

AMILY

SUSTAINABILITY REPORT MANAGEMENT APPROACHES 2018-2019

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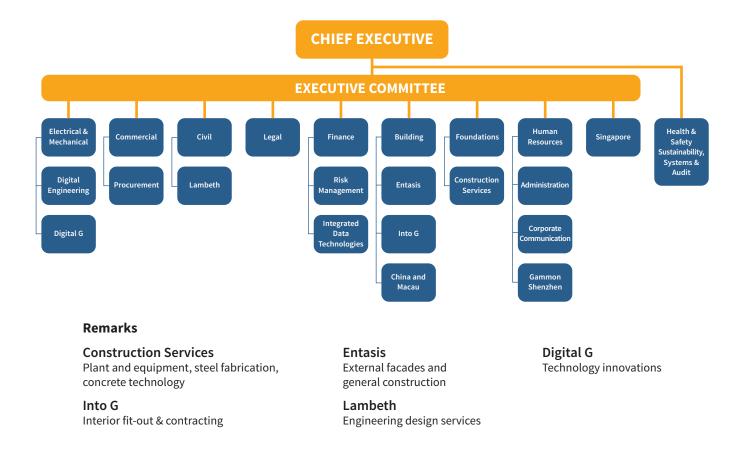
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GOVERNANCE

MANAGEMENT APPROACHES

GOVERNANCE STRUCTURE GRI 102-18

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 presented below. The ExCo is responsible for the strategy, policies, risk management Committee (RMCC) which meets four times a year to review the business from a risk and compliance perspective. Other members of the RMCC are select members of ExCo, our General Counsel, risk assurance managers and relevant staff as required. The ExCo is responsible for decision-making on sustainability issues that are addressed at weekly Safety, Environmental and Assurance Committee meetings which are led by the Director for Health & Safety, Sustainability,



and financial performance of the business, and is directly accountable to our shareholders Balfour Beatty and Jardine Matheson (the Shareholders).

The ExCo reports to the board of Gammon China Limited (the 'Gammon Board'), which is the joint venture holding company set up by the Shareholders to hold the Gammon construction business, including the company. The members of the Exco also sit on the Gammon Board, together with the Shareholders' representatives. In addition, the Shareholders are engaged in the Gammon China Limited's Risk Management and Compliance Systems & Audit. At operations level, actions are mainly driven and supported by the Group Sustainability Manager, the Environment & Sustainability Team, the Project & Operations Environmental Working Group and the Sustainability Action Group, as shown below.

Guided by the vision, mission and values of The Gammon Way and our business priorities, our sustainability strategy, Responsible Growth – 25 by 25, outlines objectives, actions and targets for improvements under four focus areas up to the year 2025 for which the ExCo has overall responsibility. The strategy is publicly available online and can be found here: www.gammonconstruction.com/uploaded_files/files/ en/Sustainability_Strategy.pdf

ExCo is responsible for agreeing targets and reviewing performance every year. Day-to-day operational activities aimed at achieving the actions occur across the business units, encouraged and supported by the Environment and Sustainability Team and other supporting functions, as required.

Our shareholder Balfour Beatty reviews our sustainability progress annually. A third-party assessment is undertaken to audit our greenhouse gas emissions before they are submitted to CDP (formerly the Carbon Disclosure Project). Through forums and active roles

VALUES AND NORMS OF BEHAVIOUR GRI 102

Gammon has a set of core values that define our work ethic and guide our workforce in today's rapidly changing and challenging world. The core values – Safety, Integrity and Excellence – have been incorporated into a philosophy called The Gammon Way, which also outlines Gammon's Mission and Vision. Our Mission is 'to build for a better quality of life and living environment in a safe and sustainable manner' and our vision is 'to be the contractor of choice in Hong Kong, China and Southeast Asia'.

At Gammon, our ultimate goal is to deliver a high level of quality to our customers. This means not only the quality of our built products and service outcomes, but also in the way they are delivered: reliably, safely and responsibly. We believe we can best deliver the level of quality to which we aspire by concentrating on our three core values.

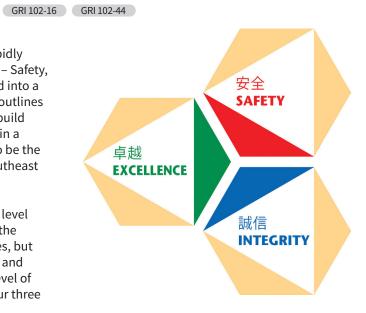
Our Code of Conduct¹ lays out the following principles for our business operations to which all employees must adhere:

- to instill a high standard of integrity, ethics and environmental responsibility in all aspects of our business dealings and operations;
- to abide by the legal and regulatory requirements in the countries where we operate;
- to observe the rights of our employees and the communities in which we work; and
- to create the means to make the Code of Conduct an integral part of daily practice.

The Gammon Way, our core values and our Code



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 the Value Chain section).



of Conduct are clearly communicated to all staff at induction, as mentioned in the section on Training below. The Group General Counsel and Legal Director is responsible for overseeing governance and the Code of Conduct. The Code is publicly available on our website in both English and Traditional Chinese.

Through the Gammon Way and by operating our business responsibly, we hope to deliver the desired level of quality expected by our clients reliably, safely and responsibly. Indeed, to be the contractor of choice we must ensure our clients' satisfaction, and improving that level of satisfaction has been identified as a material issue by internal and external stakeholders. We trust the many efforts we are making as outlined in this and other sustainability reports, through engagement, leadership, collaboration and innovation, demonstrate our determination and commitment to more than satisfy our clients' expectations.

 $^{^{\}scriptscriptstyle 1}$ See www.gammonconstruction.com/uploads/Code_of_Conduct.pdf

MANAGING RISK GRI 102-11

Our risk management approach covers all elements of our operations including tenders, projects, functions, and corporate level operations (e.g. through our Risk Management and Compliance Committee, as mentioned above). The process forms an integral part of our business management system and is formalised and documented in our Risk and Opportunity Management procedure. In addition to business, health, and safety-related risks, we pay particular attention to environmental risks and this is addressed in our Code of Conduct as follows: "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." We also have plans and procedures in place for extreme weather events, business continuity planning and crisis management.

ANTI-CORRUPTION GRI 103-2 GRI 103-3

'Integrity' is one of Gammon's three 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. It is also recognised by our stakeholders as a material issue. Our Legal Director and General Counsel along with our Executive Directors and shareholders are responsible for setting, approving and evaluating our anti-corruption policies, procedures and grievance mechanisms.

Corruption risk assessment GRI 205-1

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 interest. The corruption risk assessment is undertaken for 100% of our operations in all locations. 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. The significant risks related to corruption identified through the risk assessments and addressed in the company procedures are:

• Two or more parties including staff, supply chain, other clients and /or competitors collude for fraud, business misconduct or release of sensitive information e.g. tender prices or ideas, financial data, innovation or other client's information to gain an advantage.

- Employees soliciting or accepting any advantages from clients, consultants, contractors, subcontractors, suppliers or any person in connection with Company business.
- Employees having a conflict of interest where their judgement is affected by a vested interest
- Failure of the Company or employees to follow fair competition or anti-trust laws (e.g. bid rigging, price fixing, market sharing, abuse of a strong market position or other anti-competitive arrangements).

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 that 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 on anti-corruption and Code of Conduct

As stated in our Code of Conduct (the Code), "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 and during orientation for all 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.

SAFETY - ZERO HARM

MANAGEMENT APPROACHES

HEALTH AND SAFETY AND WORKING ENVIRONMENT GRI 403 GRI 103-2 GRI 103-3

From our stakeholder engagement process, not unsurprisingly, the topics of 'safety management' and 'working environment' were viewed as our most important material issues by both internal and external stakeholders who participated in the stakeholder engagement process in early 2020. We present below our approach to managing safety and providing an appropriate working environment. Key performance indicators are provided in Appendix A of Sustainability Report 2019 (SR19).

As stated in our Code of Conduct¹, 'our vision is to have a workplace without injury or accident' and our business adopts a 'Zero Harm' approach in the planning and implementation of all projects and operations, supported by senior management's 'Bold Commitments'². Every employee understands 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.

Gammon is committed to providing as safe a working environment as possible for its staff and others working on our sites (e.g. subcontractor workers, suppliers and client teams), and will ensure 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 government authorities in the locations where we work. In addition, we have inhouse rules (such as our Bold Commitments), standards and guidelines which often exceed the mandated requirements. 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 and subcontractor workers. The Company does not tolerate any unsafe work practices or serious infringements or the consumption of alcohol or taking of drugs during working hours.

Planning for safety usually starts during the tendering stage and potential occupational health and safety

risks are addressed through temporary works design, construction methods, or controlled by procedures for all major activities on site during operation. We use the 'Swiss cheese model' of safety management to provide four layers of protection, covering: design and engineering; materials, plant and equipment; process; and people. Our focus is always on designing out and avoiding risks completely rather than relying on the other three layers of protection.

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

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

Should an incident occur on one of our projects or sites, we carefully record and investigate it, reporting to ExCo for review and follow-up improvement measures and to ensure we are adopting industry-standard best practices.

We operate a comprehensive Business Management System (BMS) which incorporates the requirements of an Occupational Health and Safety System that is certified under OHSAS 18001: 2007. This system, including the formal internal and external audits, as well as our inhouse System Assurance Validation process, project assurance programme and management review process, allows us to evaluate our health and safety management system, its effectiveness and how to improve our practices. We have started the process of conversion to ISO45001 and our HSEQ Policy and general contents of the BMS have been updated to meet the standard in 2019.

Health and welfare

Our site nurses provide voluntary health checks for both employees and subcontractor workers. They also hold health and well-being promotional talks which include

¹ See www.gammonconstruction.com/uploads/Code_of_Conduct.pdf

² Gammon's 'Bold Commitments' are a set of actions exceeding mandatory requirements, designed to embed our Zero Harm approach into the workplace and make safety personal

prevention of diseases and health lifestyle guidance. Our human resources team conduct regular informal 'caring visits' to sites to give employees the chance to share their suggestions and to listen to their concerns. There are also mechanisms for staff to feed back to the company through various avenues such as periodic employee surveys, caring visits, email and telephone hotlines, mentors, and a formal grievance mechanism.

We try to go beyond compliance and the local industry norms in terms of worker facilities on site including good rest areas, lockers, cooled welfare facilities, phone charging, toilets, showers, refrigerators, microwaves, ice machines, snacks, meals and drink vending machines, canteens (where possible), and in some cases laundry services and recreational facilities on our projects. This is encouraged and incentivised through our in-house Green and Caring Site Commitment Scheme where sites try to set a leading example to achieve our highest 'Green Flag' status.



WORKFORCE REPRESENTED IN FORMAL JOINT MANAGEMENT - WORKER HEALTH AND SAFETY COMMITTEES GRI 403-1

To improve the standards of safety at work, full cooperation and commitment of workers and foremen are absolutely essential. Hence, these employees must be able to participate in the implementation 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 workers and ensure the practicability of any new measures proposed. Gammon therefore sets up an SSC in each project and holds meetings at least once a month to drive improvement of occupational health and safety in the workplace and to listen to concerns raised. We ensure all the subcontractors' representatives attend the monthly SSC meeting in our projects. This means 100% of workers are represented by formal joint managementworker health and safety committees.

CUSTOMER HEALTH AND SAFETY AND COMPLIANCE OF PRODUCTS AND SERVICES

GRI 416 GRI 419 GRI 103-2 GRI 103-3

The two areas of 'compliance of our products and services' and 'customer health and safety' were raised as material issues for our business by our stakeholders. These issues are covered by our Code of Conduct and our BMS. 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 all employees have the information available

or are given instruction on the standards, laws and regulations applicable to them.

As also reiterated in our Code of Conduct, we treat compliance with health, safety and environmental protection regulatory requirements applicable to our business as a minimum standard to which all employees are expected to adhere. BMS processes ensure all applicable legal requirements are identified and actions put in place to ensure compliance, as well as to check for updates. Our staff are required to obey the law and follow all applicable regulations. We also require all employees to adhere to guidance, codes of practice and technical circulars issued directly by government departments that are not legally binding.

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Our BMS 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 we comply with our customers' specifications as a minimum. In order to ensure we deliver what is required and that we operate in compliance with all laws and regulations, our BMS includes production controls for all work including rigorous checking, quality control and assurance, inspection and testing as well as internal and external audits. These controls extend to subcontractors and materials where relevant.

Procurement is a key area where we must be meticulous in ensuring the health and safety of the materials and products we use and avoid any products with harmful substances. Our Sustainable Procurement Policy and practices extend the Zero Harm approach 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 and durability, cost, resource use, waste generation, carbon footprint, programme, etc. We also strive to improve the health and safety aspects of the projects we construct for our customers, but this

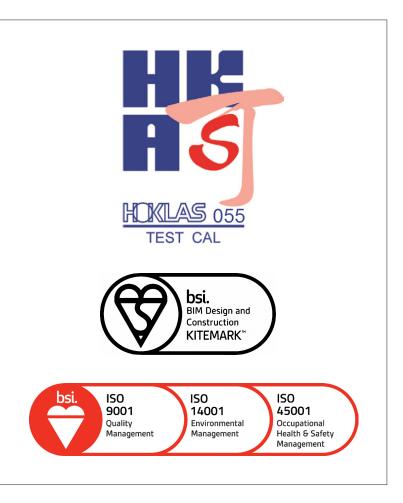
must be within the constraints of the customers' contract specifications. We will always propose alternative designs and materials where we believe customer health and safety can be improved. These opportunities for improvement are often identified through our risk and opportunity management process and we raise these with our clients as and when they are identified.

Operating with recognised management systems

Our BMS also includes our Quality Management System and Environmental Management System and is independently certified against ISO9001:2015 and ISO14001:2015. It also includes our Energy Management System which has been certified for selected project types against ISO 50001:2011. Our soil laboratory at the Gammon Technology Park in Tseung Kwan O is also certified to ISO/IEC 17025:2017 and is a certified HOKLAS laboratory for construction materials and calibration tests, as listed in the HOKLAS Directory. Our steel fabrication department at our plant in Dongguan combined with Lambeth Associates engineering design consultancy was awarded a CE Mark in 2017, certified

against Execution Class 4 under the EN1090-1: 2009 + A1:2011. Our concrete batching facilities are also certified against QSPSC:2014. We are one of the first companies globally to have had our information management using BIM certified against PAS 1192-2:2013 and have been awarded the BSI Kitemark. We also verify our greenhouse gas emissions inventory against the ISO 14064-1:2006 guideline annually.

These standards, systems and the associated audits, as well as our in-house system assurance validation process and project assurance programmes, allow us to evaluate our BMS and management approaches, their effectiveness and how to improve our practices. The performance of the business, successes and shortcomings are normally communicated directly from senior management to the management teams through regular briefings where dialogue is encouraged. Management teams are then asked to cascade these findings to every level of staff and these are supplemented by other messages from the corporate communications team and staff circular emails. Every year, we have a formal 'Lessons to Learn' workshop where managers share insights and propose improvements through a yearly Lessons to Learn Action Plan. A summary version of our Sustainability Report is sent out in the form of a leaflet and posters on site to all key subcontractors and suppliers. Each year there is also a sustainability briefing provided by senior managers from the sustainability team to all main project sites and offices.



ENVIRONMENT - ZERO WASTE

MANAGEMENT APPROACHES

ENVIRONMENTAL MANAGEMENT GRI 103-2

Approach

As mentioned earlier, environmental management is an integral part of our BMS and our environmental management system has been independently certified against ISO14001:2015. Environmental aspects, risks and impacts are considered for each project and mitigation and improvement measures are applied to avoid or ameliorate potential issues. More importantly, we strive for proactive improvements that go beyond basic compliance whether it is to reduce water consumption, avoid waste, save energy or cut material use on site, or by alternative construction methods and reusable temporary works. This is encouraged and incentivised as part of our in-house Green and Caring Site Commitment (G&CSC) scheme. In 2018, we also started requiring new projects to develop a Zero Waste Plan to dive into the biggest sources of waste, energy and water consumption and cut waste in all its forms (refer to Sustainability Report 2018 [SR18], page 12).



We are active Council members of the Business Environment Council (BEC) and remain a Patron member of the Hong Kong Green Building Council (HKGBC). Gammon has been recognised as a Hong Kong Green Organisation for our commitment to proactive environmental management and has won several Hong Kong Awards for Environmental Excellence over the years.



Monitoring

We believe in the philosophy that 'you can't manage what you don't measure' so monitoring our data, which we have been collecting for over 10 years, is an important part of our environmental management process. We have a bespoke data system that uses both site inputs as well as automated links to other business systems such as Finance and Procurement. There is a significant amount of data collected each month and this is available across the business - where projects can respond and have the biggest impact through a dashboard system called ACE. There is also a sustainability dashboard (S-Dash) that combines all sustainability-related data (environment, social, financial, safety) into an easy-to-understand single summary which is available every month. This allows the opportunity to interrogate the

data and compare project and divisional performance, as well as view 'league tables' of the best performing projects to encourage improvement.

Material issues

Our stakeholders have identified construction materials, waste and energy as the issues of most concern related to our business. In this section, we therefore describe the approaches we use to manage these issues.

MATERIALS GRI 103-2 GRI 103-3

Our approach

During our stakeholder engagement process, the issue of construction materials was identified as being material for Gammon and of most interest under the topic of the Environment, with particular interest from stakeholders, academic institutions and industry associations. We try to deliver products and services designed to use resources wisely and minimise negative social and ecological impacts. We are committed to the efficient use of resources and minimising impacts on environments affected by our operations. We have been recognised as one of the leaders in sustainable



procurement in the construction sector and have been awarded the Sustainable Consumption Enterprise by the BEC.

We adopt the widely accepted '3Rs' philosophy of 'reduce, reuse, recycle' and focus very strongly on avoiding material use in the first instance by rethinking designs and construction methods where at all possible. Often, when we are awarded a contract, design and material specification decisions have already been made and many times it is too late to change within the tight construction programme. However, we are trying to work with private clients more during the tender stage (and earlier through ongoing engagement) in order to find opportunities to achieve reduced impacts in resource use without affecting the client's programme or budget. Unless we are awarded a design element in a project, it is challenging to make a significant difference to projects where we are engaged later in the process or where direct communication during tendering is not permitted. We must continue to influence the industry through institutional involvement and promotion of best practice to get deeper and more significant change across what is a very traditional industry.

Stakeholders pointed out that while Gammon is making progress when it comes to the sourcing and use of sustainable construction materials in Hong Kong, they recommended we try to increase our influence with our business partners along the supply chain, especially subcontractors, so that we create positive wider impact. We believe we can better work with and influence our whole value chain to maximise opportunities for materials savings and sustainable procurement with a less traditional contract procurement method. Earlier contractor involvement or design-and-build contracts can allow for the full use of BIM, a collaborative design approach using a common data environment, sufficient lead time for offsite construction and a leaner design overall with the use of integrated digital project delivery (IDPD).

Material use increases significantly when changes are made to the design, especially in the built construction,

creating waste and requiring additional materials. Using a detailed BIM model can avoid clashes and mistakes, allow visualisation (with virtual reality) and fix designs earlier to reduce total material use and wastage. BIM can also facilitate off-site construction and data can be taken from the model directly into factory processes. Stakeholders also mentioned they would like us to encourage more use of green building materials (e.g. with high recycled content) and low carbon design, so early involvement in projects would also facilitate this.

However, until IDPD and earlier involvement is more widely adopted we also make proposals to clients and subcontractors for alternative materials when we have enough time in the programme, for example, the use of gypsum blocks (using gypsum waste products from coal-fired power stations' desulphurisation treatment) to replace concrete blockwork.

Steel and concrete GRI 301-1

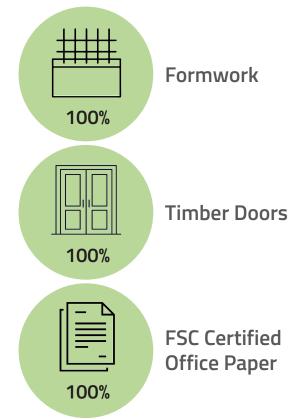
As concrete and steel are the two most widely used materials in construction in Hong Kong (with the highest embodied energy/carbon), one of our main priorities is to optimise designs and construction methods for leaner construction, less material use, and increased re-use (for example in edge protection, reusable struts, and temporary works needed for the construction process). This makes good business sense as well, as it minimises natural resources and energy use. Detailed data on the construction of these materials in recent years is included in Appendix A of SR19.

Through different initiatives, we have encouraged alternative designs using mechanisation, modularisation (e.g. re-use of modular struts), standardisation, automation and offsite prefabrication solutions (e.g. E&M modularisation, precast concrete) which result in more efficient use of resources. Tools such as our ACE dashboard and the Concrete Management System combined with the use of BIM help us achieve greater efficiencies in material use and wastage reduction. We continue to increase our use of the offsite cut-and-bend factories established in Hong Kong in the past few years with good success. We also look for opportunities to reduce waste to public fill with a focus on minimising earth works and finding a direct beneficial use of excavated material.

Other materials GRI 301-2

In addition, we try to reduce material impacts through the procurement of more sustainable materials, for example, with higher recycled content, lower embodied carbon (e.g. use of pulverised fuel ash (PFA) as a cement replacement in concrete), sustainable sources, and the use of design alternatives to reduce material quantities. One example is our use of certified sustainable timbers (normally FSC or PEFC certified) under our Sustainable Timber Procurement Policy and Implementation Guideline (please see data in our KPIs in Appendix A of SR19). We also use sustainably certified A4 and A3 paper in all our permanent and site offices but are trying to convert to paperless approaches and systems where possible and work with clients to reduce paper-based submissions.

In addition to ongoing ad hoc communication with suppliers and subcontractors, we conduct regular sustainable procurement workshops in Hong Kong and Shenzhen to increase their capability in green procurement.



LOW CARBON READY-MIX CONCRETE GRI 301-2

Our Concrete Technology Department continues to investigate new alternatives for more sustainable concrete mixes. The raw material types, sources (e.g. recycled content for cement replacements, see Appendix A of

SR19), mix design and the plant production and management systems are all considered in the mix to try to reduce the carbon footprint of the concretes we produce in Hong Kong. We have assessed the 'cradle to gate' life cycle carbon footprint for concrete mixes and these have been verified against BSI PAS 2050 Product Carbon Footprint Verification. We were the first concrete producer to have Construction Industry Council (CIC) Carbon Labels for our ready-mix concretes. We started with just 10 mixes but renewed our application in early 2018 for 66 mixes. These were assessed and achievements included: 42 'Outstanding',





CIC GREEN PRODUCT CERTIFICATION CARBON LABELLING SCHEME 22 'Highly commended', 1 'Very good', and 1 'Good'. By the end of 2018, we remained the only ready-mixed concrete supplier with CIC Carbon Labels for low carbon concrete mixes.

In 2019, two green labelling systems from the CIC and HKGBC were combined and the Carbon Labels were converted to CIC Green Product Certification

Scheme labels. Our Carbon Labels have therefore been converted to 42 Platinum, 22 Gold, 1 Silver and 1 Bronze certified products. We are also recognised by the BEC as a Sustainable Product Supplier.



Our sustainable timber purchases for 2019 (HK)

FFFI II FNT AND WASTE GRI 103-2 GRI 103-3 GRI 306-2

Our approach

Gammon has developed a set of production procedures including water pollution control and waste management to guide our teams on managing these aspects. It is the responsibility of the project site environmental representative, site depot or workshop manager or environmental officer to ensure these procedures are implemented. The project team must ensure 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. Most sites prepare a project-specific Waste Management Plan to define responsibilities and mitigation clearly from the beginning of the project.

Waste was identified as a material issue by our stakeholders with clients, academic institutions and industry associations all recognising this as particularly important. Aside from construction materials, stakeholders also brought up the topic of increasing site and planning efficiencies to reduce unintended waste. One example was to leverage the large number of construction sites to better plan overall logistics and materials allocation to decrease waste. We considered this several years ago and may revisit the options again in the near future. A second example was to centralise and strengthen Gammon's procurement and inventory database to reduce redundant purchasing. Our app, ARM (see Innovation section in the Sustainability Report 2017 Highlights) is being more widely used for inventory tracking. Our DiMart app also reduces the risk of overordering through our electronic procurement process.

We believe waste is probably our greatest environmental challenge (particularly in Hong Kong where there is very little support for the recycling sector) and also an area for opportunity. We need to think of waste as a resource and find ways to work up the supply chain to reduce it and look for chances to close material loops (circular economy thinking). Off-site construction and using a design for manufacturing and assembly (DfMA) approach present real opportunities for improvement both on material use (as mentioned above) and waste avoidance and we continue to promote these both internally and externally.

We developed a Waste Management Handbook that aims to provide project teams with practical and achievable guidelines for achieving our waste reduction targets. 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 and

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 the requirements of the site waste management plan are properly implemented.
- Contact details for waste recyclers in Hong Kong.

We advocate waste management improvement and policy support in Hong Kong through our role as a Steering Committee Member of the Waste Management Advisory Group at the BEC and work with our supply chain to try to reduce packaging waste where possible.

Reuse and recycling of construction waste

In Hong Kong, we continue to be challenged by waste reduction, as is the rest of the construction industry. Limited opportunities and high costs for recycling are combined with heavily constrained sites making waste separation difficult. Currently, the only widely recycled materials on sites in Hong Kong are waste metals, and this is largely due to the still strong market for scrap metal. However, we also recycle hard, inert material (e.g. demolition waste) where possible for use as aggregate for paving or concrete blocks or for drainage/ compaction layers at landfills. We also recycle some wooden pallets and timber where possible, but the scope is limited. While we continue to look for costefficient recycling opportunities, more important is waste avoidance. Examples include:

- the use of metal system formwork instead of timber;
- re-usable packaging methods and packaging 'takeback' by suppliers;
- redesign, material substitution and supplier engagement for easier recycling (e.g. closing the loop on our HDPE safety and water barriers which was started in 2015); and
- the use of BIM with visualisation and early design • freeze to avoid repeat work; and
- off-site factory construction where bespoke ordering and bulk production can avoid waste generation.

In Singapore, more of our waste is recycled due to the improved availability of sorting/recycling sites, and mandatory requirements for construction waste separation, recycling and disposal (e.g. waste to energy incineration). Data on our waste generation and disposal is shown in Appendix A of SR19.

Reducing and recycling office waste

For general (non-construction) waste, we already recycle all our office waste paper (on sites and in offices) and in 2017 we:

- stopped providing paper cups in our head office and switched to reusable tableware;
- stopped providing site visitors with individual singleuse plastic bottles on almost all sites and switched to reusable cups and glasses;
- worked with vending machine suppliers to avoid any plastic bottles in machines on some sites;
- upgraded our IT in meeting rooms in head office to make it easier to hold paperless meetings; and
- redesigned our annual Gammon diaries with a reusable cover and a replaceable diary insert using FSC certified paper.

In 2018, we rolled out our Zero Waste Office programme for permanent offices (see the Highlights and Main Report) starting with the Hong Kong head office,



ENERGY GRI 103-2

Energy mix

Energy was identified as a material issue during our stakeholder engagement process. Around three quarters of the energy we consume is in the form of B5 biodiesel (HK), marine vessel (ultra-low sulphur) diesel (HK) and diesel (Singapore) in plant and equipment used during construction operations, particularly foundations projects. The next largest significant energy type is electricity used in both our temporary projects and permanent operations, with a lower proportion of energy used for transport (e.g. concrete mixer trucks, site vehicles).

Responding to climate change

While the issue of climate change was not identified specifically as a standalone material issue in our previous stakeholder engagement, it is of course very closely related to energy consumption. Mitigating our contribution to global warming by reducing the carbon emissions associated with our energy consumption is a key intention. Reducing our carbon intensity and using cleaner, lower carbon energy is part of that challenging journey.



100% B5 Biodiesel use in our plant and equipment (HK) Having started using B5 biodiesel in 2013, by 2015 we had already successfully converted 100% of our own site plant and equipment to its use. We prefer to use B5 sourced in HK from the re-processing of waste cooking oils if at all possible. We also introduced B5 biodiesel to our concrete mixer truck fleet at the end of 2015 and by 2018 around one quarter of the diesel used in these trucks was B5. As B5 becomes available at more gas stations in Hong Kong, we expect this percentage to increase. We have been advocating for wider uptake through seminars, in collaboration with energy suppliers, and with other truck fleet owners.

Every year we do a detailed inventory of our greenhouse gas emissions according to ISO 14064:2018 (Specification with guidance at the organisation level for quantification and reporting of greenhouse gas emissions and removals) which is externally verified. As many of the sources of information for this data are based on energy consumption, this provides us with good confidence the systems we have in place provide us with a reasonable level of data accuracy.

Energy on site

Our preference on site is to use mains-connected





electricity from local power companies rather than diesel generators wherever possible. This improves our energy (and carbon) efficiency, reduces noise and air quality impacts to both people working on the site and surrounding neighbours, and reduces costs. However, in many cases the amount of electricity that can be supplied is often insufficient or cannot be connected quickly enough in the construction programme. It often takes several months or up to a year to supply sufficient power to the site, as well as get approval for and build a temporary transformer room, particularly if in a more remote or new development area. We therefore advocate for early application of sufficient electricity supply by our clients to avoid the need to use diesel generators and to allow for the use of more electric plant in the future.

In the meantime, temporary power is carefully planned on our sites, sizing generators and other equipment accurately with regular reviews and ensuring preventative maintenance is carried out to ensure plant is running efficiently. Operationally, we ensure equipment is being used efficiently with plant switched off instead of idling and planning work to avoid double handling. We are hoping to more widely adopt a DfMA and modular approach to construction in order to minimise impacts such as these.

Energy efficiency

We use LED lighting widely both on site for works lighting and in offices, with timer switches, smart metering, occupancy sensor controls, and smart controls being implemented gradually across projects. We also make use of renewable energy (solar photovoltaics, solar heating and some wind turbines) where possible, especially for lighting, fans and hot water for showers. New electrical appliances are purchased with Grade 1 or 2 energy efficiency labels and many new container offices are insulated to reduce solar gain and thermal transfer. These measures are promoted and rewarded through our internal G&CSC scheme, Eco office programme (Singapore) and when projects participate in the Environmental Campaign Committee's Energywi\$e programme. We have energy efficiency targets for both our concrete batching

facilities and our steel fabrication plant, Pristine, as well as an electricity intensity target for offices as part of our G&CSC scheme. For public housing and other selected projects, we operate



an ISO 50001 certified Energy Management System, with energy policy and associated energy purchasing standard procedures. We carefully track and monitor our energy consumption through our ACE dashboard and S-Dash.

For the most part, we do not have the opportunity to directly control or influence the design and equipment choice on our clients' completed projects. Where possible, however, we will recommend alternative designs for permanent facilities, plant, equipment and control system specifications where we believe improvements could easily be made. Opportunities for change, however, are often limited due to programme pressure. Where we are able to be engaged earlier during the project or for design-and-build contracts, we always look for opportunities to reduce consumption in the operation of the completed project.

We advocate energy efficiency improvement and policy support in Hong Kong through our roles as Chairman of the Energy Advisory Group and Member of the Climate Change Business Forum Advisory Group at the BEC.



VALUE CHAIN - CO-CREATION

MANAGEMENT APPROACHES

INFLUENCING THE INDUSTRY AND COMMITTING TO CHANGE

Association memberships GRI 102-13

In order to support the industry, advocate for change, and drive improvement, Gammon's staff have memberships of various external industry, professional and business organisations and government bodies and support them in governance, advisory or participation in committees or initiatives, etc. Memberships of these organisations and committees is particularly important as it provides an opportunity for the business to learn and share knowledge, promote best practices, and influence the industry for good. Our stakeholders view our role as influencers within the industry as a material issue and we take the same view that we must be proactive, challenge industry norms and strive for greater, more sustainable progress.

The list of the external organisation and association memberships is shown in Appendix G of SR19. We also regularly provide feedback and insight for academic research projects and consultancy studies, as well as support non-government organisations with their research and engagement. Other engagement activities where Gammon aims to influence both direct stakeholders and the broader industry include, among others:

- Safety, sustainability and innovation/digital construction conferences;
- Partnering lunches with CEO forums; and
- Various workshops and presentations.

External commitments and initiatives GRI 102-12 Gammon has also subscribed to and endorsed a range of externally developed economic, environmental and social charters, principles and other initiatives. These are all voluntary initiatives, applied in Hong Kong, and those from the past 10 years are listed below.

Date	Principles/Chartered	Organisation	
2008	Carbon Reduction Charter	Environmental Protection Department (EPD)	www.epd.gov.hk/epd/tc_chi/climate_change/ ca_partners.html#G
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	www.wbcsd.org/Projects/Energy-Efficiency-in- Buildings/Resources/
2014	Hong Kong Green Purchasing Charter	Hong Kong Green Council	https://www.greencouncil.org/
2016	No Car Day 2016	Friends of the Earth (HK)	https://www.foe.org.hk/default.aspx
2017	Code of Practice against Discrimination in Employment on the Grounds of Sexual Orientation	Constitutional and Mainland Affairs Bureau	www.cmab.gov.hk/en/issues/code_of_practice.htm
2017	Pledge to Support the Development of Qualified Environmental Professionals	Hong Kong Institute of Qualified Environmental Professionals Limited	http://hkiqep.org/pledge-to-support-the- continuous-professional-development-of-qualified- environmental-professionals/
2017	Biz Green Dress Day 2017	Hong Kong Green Building Council & Construction Industrial Council	www.hkgbc.org.hk/eng/events/20170913.aspx
2018	Earth Hour 2018	World Wildlife Fund for Nature (WWF)	
2018	STEM Alliance	Hong Kong Institute of Construction	www.hkic.edu.hk/eng/stem
2018	Biz Green Dress Day 2018	Hong Kong Green Building Council & Construction Industrial Council	www.hkgbc.org.hk/eng/hkgbw2018.aspx
2019	BEC Low Carbon Charter	Business Environment Council, Climate Change Business Forum	http://bec.org.hk/articles/bec-low-carbon-charter

OUR SUPPLY CHAIN GRI 102-9 GRI 103-2 GRI 103-3

Supply chain management and procurement approach As one of the largest contractors in Hong Kong, Gammon has an extensive supplier base providing a variety of products and services for our business operations. We believe suppliers are valuable stakeholders within our business supply chain and we are committed to engaging with them to build a better and more responsible future together. Indeed, supply chain engagement was identified as one of our material issues in our stakeholder engagement exercise. We believe developing and maintaining good relationships with our suppliers and subcontractors is an integral part of being a sustainable business. In addition to ongoing regular dialogue, we hold workshops with our supply chain to communicate our expectations in a number of key areas, as well as provide an opportunity for the suppliers to discuss any issues they may have or propose alternative solutions or products. We also invite both material or equipment suppliers and subcontractors to our safety, sustainability and other conferences and engagement sessions.

Gammon's supply chain is predominantly made up of material suppliers, material manufacturers, subcontractors and service providers. The total number of suppliers, their region of origin and types of suppliers are provided in the KPI table in Appendix D. Below we describe the management of our supply chain and the procurement process.

Our procurement process is guided by our Sustainability Procurement Policy which is available on our website¹ and our process, practices and procedures are included within our BMS. Our subcontract procurement, management and administration procedures are also defined in our BMS. It is our policy to act fairly in business dealings with vendors and subcontractors and at the same time to purchase responsibly and obtain the best possible value for money in procuring materials, services, plant and equipment.

A comprehensive supply chain management mechanism has been established to monitor a wide range of aspects for the suppliers and subcontractors, from product and service quality to ethical standards.

Our expectation of suppliers and subcontractors are incorporated in our tender invitations and supplier contracts. All suppliers and subcontractors should operate in accordance with local laws and regulations and are encouraged to conduct business with integrity and in accordance with our Codes of Conduct, Health, Safety, Environmental and Quality Policy, as well as strict standards for corporate governance. Our suppliers and subcontractors are given regular training every year to help them meet our standards. Risks in our supply chain, similar to our other operation risks, are subject to regular assessment through the Risk and Opportunity Management Procedure. Please refer to Managing Risk in the Governance section for details.

Local supply chain spending

Gammon is proud of delivering premium products and services to our clients. A key factor for our success is having the support from a diverse pool of suppliers and subcontractors. The proportion of spending on local suppliers (as identified under GRI 204-1) was not considered to be a material issue by our stakeholders. Whenever possible, however, our procurement approach includes local suppliers to reduce carbon emissions arising from the transportation of materials and products, as well as targeting the creation of economic value in the local community. In 2019, we had a total of 1,912 suppliers and subcontractors. Of our HK\$3,937 million supplier spend, 21.24% was spent on Hong Kong suppliers, 46.96% was with those based in Mainland China and 31.8% was with overseas suppliers. Almost all subcontractors are based in the locality where we are operating, with the exception of only extremely specialised skills such as heritage brickwork restoration. Further information on our supply chain can be found in Appendix A of SR19.

Supply chain assessment

Gammon has a structured process and database for managing its supply chain. Our Supply Chain Management System includes approvals of subcontractors and suppliers onto our Approved Subcontractors and Suppliers List, conducting performance appraisals half yearly for active subcontractors and suppliers, monitoring trade performance Key Performance Indicators with access for our subcontractors and suppliers on the Gammon supply chain extranet, and selection and evaluation of preferred/strategic subcontractors and suppliers. We ask and expect that our supply chain abides by our Code of Conduct at all times. For major material suppliers, we undertake on-site assessments of factories' health and safety and worker facilities and amenities including staff quarters, washroom hygiene condition, canteen facilities, resting area, recreation area, drinking water, personal protection equipment, etc.

PEOPLE - CARING

MANAGEMENT APPROACHES GRI 103-2 GRI 103-3

Our people

Attraction, retention and the development of our people and providing the right working environment for staff to thrive is critical to the success of our business and were identified as such in our stakeholder engagement

EMPLOYMENT GRI 401-1 GRI 404-2

We offer employment conditions that meet or exceed 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 based on objective criteria, individual performance and merit. As mentioned in the Zero Harm section, we observe the rights of employees and subcontractors to a safe and healthy work place.

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

For new employees, competitive packages are offered that recognise their 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 (or a five-day working

exercise. How we responsibly manage and support our people also affects our ability to influence the industry, engage with our supply chain, and make a positive impact on industry-wide issues such as the labour shortage.

week), 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. In late 2018, we increased our maternity and paternity leave for Hong Kong and Macau in line with HKSAR Government recommendations and ahead of any mandatory requirement to do so.

The normal retirement age of all employees is 60. However, Gammon may consider offering post-retirement employment where the employee has acquired specialised knowledge and skills, and is willing and capable of making a continued contribution to the Company.

Our employment practices and procedures are governed by our BMS and are reviewed as part of our management system review process. Our policies are outlined in employee handbooks for different locations and are available for both workers and staff.

Details of our employee hires and turnover by age group, gender and region are shown in Appendix A of SR19.

TRAINING AND EDUCATION

GRI 404-1 GRI 404-2

Gammon believes investing in training is an important factor in retaining and developing high-quality human capital. Therefore, since 2003, 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 management, quality management, engineering capabilities development, BIM, DfMA, 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. With the revamp of our Gammon Academy programme in 2017, training curricula have been further refined to provide greater relevance to each business division.

Training is backed up through our annual performance appraisal process which includes objectives and a learning and development plan to guide each individual employee. Our comprehensive training programme has been identified as one of the key reasons new graduates select Gammon and construction as a career.

In addition, we also developed the Technician Apprentices (TA) and Craft Apprentices (CA) programmes which provide comprehensive training in various disciplines including civil, building, building services,

electrical and mechanical and quantity surveying. We provide on-the-job training, skills-based training, mentorship and further education sponsorship for frontline workers and staff.

Our employees can also apply for and are financially supported to attend external training courses to meet training needs that have been identified or are mandatory to their current jobs in preparation for future roles.

We have an active Young Professionals Group and a Construction Supervisor and Technician Apprentice Group which provide opportunities for additional knowledge-based and social activities. Further information on training and education, including hours of training per year per employee can be found in the KPI Appendix A of SR19.

Skilling workers

Gammon has adopted a three-pronged approach to meet labour shortage challenges in Hong Kong and at Pristine: self-performing, upskilling / multiskilling, and new blood training. Having a permanent workforce ensures we have the necessary skilled manpower to take on new projects. Through multiskilling, 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 to assist with continued employability and life-long careers. We collaborate with HK's Construction Industry Council to hold formal training programmes and provide training to both our own and subcontractor workers.

CAREER DEVELOPMENT AND SUPPORT GRI 404-2 GRI 404-3

Gammon supports staff in the pursuit of technical and professional qualifications. Engineering and quantity surveying employees are encouraged to pursue professional memberships with the Institution of Civil Engineers, the Hong Kong Institution of Engineers and the Hong Kong Institute of Surveyors. Fresh graduates are encouraged to enrol in the approved training schemes provided by Gammon, in preparation for the professional examinations. Experienced employees can apply for professional and institutes' membership via the mature routes. Fresh graduates may be required to sign an undertaking with Gammon upon enrolment to the approved training scheme. They should understand the commitment they have undertaken to satisfactorily complete the training. The obligation to complete the institutions' requirements is linked to career progression within Gammon.

Other professional qualifications are also supported by the business in construction-related disciplines such as BIM, procurement, finance, safety, occupational health, quality and the environment. For example, environmental staff are encouraged and financially supported to qualify as members of the Chartered Institute of Waste and Environmental Management and the Hong Kong Institute of Qualified Environmental Professionals.

CAs and TAs are hired for training programmes and are supported by the company financially to cover their education costs while they work full time for Gammon. They attend relevant courses during part-time day release or during evenings. Gammon monitors their performance at work and their academic achievements, and they will be promoted within the company subject to satisfactory performance and job requirements. Upon completion of their apprenticeships, CAs are normally transferred to monthly or daily paid workers such as mechanics, electricians and levellers, and TAs would be promoted to permanent employees as construction supervisors or technicians. We have regular performance and career development reviews, normally held annually and targeting all employees and the data relating to these reviews is shown in Appendix A of SR19.

Diversity and inclusion

Gammon wishes to be an employer that is recognised to have a strong culture of fairness, inclusion and respect. The issue of diversity and inclusion (D&I) has therefore been included as one of the action areas in our Responsible Growth - 25 by 25 sustainability strategy. In late 2018, we started to formalise our approach with a group of D&I champions who are looking into this issue and considering how it is best supported. We believe D&I is important for a forward-looking business that wishes to retain, support and nurture their best talent, whoever they may be.

Employee rights – collective bargaining GRI 102-41 The majority of Gammon's employees are based in Hong Kong, Macau, Mainland China and Singapore. There is no statutory recognition of collective bargaining agreements in Hong Kong or Macau. In respect of Mainland China and Singapore, there is statutory recognition of collective bargaining agreements and, if applicable to the construction industry, any collective bargaining agreements would be complied with. To the best of our knowledge, there are no Gammon employees covered by collective bargaining agreements in Mainland China and Singapore.

Our Code of Conduct 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 website¹. 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.



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We value and encourage dialogue on our sustainability initiatives. 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 sustainability@gammonconstruction.com GRI 102-53

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