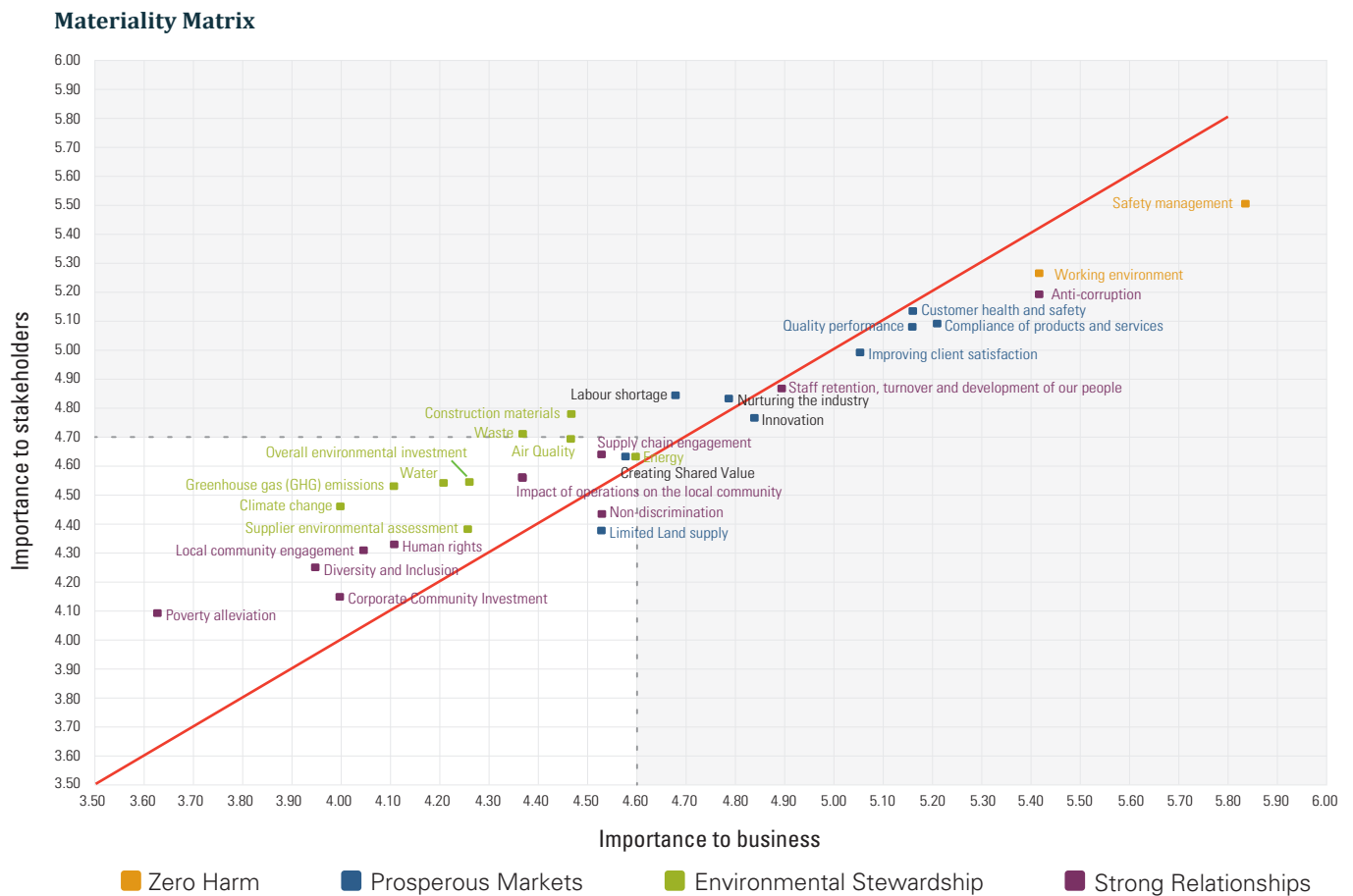


We also conducted two online surveys, in which over 170 stakeholders rated 30 sustainability issues on a scale of 1 to 6, where 1 was 'Not at all important'; 2 was 'Low importance'; 3 was 'Somewhat importance'; 4 was 'Important'; 5 was 'Very important' and 6 was 'Extremely important'. Stakeholders were advised to consider an issue is important if it (1) Affects their assessments of Gammon, (2) Affects their decisions with regard to Gammon and (3) Is something they want to see disclosed in detail in Gammon's sustainability report.

Selected internal and external stakeholders rated each issue for its importance to their assessments and decisions about the company, whilst directors and selected managerial staff rated each issue for its importance to Gammon's business. The average scores for each issue were used to plot them onto a materiality matrix. The threshold for materiality and the final list of 14 material issues were validated in the senior management workshop.

### Materiality Matrix

The overall average of the scores for each survey – the importance to stakeholders survey (4.7) and the importance to business survey (4.6) – were taken as the threshold for materiality. All issues that scored above average for either importance to stakeholders or importance to business are considered material, and should be included in detail in the Sustainability Report. The material area is represented by the shaded area of the matrix below.



Gammon's 14 material issues are:

1. Safety management
2. Working environment
3. Compliance of products and services
4. Customer health and safety
5. Quality performance
6. Improving client satisfaction
7. Innovation
8. Leading the industry
9. Labour shortage
10. Construction materials
11. Waste
12. Energy
13. Anti-corruption
14. Staff retention, turnover and development of our people

Material Issues for Each Stakeholder Group G4-27

Material Issue	Scored Material By								Where the Issue is Addressed
	Employees	Clients	Suppliers	Subcontractor	Service Provider	NGOs	Industry Association	Government	
Safety management	X	X	X	X	X	X	X	X	<ul style="list-style-type: none"> <li>– Zero Harm (p.8-9)</li> <li>– GRI Content Index Aspect: Occupational Health and Safety</li> </ul>
Working environment	X	X	X	X	X	X	X	X	<ul style="list-style-type: none"> <li>– Zero Harm (p.8-9)</li> <li>– Green and Caring Site Commitment (p.19)</li> <li>– GRI Content Index Aspect: Occupational Health and Safety</li> </ul>
Compliance of products and services	X	X			X	X	X	X	<ul style="list-style-type: none"> <li>– Prosperous Markets (p.10-11)</li> <li>– GRI Content Index Aspect: Product Responsibilities: Compliance</li> </ul>
Customer health and safety	X	X	X		X	X	X	X	<ul style="list-style-type: none"> <li>– GRI Content Index Aspect: Customer health and safety</li> </ul>
Quality performance	X	X	X	X		X	X	X	<ul style="list-style-type: none"> <li>– Key Performance Indicator Table</li> </ul>
Improving client satisfaction	X	X			X		X	X	<ul style="list-style-type: none"> <li>– GRI Content Index Aspect: Product and Services Labelling</li> </ul>
Innovation	X	X	X				X	X	<ul style="list-style-type: none"> <li>– Throughout the report</li> <li>– Key Performance Indicator Table</li> </ul>
Leading the industry	X	X				X		X	<ul style="list-style-type: none"> <li>– Key Performance Indicator Table</li> <li>– Other Initiatives – Awards</li> </ul>
Labour shortage	X	X					X	X	<ul style="list-style-type: none"> <li>– Strong Relationships (p.16)</li> <li>– GRI Content Index Aspect: Training and Education</li> <li>– Key Performance Indicator Table</li> </ul>
Construction materials	X	X	X		X	X	X	X	<ul style="list-style-type: none"> <li>– Environmental Stewardship (p.14-15)</li> <li>– GRI Content Index Aspect: Material</li> <li>– Key Performance Indicator Table</li> </ul>
Waste		X				X	X	X	<ul style="list-style-type: none"> <li>– Environmental Stewardship (p.14-15)</li> <li>– GRI Content Index Aspect: Effluent and Waste</li> <li>– Key Performance Indicator Table</li> </ul>
Energy						X	X	X	<ul style="list-style-type: none"> <li>– Environmental Stewardship (p.14-15)</li> <li>– Key Performance Indicator Table</li> </ul>
Anti-corruption	X	X		X		X		X	<ul style="list-style-type: none"> <li>– GRI Content Index Aspect: Anti-corruption</li> </ul>
Staff retention, turnover and development of our people	X								<ul style="list-style-type: none"> <li>– Zero Harm (p.9)</li> <li>– Strong Relationships (p.16)</li> <li>– GRI Content Index Aspect: Training &amp; Education</li> <li>– Key Performance Indicator Table</li> </ul>

## Response to the Stakeholders G4-27

After the stakeholders engagement workshop we sent a letter of appreciation to all stakeholders who participated. This included a written response to some of the common themes and issues raised during the workshop. The response is provided in the table below.

Issues Raised	Our Response
Disclose the targets and indicators that we use to track environmental and social performance, and report on success stories.	We will include more information regarding our indicators, targets, performance and case studies in the upcoming sustainability report 2015. Some highlights will be in the main report and some data will be in our online supplement.
Strengthen community investment initiatives and reporting on these initiatives. Clearly define what Gammon means by shared value.	We will include information on our community investment initiatives and how we are bringing social value in the upcoming sustainability report. Next year we hope to develop a more formal strategy to creating shared value and plan to launch a specific programme in 2016.
Engaging with the value chain (clients, suppliers, subcontractors and service providers) is essential for achieving our sustainability objectives.	We will continue to engage suppliers and subcontractors to achieve our sustainability objectives, and we target to arrange another series of supplier workshops to increase our supply chain capabilities.
Air quality and transport emissions are an important issue.	Gammon has implemented B5 since 2013 and our annual fuel consumption using Euro V B5 biodiesel exceeded 90% in 2015. To reduce our emissions we have a plant and equipment replacement plan in place to phase out older mechanical plant progressively. We are also currently investigating the practicalities of using electric vehicles to replace our site vehicles and will continue to investigate opportunities that reduce transport emissions.

## Governance

### Governance Structure G4-34

The overall management of the Company's business is vested in the Board of Executive Directors (also referred to as the Executive Committee or ExCo), which is chaired by the Chief Executive. All Executive Directors are full time employees of Gammon, and have specific defined responsibilities and authority within the Company's operations. The organisation chart showing these responsibilities is shown on page 48. The ExCo is responsible for the strategy, policies, risk management and financial performance of the business, and is directly accountable to our shareholders Balfour Beatty and Jardine Matheson.

The ExCo is responsible for decision-making on sustainability issues. Guided by our sustainability vision, 'By 2020 Gammon will be the industry leader and an agent of sustainable construction', and our Sustainability Roadmap 2020, a Sustainability Action Plan (SAP) has been developed for which the ExCo has overall responsibility. Sustainability-related issues are addressed weekly by ExCo at the Safety, Environment & Assurance Committee meeting which is led by the Director for Health & Safety, Sustainability, Systems & Audit. At the operations level, actions are mainly driven and supported by the Group Sustainability and CSR Manager, the Environment & Sustainability Team, the Project & Operations Working Group and the CSR Committee.

The ExCo is responsible for setting metrics and reviewing the implementation of the SAP every half year. Our shareholder Balfour Beatty reviews our progress and data using both self-assessment and a third party assessment. Through forums and active roles in industry associations and societies, we have taken a leadership role not just for the promotion of Gammon's interests but for the betterment of the industry as a whole (see G4-16).

## Specific Standard Disclosures

### Environmental

#### G4-DMA Materials

Our sustainability vision is to be a sustainability leader and contractor of choice for clients delivering world class project in Hong Kong, China and Southeast Asia. Therefore we try to deliver products and services that are designed to use resources wisely and minimise negative social and ecological impacts. We are committed to the efficient use of resources and minimising the impacts on environments affected by our operations.

As concrete and steel are the two most widely used materials in construction, one of our main priorities is to optimise designs and construction methods for leaner construction and less material use. This makes good business sense as well as minimising material resource and energy use.

Through different innovation initiatives, we have emphasised alternative designs using mechanisation, modularisation, automation and prefabrication solutions. We are also looking for opportunities to reduce waste to public fill with a focus on minimising earth works and finding a direct beneficial use of excavated material.

We also try to reduce material impacts through sustainable procurement of materials with higher recycled content, lower embodied carbon and the use of design alternatives to reduce the material quantities. In addition, to precast concrete, we continue to investigate other alternatives for more sustainable concrete mixes.

We conduct regular sustainable procurement workshops with suppliers and subcontractors in Hong Kong and Shenzhen to increase their capability on green procurement. This year we worked closely with our suppliers on reducing packaging waste.

#### G4-DMA Effluent and Waste

Gammon has developed a set of production procedures including water pollution control and waste management to guide our team on managing these aspects. It is the responsibility of the project site environmental representative, site depot or workshop manager, or environmental officer to ensure that these procedures are implemented. The project team must ensure that water pollution and waste management risks are identified and assessed and appropriate mitigation measures implemented and maintained to achieve compliance with the law, contract, Health, Safety and Environmental Policy commitments, objectives and targets.

We also developed a Waste Management Handbook which aims to provide each project team with practical and achievable guidelines for achieving the waste reduction target of our Sustainability Roadmap and Action Plan. The Handbook includes:

- Project organisation structure setting out the roles and responsibilities of the respective project team member responsible for waste management and appropriate mitigation measures;
- An analysis of timing and types of construction & demolition materials to be generated in the course of the execution of the works;
- The steps required to implement a site waste management plan;
- Suggestions of waste reduction measures;
- A monitoring and reviewing proposal to ensure that the requirements of the site waste management plan are properly implemented; and
- Contact details for waste recyclers in Hong Kong.

### Social – Labour Practices and Decent Work

#### G4-DMA Employment

We offer employment conditions that meet the minimum legislative requirements and accepted conventions and do not use involuntary labour or restrict free movement of our employees. We do not allow discrimination or harassment and provide equal opportunities, with recruitment and career progression being based on objective criteria, individual performance and merit. We observe the rights of employees and subcontractors to a safe and healthy work place.

In order to attract, motivate and retain employees, we will ensure our remuneration packages, pay levels and fringe benefits match with or even exceed our principal competitors for talented employees.

For new employees, competitive packages are offered which recognise individual academic and professional qualifications, relevant years of experience, job scope and responsibilities; and the appropriate grades for which they are appointed.

Depending on the specific employment terms and conditions, we offer different benefits including, statutory holidays, alternative Saturdays off, annual leave, sick leave, maternity leave, paternity leave, jury service leave, study leave, marriage leave, compassionate leave, medical benefits, optional dental scheme, group life insurance, accident insurance, retirement scheme, reimbursement of professional bodies membership fee, club membership, and long service awards.

#### **G4-DMA on Occupational Health and Safety**

As stated in our Code of Conduct, 'our vision is to have a workplace without injury or accident' and our business adopts a 'Zero Harm' approach in terms of planning and implementation of all projects and operations, supported by senior management's 'Bold Commitments'. Every employee understands that they have a clear duty to themselves, their fellow workers and, in many cases, the public to take every reasonable precaution to set up and maintain a safe and secure working environment free from hazards. The Company has set up management systems and resources to plan, implement, control and continually improve performance in these areas. Strict wearing of personal protective equipment (PPE) when on site and adherence to the policies, manuals, procedures and safe working rules are expected of all employees. The Company does not tolerate any unsafe work practices or serious infringements or the consumption of alcohol or taking of drugs during working hours.

Gammon is committed to providing as safe a working environment as possible for its staff, and will ensure that safety is always a priority over all else. As a minimum, we will comply with all applicable regulations, codes of practice and other guidelines issued by the government authorities in the locations where we work. In addition, we have in-house rules, standards and guidelines which often exceed the mandated requirements.

Planning for safety usually starts during the tendering stage and potential occupational health and safety issues are controlled by procedures for all major activities on site during operation. We use the 'swiss cheese model' of safety management to provide 4 layers of protection covering: design and engineering; materials, plant and equipment; process; and people.

Training and continual process improvement are an integral part of Gammon's approach. Prevention and risk control measures are promoted, including, amongst others:

- training and awareness raising on how to reduce injury, prevent disease and avoid heatstroke;
- providing safe plant, equipment and tools for worker use; and
- changing engineering design, programme and methods to reduce or eliminate risk during construction.

We operate a comprehensive business management system which incorporates the requirements of an Occupational Health and Safety System that is certified under OHSAS 18001.

#### **G4-LA5 – Workforce Represented in Formal Joint Management – Worker Health and Safety Committees**

To improve the standards of safety at work, full cooperation and commitment of the workers and foremen are absolutely essential. Hence, these employees must be able to participate in the making and monitoring of arrangements for safety at their place of work. The establishment of Site Safety Committees (SSC) in which these employees and the management of the contractor and sub-contractors are represented can increase the involvement and commitment of these employees and ensure the practicability of any new measures proposed. Gammon therefore sets up a SSC in each project and holds meetings at least once a month to drive improvement of occupational health and safety in the workplace. We ensure all the subcontractors' representatives attend the monthly SSC meeting in our projects.

## G4-DMA Training and Education

Gammon believes investing in training is an important factor in retaining and developing high quality human capital. Therefore, since 2003, the Gammon Academy has provided a diverse range of training programmes to develop our employees and assist them along their career path. Our training roadmap strategically divides staff into four groups: new recruits (including graduate engineers), administrative staff, middle managers, and senior management and above.

Each year, we run an average of over 150 sessions in our training programmes. Subjects include health, safety and environmental control, quality management, engineering capabilities development, commercial awareness, contract management, strategy for tendering, project planning and controlling, procurement and legal requirements, and managerial skills development. In addition to classroom training, we offer seminars, sharing sessions and site visits. Our comprehensive training programme have been identified as one of the key reasons why new graduates select Gammon and construction as a career.

In addition, we also developed the technician/craft apprentices programme which provides comprehensive training in various disciplines including Civil, Building, Building Services, Electrical and Mechanical and Quantity Surveying. We provide on-the-job training, mentorship and sponsorship for frontline staff.

Gammon has adopted a three-pronged approach to meet labour shortage challenges: self-performing, multi-skilling and new blood training. Having a permanent workforce ensures that we have the necessary skilled manpower to take on new projects. Also through multi-skilling, we have a more productive and flexible workforce suited to the mix of works being performed. It reduces the risk of labour shortage in key skills, while empowering workers with a broader set of skills that can be used throughout their careers.

## Social – Society

### G4-DMA Anti-Corruption

Integrity is one of Gammon's 3 core values and anti-corruption is taken very seriously by the business and is a fundamental part of our Code of Conduct, to which all employees must subscribe.

#### *Corruption risk assessment*

Our business risk management programme covers corruption risk with a separate corruption risk assessment covering aspects such as bribery, fraud, fair competition, gifts, and conflicts of interests. The assessment is based on various activities undertaken during the course of our business (e.g. bidding for work, selecting subcontractors and suppliers, seeking payment or approvals etc.) and includes potential variation of risks outside Hong Kong. It is also a requirement of our shareholder, Balfour Beatty, that we follow their Ethics and Compliance Programme which includes corruption risk.

#### *Conflict of interest*

Conflicts of interest are to be declared and form part of our Code of Conduct and are an identified risk in the corruption risk assessment for review and management.

#### *Charitable donations and sponsorships*

Our Code of Conduct describes how we ensure that charitable donations and sponsorships are not used as a disguise for bribery, as follows: 'The Company ensures that charitable contributions and sponsorships are not used as a subterfuge for bribery. All charitable contributions and sponsorships shall be subject to Chief Executive approval (or in accordance with the Group Delegation and Limits of Authority) with clear expressions of intent, shall be transparent to interested parties including all employees, shall be fully accounted for and made in accordance with applicable law.'

The Company, its employees or intermediaries shall not make direct or indirect contributions to political parties, party officials, candidates or organisations or individuals engaged in politics, as a subterfuge for bribery.'

Further guidance on charitable donations and sponsorships is provided in our Corporate Communications procedures within the business management system. Guidance is provided on the focus areas that Gammon wishes to support, the funding criteria, organisations which Gammon will not support, submissions of proposals for funding, and the assessment and approval process. The issue of gifts and hospitality is also included in our corruption risk assessment.

### **Training**

As stated in our Code of Conduct, 'Employees shall receive specific training on the Code tailored to relevant needs and circumstances. Where appropriate, subcontractors and suppliers shall also receive instruction or briefings on the Code. Training activities shall be assessed periodically for effectiveness.' Integrity (including anti-corruption) and our Code of Conduct are included in induction training for new staff members. We also have additional briefings with key staff associated with approvals, commercial aspects, procurement and estimating. We have Code of Conduct requirements for subcontractors and suppliers, and provide specific briefings as necessary. For example, in 2015 our curtain wall suppliers were a focus group for training on our Code of Conduct.

## **Social – Product Responsibility**

### **G4-DMA Customer Health and Safety and G4-DMA Compliance of Products and Services**

The two areas of 'compliance of our products and services' and 'customer health and safety' are covered by our Code of Conduct. One of our core business principles is to abide by the legal and regulatory requirements in the countries where we operate. We have established policies and procedures to guide the proper management of operational compliance issues as well as systems dealing with financial, taxation and human resources management which enable employees to learn how to comply with all accountability standards, laws, rules and regulations. We maintain and continually improve these systems of management and ensure that all employees have the information available or are given instruction on the standards, laws and regulations applicable to them.

As also stated in our Code of Conduct, we treat compliance with health, safety and environmental protection regulatory requirements applicable to our business as a minimum standard expected to be adhered to by all employees. Management system processes ensure that all applicable legal requirements are identified and actions put in place to ensure compliance. Our staff are required to obey the law and follow all applicable regulations.

Our business management system includes all applicable regulations, guidance and codes of practice in relation to our products and services for the locations where we operate. Construction products and projects often have very stringent general and particular specifications in terms of design, material selection and quality so it is essential that we comply with our customers' specifications as a minimum. In order to ensure that we deliver what is required and that we operate in compliance with all laws and regulations, our business management system includes production controls for all work including rigorous checking, inspection and testing. These controls extend to subcontractors and materials.

Procurement is a key area where we must be meticulous in ensuring the health and safety of the materials and products we use. Our Sustainable Procurement Policy (established in 2011 and updated in 2015) extends the Zero Harm approach and avoiding products with harmful substances, to product and service sourcing to ensure the safety of our customers and the wider public.

We are constantly looking for improvement in the products and projects we deliver across many areas, including worker safety, productivity, product quality & durability, cost, resource use, waste generation, carbon footprint, programme etc. Customer health and safety is also one aspect we strive to improve, but this must be within the constraints of the customers' contract specifications. We will always propose alternative designs and materials where we believe customer health and safety can be improved. These opportunities for improvement are often identified through our risk and opportunity management process and we raise these with our clients as and when they are recognised.

# Key Performance Indicator

GRI Reference	Performance Indicators	Units	2011	2012	2013	2014	2015
<b>Safety</b>							
G4-CRE6, G4-PR1	Organisation operating in verified compliance with OHSAS 18001 <sup>1</sup>	%	100%	100%	100%	100%	100%
G4-LA6, G4-LA7	Fatalities	number	5	0	1	1 (HK) <sup>†</sup>	1 (HK) <sup>†</sup>
	Accident/Incident rate <sup>2</sup>	per 1,000 workers	11.3	6.9	6	5.5	5.1
<b>Economic</b>							
G4-9, G4-EC1	Group turnover (by region)	US \$millions	1,610	1,638	1,757	2,252	2,425
	Rest of Asia – Mainland China	US \$millions	0	0	0	0.1	0.2
	Singapore	US \$millions	128	166	165	195	164
	Hong Kong & Macau	US \$millions	1,481	1,471	1,592	2,057	2,260
G4-9	Active project site	number	99	100	117	109	116
G4-12	Active subcontractors and suppliers	number	–	–	–	–	1813
G4-12	Supply chain category						
	Subcontractors	number	–	–	–	–	967
	Distributors/Traders/Stockist	number	–	–	–	–	674
	Manufacturers	number	–	–	–	–	106
	Licensees	number	–	–	–	–	31
	Professional	number	–	–	–	–	34
	Contractor	number	–	–	–	–	1
G4-12	Location of suppliers by country or region						
	% Hong Kong & Mainland China	number	–	–	–	–	96
	% Overseas	number	–	–	–	–	4
G4-PR9	Product and services convictions <sup>3</sup>	number	–	–	–	–	2
	Innovation entry <sup>4</sup>						
	Entry for in-house “Innovation of the month”	number	–	–	–	–	181
	Entry for in-house “Innovation competition”	number	–	–	–	–	102
	Entry for external competition	number	–	–	–	–	1
<b>Social</b>							
G4-10	Total monthly-paid staff (by location)	number	3,832	4,643	5,069	5,397	4,912
	Mainland China	number	386	423	507	517	530
	Singapore	number	374	448	502	494	424
	Hong Kong & Macau	number	3,072	3,772	4,060	4,386	3,958
	Gender, monthly-paid staff <sup>5</sup>	% male	81	85	83	84	85
		% female	19	15	17	16	15
G4-10	Total daily-paid workers (all locations)	number	2,067	2,440	3,091	3,665	3,419
G4-10	Total subcontractor workers (all locations)	number	9,411	10,493	7,528	10,536	12,881
	Hong Kong	number	8,923	9,493	7,015	9,711	12,331
	Singapore	number	488	1,000	513	825	550



GRI Reference	Performance Indicators	Units	2011	2012	2013	2014	2015	
<b>Social</b> continued								
G4-10	Employee by contract type <sup>6</sup>	% permanent	–	77.0	75.0	73.0	87	
		% contract	–	23.0	25.0	27.0	13	
G4-10	Employee by management class <sup>6</sup>	% director	–	0.3	0.3	0.2	0.2	
		% managerial	–	6.3	5.8	5.7	6.2	
		% professional	–	14.9	13.8	13.2	13.9	
		% supervisory	–	13.3	10.9	10.6	10.7	
		% technical	–	54.8	58.8	61.3	60.2	
		% others	–	10.5	10.4	9.1	8.8	
	Graduate recruitment <sup>5,6</sup>	number	105	135	117	116	83	
	Technician apprentice recruitment <sup>5,6</sup>	number	51	73	65	58	34	
G4-LA9	Training hours per employee <sup>5,6,7</sup>	hrs/employee	22.3	22.8	22.3	21.2	19.7	
G4-LA9	Training by gender <sup>6,7</sup>	% male	–	88.2	85.8	85.7	82.1	
		% female	–	11.8	14.2	14.3	19.9	
G4-LA9	Training by management class <sup>6,7</sup>	% director	–	0.4	0.7	0.6	0.5	
		% managerial	–	14.7	16.6	13.6	14.6	
		% professional	–	27.8	26.0	27.3	28.0	
		% supervisory	–	22.0	17.7	16.7	13.9	
		% technical	–	30.4	33.7	36.3	36.6	
		% others	–	4.7	5.4	5.5	6.5	
	Volunteer hours	hours	5,226	5,225	4,974	3,658	1,649	
	No. of community event	number	106	109	126	106	72	
G4-CRE8	Sustainability certification, rating and labelling schemes for new construction	number of project	28	32	53	52	61	
G4-PR5	Yearly customer satisfaction <sup>8</sup>	%	100	100	100	100	100	
		very satisfied	%	18	17	17	14	To be update in Aug-2016
		satisfied	%	72	70	63	77	
		neutral	%	8	10	16	8	
		dis-satisfied	%	2	3	4	2	
<b>Environment</b>								
G4-EN1	Major materials used (rebar/steel)	tonnes	73,662	82,890	68,803	86,841	99,700	
		Major materials used (concrete)	m <sup>3</sup>	–	–	–	–	1,031,177
	Sustainable sourced timber, all sources	% value	95	99	97	99	98	
	Forest Stewardship Council Certified	FSC mix %	100	100	100	100	100	
G4-EN3, G4-EN5	Electricity intensity <sup>*9</sup>	kWh/HK\$1m turnover <sup>17</sup>	3,229	3,708	3,569	2,962	2,243	
G4-EN3, G4-EN5	Diesel intensity	litre/HK\$1m turnover <sup>17</sup>	1,864	1,692	1,386	1,510	1,330	
G4-EN3, G4-EN5	Petroleum intensity	litre/HK\$1m turnover <sup>17</sup>	89.8	105.2	96.2	93.6	70.9	
G4-EN5, G4-CRE1	Energy-electricity for offices <sup>*10</sup>	kWh/m <sup>2</sup> /month	15.7	15.3	15.4	15.5	14.7	

GRI Reference	Performance Indicators	Units	2011	2012	2013	2014	2015
<b>Environment</b> continued							
	Renewable electricity generated <sup>11</sup>	kWh	8,008	7,992	8,873	4,549	5,487
	Municipal water intensity*	m <sup>3</sup> /HK\$1m turnover	81.1	97.9	90.6	87.7	72.0
G4-EN10	Recycled water	m <sup>3</sup>	2,508,253	2,019,264	2,129,860	1,338,533	436,636
	% of recycle		71	62	63	46	24
G4-EN15 -EN18, CRE4,	Carbon dioxide equivalent (CO <sub>2</sub> e) emissions (Scope 1 & Scope 2)* <sup>12,13,14</sup>	kg/HK\$1m turnover	7,564	7,482	6,525	6,394	5,265
G4-EN17	CO <sub>2</sub> e from air travel <sup>15</sup>	tonnes	331	254	289	245	212
G4-EN23	Total waste landfilled* <sup>16</sup> Hong Kong	tonnes	33,100	37,147	32,283	37,790	44,261
G4-EN23	Total waste incinerated Singapore	tonnes	767	286	531	2,026	3,424
G4-EN23	Total inert material to Public Fill	tonnes	954,641	1,507,732	963,512	1,078,445	1,709,245
G4-EN23	Total waste recycled excluding rebar/ steel (divert from landfill)	tonnes %	2,107 6	2,759 7	2,160 6	3,880 9	1,819 4
G4-EN23	Total waste recycled including rebar/ steel (divert from landfill)	tonnes %	10,818 24	22,160 36	9,985 24	22,932 38	16,429 27
G4-EN23	Rebar/steel recycled	kg/HK\$1m turnover tonnes	694 8,711	1,519 19,401	571 7,825	1,085 19,052	773 14,610
G4-EN23, G4-EN2	Total direct inert material reuse	% of reuse tonnes	51 995,417	47 1,350,304	52 1,048,959	42 790,636	30 730,029
	Hong Kong	tonnes	889,696	1,331,386	1,031,646	722,192	702,774
	Singapore	tonnes	105,721	18,918	17,314	68,444	27,255
G4-EN29	Environmental convictions	number	1 (HK)	1 (HK)	1 (HK)	0	0

1. OHSAS 18001 certification does not include JV projects.

2. Excludes first aid case.

3. Two convictions under the Factories & Industrial Undertaking Ordinance, CAP.59 in our joint venture project – CX Air Cargo Terminal in 2015. The total amount of the fines was \$240,000.

4. Response to Innovation material issue from stakeholders. We won the CIC Innovation Award: Local Industry Practitioners 1st Prize

5. Hong Kong Group only.

6. Excludes subcontractor number.

7. The training record is for Hong Kong & Macau and excludes the daily-paid worker.

8. Response to Quality Performance material issue from stakeholders

9. Data source from CLP and HKE electricity bills.

10. Only offices with electricity meters report office electricity data.

11. Renewable energy includes solar power and wind power.

12. Carbon data is restated for alignment with ISO 14064 since 2012.

13. Includes the office electricity data into the total carbon dioxide equivalent emissions calculation.

14. CO<sub>2</sub> emission intensity (Scope 1 and Scope 2) includes petrol and diesel in HK, China, Singapore and Macau; B5 Biodiesel in Hong Kong for machinery and mobile vehicle; HK Town Gas; WD40, acetylene, CO<sub>2</sub> in fire extinguisher, CO<sub>2</sub> cylinder bottle, R134A, R404A, R410A in Gammon; methane from Septic Tank in Pristine, LPG for water heater in Pristine, Fire Extinguishing Agent FM200 (HFC-227ea), Fire Extinguishing Agent NAFS-III. Scope 2 includes Electricity in HK, China, SGP and Macau.

15. Only business air travel was counted.

16. Non-hazardous waste.

17. Electricity/Diesel/Petroleum intensity = (Actual consumption/Group turnover in HK\$) x HK\$1m

\* Previous value updated, principally due to year-end account reconciliation.



† Gender: male



## G4-15 External Principles and Charters

Date	Principles/Charters	Organization	Weblink
2000	Active Living Charter	Department of Health	<a href="http://www.lcsd.gov.hk/en/healthy/index/active2.html#5">http://www.lcsd.gov.hk/en/healthy/index/active2.html#5</a>
2003	Workplace Hygiene Charter	Occupational Safety and Health Council; Labour Department; Environment, Transport and Works Bureau; Hong Kong Housing Authority; Food and Environmental Hygiene Department; RTHK Radio 1	<a href="http://www.oshc.org.hk/eng/company/health_contract.asp#">http://www.oshc.org.hk/eng/company/health_contract.asp#</a>
2005	Clean Air Charter	Business Coalition on the Environment (BCE)	<a href="http://www.cleanair.hk/eng/business_cleanair.htm">http://www.cleanair.hk/eng/business_cleanair.htm</a>
2007	Occupational Safety Charter	Occupational Safety and Health Council	<a href="http://www.oshc.org.hk/eng/company/safety_contract.asp#">http://www.oshc.org.hk/eng/company/safety_contract.asp#</a>
2007	Clean Air Charter	Hong Kong Construction Association	
2008	Carbon Reduction Charter	Environmental Protection Department (EPD)	<a href="http://www.epd.gov.hk/epd/english/climate_change/ca_partners.html#G">http://www.epd.gov.hk/epd/english/climate_change/ca_partners.html#G</a>
2009	Charter of Construct Our Future, Pledge and Prosper Campaign	Hong Kong Construction Association	
2012	WBCSD Manifesto for Energy Efficiency in Building	Business Environment Council	<a href="http://www.wbcscd.org/work-program/sector-projects/buildings/eeb-manifesto.aspx">http://www.wbcscd.org/work-program/sector-projects/buildings/eeb-manifesto.aspx</a>
2014	Hong Kong Green Purchasing Charter	Hong Kong Green Council	<a href="http://www.greencouncil.org/eng/hkgpc/member.asp">http://www.greencouncil.org/eng/hkgpc/member.asp</a>

## G4-15 Other Initiatives – Awards

Date	Name of Award	Issued by	Name of Project/Division
11 Mar 2015	BIM Excellence Awards 2014 Construction Innovator by BIM – Ir Lau Kwok Cheong, Mr Victor Tse, Mr Welie Ng	Construction Industry Council	Gammon E&M
13 Mar 2015	RICS Hong Kong Awards 2015 Construction Project Team of the Year – Winner	Royal Institution of Chartered Surveyors	Gammon Construction Limited
			
22 Mar 2015	Construction Industry Safety Award Scheme 2014/15 Safety Team: Meritorious Prize	Labour Department	13473 – Shatin to Central Link Contract 1111 Hung Hom North Approach Tunnel (Fdn)
22 Mar 2015	Construction Industry Safety Award Scheme 2014/15 Civil – Subcontractors: Gold Prize	Labour Department	13473 – Shatin to Central Link Contract 1111 Hung Hom North Approach Tunnel (Fdn)
22 Mar 2015	Construction Industry Safety Award Scheme 2014/15 Building – Subcontractor: Meritorious Prize	Labour Department	13543 Minipiles – Construction of Public Rental Housing Development at Tuen Mun Area 54 Site 2 Phases 1 & 2
22 Mar 2015	Construction Industry Safety Award Scheme 2014/15 Building – Public Sector: Bronze Prize	Labour Department	13463 – Construction of Public Rental Housing Development at Lei Yue Mun Phase 3
22 Mar 2015	Construction Industry Safety Award Scheme 2014/15 Safety Team: Meritorious Prize	Labour Department	13559 – Construction of Public Rental Housing Development at Tuen Mun Area 54 Site 2 Phases 1 & 2
22 Mar 2015	Construction Industry Safety Award Scheme 2014/15 Safety Team: Meritorious Prize	Labour Department	13559 – Construction of Public Rental Housing Development at Tuen Mun Area 54 Site 2 Phases 1 & 2
22 Mar 2015	Construction Industry Safety Award Scheme 2014/15 Safety Team: Meritorious Prize	Labour Department	13562 – Redevelopment of Grand Court at 109 – 135 Kadoorie Avenue, Homantin, Kowloon
26 Mar 2015	Green Contractor Award 2014 – Bronze Award	Architectural Services Department	13299 – Victoria Park Swimming Pool; 13383 – Kwun Tong Swimming Pool
24 Apr 2015	buildingSMART International BIM Awards 2015	buildingSMART International	Gammon (Hong Kong)

Date	Name of Award	Issued by	Name of Project/Division
14 May 2015	Hong Kong Award for Environmental Excellence (HKAEE) Sectoral Awards (Construction) – Gold 	Environmental Campaign Committee 	15208 – Shatin To Central Link Contract 1111 – Hung Hom North Approach Tunnel
14 May 2015	Hong Kong Award for Environmental Excellence (HKAEE) Sectoral Awards (Construction) – Bronze	Environmental Campaign Committee	15207 – XRL Contract 810A West Kowloon Terminus Station North
14 May 2015	Hong Kong Award for Environmental Excellence (HKAEE) Sectoral Awards (Construction) – Certificate of Merit	Environmental Campaign Committee	13416 – Central Police Station Conservation and Revitalization Project
14 May 2015	Hong Kong Award for Environmental Excellence (HKAEE) Sectoral Awards (Construction) – Certificate of Merit	Environmental Campaign Committee	13478 – Construction of Lower Ngau Tau Kok Estate Redevelopment Phases 2 & 6, Demolition and Minor Works at Tung Tau Estate Redevelopment Phase 8, Alteration & Addition Works at Homantin Estate
14 May 2015	Hong Kong Award for Environmental Excellence (HKAEE) Sectoral Awards (Manufacturing and Industrial Services) – Bronze	Environmental Campaign Committee	Concrete Technology Department
14 May 2015	Hong Kong Award for Environmental Excellence (HKAEE) Wastewi\$e Label – Class of Excellence	Environmental Campaign Committee	Concrete Technology Department
19 May 2015	Indoor Air Quality Certificate Award Good Class certificate	Hong Kong Productivity Council	13299 – Victoria Park Swimming Pool Complex
27 May 2015	Innovative Safety Initiative Award 2015 Health and Welfare – Bronze	Development Bureau; Construction Industry Council; Hong Kong Construction Association	Pedestrian Access System for Protection of Workers Working Close to High Speed Road
27 May 2015	Innovative Safety Initiative Award 2015 Safety Operational Device – Silver	Development Bureau; Construction Industry Council; Hong Kong Construction Association	Gammon (Hong Kong)
27 May 2015	Innovative Safety Initiative Award 2015 Use Smartphone to Carry out Risk Assessment – Merit	Development Bureau; Construction Industry Council; Hong Kong Construction Association	Gammon (Hong Kong)
27 May 2015	Qigong Display Competition 2nd prize	Development Bureau; Construction Industry Council	Gammon (Hong Kong)
27 May 2015	Qigong Display Competition 3rd prize	Development Bureau; Construction Industry Council	Gammon (Hong Kong)

Date	Name of Award	Issued by	Name of Project/Division
29 May 2015	21st Considerate Contractors Site Award Scheme Non-public Works – New Works Group B CCSA – Gold	Development Bureau; Construction Industry Council	13531 – Foundation Works for Proposed Tsuen Wan Property Development TW5 Bayside at West Rail Tsuen Wan West Station, T.W.T.L. No. 401, N.T.
			
29 May 2015	21st Considerate Contractors Site Award Scheme Non-public Works – New Works Group B OEMPA – Merit	Development Bureau; Construction Industry Council	13531 – Foundation Works for Proposed Tsuen Wan Property Development TW5 Bayside at West Rail Tsuen Wan West Station, T.W.T.L. No. 401, N.T.
29 May 2015	21st Considerate Contractors Site Award Scheme Public Works – RMAA Works CCSA – Silver	Development Bureau; Construction Industry Council	15211 – Highways Department Term Contract: 05/HY/2012 – Management and Maintenance of High Speed Roads in New Territories East and Hong Kong Island 2013-2019
29 May 2015	21st Considerate Contractors Site Award Scheme Non-public Works – New Works Group B CCSA – Merit	Development Bureau; Construction Industry Council	13532 – Proposed Residential and Commercial Development at 18, Tong Chun Street, Tseung Kwan O, N.T.
29 May 2015	21st Considerate Contractors Site Award Scheme Non-public Works – RMAA Works CCSA and OEMPA – Merit	Development Bureau; Construction Industry Council	13416 – Central Police Station Conservation and Revitalization Project
29 May 2015	21st Considerate Contractors Site Award Scheme Public Works – RMAA Works CCSA and OEMPA – Merit	Development Bureau; Construction Industry Council	13550 – Contract No GE/2013/37 Marine Ground Investigation and Geophysical Surveys (Term Contract)
May 2015	BCA Green and Gracious Builder Award 2015 – category of STAR	Building and Construction Authority	Gammon Pte Ltd (Singapore)
			

Date	Name of Award	Issued by	Name of Project/Division
17 Jun 2015	Construction, Safety, Health and Security Campaign 2015 Workplace Safety & Health Awards for Supervisor category – Gold	Singapore Contractors Association Limited	14265 – Grace Assembly of God Church
3 Jul 2015	Construction Safety Forum and Award Presentation Best Method Statement – Silver Award	Occupational Safety & Health Council	13531 – Foundation Works Contract for Proposed Tsuen Wan Property Development TW5 Bayside, West Rail Tsuen Wan West Station, TWTL 401, New Territories
3 Jul 2015	Construction Safety Forum and Award Presentation Best Safety Enhancement Programme for Working at Height – Merit Award	Occupational Safety & Health Council	13500 – Proposed Residential Development at No.8 Mount Nicholson Road
11 Sep 2015	Construction Manager of the Year Awards 2014 – Bronze award	Chartered Institute of Building	Buildings Division Senior Construction Manager
8 Oct 2015	MTRC Projects Quality, Safety, Environmental and Stakeholder Engagement Awards Environmental – Bronze Award	Mass Transit Railway Corporation	13473 – Shatin to Central Link Contract 1111 Hung Hom North Approach Tunnel (Fdn)
8 Oct 2015	MTRC Projects Quality, Safety, Environmental and Stakeholder Engagement Awards Stakeholder Engagement – Bronze Award	Mass Transit Railway Corporation	13473 – Shatin to Central Link Contract 1111 Hung Hom North Approach Tunnel (Fdn)
29 Oct 2015	Main Contractor with the most BEAM Plus Final Platinum projects to-date 	World Green Building Council	Gammon (Hong Kong)
25 Nov 2015	CarbonCare® Label Level 1 – Achievement Action Label	Carbon Care Asia	Gammon Group
1 Dec 2015	HKIHT Highway and Transportation Excellence Award 2015 Grand Award Winner	Hong Kong Institution of Highways and Transportation	13322 Widening of Tolo Highway/ Fanling Highway Between Island House Interchange and Fanling (Stage 1 Ma Wo and Tai Hang)
15 Dec 2015	CIC Innovation Awards Industry Practitioners – 1st Prize Mechanised construction	CIC	Gammon (Hong Kong)

Note: RMAA = Repair, Maintenance, Alteration and Addition  
OEMP – Outstanding Environmental Management and Performance Awards

# G4-16 Membership of Associations and Industry Bodies

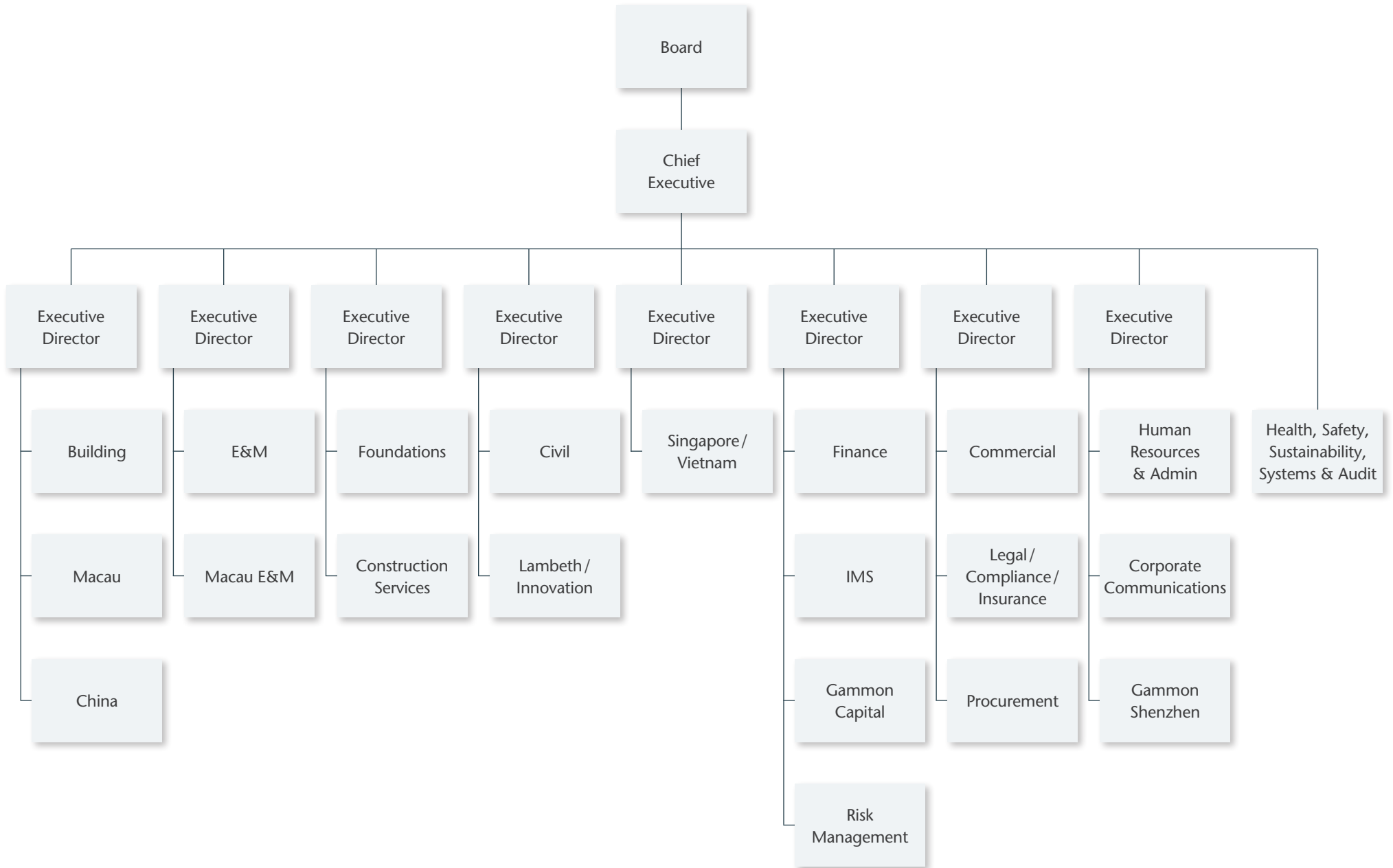
HONG KONG GOVERNMENT		
Association/Body	Group/Committee	Appointment
<b>A. STATUTORY BODIES</b>		
Building Department		Technical Director
Construction Industry Council	Subcontractor Registration Scheme Task Force on NEC3 Collaborative Contracts Task Force on Employer Controlled Insurance	Committee Member Member Member
Development Bureau	Site Safety Panel	Member
Hong Kong Council for Accreditation of Academic & Vocational Qualifications	Construction and Building Services	Subject Specialists
<b>B. PERMANENT NON-STATUTORY BODIES</b>		
Labour Department Labour Advisory Board	Committee on Occupational Safety and Health	Member
Development Bureau	Land and Development Advisory Committee	Member
Environmental Campaign Committee (EEC)		Member
EEC Hong Kong Awards for Environmental Excellence	Awards Committee	Chairman
Hong Kong Trade Development Council	Infrastructure Development Advisory Committee	Member
Pneumoconiosis Compensation Fund Board		Chairman
<b>C. TERTIARY INSTITUTION</b>		
The University of Hong Kong	Careers Advisory Board Advisory Council for Department of Civil Engineering	Member Member External Examiner
Vocational Training Council	Electrical and Mechanical Services Training Board Building and Civil Engineering Training Board	Member Member



## NON GOVERNMENT ORGANISATION

Association / Body	Group / Committee	Appointment
British Chamber of Commerce in Hong Kong	Construction Industry Group	Chairman
	Environment & Energy Committee	Member
	CSR Steering Group	Member
Business Environment Council		Director
	Energy Advisory Group Steering Committee	Chairman
	Transport & Logistics Advisory Group Steering Committee	Member
	Waste Management Advisory Group Steering Committee	Member
	Climate Change Business Forum Advisory Group	Member
Hong Kong Institute of Human Resource Management	Work Experience Recognition Sub-committee	Co-chairperson
	Membership Evaluation Committee	Member
	Professional Standards Committee	Member
Hong Kong Institute of Surveyors	Quantity Surveying Assessment of Professional Competence	Assessor
Hong Kong Institution of Engineers	Civil Discipline Advisory Panel	Chairman
	Qualification and Membership Board	Member
	Geotechnical Division Committee	Member
	Registration Committee	Member
	Fellowship Committee	Member
	Joint Structural Division Committee	Member
The Chartered Institution of Highways and Transportation, Hong Kong Branch	Committee	Member
Royal Institution of Chartered Surveyors	Quantity Surveying & Construction & Dispute Resolution Professional Group Committee	Chairman
	Asia Quantity Surveying & Construction Professional Group Board	Member
	Quantity Surveying Assessment of Professional Competence	Assessor
The Hong Kong Management Association	Operations Management Committee	Member
Chartered Institute of Arbitrators		Fellow
Hong Kong International Arbitration Centre	Appointment Advisory Board	Member
Society of Construction Law, Hong Kong		Member
Hong Kong E&M Contractors' Association		Honorary Secretary
The Hong Kong Federation of Electrical and Mechanical Contractors Limited	Council	Member
Lighthouse Club		Member
New Life Psychiatric Rehabilitation Association	Human Resources Task Group	Member
Pneumoconiosis Mutual Aid Association		Honorary Consultant
The Chinese People's Political Consultative Conference	Xian Committee	Member

# G4-34 Organisation Structure



# G4-CRE8 Green Building Projects Undertaken by Gammon

Gammon has completed many certified green building projects under HK-BEAM and LEED in Hong Kong and Green Mark in Singapore. The table below provides a partial listing of the projects we have been involved with:

Project	Rating/Target Rating	Client
LOHAS Park Phase 6	BEAM Plus NB V1.2 On-going	MTR Corporation Ltd. / Great Team Development Ltd.
Foundations for Proposed LOHAS Park IV Property Development at Tseung Kwan O, Town Lot No 70, Area 86	BEAM Plus NB V1.2 Provisional Gold	Sun Hung Kai Properties Ltd.
Foundation Works Contract for Proposed Tsuen Wan Property Development TW5 Bayside, West Rail Tsuen Wan West Station, TWTL 401, New Territories	BEAM Plus NB V1.1 Provisional Gold	Cheung Kong Holdings Ltd.
Global Switch Data Center	BEAM Plus NB V1.2 On-going	Global Switch
Main Contract Works at TKOTL 126	BEAM Plus NB V1.2 On-going	Wheelock Properties Ltd.
Murray Building Hotel Development	BEAM Plus NB V1.2 On-going	Smart Event Investments Limited
Proposed Residential and Commercial Development at 33 Tong Yin Street, TKO TL 125, Area 68A1, Tseung Kwan O, N.T.	BEAM Plus NB V1.1 Provisional Gold	Amblegreen Company Limited (Subsidiary of Wheelock Properties)
West Rail Tsuen Wan West Station TW5 Cityside Property Development	BEAM Plus NB V1.1 Provisional Gold	Denny Investment Limited (Chinachem Group)
Proposed Residential Development at Area 54, Siu Hong, Tuen Mun, N.T.	BEAM Plus NB V1.2 On-going	Pacific Good Investment Limited
Main Contract for Proposed Commercial and Residential Development at No. 1 Castle Road and No. 2 Castle Lane, Mid-level, Hong Kong	BEAM Plus NB V1.1 Provisional Silver	Best-Rights Company Limited
Maxim's HQ, No. 17 Cheung Shun Street	BEAM Plus NB V1.1 Provisional Platinum	Luk Yeung Restaurant Limited
Tsing Yi IVE	BEAM Plus NB V1.1 Provisional Silver	Vocational Training Council
Science Park Phase 3c building 20E and 22E	BEAM Plus NB V1.1 Provisional Platinum	Hong Kong Science & Technology Parks Corporation
TKO Area 66A	BEAM Plus NB V1.1 Provisional Silver	Crown World Investment Limited (Sun Hung Kai Properties Group)
Nam Cheong Station – Package B, NKIL 6333	BEAM Plus NB V1.1 Provisional Gold	Joinyield Limited (Sun Hung Kai Properties Group)
Nam Cheong Station – Package A, NKIL 6333	BEAM Plus NB V1.1 Provisional Gold	Joinyield Limited (Sun Hung Kai Properties Group)
No 24 Po Shan Road	BEAM Plus NB V1.1 On-going	Majestic Elite Property Development Ltd.
18 Tong Chun Street Development	BEAM Plus NB V1.1 Provisional Gold	Fortune Precision Limited (Wheelock)
No 1-3 South Lane	BEAM Plus NB V1.1 Provisional Bronze	Both Talent Limited
No 8 Mount Nicholson Road	BEAM Plus NB V1.1 Provisional Gold	Market Prospect Limited
NKIL 6512 Kwun Tong	BEAM Plus NB V1.2 On-going LEED CS v2009 – Platinum	Link Properties Limited / Nan Fung Development Limited
Midfield Concourse Works	BEAM Plus NB V1.1 Provisional Gold	Airport Authority Hong Kong
Shanghai Commercial Bank	BEAM Plus NB V1.1 On-going	Shanghai Commercial Bank
House Development at No 724 Cheung Sha	BEAM Plus NB V1.1 Provisional Gold	Bao Wei Enterprise Ltd. (Subsidiary of Swire)

Project	Rating/Target Rating	Client
TKO Area 66C1	BEAM Plus NB V1.1 Provisional Silver	Winbox Investment Ltd. (Sun Hung Kai Properties Group)
Foundation Works for Shatin Communication and Technology Centre (SCTC)	BEAM Plus NB V1.1 Provisional Gold LEED NC V2009 – On-going	The Hong Kong Jockey Club
Proposed Resident Tower at 33 Seymour Road, Hong Kong	BEAM Plus NB V1.1 Provisional Platinum	Excel Free Limited (Swire Properties Limited)
Foundation Works for 18-22 Castle Road and 92-102 Caine Road	BEAM Plus NB V1.1 Provisional Gold	Wonder Cruise Group Limited (Swire Properties Limited)
Foundation works for “My Home Purchase Plan” Project at Tsing Luk Street, Tsing Yi, TYTL 138 (Greenview Villa)	BEAM Plus NB V1.1 Provisional Gold	Hong Kong Housing Society
Proposed Residential Development at Austin Station Site D at K.I.L. No. 11129	BEAM Plus NB V1.1 Provisional Gold	Fast New Ltd. (New World Development Co., Ltd.)/Wheelock Properties Ltd.)
Science Park Phase 3 a&b Building 12W	BEAM Plus NB V1.1 Platinum LEED CS v2009 – Platinum	Hong Kong Science and Technology Parks Corporation
Science Park Phase 3 a&b Building 15W	BEAM Plus NB V1.1 Platinum	Hong Kong Science and Technology Parks Corporation
Science Park Phase 3 a&b Building 16W	BEAM Plus NB V1.1 Platinum	Hong Kong Science and Technology Parks Corporation
Pak Shek Kok, Tai Po, TPTL200	BEAM Plus NB V1.1 On-going	Top Gallant Limited (Sino Group)
Central Police Station Conservation and Revitalisation Project	BEAM Plus NB V1.1 Provisional Bronze	Hong Kong Jockey Club
CIC Zero Carbon Building	BEAM Plus NB V1.1 Platinum	Construction Industry Council
HKU Centennial Campus	BEAM 4/04 – Platinum LEED NC v2009 – Platinum	The University of Hong Kong
500 Hennessy Road Redevelopment Causeway Bay (Hysan Place)	BEAM Plus NB V1.1 Platinum LEED CS v2.0 – Platinum	Hysan Development Co Ltd.
Proposed Residential Development at 38-44 Caine Road, Central	LEED NC v2.2 – Certified	Fine Mean Limited
P&G Singapore Innovation Centre SgIC Project, Singapore	LEED CI v2.0 – Gold 2009	P&G
Diaphragm wall and Piling works to Singapore Innovation Centre (SgIC)	LEED NC 2009 – Gold	CH2M Hill Singapore Pte Ltd.
Foundation Works for Project Symmetry at Sha Tin Shek Mun STTL 433, New Territories	LEED ID+C: v3 – LEED 2009 – On-going	The Hong Kong and Shanghai Banking Corporation Ltd.
HSBC Project Symmetry BS Works	LEED NC v2009 Certified	The Hong Kong and Shanghai Banking Corporation Limited
HSBC Project Bridge	LEED CI v2.0 Gold	The Hong Kong and Shanghai Banking Corporation Ltd.
China Mobile Data Ctr, MEP1	LEED BD+C: Core and Shell v3 – LEED 2009 – Pre-certified Gold	China Mobile International Limited
Proposed Redevelopment – The Forum, Exchange Square – Demolition Contract & Superstructure Contract	LEED NC v2009 Platinum	Hong Kong Land Limited
Proposed Erection of New ITE College West PPP Project	GreenMark – Platinum	Gammon Capital (West) Private Limited
Nanyang Polytechnic Extension	GreenMark – Platinum	Nanyang Polytechnic
Design and Construction of Mayflower Station	GreenMark – Gold	Land Transport Authority (LTA)
LTA Contract T221 – Construction of Havelock Station for Thomson Line	GreenMark – Gold	Land Transport Authority
Construction of 3 Intra-Island Cableway Stations, 8 Cableway Tower Foundations and a Fort Siloso Pedestrian Bridge with Lift Tower at Sentosa	GreenMark – Certified	Sentosa Development Corporation

# Verification Statement



## INDEPENDENT ASSURANCE OPINION STATEMENT



By Royal Charter

Statement No.: **SRA-HK-650769**

### **Gammon Construction Limited Sustainability Report 2015**

The British Standards Institution is independent to Gammon Construction Limited (hereafter referred to as "Gammon" in this statement) and has no financial interest in the operation of Gammon other than for the assessment and assurance of this report.

This independent assurance opinion statement has been prepared for Gammon only for the purposes of assuring its statements relating to its sustainability report, more particularly described in the Scope, below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read. This statement is intended to be used by stakeholders & management of Gammon.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by Gammon. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to Gammon only.

#### **Scope**

The scope of engagement agreed upon with Gammon includes the following:

1. The assurance covers the whole Sustainability Report 2015 of Gammon prepared "In accordance" with GRI G4 Guidelines – Core option, and focuses on systems and activities of Gammon and its subsidiaries in Hong Kong, Macau, Mainland China, and Singapore during the period from 1<sup>st</sup> January 2015 to 31<sup>st</sup> December 2015.
2. The AA1000 Assurance Standard, AA1000AS (2008) Type 1 engagement evaluates the nature and extent of Gammon's adherence to all three AA1000 AccountAbility Principles: Inclusivity, Materiality and Responsiveness. The specified sustainability performance information/data disclosed in the report has been evaluated.

This statement was prepared in English and translated into Chinese for reference only.

...making excellence a habit.™



By Royal Charter

### Opinion Statement

Our work was carried out by a team of sustainability report assurers in accordance with the AA1000 Assurance standard, AA1000AS (2008) and GRI G4 Guidelines. We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that Gammon's description of their self-declaration of compliance with the GRI guidelines were fairly stated.

We conclude that the Gammon Sustainability Report 2015 Review provides a fair view of the Gammon CSR programmes and performances during 2015. We believe that the 2015 economic, social and environment performance indicators are fairly represented. The sustainability performance indicators disclosed in the report demonstrate Gammon's efforts recognized by its stakeholders.

### Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- A top level review of issues raised by external parties that could be relevant to Gammon's policies to provide a check on the appropriateness of statements made in the report
- Discussion with senior executives on Gammon's approach to stakeholder engagement. We had no direct contact with external stakeholders
- Interview with staff involved in sustainability management, report preparation and provision of report information were carried out
- Review of key organizational developments
- Review of supporting evidence for claims made in the reports
- An assessment of the company's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality and Responsiveness as described in the AA1000 AccountAbility Principles Standard (2008)

### Conclusions

A detailed review against the AA1000 AccountAbility Principles of Inclusivity, Materiality and Responsiveness and the GRI G4 guidelines is set out below:

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### Inclusivity

This report has reflected the fact that Gammon is seeking the engagement of its stakeholders through numerous channels such as client feedback review reports, client surveys, CEO industry luncheons, supplier workshops, media luncheons, and an internal cross-generation communication survey. Being a construction company, the principle activities of Gammon are civil engineering, foundation works, building and façade construction, electrical and mechanical installation, manufacturing and supply of fabricated steel, manufacturing and selling concrete, façades and interiors, rental of plant and machinery. This report covers the stakeholder issue together with fair reporting and disclosures for economic, social (including safety) and environmental information. In our professional opinion, the report covers the Gammon inclusivity issues. Our view of an area for improvement for the report was adopted by Gammon before issue of this opinion statement.



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### Materiality

Gammon publishes sustainability information that enables its stakeholders to make informed judgments about the company's management and performance. In our professional opinion the report covers Gammon's material issues by using Gammon's materiality matrix and boundary mapping. Our view of an area for improvement for the report was adopted by Gammon before issue of this opinion statement.

### Responsiveness

Gammon has implemented the practice to respond to the expectations and perceptions of its stakeholders. It includes client survey and different feedback mechanisms to external stakeholders and internal stakeholders. In our professional opinion the report covers Gammon's responsiveness issues, however, the future report should be further enhanced by the following areas:

- Provide further information regarding responsiveness mechanism to different stakeholder

### GRI-reporting

Gammon provided us with their self-declaration of compliance GRI G4 Guidelines and the classification to align with "In accordance" - Core.

Based on our verification review, we are able to confirm that social responsibility and sustainable development indicators in all 3 categories (Environmental, Social and Economic) are reported with reference to "In accordance" with the GRI G4 Guidelines – Core option.

In our professional opinion the self-declaration covers Gammon's social responsibility and sustainability issues, however, the future report will be improved by the following areas:

- In addition to showing their process of "Stakeholder Engagement" (Principle of Inclusivity) and "Materiality Matrix and Boundary Mapping" (Principle of Materiality), also include more information for developing appropriate responses for responsiveness principle.
- Improve the way to present information in G4-EN16<sup>^</sup>, G4-LA1<sup>\*</sup>, & G4-LA6<sup>#</sup>

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<sup>^</sup> Energy indirect greenhouse gas (GHG) emissions (scope 2)

<sup>\*</sup> Total number and rates of new employee hires and employee turnover by age group, gender and region

<sup>#</sup> Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender



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### Competency and Independence

The assurance team was composed of Lead auditors experienced in industrial sector, and trained in a range of sustainability, environmental and social standards including GRI G3, GRI G3.1, GRI G4, AA1000, ISO10002, ISO 14001, OHSAS 18001, and ISO 9001, etc. BSI is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

### Assurance Level

The moderate level of assurance provided is in accordance with AA1000 Assurance standard, AA1000AS (2008) in our review as defined by the scope and methodology described in this statement.

### Responsibility

It is the responsibility of Gammon's senior management to ensure the information presented in the Sustainability Report is accurate. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

For and on behalf of BSI:

**Dr. Yi-Min Gao**  
Vice-President, Sustainability, BSI Asia Pacific

**Mr. Wilfred Chan**  
Sustainability Portfolio Manager, BSI Asia Pacific  
Operations Director, BSI Hong Kong

**Hong Kong**  
**15 April 2016**



**AA1000**

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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](mailto:environment@gammonconstruction.com).*

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