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CRH plc is a leading global diversified building materials group, employing 89,000 people at over 3,900 operating locations in 31 countries worldwide.

CRH's vision is to be the leading building materials business in the world. The Group believes that strong Corporate Social Responsibility and Sustainability practices are fundamental to achieving its vision and has embedded these concepts into its business model.

CRH is dedicated to extensive and transparent reporting of its sustainability performance. This Report is CRH's thirteenth annual Sustainability Report and covers activities during 2015.



# A Message from the CEO



'With our leading positions globally we are conscious of our ability to influence progress in sustainability areas directly and indirectly impacted by our business. We believe that we can do this in a way that adds value for our business and for our stakeholders and this is embedded in our Group strategy.'

I am proud to welcome you to this, our thirteenth annual Sustainability Report. 2015 was a very successful year for CRH. The Group delivered a strong performance which was achieved through solid organic growth in our heritage businesses, an improving economic backdrop in some of our key markets and the partial year contribution from businesses newly acquired during the year. On a financial basis, our sales increased by 25% and our profit before tax rose by 36% on the previous year. Acquisition spend of approximately €8 billion in 2016 included two significant deals (LafargeHolcim Assets and CRL), which represent an ambitious step forward for the Group and which provide platforms for further growth opportunities in the future.

During 2015, we made further strides in key areas of sustainability. Our focus on sustainability is underpinned by a strong understanding, throughout the Group, that conducting our business in a responsible and sustainable manner, is key to achieving our ambition to be the leading building materials business in the world.

2015 saw increasing recognition of the role business has to play in delivering the UN sustainable development goals and global climate targets. We are aware of the role that we, as a leading building materials business, have to play, in delivering solutions for a more sustainable future. We believe we can do this in a way that harnesses new opportunities for our businesses globally, and delivers benefits along the value chain. We are focused on achieving safe and responsible operations while also delivering transformative solutions for a sustainable built environment.

In 2016, we will continue to strengthen our organisational structures around corporate social responsibility and sustainability and we are more clearly defining our medium-term and long-term objectives and ambitions.

#### Safety

I am pleased to report that we continued with our uncompromising approach to safety as we integrated our newly-acquired businesses. In 2015 we devoted significant resources to meeting the challenge of ensuring our culture of safety is embedded at every location. The accident frequency rate has declined further in 2015 and 92% of locations were accidentfree. Our Fatality Elimination Plan remains the cornerstone of our safety strategy and there were no employee fatalities in either 2014 and 2015. However, we deeply regret the loss of two contractors' lives at Group subsidiaries during 2015. We extend our sincere sympathies to the families of these individuals, and we continue to focus on all aspects of contractor safety within the Group's control.

#### **Environment & Climate Change**

We extended our focus on delivering innovative products that offer transformative change in the built environment, and in 2015 we used 23 million tonnes of recycled materials in our products. Having achieved our 2015 carbon and air emissions targets ahead of schedule, we are on-track to achieve our 2020 commitments. We work closely with local stakeholders to enhance natural habitats and we are actively chasing targeted performance improvements that realise both

environmental and business value. We remain a core member of the Cement Sustainability Initiative of the World Business Council for Sustainable Development (WBCSD) and have also endorsed the Council's Low Carbon Technology Partnership Initiative (LCTPi), a statement of ambition, which seeks a reduction in Global Cement  $\mathrm{CO_2}$  emissions by between 20 to 25% by 2030.

#### Governance

We remain committed to operating a global business to the highest ethical, legal and moral standards, as underpinned by a culture of openness and core values of integrity, honesty and respect for the law. The Group Regulatory, Compliance & Ethics programme continues to develop in scope and reach, and the organisation of this function was strengthened in 2015. There is also a focus on training, with the overall aim of fostering a 'speak-up' culture and ensuring that all employees understand that there is never a good business reason to do the wrong thing.

#### People & Community

We believe that ongoing business success is built on maintaining excellent relationships with all stakeholders. Our philosophy is to develop and nurture all employees, recognising that people are critical to achieving our strategy. We also recognise a wider responsibility beyond our core business activities in the communities in which we operate. In 2015, we held over 800 stakeholder engagement events and continued to assist local community initiatives and charities. We endorse human and labour rights

and our policies and processes in these areas, including both our supply chain and our own businesses, were further extended recently.

#### Communication

We communicate regularly with all our stakeholders in an open and transparent way. As with previous reports, we are proud that this report is independently verified in line with the Global Reporting Initiative guidelines. We will further develop our processes to align sustainability targets with business targets and ensure activities in the area deliver lasting value.

We are delighted that our sustainability performance is being recognised by external stakeholders. In 2015, Group companies received almost 600 external awards in areas of sustainability, and we are pleased to be ranked among sector leaders by a number of Socially Responsible Investment Agencies (SRIA).

#### Conclusion

Our vision is to be the leading building materials business in the world. We have a clear path to achieving this, based on a sound business model and sustainability framework that underpins our core values and commitments. By constantly striving for improvement, CRH is working towards becoming the leading building materials business in the world.

I would like to take this opportunity to thank everyone working in CRH's family of businesses around the world, for their hard work, effort and dedication during 2015. I am deeply grateful for their continued commitment to our business.





## About CRH

#### **CRH Vision**

#### To be the leading building materials business in the world

CRH plc is a leading global diversified building materials group, employing 89,000 people at over 3,900 operating locations in 31 countries worldwide. CRH is the largest building materials company in North America, has leadership positions in Europe and has established strategic positions in emerging economic regions.

CRH is committed to improving the built environment through the delivery of superior materials and products for the construction and maintenance of infrastructure, residential and commercial projects. Corporate Social Responsibility (CSR) and Sustainability concepts are embedded in the heart of the CRH business and are fundamental to achieving the Group's vision.

A Fortune 500 company, CRH is listed in London and Dublin and is a constituent

member of the FTSE 100 and the ISEQ 20 indices. CRH's American Depositary Shares are listed on the New York Stock Exchange. CRH's market capitalisation at 31 December 2015 was approximately €22 billion. CRH is ranked among sector leaders by a number of Socially Responsible Investment rating agencies for its sustainability and CSR performance.

The Group's major businesses are in the developed markets of Europe and North America, and it has growing positions in developing economies in Asia, including India and China. Operations focus on three closely related core businesses: primary materials, value-added building products and building materials distribution. CRH is headquartered in Dublin, Ireland.

#### Chief Executive Officer

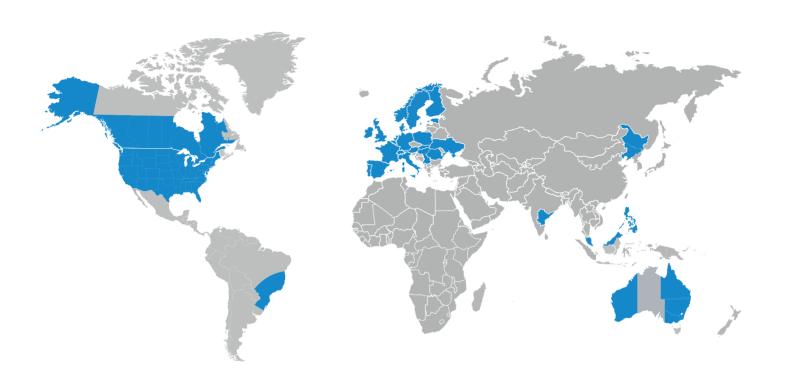
#### Group Functions

Finance, Internal Audit, Business Conduct, Risk Management, Human Resources, Investor Relations, Communications, CSR & Sustainability, Strategy & Development









31 Countries

89,000 people

3,900 operating locations

860 distribution branches

450m tonnes of manufactured product

€23.6 billion sales

# Becoming the Global Leader in Building Materials

Since the Group's foundation in 1970, CRH has successfully refined and honed its strategy in continuously evolving market environments. CRH has implemented this strategy by strengthening existing positions and developing new platforms for growth. While the Group continues to grow in scale, CRH remains resolutely focused on serving the unique needs of customers in local and regional markets around the world.

CRH provides a world class service with the personal touch of a local supplier. This focus on delivery for customers through strong local businesses is a key factor in enabling CRH to realise its vision of becoming the global leader in building materials.

#### Delivery of the Group's strategy is centred on:

Maximising performance and returns in its business.

- Conducting its business responsibly and sustainably.
- Expanding its balanced portfolio of diversified products and geographies.

CSR and sustainability principles are fully integrated into the overall Group strategy. CRH focuses on the interrelated areas of ensuring safe and responsible operations, ensuring excellence in environmental management and developing transformative solutions for a sustainable built environment.

#### CRH is guided by a number of strategic imperatives:

#### Continuous Business Improvement

Make businesses better through operational, commercial and financial excellence.

#### Disciplined and Focused Growth

Maintain financial discipline, use a strong balance sheet, cash generation capability

and focused allocation of capital to achieve optimum growth.

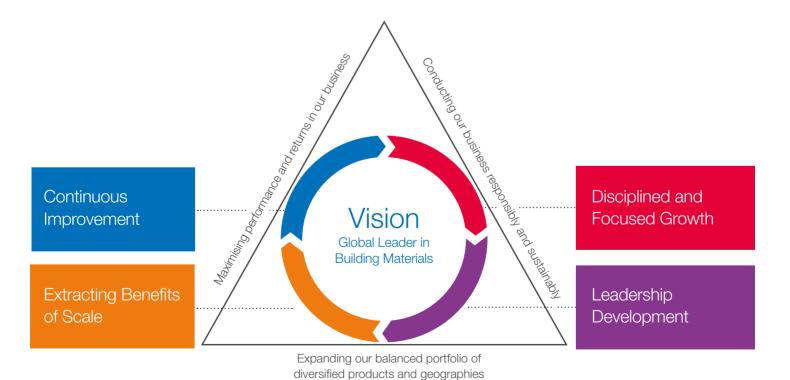
#### Leadership Development

Attract, develop and empower the next generation of performance orientated, innovative and entrepreneurial leaders.

#### Extracting the Benefits of Scale

Leverage Group scale to fund expansion by acquisition and to build leadership positions in local markets.

The strength of CRH's business model, with a balanced portfolio and decentralised and geographically dispersed structure maximises the opportunity to create value and has led to continued business success for over 40 years.



# Innovating for Sustainability

CRH is committed to delivering a built environment that is sustainable and of value to the communities it serves. With an extensive global presence and industry leadership positions, the Group is in a strong position to influence transformative innovation that improves the sustainability of the built environment.

CRH has a continuous focus on innovation, research and development. There are strategies

to ensure that the Group is constantly aligning its products and services to the demands of customers while taking a whole life cycle approach. Excellence in safety, environmental management, governance and social performance are priorities at all levels of the organisation.

The strategic focus on continued business improvement has extended the reach of technical and performance activities.

Formal mechanisms, such as performance benchmarking, are in place to ensure business value is realised from key areas including sustainability aspects and innovation.

Regional research and development centres exist, such as Oldcastle's North American research and development centres and the CRH Europe Sustainable Concrete Centre.

Please refer to page 30 for further details on Sustainable Products.

#### Materials 2015 Annualised Production Volumes 33.5 (41.1)\*m tonnes CRH's primary materials business includes alternative fuels and materials. cement, aggregates, asphalt, readymixed Aggregates 270.3 (279.9)\*m tonnes There is also a focus on the development of concrete and lime. With large land holdings climate-friendly building materials such as Asphalt 54.5 (55.9)\*m tonnes around guarries and pits, materials businesses lower carbon cements, warm-mix asphalt can have a positive impact on natural capital. and recycled aggregates. All of these result Readymixed Process initiatives include operational and 24.2 (24.7)\*m m<sup>3</sup> Concrete in significant cost and resource savings. energy efficiency, together with the use of Lime 1.1m tonnes

# CRH caters for a range of end-uses through its wide spectrum of construction products, including precast concrete, building envelope products (architectural glass, aluminium glazing systems, customised hardware products to the glass and glazing industry) and construction accessories. Many of these products positively

contribute to the sustainability of the built

**Products** 

environment and CRH is increasingly providing tailored value-added solutions for individual applications through measures such as the use of building information modelling and the provision of advice for sustainable buildings. At plant level, there is a focus on energy efficiency, recycling and product innovation.

Concrete & Precast Products	22.9m tonnes
Fencing Products	3.9m lineal metres
Building Envelope Products	7.6m tonnes (67k SKUs)
Pre-Packaged Concrete Mixes	3.3m tonnes
Pre-Packaged Lawn & Garden Products	5.2m tonnes

134 outlets

144 outlets

53 outlets

Sanitary, Heating

**Exterior Products** 

Interior Products

& Plumbing

2015 Annualised Production Volumes

# Distribution 2015 Outlets CRH's distribution business supplies building materials to general and specialist building operational excellence. Environmentally-driven products are actively promoted and customers Builders Merchants 347 (506)\*\* outlets DIY 183 (228)\*\* outlets

CRH's distribution business supplies building materials to general and specialist building contractors as well as DIY customers. The businesses focus on superior customer service, optimising the supply chain and

operational excellence. Environmentally-driven products are actively promoted and customers are advised on more sustainable building solutions, extending a positive influence along the value chain.

\*\* Total number of outlets in which CRH has a share

<sup>\*</sup> Amounts in parenthesis represent annualised 2015 production including CRH's share of equity accounted investments

# Creating Value from Sustainability

CRH has placed sustainability and CSR at the heart of its business model, strategy and activities worldwide. For over four decades, CRH has grown to be a leader in the building materials industry by building better businesses across its international operations.

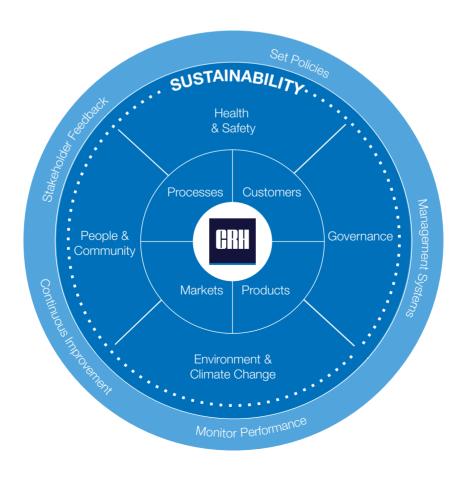
The fundamentals of business are managed within an established sustainability framework, which is based on four pillars: Health & Safety, Environment & Climate Change, Governance, and People & Community. For each of these areas, the Group defines and implements policies, develops management systems, monitors performance and incorporates stakeholder feedback. Implementation and monitoring of these policies is the responsibility of line management, who are assisted by safety

officers, environmental liaison officers, country compliance coordinators and human resource managers in the operating companies.

CRH continuously identifies, evaluates and manages potential risks and opportunities in sustainability areas through stakeholder engagement and feedback processes. The sustainability performance of the Group is monitored and reported at business level and also by the central sustainability support team. CRH believes that measurement improves performance, and this is incorporated into the continuous business improvement approach by defining appropriate financial and non-financial key performance indicators (KPIs). These KPIs are quantifiable measures which the Group has been working to for many years and are closely

aligned to the Group's strategic priorities. A series of key safety, social and environmental indicators are published in the Annual Report as well as in this annual Sustainability Report, as part of CRH's commitment to full and transparent reporting on its activities.

For CRH, sustainability goes beyond simply measuring performance and managing risks to embrace innovation, efficiencies and competitive advantage across all products and processes – all the time adding value. Sustainability for CRH is also about organisational longevity. Being commercially sustainable, finding new sources of competitive advantage and attracting the best talent ensures that the business can thrive in the long-term.



# Assessing Materiality of Sustainability Issues

For CRH, materiality in the context of sustainability is defined by identifying the focus areas that are relevant or significant to the organisation and its stakeholders.

CRH has a range of internal and external processes which are effective in identifying economic, environmental and social issues of relevance and importance to the business, society and key stakeholders. Through these processes, CRH has identified and addressed material sustainability issues and in addition, informed the content of Sustainability Reports.

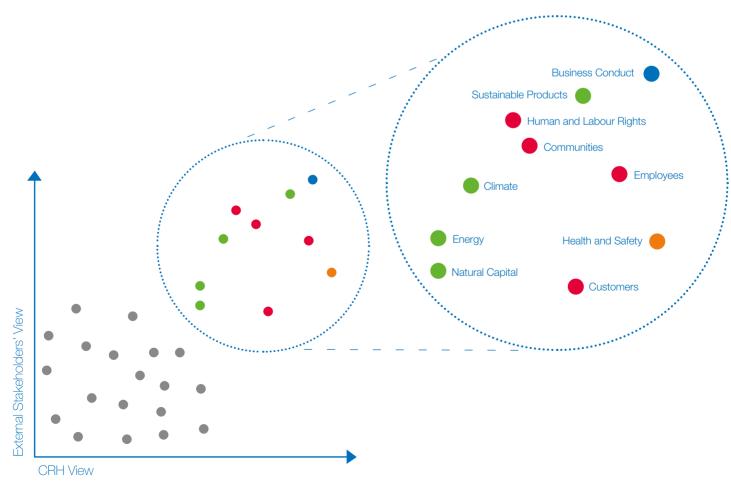
A formal materiality assessment has been carried out with an external organisation for an independent approach. This was based on

international best practice guidelines and the Global Reporting Initiative G4 Sustainability Reporting Guidelines. The assessment resulted in a comprehensive and balanced understanding of material sustainability issues. identifying ten key focus areas, which were evaluated and prioritised using internal and external stakeholder feedback. In 2015, to capture potential changes in the key materiality areas for CRH as a result of the significant acquisitions and changing stakeholder expectations, the materiality assessment was further updated. This confirmed that the ten previously identified key focus areas remained appropriate. The order of priority changed in comparison with the previous assessment,

resulting from the changing expectations of stakeholders and the developments in sustainability such as the publication of the UN Sustainable Development Goals and the 2015 global climate agreement.

Each of these ten areas is specifically discussed in this Report. The Group has policies and guidelines in place to support management in key material sustainability areas, which together enhance CRH's reputation and underpin CRH's ability to do business.

#### Key Material Sustainability Areas



## Dynamic Capital Management

CRH creates value and growth by identifying and acquiring strong businesses that complement its existing portfolio of operations. Typically, CRH specialises in acquiring small and mid-sized companies, releasing value through synergies and network optimisation. From time to time the Group also evaluates and concludes larger transactions where the strategic rationale is compelling.

In 2015, CRH completed the €6.5 billion acquisition of certain assets from Lafarge S.A. and Holcim Limited (LH Assets). This more than doubled the Group's cement production volumes and enabled the Group to establish new leadership positions in certain heavyside materials markets globally.

CRH also concluded the \$1.3 billion acquisition of CR Laurence (CRL), North America's leading manufacturer and distributor of custom hardware and installation products for the professional glazing industry. This business provided an exceptional operational fit with the Group's existing glass business in North America and is an excellent example of targeting focused and balanced growth across the CRH portfolio. There were a further 20 bolt-on acquisition and investment transactions during 2015.

Extensive due diligence is carried out for all acquisitions, covering, among other topics,

material sustainability issues in the areas of environment and climate change, health and safety, as well as people and community. Due diligence for acquisitions in developing economies also covers human rights and other relevant social and ethical issues, where relevant. Companies joining the CRH Group are integrated into health and safety, environmental, social and compliance and ethics reporting systems, together with CRH governance systems.

In 2015, there was a particular focus on welcoming new colleagues to the Group. An integration team was established to meet the challenge of implementing the Group policies, processes and reporting systems in the newly acquired companies. There is a particular focus in new territories such as Brazil and Philippines. CRH is proud that this Report includes data from the date of acquisition of the LH Assets in most cases.

CRH has an ongoing portfolio review process and in 2015 completed 29 divestments, realising €1 billion. These included a 25% equity interest in Mashav, the holding company for the sole producer of cement in Israel, together with a fencing business and a lightweight aggregates division, both in the United States. In addition, CRH operations in South America were divested.











Eqiom, France, and Republic Cement, Philippines, part of LH Assets; and CR Laurence, US and Canada, all acquired during 2015.

# Creating Value Through Risk Governance

Managing risk is of vital importance and CRH has a formal Enterprise Risk Management (ERM) Framework as the basis for assessing and managing risks associated with business and strategic corporate decisions. From a CRH perspective, ERM is a forward-looking, strategy-centric, risk-based approach to managing the risks inherent in decision making. It recognises the linkage between business objectives and strategies, and their associated risks and opportunities, and hence integrates strategic decision making and risk taking in order to preserve and/or enhance value and reputation.

#### **ERM Framework**

The ERM Framework encompasses risks across the various strands of CRH's strategy – driving performance, executing organic and acquisitive growth, protecting information assets, monitoring compliance with all laws and regulations (including an unwavering commitment to health and safety), sustainability, leadership development, talent management

and finance. A key requirement of the ERM Framework has been to ensure that it continues to deliver value for management by providing visibility on strategic priorities and the linkages to the associated risks and opportunities. The key risks identified are reported periodically through the Framework to the Audit Committee and the Board with the risks being subject to common, standardised and repeatable processes of assessment, evaluation, management and monitoring.

#### Risk Management Lines of Defence

CRH adopts the best international practice of incorporating the 'three lines of defence' structure into its corporate risk management:

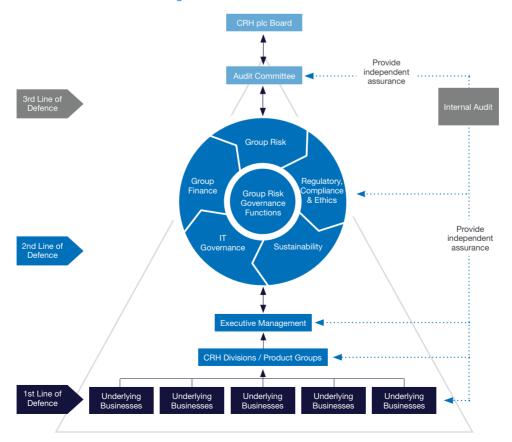
- First line: Operating company/business leaders.
- Second line: Divisional and corporate oversight.
- Third line: The internal audit function.

Management are required to assess all risks which could have an impact on the current or future operation of their business and to document these risks in a standardised template. Risks are assessed in terms of their financial and operational impact should they occur and their likelihood of occurrence, using a defined risk scoring methodology.

#### Reporting Risks

The Group-level Risk Register, which is compiled by the Group Risk function, identifies those risks which may impede the realisation of core strategic objectives. The risks listed on pages 113 to 119 of the CRH Annual Report 2015 constitute this register, which forms the basis of Board and Audit Committee communications and discussions.

#### Our Risk Management Framework - Three Lines of Defence



# Targeting Leading Class Sustainability

CRH's vision is to be the leading building materials business in the world and in doing so to create value and deliver superior returns for all stakeholders. Conducting business in a responsible and sustainable manner is identified as key to delivering this strategy. CRH translates

this strategy into ambitions and targets in each sustainability area that has been identified as material. These reflect sustainability risk areas, identified through the ERM and other processes outlined on the previous pages of this Report. Priority areas and ambitions are outlined in the

table below. In each sustainability area, key performance indicators (KPIs) are published, which are highlighted throughout this Report.

Health & Safety	
Strategic Priority: To ensure the safe	ty of everyone in the workplace
Priority Areas	Ambition
Policy Implementation	<ul><li>Continue to refine the Health &amp; Safety Policy and implement consistently in acquisitions.</li><li>Continuously improve safety performance.</li></ul>
Safety Management	Continue to develop and invest in safety management initiatives.
	<ul> <li>Target: zero accidents at every location.</li> <li>Continue positive trend in reduction of frequency and severity of accidents.</li> </ul>
Fatality Elimination ZE	<ul> <li>Target: elimination of all fatalities.</li> <li>Continue to focus on implementation and auditing of Fatality Elimination Plan.</li> </ul>
Contractor Safety	<ul> <li>Develop a partnership approach and continue to monitor contractor safety, implement contractor safety procedures.</li> </ul>
Employee Health	<ul> <li>Continue to implement the documented policies and procedures that follow best practice in occupational health, including employee health and workplace monitoring.</li> </ul>
Environment & Climate Change	
Strategic Priority: To achieve the high	nest standards of environmental management and proactively address the challenges of climate change
Priority Areas	Ambition
Policy Implementation	<ul> <li>Continue to refine the Environmental Policy and implement consistently in acquisitions.</li> <li>Continuously improve environmental performance.</li> </ul>
Sustainable Products	<ul> <li>Continue to develop and promote transformative products that benefit the built environment.</li> <li>Continue to consider and improve sustainability of products throughout their life-cycle.</li> </ul>
Climate	<ul> <li>Target: to reduce specific net cement CO<sub>2</sub> emissions by 25% (2020 vs 1990).</li> <li>After achieving 2015 targets three years ahead of schedule, continue to implement strategic programmes aimed at reducing specific CO<sub>2</sub> emissions in all activities.</li> </ul>
Energy	Continue with strategic energy reduction programmes at all activities.
Emissions 80% reduction in 22	<ul> <li>Target: to reduce specific cement dust emissions by 80% and NO<sub>x</sub> by 22% (2020 vs 2006).</li> <li>After achieving 2015 targets three years ahead of schedule, continue progress towards achieving new targets.</li> </ul>
Natural Capital 10	<ul> <li>Continue to improve water and waste management, and recycling.</li> <li>Currently focusing on formalising a biodiversity management strategy at all locations within, containing or adjacent to protected biodiversity areas.</li> <li>Target: 100% of quarries and pits to have reinstatement plans.</li> </ul>
Es transcription of the	

Continue to develop investment plans to improve performance and offer innovative opportunities.

Environmental Investment

Governance					
Strategic Priority: Committed to the highest standards of corporate governance					
Priority Areas	Ambition				
Corporate Governance	<ul> <li>Continue to ensure organisational structures and reporting meets all requirements for best-in-class.</li> </ul>				
Business Conduct	<ul> <li>Continue to develop the Group RCE programme in scope and reach.</li> <li>Ensure that employees at all levels in the organisation understand that at CRH: There is never a good business reason to do the wrong thing.</li> </ul>				
People & Community					
Strategic Priority: To develop CRH employees an	nd create an inclusive workplace				
Priority Areas	Ambition				
Policy Implementation	<ul><li>Continue to refine the Social Policy and implement consistently in acquisitions.</li><li>Continuously improve social performance.</li></ul>				
Employees  Target 25% female board members	<ul> <li>Continue to maintain excellent employee relations.</li> <li>Extend the development programmes to continue to supply the depth and breadth of skills for a global organisation.</li> <li>Enhance diversity at all levels of the organisation.</li> <li>Target to increase the number of female Board members to 25% has been exceeded; females now represent 31% of Board members.</li> </ul>				
Human and Labour Rights  Target 100% of procurement team trained	<ul> <li>Continue to extend influence along value chain to respect human and labour rights.</li> <li>Continue to implement sustainable supply chain management policies.</li> <li>Train all members of the procurement team in responsible sourcing.</li> </ul>				
Customers	Continue to achieve excellence in customer care, product quality, value and service.				
Communities  Target 100% community engagement plans	<ul> <li>Continue to grow community programmes in all regions of operations.</li> <li>Implement formal community engagement plans at all Group companies.</li> </ul>				

Stakeholder Dialogue				
Strategic Priority: Committed to comprehensive and transparent engagement on sustainability performance.				
Priority Areas	Ambition			
Materiality	Further develop KPIs in each focus area to drive and improve sustainable business performance.			
Stakeholder Communications	Continue to communicate openly with stakeholders and respond to feedback.			
Awards	Continue to promote awards.			
SRI Rating Agencies	Maintain leading position with SRI Agencies.			
GRI Guidelines	Continue to use best international sustainability reporting practices.			
External Verification	Maintain external verification of sustainability, continuously improving reporting.			

# Transparently engaging with stakeholders

CRH believes that continued business success depends on maintaining excellent relationships with all stakeholders.

CRH defines stakeholders as people and organisations who affect or are affected by CRH's business. Internal stakeholders include employees at all levels of the organisation and external stakeholders include shareholders, the investment community, socially responsible investment rating agencies, legislative and regulatory authorities, industry peers, government representatives, contractors, customers and suppliers as well as neighbours, local Non-Governmental Organisations (NGOs) and community groups.

CRH maintains these relationships through open dialogue, inclusiveness, collaboration, responsiveness, transparency and direct engagement. During 2015, CRH companies held over 800 stakeholder engagements, examples of which are presented in the table on the following page. Stakeholder dialogue is particularly important to CRH in developing, implementing and continuously improving its sustainability policies. The outcome from these engagements informs continuous improvement processes.

Interaction with stakeholders is ongoing and takes place on both a global and local level. Among other issues, CRH's sustainability approach and challenges are discussed during these engagements. At Group level, CRH engages with shareholders and the investment community, employees, third-party survey and assessment organisations and other interested parties. CRH is responsive to stakeholder feedback. For example, this Report has been enhanced based on stakeholder feedback to clarify targets in sustainability areas and provide greater transparency in data breakdowns.

At local level, individual CRH companies engage with customers, suppliers, neighbours and local communities on a day-to-day basis. Interactions with legislative and regulatory authorities are handled at company level, product group or regional level, as appropriate. In addition, company representatives are involved with educational institutions throughout the countries in which CRH operates.

Internal communications with employees are central to building and maintaining a successful and productive workforce. Internal communication is two-way, and the employees

provide their input and feedback through various representative structures, depending on the business or country of operation. Regular employee briefings are held throughout the Group with the aim of informing and consulting employees on relevant matters. For example, in the US, Oldcastle holds regular "Town Hall" meetings, where employees can join discussions in person or remotely. In the European Union, the CRH Euroforum (in compliance with the European Works Council Directive) provides a regular opportunity for employee representatives to discuss, with company management, a wide range of business and social issues, including the sustainability strategy.

over Stakeholder

engagement events



CRH Group companies received close to 600 external sustainability awards in 2015. Farrans, which operates throughout Northern Ireland and the UK, was successful in the Considerate Constructors Scheme Regional Site Awards. These awards are judged on criteria including site impact, community engagement, environmental protection, and health and safety.



Shelly hosted a State Representative at its Streetsboro facility in Ohio, US. The State Representative engaged with Shelly's employees and learned about the positive impacts that Shelly makes on the local community.

CRH Stakeholders		Engagement Examples	Areas of Interest
Employees	<ul><li>Senior Management</li><li>Staff</li><li>Trades Unions</li><li>Potential and new recruits</li><li>Leavers</li></ul>	<ul> <li>Team meetings</li> <li>Employee newsletters</li> <li>Forums</li> <li>Annual Euroforum</li> <li>Employee surveys</li> <li>Town Hall meetings</li> <li>CEO blog</li> </ul>	<ul> <li>Business performance</li> <li>Employee relationships</li> <li>Health, safety and wellbeing</li> <li>Corporate governance and ethics</li> <li>Human and labour rights</li> <li>Potential local impact</li> </ul>
Local Communities	<ul><li>Neighbours</li><li>Local authorities</li><li>Charities and volunteer organisations</li><li>Environmental groups</li></ul>	<ul><li>One-to-one meetings</li><li>Open days</li><li>Site tours</li><li>Participation in local events</li></ul>	<ul><li>Community issues</li><li>Planning matters</li><li>Potential local impact</li><li>Sustainability of processes and products</li></ul>
Investors	<ul><li>Institutional investors</li><li>Fund managers</li><li>Financial and SRI analysts</li><li>Rating agencies</li></ul>	<ul> <li>Annual General Meeting</li> <li>One-to-one meetings</li> <li>Investor conferences and roadshows</li> <li>Survey engagement</li> <li>Ratings</li> </ul>	<ul> <li>Business performance</li> <li>Sustainability policy</li> <li>Corporate governance and ethics</li> <li>Environment and climate change</li> <li>Employee relationships</li> <li>Cost reduction</li> <li>Board and executive appointments</li> </ul>
Customers	<ul><li>Builders</li><li>Architects and engineers</li><li>Public sector</li><li>Private developers</li><li>Consumers</li><li>Contractors</li></ul>	<ul> <li>Meetings and negotiations</li> <li>Customer surveys</li> <li>Formal market research</li> <li>Brand and corporate website</li> <li>Product information on packaging</li> </ul>	<ul> <li>Customer relations and contracts</li> <li>Quality and delivery</li> <li>Health, safety and wellbeing</li> <li>Resource efficiency and sustainable products</li> <li>Product innovation</li> </ul>
Suppliers	<ul><li>Suppliers of materials</li><li>Contract manufacturers</li><li>Service providers</li></ul>	<ul><li>Supplier surveys</li><li>Contractual meetings</li><li>Tender quotations</li><li>Information requests</li></ul>	<ul> <li>Quality and delivery</li> <li>Contract performance</li> <li>Health, safety and wellbeing</li> <li>Corporate governance and ethics</li> <li>Potential local impact</li> </ul>
Government and Regulators	<ul> <li>Country and local governments</li> <li>Regulators of Group products and services</li> <li>Local authorities</li> </ul>	<ul> <li>Briefings and direct meetings</li> <li>Multi-stakeholder forums</li> <li>Industry associations</li> <li>Audits</li> <li>Open days</li> </ul>	<ul> <li>Potential local impact</li> <li>Corporate governance and ethics</li> <li>Planning matters</li> <li>Environment and climate change</li> <li>Emissions to air, ground and water</li> <li>Health, safety and wellbeing</li> </ul>
Academic and Scientific Community	<ul><li>Universities</li><li>Researchers</li><li>Students</li><li>Industry associations</li></ul>	<ul><li>One-to-one meetings</li><li>Seminars and lectures</li><li>Presentations</li><li>Round table discussions</li></ul>	<ul> <li>Environment and climate change</li> <li>Human and labour rights</li> <li>Emissions to air, ground and water</li> <li>Energy and resource efficiency</li> <li>Product development and innovation</li> </ul>
Media	<ul><li>TV and radio</li><li>National and local newspapers</li><li>Trades Unions</li><li>Financial newspapers</li></ul>	<ul><li>Media surveys</li><li>Interviews</li><li>Press releases</li><li>Social media</li></ul>	<ul> <li>Business strategy and performance</li> <li>Corporate governance and ethics</li> <li>Employee relationships</li> <li>Health, safety and wellbeing</li> <li>Environment and climate change</li> <li>Product innovation</li> </ul>
NGOs and Pressure Groups	Human and labour rights organisations     Environmental organisations	<ul><li>One-to-one meetings</li><li>Presentations</li><li>Participation in events</li><li>Open days</li></ul>	<ul> <li>Corporate governance and ethics</li> <li>Environment and climate change</li> <li>Human and labour rights</li> <li>Energy and resource efficiency</li> </ul>

# Health



## Applying a Robust Policy

CRH's Health & Safety Policy, applied rigorously across all Group companies, is to:

#### Comply

as a minimum, with all applicable health and safety legislation and continuously improve our health and safety stewardship, aiming all the time to meet or exceed industry best practice.

#### Insist

that all employees and contractors respect the Group's health and safety guidelines.

The CRH Health & Safety Policy is applied rigorously across all Group companies. The implementation of the Policy is the responsibility of operational management up to the Chief Executive and ultimately the CRH Board.

Effective management of safety is vital to CRH's strategic vision. Managers at CRH are supported by a strong safety management structure with each company having at least one full-time or part-time Safety Officer, depending on the scale of the operating company. The Safety Officer network, supported by regional and Group specialists, assists operational managers in working towards the targeted ambition to achieve a culture of safety excellence at every location.

#### Ensure

that our companies provide a healthy and safe workplace for all employees and contractors and take due care of customers and visitors at our locations.

#### Require

all employees and contractors to work in a safe manner as mandated.

The CRH safety management culture is implemented in new acquisitions as soon as possible. This can present significant challenges in countries and regions that traditionally have a poor safety culture and CRH has developed specific processes to address this.

CRH is a core member of the Cement Sustainability Initiative (CSI) Health & Safety Task Force and other regional industry associations including CEMBUREAU in Europe and National Asphalt Pavement Association in the US. Through these associations, CRH is actively involved in global and regional discussions on improving the safety performance of the industry.



CRH employees participated in an annual drill with local emergency services at one of Quester's locations. Quester is a building materials distributor with 23 locations throughout Austria.

Refer to Glossary on page 67 for definitions related to safety statistics.

# Managing Safety

CRH's no compromise approach to safety management continues to drive improvements in safety performance. The safety performance of all operating locations at CRH is fully assessed. Safety audits were completed at over 3,100 locations during 2015 by internal safety managers or external agencies. CRH monitors leading indicators of safety performance such as employee engagement, near-miss reporting and risk reduction initiatives. In addition, CRH carries out a comprehensive annual review of the health and safety performance of all Group companies, including joint ventures and associates. The results of the review are a formal CRH Board agenda item and are also fed back to operating companies through the network of Safety Officers and at safety best practice groups.

The continued development of a culture of safety is a key focus. Targeted safety performance is incentivised, and throughout CRH any breaches of safety procedures are subject to disciplinary action. Behavioural safety and employee risk awareness are emphasised. To demonstrate the strategic imperative of safety, there are several internal safety

award schemes and during 2015 inaugural ceremonies for the new CRH Chairman's award for safety excellence in the Group were held. Regular safety meetings with employees took place at all companies during 2015 and 64% of Group employees were involved in formal joint management/worker safety dialogue. Safety improvement also forms an integral part of discussions with trade unions where applicable. Topics discussed at the various meetings include safety initiatives, contractor management and ongoing Fatality Elimination Plan actions. In 2015, particular attention was paid to integrating acquired businesses into Group safety systems.

CRH has invested €138 million over the last five years on all aspects of health and safety. This covered items such as machinery guarding, mobile plant safety upgrades, improvements in platforms and fall protection measures, electrical systems upgrades, pedestrian/mobile plant segregation and also noise and dust reduction initiatives. Transport safety continues to be a priority and there is a focus on both on-site and off-site transport.

#### Safety Management 2015



#### Employee Safety Management 2015





# Continued Strong Safety Performance

10%
reduction in annual accident frequency rate on 2014

€138m

invested in safety over the last five years

3,100 locations with

safety audits

## Preventing Accidents



CRH strives to reduce accidents with the goal of achieving zero accidents at every location.

CRH continued with a strong safety performance in 2015.

- Frequency Rate was 1.9 lost time accidents per million manhours, compared with 2.1 in 2014.
- Severity rate was 47 lost working days per million manhours, compared with 58 in 2014.
- 92% of locations recorded zero accidents, compared with 93% in 2014.

The Accident Frequency and Severity rates over the last decade have reduced by an average of 16% and 13%, respectively, per annum, showing significant improvement across the Group. The Frequency Rate for joint ventures and associates was 1.6 lost time accidents per million manhours (2014: 1.9) and the Severity Rate was 27 lost working days per million manhours (2014: 37).

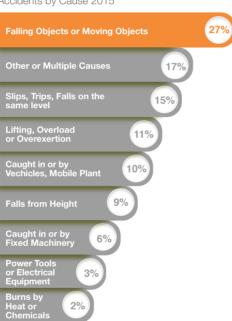
Consistent with previous years, the main accident causes in 2015 were "Falling Objects or Moving Objects", "Other or Multiple Cause", "Slips, Trips, and Falls on the same level" and "Lifting, Overload and Overexertion". The most frequent injuries were to the arms, hands, legs and feet.

CRH further analyses recordable incidents and near misses with the aim of preventing recurrence.

Each accident is investigated and analysed in order to identify risks, share the lessons learned and prevent repeat accidents. CRH believes that understanding safety incidents is key to achieving zero injuries across the Group.

Group Frequency Rate No. of Lost Time Accidents Per Million Manhours 1.9 3.0





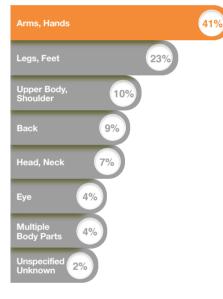
Frequency Rate by Activity 2015



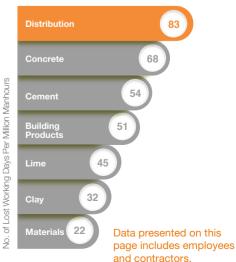
Group Severity Rate



Accidents by Injury Type 2015



Severity Rate by Activity 2015



## Eliminating Fatalities

The elimination of fatalities is a fundamental objective of CRH and it continues to receive the highest priority across all operations at CRH.

CRH implements a mandatory Fundamentals for Fatality Elimination Programme, which has proved very effective, eliminating employee fatalities in both 2014 and 2015. However, CRH deeply regrets the loss of two contractors' lives in subsidiary companies and the loss of one contractor's life at a joint venture company during 2015. With the assistance of independent specialists, the circumstances surrounding fatalities are examined in detail, the lessons learned communicated and appropriate actions taken immediately.

For all Group operations in 2015, the Employee Reportable Fatality Ratio was 0, the Contractor Reportable Fatality Ratio for 2015 was 0.76 and the Combined Employee and Contractor Reportable Fatality Ratio was 0.17. Fatality Ratios for CRH's cement operations are presented on page 64.

Over the last decade the main causes of fatalities have been identified as: mobile plant movements, falls from height, struck by falling objects and failures by individuals to abide by established plant isolation (Lock Out/Tag Out) procedures.

Fatality analysis over the past decade by country involving employees and contractors identifies higher risks in emerging markets. The CRH Construction Project Safety Protocol and Construction Safety Manual continue to be integrated into day-to-day operations at CRH companies in emerging markets.

The Fundamentals for Fatality Elimination are embedded in all day-to-day operations and are audited continuously. The audits carried out to date confirm a high level of implementation and further contribute to the enhancement of safety best practices. Deficiencies identified during the audit process are addressed by local management and reviewed through follow up audits and inspections.

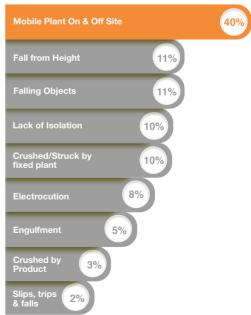


A CRH-wide Fundamentals Safety Alert continues to be distributed every month to supplement ongoing regional initiatives. Each region has developed additional specific programmes on fatality elimination, comprising direct employee communication and audiovisual materials.



The "AWARE" system is a new innovative safety technology being trialled at Oldcastle Materials, US. It increases the safety of employees and contractors by alerting them to work zone intrusions by third party vehicles that could result in serious accidents and fatalities.

#### Fatalities by Cause 2006-2015



# Targeting Safety Performance

#### Contractor Safety

CRH's contractors carry out many different functions, from specialised work and supplementing labour requirements, to delivering products. The level of contractor usage varies significantly across the Group.

CRH expects its contractors to comply with legal and regulatory requirements, meet the Group's rigorous safety requirements and operate consistently within the principles of the CRH Code of Business Conduct. Contractor companies and their employees are expected to be competent and have the required training to carry out the job safely.

All Group companies provide contractor safety induction and collaborate with contractors on

risk management and best practices. CRH experience is that contractors have a higher safety risk than employees. Therefore, CRH manages this risk through formal contractor management procedures, including setting expectations, ensuring competence, monitoring performance and appropriate supervision. CRH's no compromise philosophy around contractor management sets out that disciplinary measures are in place should performance fall below expected standards. In 2015 nearly 1900 disciplinary actions were recorded demonstrating CRH's approach. In addition, CRH continues to implement the Recommended Good Practice Guidelines for Contractor Safety developed by the CSI.

115,000

contractor transport checks in 2015

Contractor Site Induction



#### Safety Training

An essential element of achieving a worldclass safety culture is awareness and understanding by employees. Safety training receives a high priority and is viewed by CRH as a critical element of employee development.

Safety training programmes are developed at all levels of the organisation and address specific needs of operating companies and locations. Group and individual training needs are identified through task risk assessments, formal employee appraisals and review of safety data.

Training is carried out through a variety of methods including on-the-job training, face to face meetings, workshops, on-line tutorials and classroom training. In addition, specific training material is presented through several technology platforms and translated into the various languages used by Group companies.

Integrated frontline leadership programmes have been developed and are being rolled out, in recognition of the important role local supervisors and foremen play in ensuring safe and responsible operations. Senior management training and development programmes include strategic safety modules.

In 2015, employee engagement was emphasised and training areas included driver behaviour, lockout/tagout, hazardous substances, manual handling, load securement and working at height. Employees across all categories received on average 16.6 hours of safety training, with a focus on operations staff, who received on average 19 hours of such training.

million hours of safety training completed





# Focusing on Health

CRH continues to promote healthy work practices and to implement employee health and wellbeing programmes.

Specific health issues within the building materials industry include occupational noise levels, occupational levels of airborne dust and the potential for respirable crystalline silica (RCS). CRH is actively assessing any potential health risks and taking appropriate actions to mitigate these risks. Workplace monitoring of noise, dust and RCS is ongoing across the Group in accordance with best practice and local or national requirements.

A very low incidence of occupational illness cases was recorded in 2015, indicating a positive position in occupational health.

CRH continues to work with the CSI and other industry bodies to develop global best practice and standards across the building materials industry. In the EU, relevant companies participate in the European Social Dialogue Agreement (ESDA) on respirable crystalline silica exposure.

The links between a safe, healthy and productive workplace are well understood, and across CRH, 70% of Group companies have wellbeing programmes in place. These programmes include smoking cessation, diet, nutrition, fitness, weight management and vaccinations as well as drug and alcohol rehabilitation programmes. In addition, 70% of Group companies offer assistance with employee health insurance.

CRH continues to implement employee health & wellbeing programmes

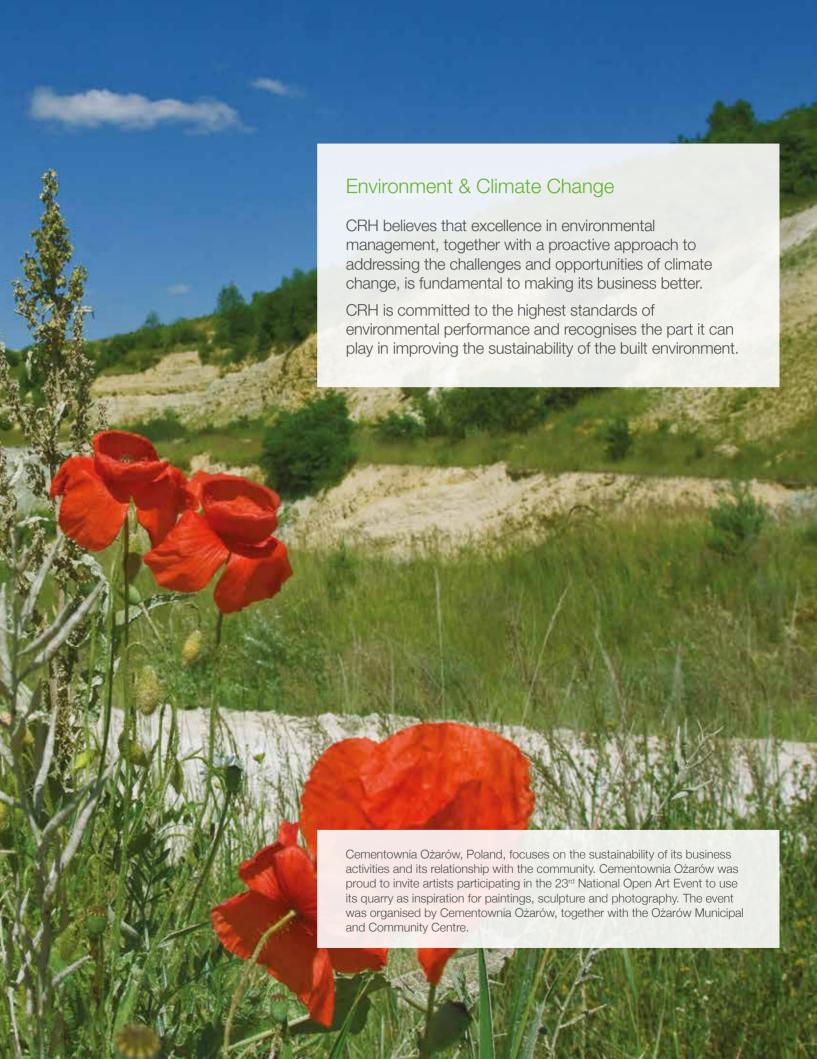


At Pennsy Supply's Millard Quarry in Pennsylvania, US, employees stretch before beginning their work. As well as contributing to the health of employees, stretching helps reduce the risk of soft tissue injury during work. In 2015, Millard Quarry celebrated 365 days of being accident-free, in part due to the stretching programme.

of Group companies have wellbeing

programmes in place





# Applying a Robust Policy

CRH's Environment & Climate Policy, applied rigorously across all Group companies, is to:

#### Comply

as a minimum, with all applicable environmental legislation and continuously improve our environmental stewardship, aiming all the time to meet or exceed industry best practice.

#### Ensure

that our employees and contractors respect their environmental responsibilities.

#### Address

proactively the challenges and opportunities of climate change.

The CRH Environmental Policy is applied rigorously across all Group companies. The implementation of the Policy is the responsibility of operational management up to the Chief Executive and ultimately the CRH Board.

Excellence in environmental management is vital to CRH's strategic vision. CRH activities vary from heavy industrial operations to retail stores, and potential environmental impacts and opportunities are different in each activity, as shown in the table below. In all activities, Environmental Liaison Officers (ELOs) are designated to assist company management in the implementation of the Environmental Policy. In each region, the ELOs network with each other, divisional HSE management and the group sustainability team to share environmental best practice with the overall

#### **Optimise**

our use of energy and all resources.

#### Promote

environmentally-driven product and process innovation and new business opportunities.

#### Develop

positive relationships and strive to be good neighbours in every community in which we operate.

aim of achieving Group ambitions. Acquisitions are systematically integrated into CRH's environmental management processes as soon as practicable.

CRH is actively evaluating its range of metrics to ensure it can assess performance and monitor progress in all areas. For its cement activities, including subsidiaries and some joint ventures and associates, CRH reports on the agreed Cement Sustainability Initiative (CSI) Key Performance Indicators (KPIs) on pages 64-65. Data on emissions, energy and biodiversity presented in this section is for all subsidiary activities and is therefore different from the CSI KPI values, which apply to cement activities only and for certain indicators, include joint ventures and associates on an equity share basis.

#### **Environmental Aspects by Activity**

Activity	Climate Change/CO <sub>2</sub>	Other Air Emissions	Water	Waste	Reinstatement	Biodiversity	Transport
Cement	<b>~</b>	<b>~</b>	<b>~</b>	~	<b>~</b>	<b>~</b>	~
Lime	<b>~</b>	<b>✓</b>	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>
Materials	<b>~</b>	<b>✓</b>	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>
Concrete Products	<b>~</b>		<b>~</b>	<b>~</b>			<b>~</b>
<b>Building Products</b>	<b>~</b>			<b>~</b>			<b>~</b>
Distribution	<b>~</b>			<b>~</b>			V

# Focusing on Environmental Excellence

Group companies are required to implement an appropriate environmental management system, tailored to the type of operating activities and the local permitting regime. The total number of Group locations with a certified ISO14001 environmental management system is now 1,051. Overall, 71% of CRH's subsidiary clinker plants are certified. It should be noted that ISO environmental certification is not common in the building materials industry in the United States, however, CRH US operations implement environmental management systems and comply with detailed environmental permit requirements.

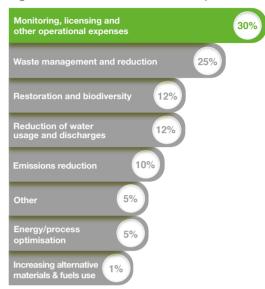
CRH continuously monitors and assesses environmental performance, compliance and potential risks, at local level as well as at Group level. A comprehensive annual environmental review is carried out, covering all Group companies, including joint ventures and associates. The findings of the annual review, including recommendations for continuous improvement, are reported to the CRH Board and are also communicated to operating companies.

CRH continuously invests in equipment and processes which improve performance or offer innovation opportunities. Environmental investments are focused on: reduction or elimination of emissions, reduction of carbon footprint, efficient use of energy and resources, sustained restoration and enhanced biodiversity.

CRH's environmental expenditure in 2015 totalled €75m. This figure includes investment in specific environmental projects and a proportion of expenditure covering environmental aspects of other major investment projects. The total environmental expenditure in 2015 including subsidiaries on a 100% basis together with joint ventures and associates on an equity share basis was €89m.

CRH is pleased to report excellent environmental compliance again in 2015. It is CRH policy to address and resolve compliance issues as soon as possible and most non-compliances that occurred during 2015 have already been resolved. Fines from regulatory authorities in 2015 related to a number of minor issues and amounted to €22k (€168k in 2014).

#### Significant Areas of Environmental Expenditure





Yatai Building Materials, CRH's 26% Associate in China, invested significantly in air abatement at its Shuangyang (above) and other cement plants during 2015 to ensure full compliance with the increasingly stringent emission limits for particulate matter and other emissions to air.



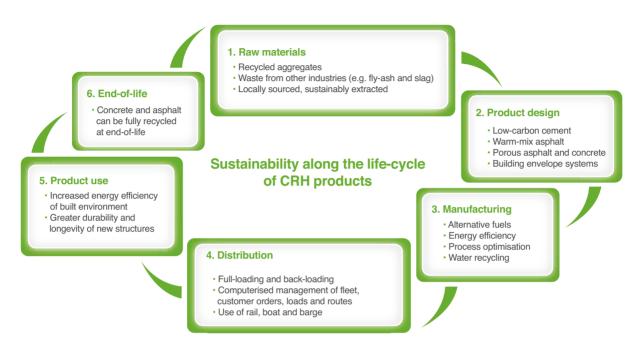
A modern crushing and screening plant was installed at Bekhy Quarry in Ukraine during 2015. The new fully automated plant has increased the quarry's production capability and significantly improved its environmental standards while reducing specific energy consumption.



Harrison Construction, which has operations in Tennessee and North Carolina, US, has invested in an award-winning mobile crushing operation to recycle and reuse materials that would otherwise be discarded, increasing the sustainability of its products and business.

## Sustainable Products

#### Producing Sustainable Products



CRH, as a global leader, recognises the role it has to play in influencing transformative sustainability in the built environment. As well as innovative actions to enhance sustainability along the life-cycle of its own products, CRH believes that collaboration with stakeholders is essential to achieve its strategic objectives in this area. CRH contributes to many regional and international initiatives; for example, CRH participates in the Concrete Sustainability Council's work towards a Responsible Sourcing Scheme for Concrete.

Across CRH's diverse activities, sustainable product innovation is a fundamental element of CRH's approach to creating value and continuous business improvement. CRH offers multiple products that enhance the environmental performance of the built environment, for example, porous paving and energy efficient building envelope solutions. CRH also offers products that reduce the environmental impacts of the built environment, such as low carbon cement and warm-mix asphalt. Other products with environmental

benefits include sustainable fencing systems, "green" roofs and precast concrete solutions for flood defence and stormwater management systems. An increasing portion of products produced by Group companies are recognised as suitable for use in green building rating systems such as BREEAM®, DGNB and LEED®. Environmental Product Declarations (EPDs) have been prepared for a selection of products. Several CRH companies are certified to BES 6001 for responsible sourcing of construction products.

#### Case Study: Warm-mix Asphalt

CRH aims to minimise the environmental footprint of its products and innovation is sought in all stages of operations, from product design to the selection of raw materials to the manufacturing process.

An example of such product innovation is warm-mix asphalt technology, pioneered by Oldcastle, CRH's subsidiary in the US. Warm-mix asphalt can reduce energy usage and CO<sub>2</sub> emissions by up to 30% compared with conventional hot-mix technology, by

lowering production and laying temperatures. This technology has additional benefits of allowing increased incorporation of recycled asphalt pavement in the asphalt mix, reducing emissions to air and improving pavement quality. Currently, half of all Oldcastle asphalt plants, including this one at Staker Parson's Brigham City Plant in Utah, can produce warm-mix asphalt and approximately 40% of asphalt sold by Oldcastle is warm-mix.



#### Closing the Loop

Using materials which would otherwise be disposed of as waste not only diverts these materials from waste streams but also reduces the carbon footprint of products and promotes resource efficiency. The closed-loop economy, also known as the circular economy, can help manage the demands on the world's finite natural resources. CRH fully participates in the closed-loop economy and continuously pursues substitution of virgin raw materials with its own and externally sourced wastes and by-products. For example, Struyk Verwo Infra, Netherlands, offers "C4C" (Cycle for Concrete), where concrete paving products are removed at the end of their life, recycled into high-quality raw materials that are then used in new paving products, which are then supplied back to the same customer. Alternative fuels are also

extensively used by CRH companies, as shown on page 35.

The percentage of recycled materials used in finished products depends on the local market availability and the percentages permitted by applicable technical standards. In 2015, a total of 22.8m tonnes of waste and 1.6m tonnes of by-products were used, substituting 8% of virgin materials overall. Other raw materials used were 275m tonnes of virgin raw materials, 5.4m tonnes of associated process materials, 54m tonnes of semi-manufactured components (such as sheet metal and float glass) and 140k tonnes of packaging material. There is an increase both in the absolute quantity and the substitution rate compared with 2014, due to acquisitions.

24.4m

tonnes of wastes and by-products reused by CRH in 2015

#### Utilising Externally Sourced Wastes

#### 9.7m Tonnes of RAP & Shingles

Recycled Asphalt Pavement (RAP) materials arise when existing road or runway surfaces are milled or crushed and reused as a raw material for new asphalt mixes. In addition, CRH companies in the US are increasingly using recycled asphalt roof shingles in asphalt mixtures. RAP & shingles accounted for over a fifth of total asphalt requirements in the US.

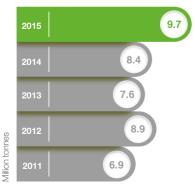
#### 7.3m Tonnes of C&D

Construction & Demolition (C&D) materials arise from construction and demolition activities and can replace virgin aggregates or can be reused for fill applications. Reduced activity in certain markets resulted in decreased use of C&D materials compared with 2014.

#### 5.8m Tonnes of Other Materials

Fly-ash, slag and other materials with cementitious properties are by-product materials sourced mainly from external power generation and steel production and replace virgin materials in cement, concrete and concrete products.

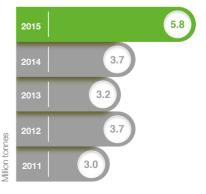




C&D



Other Reused Waste



### Climate

#### Addressing the Challenges of Climate Change

CRH believes that a proactive approach to addressing the challenges and opportunities of climate change is fundamental to making businesses better. In 2015, the UN Sustainable Development Goals further highlighted climate change and at COP21 there was global agreement to limit global temperature increases to below 2°C while pursuing efforts to limit increases to 1.5°C. CRH is committed to actively addressing the effects of these developments in a strategic manner.

CRH has endorsed the World Business Council for Sustainable Development (WBCSD) Low Carbon Technology Partnership Initiative (LCTPi), a statement of ambition, which seeks a

reduction in global cement  ${\rm CO_2}$  emissions in the range of 20–25% by 2030.

CRH has evaluated the risks and opportunities arising from climate change and has put in place a management strategy. CRH's climate management strategy focuses on energy efficiency and carbon reduction. There is an emphasis on producing lower carbon products in climate-friendly processes across all activities, from the more carbon intensive businesses to those with more limited potential climate impacts, as shown below. CRH's many approaches towards reducing specific carbon emissions are integrated into the "making businesses better" approach and are part of

realising operational, logistical, production and cost efficiencies. In addition, building products can make a meaningful contribution to both climate change mitigation and adaptation along the product lifecycle and it is CRH's ambition to achieve transformative innovative solutions for the built environment.

CRH is actively involved in global and regional discussions on the climate change agenda through its membership of the Cement Sustainability Initiative of the WBCSD, as well as, in Europe, CEMBUREAU and the European Lime Association, and in the US, the National Asphalt Pavement Association and the Portland Cement Association.

#### Climate Change Mitigation in a Diversified Business

	% of Group 2015 CO <sub>2</sub> Emissions	CO <sub>2</sub> sources	Mitigation and adaptation
Cement	82%	Both from the high temperature chemical decarbonation of the limestone, and from fuel combustion	<ul> <li>Alternative fuels</li> <li>Alternative raw materials</li> <li>Process optimisation</li> <li>Plant upgrades with energy efficient equipment &amp; technology</li> </ul>
Asphalt, aggregates and readymixed concrete	9%	Energy use for drying and heating of raw materials in asphalt plants, in excavation and processing of sand and aggregates, and also in operation of readymixed concrete plants	<ul> <li>Process optimisation</li> <li>Plant upgrades with energy efficient equipment &amp; technology</li> <li>Optimising product design</li> <li>Alternative raw materials</li> <li>Recycled materials</li> <li>Alternative fuels</li> <li>Optimising concrete mix design</li> <li>Heat recovery</li> <li>Using recycled materials</li> </ul>
Lime	5%	Both from the high temperature chemical decarbonation of the limestone, and from fuel combustion	<ul><li>Process optimisation</li><li>Plant upgrades with energy efficient equipment &amp; technology</li></ul>
Manufactured concrete and clay products, and other building products	2%	Energy use in factories	<ul> <li>Using carbon-fibre reinforcement in concrete</li> <li>Developing energy saving products &amp; solutions</li> <li>Renewable energy sources</li> </ul>
Transport 2% Energy use in vehicles		Energy use in vehicles	<ul><li>Driver behaviour &amp; training</li><li>Use of energy efficient vehicles</li><li>Electric vehicles</li></ul>
Distribution	<1%	Energy use in stores	<ul> <li>Optimising logistics</li> <li>Promoting sustainable products</li> <li>Optimising logistics and modes of transport</li> <li>Renewable energy sources</li> </ul>

#### Monitoring Carbon Emissions

Carbon dioxide ( $CO_2$ ) is the only relevant greenhouse gas for CRH and this has been confirmed by a materiality assessment. The Greenhouse Gas Protocol, developed by the World Resources Institute and the WBCSD, defines three scopes for emissions related to an organisation:

- Scope 1: Direct CO<sub>2</sub> emissions from sources controlled by an organisation. In the CRH context, this comprises emissions from use of fuels, decarbonation, and transport by CRH of raw materials and finished products.
- Scope 2: Indirect CO<sub>2</sub> emissions from purchased electricity.
- Scope 3: Indirect emissions from all other activities. In the CRH context, this includes contracted transport of finished products and major supply chain inputs.

Scope 1  $\rm CO_2$  emissions from all wholly owned subsidiaries in 2015 were 19.7m tonnes, Scope 2 emissions were 2.1m tonnes and Scope 3 emissions were 1.5m tonnes. The increase in absolute  $\rm CO_2$  emissions for subsidiaries is mostly due to the acquisition of the LH Assets, which doubled CRH's cement capacity. This acquisition has also changed the profile of emissions, and cement production now accounts for 82% of direct Group emissions compared to 65% in 2014. Decarbonation, a chemical reaction in a cement or lime kiln which releases  $\rm CO_2$ , remains the single largest source of  $\rm CO_2$  in CRH.

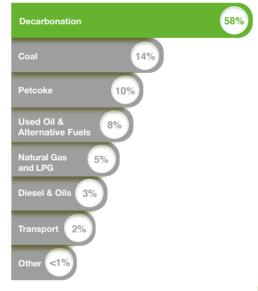
When joint ventures and associates are included on a basis proportionate to CRH's shareholding, the combined Scope 1 emissions amount to 25.8m tonnes, Scope 2 emissions are 2.5m tonnes and Scope 3 emissions are 1.5m tonnes.

Carbon dioxide is the only relevant greenhouse gas for CRH

CO<sub>2</sub> Emissions (Scope 1)



CO<sub>2</sub> Emissions By Source (Scope 1)



82% of direct Group emissions arise from cement production

CO<sub>2</sub> Emissions (Scope 2)



Willion tonnes

CO, Emissions (Kg/Revenue)



# Target 25% reduction in CO<sub>2</sub>

2015 target achieved ahead of schedule; now working towards 25% reduction in specific net CO<sub>2</sub> cement plant emissions by 2020 on 1990 levels

## Climate (continued)

#### Reducing Carbon Emissions

Setting targets helps CRH to embed sustainability within its core business strategy. Targets also present good business value, as ultimately achieving targets contributes to cost savings.

Within CRH 82% of total  $\mathrm{CO}_2$  emissions arise from cement activities, therefore, the  $\mathrm{CO}_2$  emission reduction commitment is focused on this source. CRH has committed to meeting two targets:

- 1. 15% reduction in specific net CO<sub>2</sub> cement plant emissions on 1990 levels by 2015.
- 2. 25% reduction in specific net  ${\rm CO_2}$  cement plant emissions on 1990 levels by 2020.

The first CO<sub>2</sub> reduction commitment was met three years ahead of schedule, in 2012. The 2020 commitment covers wholly owned cement plants in Belgium, Finland, Ireland,

Poland, Spain, Switzerland and Ukraine, which were owned by CRH in 2013 when the goal was set. The 2015 specific emissions of 0.611t  $\mathrm{CO_2/t}$  cementitious product were 19% lower than 1990 emissions of 0.760t  $\mathrm{CO_2/t}$  cementitious product. CRH is confident that its strategy will deliver the 2020 commitment of 0.571t  $\mathrm{CO_2/t}$  cementitious product on target.

Relevant facilities within CRH participate in greenhouse gas emissions trading schemes in the EU, Switzerland and Canada.

 $\mathrm{CO}_2$  reduction initiatives and targets are in place at many other facilities within CRH. These include energy efficiency measures, purchasing green electricity and electric vehicles, and using less carbon intensive fuels. CRH is currently working to integrate its newly acquired cement capacity into its  $\mathrm{CO}_2$  emissions reduction roadmap.



Rail transport of bulk cement at Jura Cement's Wildegg plant in Switzerland. Jura uses 75% alternative fuels and produces ECO JURA cement, which has an eco-label for its lower carbon footprint.

# Manufacturing Low Carbon Cement

The manufacture of low carbon cement is key to achieving the  $\mathrm{CO_2}$  reduction target. Approximately 60% of  $\mathrm{CO_2}$  in cement production arises from decarbonation. The remaining 40% arises from the fuels used to reach the high temperatures required. Reduction strategies are therefore focused on using less clinker and less carbon intensive fuels in cement manufacture, and improving energy efficiency, while maintaining quality, performance and compliance.

#### Alternative Raw Materials

Alternative raw materials can be used in two parts of the cement manufacturing process to reduce carbon emissions:

- By replacing a portion of the raw materials with fly-ash, slag, quarry overburden or other process by-products in raw meal (i.e. at the kiln input).
- By replacing a portion of clinker with ground limestone, fly-ash, slag or other process by-products in the blended cement.

Both of these techniques are used by CRH. Certain plants use quarry overburden in raw meal to replace virgin quarried raw materials. Using quarry overburden as an alternative raw material has additional benefits of preserving resources and reducing energy use during quarrying of virgin raw materials.

During 2015, a total of 3.8m tonnes (2014: 1.8m tonnes) of alternative materials were used in CRH's subsidiary cement plants. CRH strives to further reduce the clinker factor through the use of alternative materials. However, in certain cases this is limited by market requirements for specific products.

CRH is continuously working on increasing the use of alternative raw materials through optimisation of clinker mineralogy and further development of blended cements.

#### Alternative Fuels

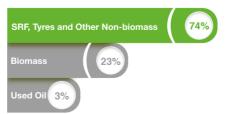
Alternative fuels used by CRH cement plants typically include solid recovered fuels (SRF), waste tyres, solvents, used oil and carbonneutral biomass (meat and bone meal, wastewater treatment plant residue, rice husk, etc.). Alternative fuels in general have a lower carbon intensity. Substituting traditional fossil fuels with alternative fuels reduces CO<sub>2</sub> emissions and also supports the circular economy, by reusing by-products and wastes from other industries.

In 2015, CRH's subsidiary cement plants used 1.6m tonnes of alternative fuels (2014: 547k tonnes). This provided 30% of total energy consumption for cement activities, similar to the previous year. Continued investment in alternative fuel handling systems will enable further increases.

Alternative Materials Used in CRH Cement Plants



Alternative Fuels Used in CRH Cement Plants



3.8m

tonnes of alternative materials were used by CRH's cement plants in 2015

1.6m

tonnes of alternative fuels provided 30% of CRH's cement plants' fuel requirements

# Energy

# Targeting Energy Efficiency

In 2015, CRH used 34.0 TWh of energy, which represents a significant increase on 2014 (23.2 TWh), mostly due to the acquisition of the LH Assets. Energy costs for 2015 were €789m, representing 4.8% of total Cost of Sales. Therefore, energy efficiency is a major element of CRH's approach to making businesses better, particularly in the higher energy activities such as cement, which accounts for 66% of total energy usage. CRH recognises the opportunity it has to contribute to energy efficiency along the value chain, and supplies a wide range of energy-saving products and solutions, for example building envelope systems.

Group companies have put in place energy management teams, tasked with identifying and implementing energy saving programmes. Formal energy management systems are being increasingly introduced. Certified ISO 50001 Energy Management Systems cover more than 700 locations, all of which are in

Europe. Such certification is not common in other regions, however other systems are employed. Reduction targets have been set by over half of all Group companies, mainly among higher energy users. As a result of these efforts, approximately 200 GWh of energy was saved in 2015.

#### Renewable Energy

Energy from renewable resources is actively pursued by many Group companies.

Alternative fuels, widely used in cement plants, include renewable fuels such as biomass (refer to page 35).

A growing number of Group locations have on-site renewable energy generation systems, mainly solar panels and wind turbines. Furthermore, many Group companies target purchasing electricity which is generated from renewable resources, and in 2015, 396 GWh of 'green' electricity was purchased by CRH.

#### Transport Efficiencies

Transport by road is the most common mode, but wherever possible, fuel-efficient rail, boat or barge transport is utilised. Overall, 54% of Group companies have initiatives in place to optimise transport through the use of GPS in route planning, ensuring full loads, fleet management, engine idling alerts and maximising back-loading, as examples. CRH's focus on transport optimisation has multiple benefits:

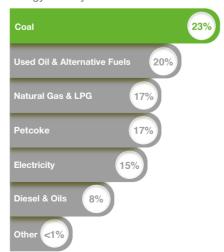
- Reducing fuel usage.
- · Improving profit margins.
- Reducing the overall carbon footprint of Group companies.
- Reducing other air emissions, primarily NO<sub>2</sub> and particulates.
- Improving customer service.

# CRH implements programmes across its worldwide operations to promote energy efficiency and energy purchasing

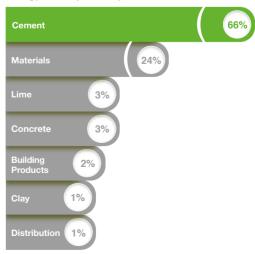




Energy Use By Source



Energy Use By Activity



# Implementing Energy Initiatives

#### **Energy Efficient Products**

Energy is used in buildings for heating, cooling, ventilation, lighting, appliances, and other applications. Over 80% of greenhouse gas emissions from buildings are released during the operational phase and so CRH focuses on ensuring its products improve the environmental footprint of buildings throughout the life-cycle. Many innovative building products and solutions are produced by CRH companies, which improve the energy performance of buildings during their use.

Concrete is a well-established resilient building material and its thermal mass properties can positively benefit energy requirements when used in buildings. Concrete stores heat and this reduces the need for heating in cold weather and cooling in warm weather.

Shown is the construction of an energyefficient hospital building in Brussels, Belgium, for which CRH companies Prefaco and Echo provided concrete slabs, columns and hollow core floor slabs.

There are also innovations in lightside products. For example, Oldcastle BuildingEnvelope® offers products that meet the most stringent thermal performance requirements and reduce energy consumption and solar heat gain, resulting in increased energy efficiency of buildings throughout their life-cycle. Sophisticated computer modelling tools are used to help architects and designers select and specify solutions with optimal energy performance for their design.



#### On-site Electricity Generation

CRH companies are implementing renewable energy in innovative ways. Several Group companies have partnered with local utilities to install wind turbines at CRH locations, which then supply energy to these locations and feed the surplus to the grid. Such energy solutions were recently implemented by Marlux and Stradus Infra in Belgium.

Several other Group companies made significant investment in solar panels. For example, CRH Distribution companies in Switzerland have covered the roofs of eight locations with photovoltaic solar panels and are connecting these to the national grid. In the US, at a single Trap Rock Industries location, two solar-panel systems generate 3MW of power, providing approximately 60% of the peak electricity for the location.

CRH also provides materials for construction of renewable energy installations. For example, Shelly provided 680,000 tonnes of material for use in the foundations of these wind turbines in rural northwest Ohio, US.



#### Transport Efficiency

According to the Intergovernmental Panel on Climate Change, transport, in addition to power generation and industry, is one of the main sources of global carbon emissions. In addition, transport is a significant source of other air emissions. Therefore, Group companies, in line with the CRH Environmental Policy and the Group Sustainability Strategy, are striving to optimise transport.

For example, Oldcastle Materials, Wheeler Companies, Texas, US transported 71% of aggregates produced at the Marble Falls Quarry in 2015 to customers by rail. This significantly reduced CO<sub>2</sub> and other emissions, fuel usage and truck traffic.



# Natural Capital

### Managing Emissions to Air

Natural Capital can be defined as the world's stocks of natural assets which include air, land, water and biodiversity. The main emissions to air from CRH activities, (apart from CO, which is covered in the Climate section of this Report), comprise particulates, nitrogen oxide (NO...) and sulphur oxide (SO,) emissions. Particulate emissions may arise from point sources, such as stacks, and also as fugitive emissions arising from quarrying, open storage of materials, transfer of materials through uncovered conveyors, and from loading and unloading operations. NO is formed during combustion of fuels and SO, is mostly formed from oxidation of sulphur in raw materials, and only a small proportion from sulphur present in

certain fuels. Emissions to air from industrial sources are regulated throughout the world and CRH is compliant with increasingly stringent emission limits.

Within CRH, most stack particulates arise from cement, other heavyside materials and concrete manufacturing activities. The greater portion of  $\mathrm{NO}_{\mathrm{x}}$  and  $\mathrm{SO}_{\mathrm{x}}$  emissions are from stacks in cement activities. Air quality improvement programmes are in place throughout CRH and there is a public emission reduction commitment detailed on the following page. Stack emissions are controlled and reduced by modern efficient abatement technologies, ongoing investment and regular

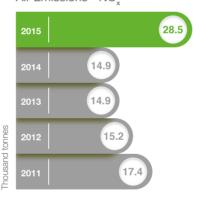
maintenance. Control of fugitive emissions is achieved though building enclosures for material storage and conveyor belts, and paving of plant areas and internal roads.

Total stack emissions to air and trends for recent years are shown below. The change in the emissions profile in comparison with 2014 is due to new acquisitions, and in the case of particulates also due to divestments. However, emissions from individual facilities remain well within the regulatory limits.

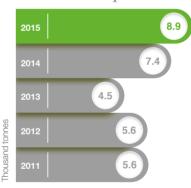
Air Emissions - Particulates



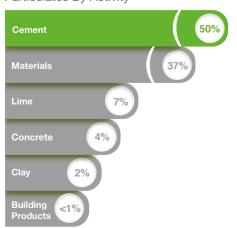
Air Emissions - NO



Air Emissions - SO



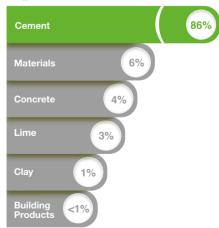
Particulates By Activity



NO By Activity



SO<sub>x</sub> By Activity



### Reducing Emissions to Air

A key part of CRH's sustainability strategy is to work towards specific targets. Due to the significance of particulate and  $NO_x$  emissions from cement activities, CRH has focused its emission reduction targets on this activity.

CRH achieved its 2015 particulate and  $NO_x$  emission reduction targets three years ahead of schedule, in 2012. These were:

- 50% reduction in average clinker particulate emissions by 2015 compared with 2006 levels.
- 10% reduction in average clinker
   NO<sub>x</sub> emissions by 2015 compared with 2006 levels.

CRH is on track to meet its 2020 emission reduction targets:

- 80% reduction in average clinker particulate emissions compared with 2006 levels (437g/t clinker) by 2020.
- 22% reduction in average clinker NO<sub>x</sub> emissions compared with 2006 levels (1,763g/t clinker) by 2020.

The targets cover a defined portfolio of clinker plants within the CRH Group at the beginning of 2013 and include facilities in Finland, Ireland, Poland, Spain, Switzerland and Ukraine. CRH is confident that its strategic programmes will deliver the 2020 commitments within the target date.

Particulate emissions are influenced by the relative output of specific plants and will continue to be reduced through ongoing investment in new, more efficient filters and also by efficiently operating plants.

 ${
m NO}_{
m x}$  emissions will be reduced by a number of significant investments which are currently planned, such as installation of new filter control technologies, and the optimisation of abatement systems and operational parameters.

CRH is currently working to integrate its newly acquired cement capacity into its air emission reduction roadmap.



Reduction in average specific clinker particulate emissions by 2020 compared with 2006



Rohoznik cement plant, Slovakia, implements an air quality improvement programme with specific targets to reduce particulates and  $\mathrm{NO}_{\mathrm{x}}$  emissions. The plant continuously invests in air emissions abatement equipment to meet increasingly stringent regulatory emissions limits.



Reduction in average specific clinker NO<sub>x</sub> emissions by 2020 compared with 2006

# Natural Capital (continued)

### Reducing Waste

CRH's commitment to the circular economy principles includes minimisation, reuse and recycling of internally generated waste.

In production processes, any by-product is internally recycled back into the process where possible, thereby reducing raw material usage and enhancing process efficiency. Examples include the use of baghouse fines in asphalt mixes and the recycling of off-spec products back into production processes in various activities. These internally reused wastes result in significant cost savings, replace virgin materials and reduce the environmental footprint of operations and products.

In 2015, CRH diverted 1.6m tonnes of by-products from waste streams and through

such measures, reduced waste by 55%. When not possible to recycle internally, waste is sent for final disposal to licensed facilities. More than three quarters of the 1.3m tonnes of waste generated by CRH was externally recycled. Although the total amount of waste increased by 16% compared to 2014 due to acquisitions, the recycling rate increased from 69% in 2014.

A small number of Group companies are permitted to landfill waste on-site and in these cases the landfill is operated strictly in line with permit requirements.

All Group companies take extensive precautions to prevent unauthorised waste disposal.

of all waste was

recycled in 2015

# Case Study:

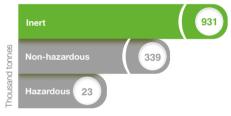
#### Internal Recycling

Preferred Materials, US, which operates in Florida, Georgia and South Carolina, recently introduced recycling and reuse of internally generated waste concrete from readymixed concrete operations. Preferred Materials worked with an existing partner to adapt their crusher for processing waste concrete.

As a result approximately 30% of virgin materials in concrete blocks are now replaced with internally sourced waste. Preferred Materials is now benefiting from significant savings of 17% per unit in materials costs, as well as saving on waste disposal.



#### Waste By Type



#### Waste Recycled



#### Waste by Activity



### Managing Water

Access to clean water is a global social and environmental issue. Key areas of concern include water availability and quality, water rights and efficiency of its use, particularly in water stressed areas. As a water-intensive industry, CRH has an obligation to closely manage the amount of potable and abstracted water used both in manufacturing and the day-to-day running of the business.

#### Water Intake

The total quantity of water used by CRH in 2015 is estimated at 54.5m m³, compared to 37.5m m³ in 2014. The significant increase is mostly due to acquisitions. Water for process activities can often be abstracted from several sources all of which may not be metered, however, CRH is targeting improvements in water accounting in relevant activities.

Reducing water usage is one of the key environmental priorities for CRH, in particular for the materials business which is the biggest user of water within CRH. The materials business uses water for processing, washing of aggregates and dust suppression. Water is recycled by reusing water from settlement ponds and through closed-loop systems installed in many manufacturing processes. Water is recycled at 879 locations, which reduced water intake by 65% compared with no water recycling.

An assessment carried out using the WBCSD's global water tool indicated that a very small number of subsidiary locations are in water stressed areas, which are relatively small operations with minimal potential impacts on the local water availability.

#### Water Discharge

CRH water discharge in 2015 was estimated at 19m m³, with 81% discharged to surface water, while the remainder is discharged to public sewers. Water discharge can also be difficult to quantify, because of the contribution of storm water and the difficulty in metering.

#### Water Quality

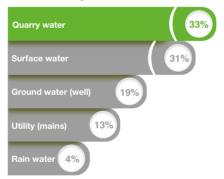
CRH has in place multiple policies and measures to protect water quality. The quality of discharged

process water is mostly managed by settling ponds and pH neutralisation systems, while some large facilities have waste water treatment plants. Potential spills of fuels and other polluting materials are managed through implementing best practice in materials storage and CRH's policy to decommission all unprotected underground storage tanks. There were no significant fuel spills in 2015.

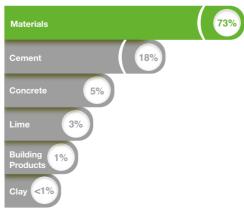
#### Water Intake



#### Water intake by Source



#### Water Intake by Activity



# CRH is focused on reducing water usage

65%

water intake reduction through recycling

# Natural Capital (continued)

### **Enhancing Biodiversity**

CRH strives to enhance natural habitats, while mitigating potential negative impacts of operations such as fragmentation of biodiversity corridors, impacts on water quality and disturbance to birds and animals. A total of 151 locations across CRH are noted for biodiversity due to the variety of species and habitats, or the presence of rare or protected species of flora and fauna.

Extractive activities in particular create multiple rare habitats which are then colonised by specialist species, for example sand martins and peregrine falcons. During the operating life of a quarry, habitats are managed by adding specific features to support wildlife present in the quarry. Management measures include

suspending blasting during nesting periods, excluding specific areas from quarrying to preserve valuable habitats, and providing structures suitable for nesting of bats, birds, bees and other species. Biodiversity is also incorporated in restoration planning. All environmental impact assessments associated with permit applications require biodiversity management plans.

CRH is currently focusing on biodiversity planning for locations within, containing or adjacent to protected biodiversity areas.

Although many Group companies already have sophisticated and award-winning biodiversity management programmes in place (as shown in Case Studies throughout this report), CRH

is currently developing its corporate strategy to further formalise biodiversity management at all locations within, containing or adjacent to protected biodiversity areas. Working with local and national stakeholders has become a key feature of biodiversity management at many Group locations. Areas where wildlife is fostered can become an educational resource for students and the public.

Notable examples include the partnership Oldcastle Materials has with the Wildlife Habitat Council in the US, and Eqiom's partnership with the International Union for Conservation of Nature in France.









# Case Study:

#### Dufferin

Dufferin runs an extensive biodiversity and restoration programme across its quarries and pits in Canada.

#### Restoration

Milton Quarry is a designated World Biosphere area and progressive rehabilitation has created new habitats for wildlife. More than one third of the area permitted for extraction has been restored to wetlands, meadows, lakes and wooded areas. Ongoing biodiversity monitoring shows that 120 bird species, 37 butterfly species and 6 amphibian species now use the rehabilitated area.

#### Biodiversity Enhancement

The Ecological Enhancement Plan at the Acton Quarry involves constructing six amphibian pools. The first pool was successfully constructed with 28 native plants now established and six amphibian and multiple insect species observed in the pond.

Dufferin also runs a seed collection programme from its own locations to enable replanting with species native to these locations.

### Preserving Natural and Cultural Heritage

#### Restoration

With over 1,300 quarries and pits, restoration planning is a focus of CRH's ambition to preserve natural and cultural heritage. Once materials are fully extracted, good environmental stewardship requires that these areas are restored or another appropriate after-use identified. This process is completed in consultation with the permitting authorities, local community and other stakeholders. As part of its sustainability strategy, in 2015, CRH formally set its target that 100% of active quarries and pits have restoration plans. Currently, 97% of such locations have restorations plans.

CRH continuously carries out restoration of quarries and pits. The rate of reinstatement depends on the closure of specific quarries or pits as reinstatement and landscaping can typically only be carried out close to completion of excavation activities. On average, about 1% of total quarry and pit area is reinstated annually. In 2015, this figure amounted to 423 hectares.

#### Heritage

CRH considers that protecting and preserving cultural heritage is an essential aspect of being a responsible company. Currently, there are 95 locations where cultural heritage is preserved. Heritage preserved by CRH companies is important to the identities of local communities, nations and the global community and examples include industrial heritage, Iron Age structures and medieval buildings. CRH companies employ archaeologists to survey new extractive operations and ensure responsibilities are addressed.



All active quarries and pits will have formal restoration plans



# Case Study: Rudus LUMO

Rudus, Finland, has created an innovative biodiversity and restoration programme called LUMO. The programme recognises that

monoculture pine forest restoration results in low biodiversity. With an objective to increase biodiversity, exploited quarries and pits are restored into habitats which are in decline but support high biodiversity, such as open meadows. Biodiversity is further supported by creating a multitude of micro-habitats, such as

ponds for amphibians, sand-banks for sand martins, and rock piles for snakes. The Kråkö, Porvoo location is shown above, including a pond habitat for moor frogs and insects, and a stone pile habitat for snakes.





Further detailed information on corporate governance may be found in the 2015 Annual Report and in the 2015 Annual Report on Form 20-F filed with the US Securities & Exchange Commission, and the Governance Appendix, all of which are available on www.crh.com.

# Corporate Governance

# CRH is committed to adopting and maintaining best-in-class governance, which is a hallmark of successful organisations and businesses.

Good corporate governance is important in enabling the Board to meet the challenges, and avail of the opportunities, which an environment of continual change, both internal and external to CRH, presents. CRH, therefore, keeps its governance structures and arrangements under review on an on-going basis.

Details of CRH's governance policies and structures are set out in the 2015 Corporate Governance Report in the 2015 Annual Report on pages 56 to 68 and in the Governance Appendix, which is deemed to be incorporated by reference into the 2015 Annual Report. The 2015 Corporate Governance Report contains letters from the Chairman and Committee Chairmen which outline the areas of focus for the Board and its Committees in 2015. The Governance Appendix provides details of CRH's general governance practices, which are largely unchanged from previous years. Both the 2015 Annual Report and the Governance Appendix are available on the Group's website, www.crh.com.

#### The Board

The Board is responsible for the leadership, oversight, control, development and long-term success of the Group. It is also responsible for instilling the appropriate culture, values and behaviour throughout the organisation. There is a formal schedule of matters reserved to the Board for consideration and decision. This includes appointments of Directors, strategic plans for the Group, annual budget, major acquisitions and disposals, significant capital expenditure, and approvals of the Annual Report and the Interim Results. There were eight full meetings of the Board during 2015.

It has been CRH's practice since the formation of the Group in the 1970s that the roles of Chairman and Chief Executive are not combined. A clear division of responsibilities, which has been approved by the Board, is set out on page 2 of the Governance Appendix. The Board has delegated responsibility for the

management of the Group, through the Chief Executive, to executive management.

It is also CRH's practice that a majority of the Board comprises non-executive Directors. At present, there are four executive and nine non-executive Directors. The independence of non-executive Directors is considered annually and the Board has determined that each of the non-executive Directors is independent.

Non-executive Directors are expected to challenge management proposals constructively and to examine and review management performance in meeting agreed objectives and targets. In addition, they are expected to draw on their experience and knowledge in respect of any challenges facing the Group and in relation to the development of proposals on strategy.

Non-executive Directors are typically expected to serve two three-year terms, although they may be invited to serve for further periods.

All Directors retire at each Annual General Meeting and, unless they are stepping down from the Board, submit themselves to shareholders for re-election. Directors who are seeking re-election are subject to a satisfactory performance appraisal.

The Directors are committed to ensuring that the Board is sufficiently diverse and appropriately balanced. In terms of Board renewal, four criteria are taken into consideration: (i) international business experience particularly in the regions in which the Group operates or in which it intends to expand; (ii) skills, knowledge and expertise in areas relevant to the operation of the Board; (iii) diversity, including nationality and gender; (iv) the need for an appropriately sized Board. During the ongoing process of Board renewal, each, or a combination, of these factors can take priority.

In 2014, the Board set itself the target of increasing the percentage of female Board members to circa 25% by the end of 2015, which was achieved by then. Following the 2016 Annual General meeting, women represent 31% of the Board.

Board Membership: Independence



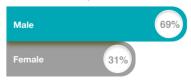
Board Membership: Tenure of Non-executive Directors (excluding Chairman)



Board Membership: Geographical Spread



Board Membership: Gender Diversity



#### Induction and Development

New Directors are provided with extensive briefing materials and the Chairman agrees a tailored and comprehensive induction programme with each new Director on the Group and its operations. Directors can also avail of opportunities to hear the views of, and meet with, the Group's shareholders. Directors periodically receive copies of research and analysis conducted on CRH and the building materials sector. The Board receives regular updates from the external auditors in relation to regulatory and accounting developments. Updates in relation to other relevant matters, for example, changes in company law, are provided from time to time. An annual review of individual Directors' performance is conducted by the Chairman and each Director is provided with feedback gathered from other members of the Board.

#### Chairman

Nicky Hartery was appointed Chairman of the Group in 2012. On his appointment as Chairman, he met the independence criteria set out in the UK Corporate Governance Code.

#### Senior Independent Director

The Senior Independent Director is available to shareholders who have concerns that cannot be addressed through the Chairman, Chief Executive or Finance Director. Don McGovern was appointed as Senior Independent Director in January 2015.

#### Company Secretary

All Directors have access to the advice and services of the Company Secretary, who is responsible to the Board for ensuring that Board procedures are complied with.

#### **Board Evaluation**

Each year, the Senior Independent Director conducts an annual review of Board effectiveness, the balance of skills, experience, independence and knowledge of the company on the Board, the operation and performance of the Board and its Committees and the effectiveness of Board communications.

An external consultant was engaged to facilitate a formal external evaluation of the effectiveness of the Board during 2015. Overall, the performance of the Board was found to be "very good", as rated on a six point scale, ranging from poor to excellent. Some relatively minor recommendations arose from the process which are currently being considered with a view to implementing over the course of the next year.

#### **Board Committees**

The Board has established five permanent Committees to assist in the execution of its responsibilities. The current permanent Committees of the Board are the Acquisitions Committee, the Audit Committee, the Finance Committee, the Nomination & Corporate Governance Committee and the Remuneration Committee.

In addition, ad-hoc committees are formed from time to time to deal with specific matters. Each of the permanent Committees has Terms of Reference, under which authority is delegated to them by the Board. The Chairman of each Committee reports to the Board on its deliberations and minutes of all Committee meetings are circulated to all Directors.

Chairmen of the Committees attend the Annual General Meeting and are available to answer questions from shareholders.

The current membership and terms of reference of each Committee are available on the Group's website.

#### Sustainability & CSR

Sustainability & CSR concepts are embedded in all CRH operations and activities. Excellence in these areas is a daily priority of line management. The Group Chief Executive, through executive management, is ultimately responsible for ensuring the Group's sustainability and CSR policies are continuously implemented. There is an executive with direct executive responsibility for sustainability and CSR (The Group Transformation Director). Reports on sustainability and CSR are formal Board Agenda items. Sustainability strategies are fully integrated with main Board activities, which is appropriate for CRH given that sustainability performance is an integral part of strategy delivery.

#### Compliance

CRH implements the 2014 UK Corporate Governance Code and complied with its provisions in 2015. The Group also has procedures in place for compliance with its obligations under the applicable rules and regulations issued by the Securities & Exchange Commission.



# **Business Conduct**

CRH is committed to operating a global business to the highest ethical, legal and moral standards as underpinned by a culture of openness and core values of integrity, honesty and respect for the law.

The Group Regulatory, Compliance & Ethics (RCE) programme continues to develop in scope and reach. The structure of the RCE organisation was strengthened in 2015 with the following key appointments:

- Group Regulatory and Compliance Director.
- Europe/Asia General Counsel.
- Senior Competition Counsel at Group level.
- · Group Compliance Manager.

In addition, in line with the Group's efforts to continually review and improve its RCE programmes, the Group commissioned an external quality assessment review to be completed in Q4 2015 – final reporting is expected during 2016 with recommendations expected to be actioned during 2016.

#### Codes and Policies

A formal Code of Business Conduct (COBC) was first implemented in 2003, and it is a foundation of CRH's RCE programme. The COBC, sets out policies, guidelines, training, monitoring and review mechanisms. The Group RCE programme continues to develop to cover CRH's diverse global footprint in an increasingly demanding regulatory environment.

The collective goal is to ensure that employees at all levels in the organisation understand that at CRH, there is never a good business reason to do the wrong thing.

The COBC was updated and approved by the Board in 2014 and the RCE team's primary focus since then has been to ensure all appropriate employees receive relevant training.

The updated COBC incorporates a clear focus on CRH's core values and guiding principles, multiple learning aids, an ethical decision-making guide and a straightforward articulation of CRH's key commitments. The updated COBC was distributed across the Group and is available at www.crh.com in all principal languages in which CRH does business.

The COBC is underpinned with supporting codes and policies, including, for example, the Anti-Bribery Policy, the Anti-Fraud Policy, the Mergers, Acquisition and Joint Venture Due Diligence Programme, the Competition and Anti-Trust Compliance Code and the Ethical Procurement Code.

An updated version of the Anti-Fraud Policy is being finalised in 2016. In addition, guidance underlying the following is under review:

- The Competition/Antitrust.
   Compliance Code.
- · Speaking Up.
- · Gifts, Hospitality and Donations.

#### Training & Communication

The RCE team works closely with business managers to achieve the Group's compliance objectives in all locations.

In the current training cycle, circa 28,000 employees participated in COBC training. Over a mix of two and three year training cycles, a further 14,000 have undertaken advanced instruction on competition law and antibribery, corruption and fraud. During 2015, online COBC training, which had already been available in this format in the US, was also made available in Europe. In Europe the roll out of a new fraud awareness online training tool commenced in 2015.

CRH's development teams and procurement teams continue to receive appropriate instruction on both the Mergers, Acquisitions and Joint Venture Due Diligence Programme and the Ethical Procurement Code.

A robust communications plan is in place to complement the training programme.

# Employee Hotline, Helplines and Support Channels and Investigations

The Code of Business Conduct details the channels available to employees if they are unsure about the right course of action to take or wish to report an ethical issue or suspected violation of the Code. In such circumstances,



contact can be made with various levels of management, any member of the RCE and legal teams or the Internal Audit function. In cases where it may be difficult or impractical for the employee to use these channels, CRH operates a confidential, 24/7 multilingual Hotline facility so that employees can report any such issue confidentially, in their own language and without any fear of retribution. Hotline posters are displayed at all company locations in areas of high employee traffic with a clear call to "Speak up" if there are any concerns.

Procedures ensure that concerns are systematically dealt with and appropriate actions taken. In addition, RCE is available to assist employees with any questions or concerns. Contact details for these services and the persons to whom concerns can be addressed are communicated within the COBC, on the CRH website, on the Hotline posters and in various company communications including policies and codes.

All reports received via the Hotline and through other channels are fully reviewed and investigated by appropriately qualified personnel. In 2015, CRH received 285 reports of concerns (238 in the Americas and 47 in Europe). As in previous years, 72% of these related to more routine human resource issues. As set out in the COBC, any employee who violates the COBC may be subject to appropriate disciplinary action by the employing company subject to local law. In particular, CRH has a zero tolerance approach to bribery and fraud. In 2015, six employees were dismissed for code violations as a result of the investigation process. Other cases involved corrective actions including, for example, additional training, and/or other disciplinary measures.

In July 2015, the Swiss Competition
Commission ("ComCo") announced its decision
to impose fines of approximately CHF 80
million on the Association of Swiss Wholesalers
of the Sanitary Industry and on major Swiss
wholesalers including certain subsidiaries of
CRH in Switzerland. In March 2016 ComCo
provided the rationale for its position. On foot
of this, CRH has now appealed that decision to
the Federal Administrative Tribunal. While the

Group is of the view that the position of ComCo is fundamentally ill-founded and that the fine imposed on CRH is unjustified, a provision of €32 million (CHF 34 million), representing the full amount of the fine attributed to the Group's subsidiaries, has been recorded in the 2015 Consolidated Financial Statements.

#### Monitoring and Review

The RCE programmes are comprehensively reviewed each year, taking into account the risk-based environment. The effectiveness of relevant RCE programmes are also regularly reviewed by the RCE function with appropriate oversight from senior management and the Audit Committee. The RCE programme has been integrated into standard Internal Audit procedures. There is also an annual management RCE certification process (this process was changed to an online process during 2015).

Concerns Reported to RCE by Type



Concerns reported to RCE



CRH is committed to operating a global business to the highest ethical, legal and moral standards

28K

employees participated in COBC training





# Applying a Robust Policy

CRH's Social Policy, applied rigorously across all Group companies, is to:

#### Comply

as a minimum, with all applicable legislation and continuously improve our social stewardship, aiming all the time to meet or exceed industry best practice.

#### Manage

our businesses in a fair and equitable manner, meeting all our social responsibilities as both a direct and indirect employer.

#### Support

freedom of association and recognise the right to collective bargaining.

At the heart of CRH are the people and communities which both support and are supported by Group companies. CRH's dealings with its stakeholders are directed by the Group policies and guidelines. These policies and guidelines outline key management responsibilities in relation to areas including employment, human rights, procurement, competition law and customer relationships together with obligations regarding charitable and community activities.

Company Managing Directors are responsible for the implementation of CRH employment

#### Prohibit

forced, compulsory and child labour.

#### Apply

the principle of equal opportunity, valuing diversity regardless of age, gender, disability, creed, ethnic origin or sexual orientation, while insisting that merit is the ultimate basis for recruitment and selection decisions.

#### Ensure

that we deal responsibly with our suppliers and customers in accordance with our Code of Business Conduct and proper business practice.

policies, guidelines and objectives in their areas of responsibility. They are supported in this role by Human Resources teams and central Group management. Operating company management is responsible for managing customer, supplier and community relations in local markets in accordance with overall CRH policy and with centralised support in key areas.

The thorough implementation of the CRH Social Policy is verified through the Code of Business Conduct certification and the annual social review.



Oldcastle APG brand, Belgard Hardscapes, was a sponsor and exhibitor at the 2016 Philadelphia Flower Show, the largest horticultural event in the US.

# Employees

# Engaging with Employees

CRH believes in developing and nurturing all employees, recognising that people are critical to sustaining competitive advantage and long-term success of the organisation. CRH seeks to offer rewarding career and personal development experiences to its employees worldwide. 2015 was an active year for talent injection and promotion throughout the Group. This ensures that CRH is attracting the very best talent in the market and promoting talented individuals from within.

Engaging with employees is essential to developing positive employee relationships across CRH and ensuring that employees have the information they need to deliver the CRH strategy. During 2015, a new range of Group-wide channels for employee engagement were activated. These were first launched to welcome the 16.000 new colleagues from the LH Assets acquisition into CRH and included the deployment of a dedicated online portal where the new employees could access information about CRH. Since then other new channels have been launched including an online quarterly newsletter, video channels to share operational and strategic information with employees and a monthly CEO blog

issued via email company wide. In addition employee Town Hall events have taken place, including an online Q&A session with senior management in conjunction with the financial results in Q1 2016.

A critical element of CRH's culture is to foster entrepreneurship at a local level. Ensuring open communication is key to collaboration and allows for recognition of innovative ideas.

In 2015, 87% of all employees were included in regular employee briefings. Informal meetings also take place at some smaller locations. CRH welcomes inputs from employees and there are suggestion schemes in place at 57% of Group companies.

CRH monitors employee satisfaction both formally and informally. In 2015, formal employee satisfaction surveys covered approximately 16% of employees. With an average of 23 employees at each location, there are close links between management and staff, allowing continual informal monitoring. Many employees enjoy long term careers with CRH. Employee absenteeism levels are low, at only 2.3% in 2015, a good indicator of employee satisfaction.

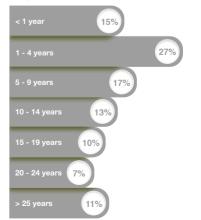
#### **Employees by Country**



#### Absenteeism by Type



#### Length of Service





CRH's Chairman's Safety Award recognises the leading safety performance of businesses across the Group and demonstrates CRH's dedication to safety at every level of the organisation. The inaugural 2015 winners included Allied Building Products' Chicago District for its employee-led Safety Committees.

# Employees (continued)

# Fostering Diversity

CRH is an equal opportunities employer, and as such provides equal merit-based opportunities to all employees, valuing their diversity and recognising the contribution of all.

The building materials industry traditionally attracts a male workforce. This is reflected in the gender balance at CRH, with males comprising 82% of employees overall. In operations, only 11% of employees are female, while the highest proportion of female staff, 40%, is in the clerical/administration category. At management level, 17% of all managers and 8% of senior managers are female. At CRH Board level, following the 2016 Annual General Meeting, 31% of Directors are female. This exceeds the goal set in 2014 of increasing the number of female Board members to circa 25% by the end of 2015. A variety of measures are employed to ensure equal pay for equal work for women and men, including union agreements, job associated pay scales and benchmarking. Training, career guidance and performance reviews were equally provided to both genders. CRH participates in the 30% club, which consists of Chairs and CEOs committed to better gender balance at all levels of their organisations through voluntary actions.

The majority of employees come from the local population, typically reflecting local ethnic diversity. CRH operates in large cities, as well as in smaller towns and rural communities. CRH provides employment opportunities at all levels of skills and education and this is particularly important in areas with fewer employment opportunities.

CRH offers employment to people of all working ages; 9% of the workforce are under 25 years of age while 34% are over 50. CRH strives to offer employment to people with disabilities where possible and in 2015, 43% of Group companies employed a total of 795 people with disabilities.

CRH's diversity programmes are aimed at increasing social diversity, not only of employees, but of the pool of talent available to take up opportunities in CRH. There is an increasing focus on targeting second level students as they make career choices, to encourage females in particular to consider careers in science, technology, engineering and mathematics (STEM) areas in general and the building materials industry in particular.



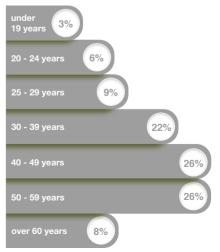
#### **Employees by Category**



#### Gender Balance by Category

Operations	Male 89%	Female 11%
Management	Male 83%	Female 17%
Clerical/admin	Male 60%	Female 40%

#### Employees by Age





Tarmac, UK, runs a graduate and apprenticeship recruitment programme. In 2015, Tarmac employed 78 new apprentices and 31 graduates, some of whom are shown here during their induction day.

### Rewarding Employees Fairly

CRH believes that it is vital to the success of CRH to ensure that at all levels of the organisation, remuneration is appropriate to the evolving needs of the Group, is competitive and supports the delivery of the CRH strategy. CRH offers pay, social and pension benefits at least in line with industry and local or national practice, often with incentives linked to company and individual performance targets.

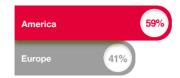
Performance related awards are a key component of remuneration at all levels of the organisation, up to executive and Board level. In some cases, share based incentives are also provided in accordance with regulatory and industry practices in particular jurisdictions. Where local legislation defines a minimum wage, Group companies offer entry level wages at or above this minimum.

The seasonal and cyclical nature of the industry places particular demands on the

workforce and also on management, to deal with peaks and troughs in demand. Excluding seasonal employees, the Group employee turnover rate is 12%. CRH works to limit the effects of this seasonality and also provides assistance to employees and managers with retirement planning and with downsizing when necessary. Fair and flexible hiring and lay-off practices apply, particularly in seasonal businesses. For major operational changes appropriate notice periods are implemented.

The use of flexible working practices can accommodate work-life balance and also help smooth employee demands at different times in seasonal businesses. Approximately 9% of all employees are part-time and these work mostly in CRH distribution businesses. Full-time and part-time employees working in the same businesses receive similar benefits, such as parental leave, retirement provision and disability or invalidity schemes.

#### Turnover by Region



#### Turnover by Age



#### Turnover by Gender





Bauking, CRH's distribution business in Germany, has a focus on providing opportunities for employees and runs a formal apprenticeship programme as well as annual training camps. Employees from both the DIY and General Builders Merchants divisions have been honoured for their exceptional achievements.

# Employees (continued)

# Supporting Human Capital Development

Developing and investing in employees at all levels within CRH has long been recognised as fundamental to the company's long-term growth and competitive advantage. This is reflected in one of the pillars of CRH's strategy which is leadership development. This delivers a very clear commitment to ongoing employee training and development at all levels of the organisation.

CRH creates opportunities for internal talent to progress through promotion, lateral movement or transfer and mobility on international assignments. In 2015, over 83% of Group companies offered career development opportunities or advice. Career guidance was received by 48% of management, 19% of operational employees and 28% of clerical/admin staff.

Acquisition and restructuring activity across CRH in 2015 created a greater number of opportunities and there are a growing number of employees on international assignments.

#### **Employee Training**

CRH supports the development of the talents and skills of all employees, with the overall aim of ensuring that employees develop to their full potential and use their talents in a manner that creates value. In 2015, approximately 2.3 million hours of training, 26.1 hours per employee, took place in Group companies. Training is focused mainly on safety but also includes front-line leadership, environmental

and skills training and compliance related training such as the Code of Business Conduct.

CRH also runs educational support programmes for employees across the Group to pursue further studies, which included administration, language, technical skills, professional development and supervisory/management skills. Mobility opportunities continue to expand as the Group seeks to offer rewarding career and personal development experiences at different operating locations worldwide.

#### Leadership Development

CRH commits significant resources to ensuring current and future leadership talent is in place to meet the Group's strategic objectives. During 2015, CRH further formalised its leadership assessment and development processes. A Leadership Profile, which outlines the core competencies for development within CRH was introduced and has been integrated into the performance management cycle for senior leaders, and leadership development programmes.

Management and leadership development programmes are formulated and delivered at both Group and regional level. These programmes are systematically reviewed and revised annually to ensure they meet the changing business environment and continue to deliver highly motivated and successful leaders across Group businesses.

In 2015, Europe Lightside organised an Innovation Forum, where attendees discussed how the businesses can effectively develop new products and services to ensure future, sustainable growth. This included a visit to a 3D Printed House in Amsterdam.

2.3m hours of training

26.1 hours

of training per employee

#### Training by Category



% of total training hours

#### Training by Type



Hours

# Human and Labour Rights

# Respecting Human and Labour Rights

CRH believes that upholding the highest standards protects the Group's reputation, attracts the best people and fosters diversity. CRH respects human and labour rights and supports, in so far as they are applicable to Group companies, the principles set out in the articles of the United Nations' Universal Declaration of Human Rights and the International Labour Organisation's Core Labour Principles.

CRH's commitment to human and labour rights has been formalised through the Group Code of Business Conduct, publically available on www.crh.com, which is implemented in all Group subsidiaries and actively promoted in joint ventures and associates.

Compliance with CRH's policies regarding human and labour rights is tracked through an annual review. The 2015 review confirmed that CRH companies take their responsibilities in this area very seriously and that CRH's policies in these areas are embedded in operations. CRH has also conducted a high level human rights risk assessment, which considered countries of operation and vulnerability. This has resulted in some recommendations for further formalisation of the process, which are currently being considered.

Human and labour rights are of particular concern to CRH when entering emerging economies. Acquisition due diligence covers human rights and other CSR issues for risk

countries. In addition, CRH requires that its principal suppliers in emerging economies meet best practice and standards in respect of human and labour rights.

#### **Labour Practices**

CRH monitors labour practices in all Group companies via an annual internal review. In 2015, the review confirmed that there was no forced or compulsory labour at any location. It also confirmed that there were no employees/contractors under the legal age in the relevant operating jurisdiction employed at any location. Apprenticeship and internship programmes implemented are in accordance with local legislation and are typically regulated by governmental educational agencies.

All Group companies respect employees' right to freedom of association. In 2015, overall trade union membership was 21%. However, union membership significantly varies by country of operation, with union membership exceeding 70% in certain countries. Wage negotiation is carried out at a variety of levels, depending on local industry practice. In 2015, 77% of the wage reviews were carried out on an individual basis or through unions/groups, with the remainder being carried out through national pay deals or on some other basis. Overall, the level of lost days due to industrial disputes is very low with just 598 days lost, equivalent to 0.003% of all mandays.

CRH endorses
human and
labour rights and
supports the
principles set
out in the articles
of the United
Nations' Universal
Declaration on
Human Rights



The CRH Code of Business Conduct places strict requirements on Group companies to comply with international best practice in relation to human and labour rights.

# Human and Labour Rights (continued)

# Managing the Supply Chain

CRH is committed to ensuring it only does business with suppliers who share its unwavering standards for responsible and ethical behaviour. In this way, CRH can extend its positive influence, promote sustainability throughout the value chain and deliver lasting change. The procurement strategy has been identified as a critical component of success for the whole business and is a key aspect of the integration of significant businesses acquired in 2015. CRH recognises that instilling the values and behaviours in its procurement activity and supply chain is important to the delivery of the Group strategy.

CRH implements its Ethical Procurement Code and Supplier Code of Conduct across its business, both of which are underpinned by the Code of Business Conduct. CRH understands that standards, tools, processes and systems in responsible sourcing are evolving, and believes it is well placed to lead this change.

CRH has a Procurement Board, which oversees purchasing policy. During 2015, the responsible procurement function was strengthened by the appointment of a European Responsible Sourcing manager to lead, coordinate and execute plans to achieve stated goals. CRH also appointed a CSR manager in the Global Direct Sourcing team in Asia to assist suppliers to develop their standards and capabilities and to enable the implementation of CRH's increasing and evolving standards.

The three core businesses: Heavyside Materials, Lightside Products and Building Materials Distribution, have supply chains with different characteristics, challenges and opportunities. Group heavyside materials businesses receive a significant portion of raw materials from internal resources. This is a vertically-integrated business, which means that materials and products produced by one

Group company may be used as raw materials by a sister company. The manufacture of building products has a typical factory supply chain, while CRH distribution businesses have a typical retail supply chain.

Because of the local nature of CRH's businesses, most suppliers are local, where their performance and reputation is well understood. None of the Group's major suppliers provide more than 2% of total purchases and most are well below 1%. CRH increasingly realises procurement synergies across the larger network to achieve value from increasing scale and embedding world class procurement processes. Major contracts are awarded following a rigorous competitive tendering process and decision criteria include value, quality, supplier reputation and CSR performance, including human and labour riahts.







### Strengthening Ethical Procurement

#### Setting Expectations

CRH expects its suppliers to operate to the highest standard and communicates these through its Supplier Code of Conduct, available on www.crh.com. Key suppliers are expected to have similar requirements in place for their upstream supply chains and to exercise diligence in verifying their own suppliers' adherence.

All new major contracts, as well as CRH's standard purchasing terms and conditions, refer to the Supplier Code of Conduct.

The procurement technology solutions that CRH has in place are increasingly used by procurement groups across CRH. This enables detailed mapping of the supply chain and tracking of compliance with the Supplier Code of Conduct. Targeted training on CRH procurement policies, supplier requirements and other relevant topics such as the new UK Modern Slavery Act has been provided. In 2015, CRH has put in place a target for 100% of the procurement team to receive responsible sourcing training.

#### Assessing Supply Chain Risks

CRH assesses supply chain risk at a commodity level against a set of 15 different sustainability aspects that are tailored to its business and Supplier Code of Conduct.

A commodity heat map is utilised, which identifies both a risk profile and opportunity assessment to understand and leverage areas where improvements could be made. By managing risk and opportunity at a commodity level, CRH is able to obtain a greater insight and coverage into its supply chain and ensure that identified requirements are integrated into commodity strategy plans and procurement decisions.

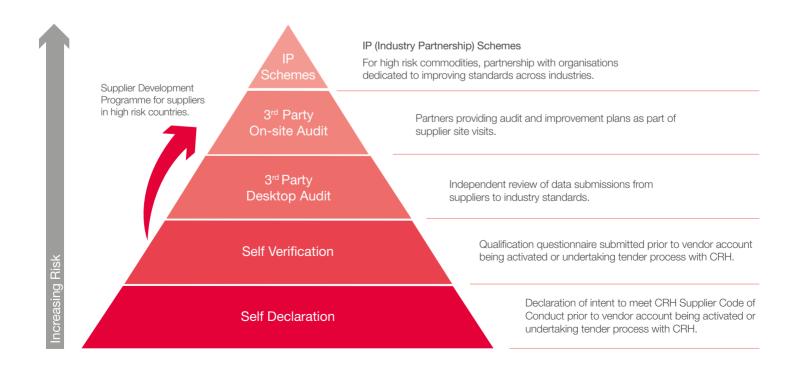
Assurance procedures for assessing compliance with the Ethical Procurement Code include supplier self-assessment, declaration and verification. Verification of the supply chain is carried out by third parties in the form of desk-top or onsite audits, or by CRH in the form of comprehensive onsite audits. The appropriate assurance procedure is used,

depending upon the risk assessment of the commodity being purchased.

All suppliers identified as being high risk have been evaluated and, in certain cases, audited. In addition to those suppliers identified as high risk, a further 2,831 suppliers have been selected for audit by a third party assessment tool. The number of audited suppliers is continuously growing. CRH also has a due diligence process to ensure conflict minerals are absent from its supply chain and its disclosure in this regard is available on www.crh.com.

#### Improving Standards

All CRH suppliers meet minimum CRH standards. CRH actively participates with various bodies to help raise standards throughout the supply chain and to ensure that all aspects of responsibility, including human rights, are addressed. For example, CRH shares with other companies its pioneering purchasing guidelines for mobile and fixed machinery that require incorporation of safety features.



# Customers

### Caring for Customers

CRH is committed to excellence in customer care. While the Group continues to grow in scale, CRH remains resolutely focused on serving the unique needs of Group customers in local and regional markets around the world. CRH provides a world class service with the personal touch of a local supplier. This focus on delivery for customers through strong local businesses is a key factor in enabling CRH to realise its vision of becoming the global leader in building materials.

Individual CRH businesses serve a wide range of customers including government agencies, contractors, distributors and private individuals. No individual customer accounts for more than 1% of Group sales, which totalled €23.6bn in 2015.

CRH works with customers to tailor products to deliver sustainability and performance goals, helping customers to solve problems with innovative designs, products and processes.

Innovation, research and development are aimed at ensuring that the Group is constantly aligning its products and services to the evolving demands of customers.

CRH builds customer loyalty through ongoing engagement and relationship management. Customer relations are informally monitored as part of day-to-day business at all Group companies. In 2015, 61% of Group companies carried out formal customer satisfaction surveys. Customer satisfaction was rated above average or better in 88% of completed surveys. The CRH Code of Business Conduct and related policies specifically address customer relationship management and has been distributed to all marketing and sales managers throughout the Group.

#### **Product Responsibility**

CRH focuses on three key areas in product responsibility: quality, health and safety, and sustainability.

CRH products are manufactured to national and regional technical standards and specifications and they are independently certified to the highest quality. In addition, many Group companies operate to ISO 9001 Quality Management System, further guaranteeing product quality.

Health and safety aspects are considered from product concept stage through the research and development process. Where necessary, Group products are accompanied by Safety Data Sheets containing appropriate advice on use, storage and application. Group companies in the EU are complying with the requirements of REACH, the European Regulation on Chemicals, providing appropriate health, safety and environmental information, in so far as the Regulation applies to Group products.

The delivery of transformative products aimed at enhancing the sustainability of the built environment is described in detail on page 30.



Ancon, CRH's UK construction accessories business, has been recognised with a second Queen's Award for outstanding performance, this time in the International Trade category. Ancon impressed the Awards advisory committee with its clearly defined strategy to drive international sales growth, focused on developing structural concrete fixings which meet local requirements, backed by market-specific communications, product approvals and distribution channels.



In October 2015, 27 different General Builders Merchants companies in Europe Distribution united under one new name. BMN Bouwmaterialen has nearly 80 branches across the Netherlands and offers customers advice on building sustainably through a range of initiatives. These include online calculators for energy efficiency improvements, provision of sustainable building materials and sustainable logistics.

# Communities

# Contributing to Communities

CRH believes that continued sustainable business success is built on maintaining excellent relationships with all stakeholders. The communities that both support and are supported by CRH have been identified as a key stakeholder.

The Building Materials industry provides the essential materials needed for residential homes, non-residential development such as hospitals and schools, and also infrastructure such as roads, bridges, telecommunications, electricity networks and water treatment. CRH's products benefit the built environment while their production and distribution provides employment in many local communities. As CRH grows, these positive impacts become more significant. In 2015, CRH:

 Provided employment to 89,000 people and paid €5bn in wages, salaries, social welfare, pension and other wage related costs.

- Purchased €9bn worth of raw materials and goods for resale.
- Paid dividends of €511m to shareholders.
- Paid taxes amounting to €235m.

#### Being a Good Neighbour

CRH is embedded in its local communities and CRH companies strive to be good neighbours, ensuring that the needs, views and interests of the local community are taken into consideration and prioritised. Many CRH companies have defined community engagement initiatives, tailored to local communities. In 2015, CRH has put in place a target for all Group companies to formalise their community engagement programmes.

CRH has an open-door policy and Group companies engage with neighbours by holding one-to-one meetings, open days, site tours and by participating in local events. Members of the community, including school children, students,

employees, community representatives and customers, together with local and regional public representatives, officials and others are typically involved in these events. Open days provide an opportunity for neighbours to talk with company managers and employees, to see the production processes at first hand and be assured of the company's intention not only to be a good neighbour, but also to contribute positively to the community. In 2015, there were over 800 stakeholder engagement days. CRH is sensitive to the potential impacts its operations may have. At extractive locations in particular, there are potential local impacts relating to landscape, traffic, noise, dust and blasting. At all locations, CRH companies are ensuring that potential impacts are minimised, operating/ environmental permits are complied with, and any issues are dealt with promptly. There is also a focus on discussions with neighbours regarding future development plans.

# Case Study:

#### Skills @ Work in Ireland

In May 2015, Irish Cement, Ireland, in partnership with a local school, concluded yet another successful Skills @ Work Programme. This is one of several community initiatives run by Irish Cement and is an educational inclusion programme that empowers young students

to take control of their future. Sessions in the programme cover aspects of seeking and securing employment, with a particular focus on career choice and the importance of further education.





# Communities (continued)

### Making a Positive Contribution

In recognition of its wider responsibility beyond core business activities, CRH supports a wide variety of community initiatives and charitable partnerships, both at a central and local level. In 2015, over 60% of Group companies supported specific community initiatives through monetary donations, as well as donations of building materials, employee volunteering, hosting of events and provision of advertising space for social causes at company locations and on company vehicles.

CRH has a clear direction and focus for its charitable and community support activities, recognising the value that these partnerships can bring for all. CRH understands that practices, customs, needs and circumstances vary across countries and regions; therefore, it is appropriate for each CRH company to be empowered to prioritise their own charitable donations. The CRH centralised standards

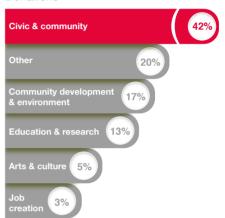
set out objectives and guidelines which are applied to all charitable and community support activities. The effectiveness of these activities is monitored in order to ensure good governance and open communication. CRH is further developing its centralised guidelines to focus on business value and societal value of investments, ensuring support for identified social needs.

In 2015, CRH contributed €5m to charity, sporting, health, nature conservation and educational events, job creation, and in addition, provided materials for schools, homes, and other community facilities.

Throughout the Group, individual employees also contribute generously of their own time in supporting good local causes and their contributions are often matched by their company.



#### Donations



### Case Study: Implementing Social Policy in Poland

In 2015, CRH celebrated its 20<sup>th</sup> year of operation in Poland. Over that 20-year period, CRH Poland has continuously engaged with local communities, schools, universities, and sports organisations and supported numerous cultural events, charities and community projects. Examples of recent community engagement events are shown below.



In June 2015, Polbruk, CRH's concrete paving sett manufacturing business, hosted a volleyball tournament in Warsaw to promote sports activities among young people. Some of the players from the Polish national team attended the tournament.



Pupils from a local school visited Trzuskawica Lime plant at Sitkówka. They were taken on a plant and quarry tour and were educated on various aspects of mining and lime production, including safety and environmental protection.



In July 2015, Group Ożarów hosted a two-day community event at its Ożarów cement plant, celebrating the 20<sup>th</sup> Anniversary of CRH in Poland and the 25<sup>th</sup> Anniversary of the Ożarów local council.

### Supporting Community Initiatives

#### Shelter

Many CRH companies develop partnerships with locally based organisations. This enables companies to raise their profile, build their reputation, enhance employee relations and further develop relationships with the local authorities.

Since 2010, Oldcastle has established a US national partnership with Habitat for Humanity. As well as donating building materials and

organising volunteers for many home-building projects, Oldcastle has sponsored six complete home builds, with the latest project completed in 2015 in Dallas, Texas. This is a natural partnership that aligns directly to the Oldcastle business and extends the existing longstanding history which many local operating companies have with their local Habitat for Humanity affiliates.



#### Education

CRH sees education as an important societal issue and it is a focus of community support across operations. CRH believes this helps attract talented individuals to the industry and showcases the CRH brand.

Student visits take place across operations providing valuable learning experiences in the areas of science, engineering and business. Many Group companies work to promote business, engineering and science as future careers for students, often in conjunction with professional associations and local educational establishments. This is supported through appropriate local means including graduate programmes, bursaries, scholarships and provision of work experience.

For example, Staker Parson Companies, headquartered in Salt Lake City, Utah, US, has been running its "Rocks Build our World" programme for over 10 years and the programme is now being rolled out to other regions by Oldcastle. "Rocks Build our World" is a free educational programme that supports the science curriculum and includes educational videos, hands-on exercises and classroom demonstrations. Through the programme, employees teach students about the rock cycle, different types of rocks and introduce them to the aggregate mining, asphalt and concrete businesses.



#### Healthcare

Healthcare initiatives are in focus at many companies, and include raising awareness of health issues, providing charitable contributions to healthcare charities and developing health initiatives.

For example, My Home Industries, India, has a targeted programme of social initiatives, which includes community healthcare support. The key healthcare activities are provision of

health-check clinics for villagers, clinics in local schools focusing on children's health, eye check clinics, free medicine and renovation of local health centres.

Pictured are villagers attending a clinic in Chowtapalli, Andhra Pradesh organised by My Home Industries in association with a local hospital. Nearly 1,200 patients attended the clinic.



# WBCSD Cement Sustainability Initiative Key Performance Indicators for Cement Activities

CRH is proud to be a core member of the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development. The CSI is a global effort by 25 major cement producers with operations in more than 100 countries who believe there is a strong business case for the pursuit of sustainable development. CRH believes that collaborating with peer companies strengthens its ability to influence transformative change in sustainability areas and CRH actively participates in CSI work.

CSI has developed a set of common Key Performance Indicators (KPIs) to which CRH reports. Note that these KPIs are externally verified and the verification statement is included on pages 70-71. For definitions of these KPIs, refer to www.wbcsdcement.org.

The data in the main body of this Sustainability Report covers 100% of subsidiaries and covers all activities. In contrast, the CSI KPIs listed in the table below relate to CRH cement activities only. Also, certain CSI KPIs include, in addition

to subsidiaries on a 100% basis, joint ventures and associates on a percentage shareholding basis. These are indicated in the footnotes.

Please note that the cement plants acquired in the LH Asset transfer during 2015 are included on a full-year basis, with the exception of the Health & Safety indicators, which are included from the date of acquisition. The significant change in CRH's cement portfolio during 2015 is reflected in the indicators below.

Key Performance Indicators	2011	2012	2013	2014	2015
Climate Change <sup>(2)</sup>					
${\it Total CO}_2 \ {\it emissions} \ ({\it Gross}), \ {\it million tonnes}$	10.7	8.85	9.14	9.56	22.56
Total ${\rm CO_2}$ emissions (Net), million tonnes	10.2	8.23	8.72	9.08	20.81
CO <sub>2</sub> emissions (kg) per tonne of cementitious product (Gross)	707	685	664	657	622
CO <sub>2</sub> emissions (kg) per tonne of cementitious product (Net)	674	637	633	624	573
Alternative Fuels & Materials <sup>(1)</sup>					
Energy efficiency (kcal/kg clinker)	930	835	855	848	855
% Fuel substitution for virgin fuels	17.3%	20.8%	21.4%	23.3%	33.9%
% Biomass in kiln fuel	3.2%	6.9%	7.7%	9.0%	12.1%
% Alternative materials (clinker and cement)	14.0%	15.7%	15.4%	11.8%	14.7%
Clinker/cement ratio	79.7%	79.2%	78.4%	78.7%	74.5%
Health & Safety <sup>(2)</sup>					
Number of fatalities (directly employed)	0	0	1	0	0
Fatality rate per 10,000 (directly employed)	0	0	4.33	0	0
Number of fatalities (contractors/subcontractors)	2	0	1	0	0
Number of fatalities (involving 3 <sup>rd</sup> parties)	0	0	0	0	0
Number of lost time injuries (directly employed)	12	7	12	5	15
Number of lost days (directly employed)	224	200	477	195	409
Lost Time Incident (LTI) rate per 1 million man hours (directly employed)	2.54	1.49	2.84	1.04	1.93
Severity rate per 1 million man hours (directly employed)	47	42	113	41	53
Number of lost time injuries (contractors/subcontractors)	6	6	4	4	11
Lost time injuries per 1 million man hours (indirectly employed)					1.36
Local Impacts <sup>(2)</sup>					
Number of active quarries within, containing or adjacent to areas designated for their high biodiversity value	1	5	5	4	19
% of sites with high biodiversity value where biodiversity management plans are actively implemented	100.0%	100.0%	100.0%	100.0%	73.7%
% of sites with community engagement plans in place	100.0%	100.0%	100.0%	85.0%	83.9%
% of active sites with quarry rehabilitation plans	92.9%	93.3%	100.0%	100.0%	94.6%
Emissions Monitoring <sup>(2)</sup>					
% Clinker produced with monitoring of major and minor emissions	76.7%	76.9%	70.4%	74.6%	91.6%
% Clinker produced using continuous monitoring of major emissions	82.7%	95.4%	93.9%	98.1%	78.0%

# WBCSD Cement Sustainability Initiative KPIs (continued)

Periodulates, specific glytoms of dinker   328   108   00   04   17.38     Particulates, coverage rate   1.505   1.306   1.306   1.301   1.707   1.707     Particulates, coverage rate   1.505   1.300   1.301   1.707   1.707   1.301   1.301   1.707   1.707     Particulates, coverage rate   1.505   1.300   1.301   1.707   1.707   1.301   1.301   1.707   1.707     Particulates, coverage rate   1.505   1.300   1.300   1.301   1.707   1.300   1.301   1.707   1.300   1.3	Key Performance Indicators	2011	2012	2013	2014	2015
Particulates, total glornes per year	Emissions <sup>(1)</sup>	000	100	20	0.4	0.5
Purticulation coverage rate   1,505   1,300   1,381   1,474   1,279   1,705   1,300   1,381   1,474   1,279   1,705   1,300   1,381   1,474   1,279   1,705   1,300   1,381   1,478   1,474   1,279   1,705   1,300   1,381   1,478   1,478   3,430   3,430   3,630						
NO <sub>x</sub> , speaking ghrome of clinker         1,505         1,360         1,381         1,474         1,279           NO <sub>x</sub> , to lab formes per year         118,043         13,823         11,860         13,736         33,336           SO <sub>x</sub> , speaking ghrome of clinker         204         304         266         542         384           SO <sub>x</sub> , speaking ghrome of clinker         204         304         266         542         384           SO <sub>x</sub> , speaking ghrome of clinker         204         304         266         542         384           SO <sub>x</sub> , speaking ghrome of clinker         204         304         266         542         384           SO <sub>x</sub> , speaking ghrome of clinker         204         304         266         542         384           SO <sub>x</sub> , speaking ghrome of clinker         204         304         266         542         384           Note of the speaking ghrome of clinker         304         306         562         789           MOCTPLC, tool to conspand to speaking ghrome of clinker         105         118         23           PCDDF, four and 17 congeners of MNTO scheme expressed as InTEQ), speaking ng/none of clinker         118         23           HG, general gar year         105         42         22 <th< td=""><td></td><td>3,931</td><td>1,096</td><td>644</td><td></td><td></td></th<>		3,931	1,096	644		
No., total tomas per year         118,043         13,823         14,865         13,766         94,388           No., coverage rate         20         304         266         542         384           SO., total tomas per year         2,441         3,050         2,666         542         384           SO., coverage rate         2,441         3,050         2,668         542         78%           SO., coverage rate         2,441         3,050         2,668         542         78%           Minor Entissions <sup>17</sup> VIX.         45         2,82         60         78%           Minor Entissions <sup>28</sup> 45         45         63         78%           MCC/TH-C, coverage rate         310         613         80         63.3%           MCC/TH-C, coverage rate         103         422         60.3%         62.3%           MCC/TH-C, coverage rate         51.38         62.3%		4.505	4.000	4.004		
No., coverage rate         204         304         266         542         384           SO,, specific giftenne of clinker         204         3,090         2,869         5,02         10,284           SO,, coverage rate         2,441         3,090         2,869         5,052         10,284           SO,, coverage rate         2,800         10,000 <td></td> <td></td> <td>· · · · · · · · · · · · · · · · · · ·</td> <td></td> <td>· · · · · · · · · · · · · · · · · · ·</td> <td></td>			· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	
SO_, specific grown of clinkier         204         304         266         542         384           SO_, total formes per year         2,441         3,090         2,689         5,052         10,284           SO_, coverage rate         2,441         3,090         2,689         5,052         10,284           MICHAID Coverage rate         827         7,896         28           MOCCTHC (botal hydrocurbons including methane and ethane expressed as carbon, specific grown of clinker         310         613           MOCCTHC, total tonnes per year         310         613         63           MOCCTHC, coverage rate         60.1%         68.3%         68.3%           MOCCTHC, total mone of NATO scheme expressed as I-TEQI, specific ng/tonne of clinker specific ng/tonne of clinker         18         22           MOCCTHC, total my per year         51.3%         68.3%         68.3%           MEDIDIF, total my per year         51.3%         68.3%         68.3%           Mig. coverage rate         60.1%         70.3%         68.3%           MILL, total kip per year         60.1%         70.3%         68.3%           MIM, coverage rate         40.8%         60.3%         60.3%           MIM, coverage rate         51.2         46.8%         60.3%      <	^	118,043	13,823	14,885	· · · · · · · · · · · · · · · · · · ·	
Sp. total tornes per year         2,441         3,090         2,869         5,052         10,284           Sp. coverage rate         3,090         2,869         5,052         10,284           Minor Emissions <sup>9</sup> VPCOFTHC total tryone-process consistency         45         28           VPCOFTHC, color larydrocarbons including methane and eithane expressed as carbon, specific or ground of clinker         301         513         503         513         VPCOFTHC, color larydrocarbons including methane and eithane expressed as carbon, specific or ground or clinker         301         513         503         600         503         600         503         600         600         503         600         600         503         600         600         600         600         600         600         600         600         600         600         600         600         600         600         600         600         60	NO <sub>x</sub> , coverage rate					
SO., coverage rate         82%         78%           Minor Emissions***         V           VOC/THC (total hydrocarbons including methens and ethane expressed as carbon, specific and forms of clinker         31         28           VOC/THC, coverage rate         310         513         50           VOC/THC, coverage rate         31         61.3%         68.3%           PCDD/F, such of 17 congeners of NATO scheme expressed as I-TEQI, specific ng/tonne of clinker specific ng/tonne of clinker         18         42           PCDD/F, stotal may per year         18         42         42           PCDD/F, stotal may per year         18         42         42           PCDD/F, stotal may per year         18         42         42           PCDD/F, stotal may per year         39         48         42           Hg, stotal kg per year         39         48         43         43           Hg, stotal kg per year         39         48         43         43         43         43         43         43         44	SO <sub>xr</sub> specific g/tonne of clinker	204	304	266	542	384
Minor Emissions**         45         28           VOC/THC (total hydrocarbons including methane and ethane expressed as carbon, specific grotnen of clinker         310         513           VOC/THC, total tonnes per year         60.18         68.3%           VOC/THC, coverage rate         60.18         68.3%           PCDDF, total in 17 congeners of NATO scheme expressed as I-TEO), specific ng/tonne of clinker specific ng/tonne of clinker         18         23           PCDDF, total mg per year         15.3%         68.0%         42           PCDDF, total mg per year         15.13%         68.0%         48           Hg, total kg per year         89         48         48           Hg, coverage rate         60.1%         70.3%         70.3%           Hg, coverage rate         60.1%         70.3%         70.3%           Hg, coverage rate         60.1%         70.3%         46           Hg, coverage rate         40.1%         46.0%         46           HM1 (sum of actination and thaillum and thailum and thailum and thailum)         60.1%	SO <sub>xr</sub> total tonnes per year	2,441	3,090	2,869	5,052	10,294
VOC/THC (total hydrocarbons including methane and ethane expressed as carbon, specific grown of clinker         45         28           VOC/THC, Lotal tones per year         310         513           VOC/THC, Lotal tones per year         60.1%         60.3%           PCDDIF, Eurn of 17 congeners of NATO scheme expressed as I-TEQI, specific ng/tonne of clinker         18         23           PCDDIF, total mg per year         108         42           PCDDIF, total mg per year         108         42           PCDDIF, total mg per year         108         42           PCDDIF, total mg per year         89         46           Mg, fortil kip per year         89         46           Mg, total kip per year         89         46           Mg, total kip per year         89         46           Mg, total kip per year         89         46           MH, sum of cadmium and thallum and their compounds expressed as cadmium and thallum), specific mg/tonne of clinker         10           MHM1, total kip per year         31         19           HMM2, coverage rate         44.6%         80.0%           MM2, germ of cadmium and thallum and their compounds expressed as antimony, areainci, lead, chromium, coball, copper, manganese, nickel and varadium and thallum, specific mg/tonne of clinker         17         263           MM2	SO <sub>x</sub> , coverage rate				82%	78%
g/tone of clinker         75         Act           VOC/THC, total tones per year         61.3         61.3           VCO/THC, coverage rate         60.1%         68.3%           PCDD/F (sum of 17 congeners of NATO scheme expressed as I-TEQ), specific ng/forme of clinker         18         2.3           PCDD/F, coverage rate         61.3%         68.0%           Hg, total kg per year         89         486           Hg, total kg per year         89         486           Hg, coverage rate         60.1%         70.3%           Hg, total kg per year         89         486           Hg, total kg per year         60.1%         70.3%           HM (sum of cadmium and thallium and their compounds expressed as cadmium and thallium), specific mg/forne of clinker         31         190           HM1, total kg per year         44.6         60.1%         60.3%           HM1, total kg per year         44.6         60.0%           HM2 (sum of antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and variadium and thair compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and variadium and thair compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and variadium and thair compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and variadium and thair compounds expressed as antimony, arsenic, lead, chromium, co	Minor Emissions <sup>(1)</sup>					
VOC/THC, coverage rate         60.1%         68.3%           PCDID/E (sum of 17 congeners of NATO scheme expressed as I-TEQ), specific ng/tonne of clinker         18         23           PCDID/F, tool mg per year         100         422           PCDID/F, coverage rate         51.3%         68.0%           Hg, total kg per year         13         26           Hg, total kg per year         60.1%         70.3%           HM1 (sum of cadmium and thallum and their compounds expressed as cadmium and thallum), specific mg/tonne of clinker         31         190           HM1, total kg per year         31         190         44.6%         68.0%           HM1, total kg per year         31         190         44.6%         68.0%         <					45	28
PCDDDF (sum of 17 congeners of NATO scheme expressed as I-TEO), specific ng/fonne of clinker specific ng/fonne of clinker         18         23           PCDD/F, total mg per year         108         422           PCDD/F, total mg per year         51.3%         68.0%           Hg, (mercury and its compounds expressed as mercury), specific mg/fonne of clinker         13         26           Hg, total kg per year         89         496           Hg, coverage rate         60.1%         70.3%           HM1 (sum of codinium and thelium and their compounds expressed as cadmium and thelium), specific mg/fonne of clinker         6         10           HM1, total kg per year         31         190           HM1, coverage rate         44.0%         68.0%           HM1, coverage rate         44.0%         68.0%           HM1, coverage rate         31         190           HM2 (sum of antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and variandum, specific mg/forme of clinker         178         263           HM2, total kg per year         512         4,649         68.0%           Vater         512         4,649         68.0%         68.0%           MM2, total kg per year         512         4,649         68.0%         68.0%         68.0%         68.0%         68.0%         68.0%	VOC/THC, total tonnes per year				310	513
specific ng/fonne of clinker         16         23           PCDD/F, total mg per year         108         422           PCDD/F, total mg per year         13.3%         88.0%           Hg (mercury and lits compounds expressed as mercury), specific mg/fonne of clinker         13         26           Hg, total kg per year         89         496           HG, total kg per year         60.1%         70.3%           HMM (sum of cadmium and thallium and their compounds expressed as cadmium and thallium), specific mg/fonne of clinker         6         10           HMM, total kg per year         31         190           HMM, coverage rate         44.6%         68.0%           HMM2 (aum of antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium, specific mg/tonne of clinker         178         263           HMM2, total kg per year         512         4,649         4,649         4,649         4,649           HMM2, total kg per year         512         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649<	VOC/THC, coverage rate				60.1%	68.3%
PCDD/F, coverage rate         51.3%         68.0%           Hg (mercury and lits compounds expressed as mercury), specific mg/tonne of clinker         13         26           Hg, total kg per year         89         496           Hg, coverage rate         60.1%         70.3%           HM1 (sum of cadmium and thallium and their compounds expressed as cadmium and thallium), specific mg/tonne of clinker         6         10           HM1, total kg per year         31         190           HM1, coverage rate         44.6%         68.0%           HM2 (sum of antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium) and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium), specific mg/tonne of clinker         178         263           HM2, total kg per year         51         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         4,649         6,00         4,649         4,649         6,00         4,649         4,649         6,00         4,649         4,649         6,00         4,649         4,649         6,00         4,649         6,00         4,649         6,00         4,649         6,00         4,649					18	23
Hg (mercury and its compounds expressed as mercury), specific mg/tonne of clinker         13         26           Hg, total kg per year         89         496           Hg, coverage rate         60.1%         70.3%           HM1 (sum of cadmium and thallium and their compounds expressed as cadmium and thallium), specific mg/tonne of clinker         6         10           HM1, total kg per year         31         190           HM2 (sum of antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium, specific mg/tonne of clinker         178         263           HM2 (sum of antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium, specific mg/tonne of clinker         178         263           HM2, coverage rate         51         4,64	PCDD/F, total mg per year				108	422
Hg, total kg per year         89         496           Hg, coverage rate         60.1%         70.3%           HM1 (sum of cadmium and thallium and their compounds expressed as cadmium and thallium), specific mg/tonne of clinker         6         10           HM1, total kg per year         31         190           HM1, coverage rate         44.6%         68.0%           HM2 (sum of antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as	PCDD/F, coverage rate				51.3%	68.0%
Hg, coverage rate         60.1%         70.3%           HM1 (sum of cadmium and thallium and their compounds expressed as cadmium and thallium), specific mg/tonne of clinker         3         10           HM1, total kg per year         31         190           HM1, coverage rate         44.6%         68.0%           HM2 (sum of antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium, specific mg/tonne of clinker         178         263           HM2, stotal kg per year         512         4,649         4,649           HM2, coverage rate         25.3%         66.0%         66.0%           Water         51.0         4,44         51.0         66.0% <t< td=""><td>Hg (mercury and its compounds expressed as mercury), specific mg/tonne of clinker</td><td></td><td></td><td></td><td>13</td><td>26</td></t<>	Hg (mercury and its compounds expressed as mercury), specific mg/tonne of clinker				13	26
HM1 (sum of cadmium and thallium and their compounds expressed as cadmium and thallium), specific mg/tonne of clinker       6       10         HM1, total kg per year       31       190         HM1, coverage rate       44.6%       68.0%         HM2 (sum of antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium), specific mg/tonne of clinker       178       263         HM2, total kg per year       512       4,649         HM2, coverage rate       25.3%       66.0%         Water       51.0       4.64         Total water withdrawal by source <sup>10</sup> , million cubic metres       1.0       3.1         Groundwater, million cubic metres       4.4       3.1         Quarry, million cubic metres       3.1       3.1         Quarry, million cubic metres       2.2         Utility, million cubic metres       0.8         Rain, million cubic metres       0.5         Total water discharge by quality and destination <sup>10</sup> , million cubic metres       5.9         Public Sewer, million cubic metres       0.1         Other, million cubic metres       5.0         Total water consumption (GWT for Cement Sector) <sup>10</sup> , million cubic metres       5.0	Hg, total kg per year				89	496
specific mg/tonne of clinker         0         10           HM1, total kg per year         31         190           HM1, coverage rate         44.6%         68.0%           HM2 (sum of antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium), specific mg/tonne of clinker         178         263           HM2, total kg per year         512         4,649           HM2, coverage rate         25.3%         66.0%           Water         Total water withdrawal by source (**), million cubic metres         11.0           Surface, million cubic metres         3.1           Groundwater, million cubic metres         3.1           Quarry, million cubic metres         3.2           Utility, million cubic metres         0.8           Rain, million cubic metres         0.5           Total water discharge by quality and destination (**), million cubic metres         5.9           Public Sewer, million cubic metres         5.9           Other, million cubic metres         5.0           Total water consumption (GWT for Cement Sector) (**), million cubic metres         5.0	Hg, coverage rate				60.1%	70.3%
HM1, coverage rate         44.6%         68.0%           HM2 (sum of antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium, and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium), specific mg/tonne of clinker         178         263           HM2, total kg per year         512         4,649           HM2, coverage rate         25.3%         66.0%           Water         Total water withdrawal by source (**), million cubic metres         11.0           Surface, million cubic metres         4.4           Groundwater, million cubic metres         3.1           Quarry, million cubic metres         2.2           Utility, million cubic metres         0.8           Rain, million cubic metres         0.5           Total water discharge by quality and destination (**), million cubic metres         6.0           Surface Water, million cubic metres         5.9           Public Sewer, million cubic metres         0.1           Other, million cubic metres         5.0           Total water consumption (GWT for Cement Sector) (**), million cubic metres         5.0           Total water consumption (GWT for Cement Sector) (**), million cubic metres         5.0					6	10
HM2 (sum of antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium), specific mg/tonne of clinker  HM2, total kg per year  512  4,649  HM2, coverage rate  52,3%  66.0%  Water  Total water withdrawal by source (**), million cubic metres  511.0  Surface, million cubic metres  511.0  Groundwater, million cubic metres  512  Utility, million cubic metres  513  Quarry, million cubic metres  514  Groundwater discharge by quality and destination (**), million cubic metres  515  Total water discharge by quality and destination (**), million cubic metres  517  Total water discharge by quality and destination (**), million cubic metres  518  Cutery, million cubic metres  519  Cutery, million cubic metres  519  Cutery, million cubic metres  510  Total water discharge by quality and destination (**), million cubic metres  510  Total water discharge by quality and destination (**), million cubic metres  510  Total water consumption (GWT for Cement Sector) (**), million cubic metres  510	HM1, total kg per year				31	190
and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium), specific mg/tonne of clinker  HM2, total kg per year  512 4,649  HM2, coverage rate  523.% 66.0%  Water  Total water withdrawal by source (°), million cubic metres  511.0  Surface, million cubic metres  4.4  Groundwater, million cubic metres  5.2  Utility, million cubic metres  5.3  Rain, million cubic metres  5.0  Total water discharge by quality and destination (°), million cubic metres  5.9  Public Sewer, million cubic metres  5.9  Other, million cubic metres  5.0  Total water consumption (GWT for Cement Sector) (°), million cubic metres  5.0	HM1, coverage rate				44.6%	68.0%
HM2, coverage rate 25.3% 66.0% Water  Total water withdrawal by source (**), million cubic metres 11.0  Surface, million cubic metres 4.4  Groundwater, million cubic metres 2.2  Utility, million cubic metres 2.2  Utility, million cubic metres 3.8  Rain, million cubic metres 3.8  Rain, million cubic metres 3.8  Total water discharge by quality and destination (**), million cubic metres 3.9  Surface Water, million cubic metres 3.9  Public Sewer, million cubic metres 3.9  Other, million cubic metres 3.9  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consumption (GWT for Cement Sector) (**), million cubic metres 3.0  Total water consump	and their compounds expressed as antimony, arsenic, lead, chromium, cobalt, copper, manganese,				178	263
Water         Total water withdrawal by source (**), million cubic metres       11.0         Surface, million cubic metres       4.4         Groundwater, million cubic metres       3.1         Quarry, million cubic metres       2.2         Utility, million cubic metres       0.8         Rain, million cubic metres       0.5         Total water discharge by quality and destination (**), million cubic metres       6.0         Surface Water, million cubic metres       5.9         Public Sewer, million cubic metres       0.1         Other, million cubic metres       <0.1	HM2, total kg per year				512	4,649
Total water withdrawal by source (1), million cubic metres11.0Surface, million cubic metres4.4Groundwater, million cubic metres3.1Quarry, million cubic metres2.2Utility, million cubic metres0.8Rain, million cubic metres0.5Total water discharge by quality and destination (1), million cubic metres6.0Surface Water, million cubic metres5.9Public Sewer, million cubic metres0.1Other, million cubic metres<0.1	HM2, coverage rate				25.3%	66.0%
Surface, million cubic metres  Groundwater, million cubic metres  Quarry, million cubic metres  2.2  Utility, million cubic metres  0.8  Rain, million cubic metres  0.5  Total water discharge by quality and destination (*), million cubic metres  6.0  Surface Water, million cubic metres  5.9  Public Sewer, million cubic metres  0.1  Other, million cubic metres  <0.1  Total water consumption (GWT for Cement Sector) (*), million cubic metres  5.0	Water					
Groundwater, million cubic metres  Quarry, million cubic metres  2.2  Utility, million cubic metres  0.8  Rain, million cubic metres  0.5  Total water discharge by quality and destination (1), million cubic metres  6.0  Surface Water, million cubic metres  5.9  Public Sewer, million cubic metres  0.1  Other, million cubic metres  <0.1  Total water consumption (GWT for Cement Sector) (1), million cubic metres  5.0	Total water withdrawal by source (1), million cubic metres					11.0
Quarry, million cubic metres2.2Utility, million cubic metres0.8Rain, million cubic metres0.5Total water discharge by quality and destination (1), million cubic metres6.0Surface Water, million cubic metres5.9Public Sewer, million cubic metres0.1Other, million cubic metres<0.1	Surface, million cubic metres					4.4
Utility, million cubic metres       0.8         Rain, million cubic metres       0.5         Total water discharge by quality and destination (**), million cubic metres       6.0         Surface Water, million cubic metres       5.9         Public Sewer, million cubic metres       0.1         Other, million cubic metres       <0.1	Groundwater, million cubic metres					3.1
Rain, million cubic metres  7 total water discharge by quality and destination (1), million cubic metres  8 curface Water, million cubic metres  9 Public Sewer, million cubic metres  9 Other, million cubic metres	Quarry, million cubic metres					2.2
Total water discharge by quality and destination (1), million cubic metres6.0Surface Water, million cubic metres5.9Public Sewer, million cubic metres0.1Other, million cubic metres<0.1	Utility, million cubic metres					0.8
Surface Water, million cubic metres  Public Sewer, million cubic metres  Other, million cubic metres <ol> <li>other, million cubic metres</li> <li>total water consumption (GWT for Cement Sector) (1), million cubic metres</li> <li>5.0</li> </ol>	Rain, million cubic metres					0.5
Public Sewer, million cubic metres  Other, million cubic metres <ol> <li>Ottal water consumption (GWT for Cement Sector) (1), million cubic metres</li> <li>5.0</li> </ol>	Total water discharge by quality and destination (1), million cubic metres					6.0
Other, million cubic metres <0.1  Total water consumption (GWT for Cement Sector) (1), million cubic metres 5.0	Surface Water, million cubic metres					5.9
Total water consumption (GWT for Cement Sector) (1), million cubic metres 5.0	Public Sewer, million cubic metres					0.1
	Other, million cubic metres					<0.1
	Total water consumption (GWT for Cement Sector) (1), million cubic metres					5.0
						22%

- (1) KPIs for Climate Change, Alternative Fuels & Materials, Emissions and Minor Emissions include subsidiaries on a 100% basis together with joint ventures and associates on a percentage shareholding basis, excluding Kunda and Yatai.
- (2) KPIs for Health & Safety, Emissions Monitoring and Local Impacts include only cement subsidiary companies.
- (3) KPI for % of sites with a water recycling system include subsidiaries on a 100% basis together with joint ventures and associates on a 100% basis, excluding Kunda and Yatai.

### External Assessments

CRH engages in a transparent manner on an ongoing basis with the major Socially Responsible Investment (SRI) Agencies on its sustainability and CSR performance. This engagement takes the form of completing formal questionnaires issued by many of the Agencies as well as interviews, meetings and other contacts. CRH is pleased to be included as a leading company for many of these.



#### FTSE4Good

CRH was included in the FTSE4Good Index in its July 2015 Review.



#### Ethibel

In September 2015, CRH was reconfirmed as a constituent of the Ethibel Sustainability Index (ESI) Excellence Europe and the Ethibel Sustainability Index (ESI) Excellence Global.



#### Vigeo Eiris

Vigeo Eiris, in its December 2015 Review, maintained CRH in its Euronext Vigeo World 120, Eurozone 120 and Europe 120 indexes. These indexes distinguish companies achieving the most advanced Environmental, Social and Governance performances.



#### **ECPI**

In its January 2016 review, ECPI included CRH as a constituent of its ECPI® Indices, which are based on environmental, social and governance indicators.



### 2016 Constituent

MSCI Global Sustainability Indexes

#### **MSCI**

MSCI Global Sustainability Indexes include companies with high ESG ratings relative to their sector peers. CRH continued as a member of one of the MSCI Global Sustainability Indexes in 2016. Refer to www.mscicom/products/esg and note MSCI disclaimer:

The inclusion of CRH public limited company in any MSCI index, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement or promotion of CRH public limited company by MSCI or any of its affiliates. The MSCI indexes are the exclusive property of MSCI. MSCI and the MSCI index names and logos are trademarks or service marks of MSCI or its affiliates.



#### oekom

In November 2015, CRH was again included in the "Prime" category by oekom research, placing CRH among the leaders in social and environmental sustainability in the industry.



#### **STOXX**

In September 2015, CRH was included as a component of the STOXX® Global ESG Leaders indices, a series of ESG equity indices.



#### Carbon Disclosure Project (CDP)

Since 2003, CRH has participated in the CDP, which requests data on carbon emissions and carbon management, on behalf of named institutional investors. The CDP rates companies both for disclosure and performance. Since its launch in 2010, CRH has also participated in the Water Disclosure Project, also run by the CDP on a similar basis. The CRH responses are publicly available on www.cdp.net.

# Glossary

Abbreviation	Explanation
Accident	In the context of safety statistics, a non-fatal work-related injury to a company, contractor's or sub-contractor's employee working at a CRH location (office, production, distribution, etc.) or contract location, or in work-related transit from or between those locations, leading to an absence of one or more days (or shifts) from work (not counting the day of the accident)
Accident Frequency Rate	The number of accidents per 1 million manhours worked
Accident Severity Rate	The number of lost days due to accidents per 1 million manhours worked
Aggregates	Crushed stone, sand and gravel, used for the production of cement, concrete and asphalt, used in drainage applications, and also as a base material under foundations, roads and railroads
Asphalt	A mixture of bitumen and aggregates. Used for road and highway surfaces
bn	One billion units
BREEAM®	Building Research Establishment Environmental Assessment Method, one of the most widely used sustainability assessment method for masterplanning projects, infrastructure and buildings
Building Envelope	The physical separator between the interior and exterior of a building. Components of the envelope are typically: walls, floors, roofs, windows, doors and their associated structures
Building Products	In relation to the description of CRH activities in this report Building Products includes building envelope products, fencing and security systems roller shutters and awnings and construction accessories
C&D	Construction and demolition, in the context of waste, C&D materials consist of the debris generated during the construction, renovation, and demolition of buildings, roads, bridges, etc.
Cement	The primary binding agent used in building, made by grinding clinker and other materials to a fine powder, which can be mixed with water, sand and aggregates to set as concrete
Clinker	A black nodular material which is the output of a cement kiln following decarbonation of limestone and reaction with other materials
Concrete	A building material consisting of a blend of aggregates, normally natural sand and gravel or crushed rock, bound together by a hydraulic binder e.g. portland cement and activated by water to form a dense semi homogenous mass
CO <sub>2</sub>	Carbon dioxide, in the context of this report, a greenhouse gas, generated by fuel combustion and decarbonation and/or oxidation of carbon in raw materials
CSI	Cement Sustainability Initiative
Decarbonation	The dissociation of calcium carbonate to calcium oxide with the evolution of carbon dioxide, occurs in the production of clinker and lime
DGNB	German Sustainable Building Council, provides a certification system for buildings, which assesses the entire life cycle of a building
Distribution	In relation to the description of CRH activities in this report Distribution includes DIY stores, specialist building materials suppliers and builders merchants
EBITDA	Earnings before interest, taxes, depreciation, amortisation, asset impairment charges, profit on disposals and the Group's share of equity accounted investments' profit after tax
Employee or Contractor Fatality	Work-related death of a company, contractor's or sub-contractor's employee at a CRH location (office, production plant, distribution store, etc.) or contract location. Exemptions to reporting are in accordance with the CSI Guidelines and in summary include death due to natural causes, death due to criminal or illegal acts or death while in transport to and from work
Fatality Ratio	Number of fatalities per 10,000 employees
GHG	Greenhouse gas
GRI	Global Reporting Initiative
GWh	Measure of energy, Gigawatt hour = 10° kWh
ISO 9001	An internationally agreed standard that sets out the requirements for a quality management system
ISO 14001	An internationally agreed standard that sets out the requirements for an environmental management system
k	One thousand units
KPI	Key performance indicator
LEED®	Leadership in Energy and Environmental Design, one of the most widely used verification systems for green buildings
Lime	Calcium oxide, created by decarbonation of limestone, and calcium hydroxide; it is a highly alkaline material with a wide range of uses in the agricultural, building/construction and other industries
m	One million units
m <sup>3</sup>	Cubic metres CODIA 1975 A CODIA
Materials	In relation to the description of CRH activities in this report Materials includes cement, aggregates, asphalt, readymixed concrete, precast and architectural concrete
Natural Capital	Defined as the world's stocks of natural assets which include geology, soil, air, water and all living things, from which humans derive a wide range of ecosystem services, which make human life possible
NGOs	Non-Governmental Organisations
NO <sub>x</sub>	Nitrogen oxides, trace atmospheric gases, mainly NO and NO <sub>2</sub> , formed and released into the atmosphere when fuels are burned at high temperatures A construction product produced by casting reinforced concrete in a reusable mould or form which is then cured in a controlled environment,
Precast Concrete	transported to the construction site and lifted into place
PJ	Measure of energy, Petajoule = 1015 Joule = 0.27 TWh
RAP	Recycled Asphalt Pavement
Readymixed Concrete Recordable Incidents	Concrete that is manufactured in a factory or batching plant, according to a set recipe, and then delivered to a work site by truck mounted in-transit mixers.  This refers to all injuries (both onsite and offsite) including fatalities, accidents and all injuries requiring medical treatment (but not first aid) to a company, contractor's or sub-contractor's employee working at a CRH location (office, production, distribution etc.) or contract location, or in work-related transit from or between those locations
SKU	Stock Keeping Unit, SKU identifies a unique product
SO <sub>x</sub>	Sulphur oxides, gases formed and released into the atmosphere when fuel containing sulphur, mainly coal and oil, is burned
Specific	A term defining emissions on a per tonne of product basis
	Measure of energy, Terawatt hour = 10° kWh
TWh	Wedsure of energy, Terawatt hour = 10° KWIT
TWh Tonnes	Metric tonnes



### DNV GL Assurance Statement

### CRH Sustainability Report 2015

#### Scope and approach

CRH Plc commissioned DNV GL Business Assurance Services UK Limited ("DNV GL") to undertake independent assurance of CRH's 2015 Sustainability Report (the "Report") for the year ended 31st December 2015.

This assurance engagement was planned and carried out in line with AA1000AS (2008). We performed our work using DNV GL's assurance methodology VeriSustainTM, which is based on our professional experience, international assurance best practice including the International Standard on Assurance Engagements 3000 (ISAE 3000), AA1000 AS (2008), and the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines. We evaluated the report for adherence to the VeriSustainTM Principles (the "Principles") of stakeholder inclusiveness, materiality, responsiveness, completeness, neutrality and reliability.

In addition, our assurance approach for CO2, NO2, SO, and particulates performance information draws on the verification protocol developed by the International Emissions Trading Association, the WBCSD-CSI Protocol "CO, and Energy Accounting and Reporting Standard for the Cement Industry" (May 2011), and the WBCSD-CSI Protocol "Guidelines for Emissions Monitoring and Reporting in the Cement Industry" (March 2012). Our assurance for health and safety performance information draws from the criteria set out in the WBCSD-CSI Protocol "Safety in the Cement Industry: Guidelines for Measuring and Reporting" (May 2013). The Assurance of CRH's CSI KPIs for CO2, SO, NO, particulates and health and safety is detailed in the separate CSI assurance statement.

We evaluated the performance data using the reliability principle together with CRH data protocols for how the data are measured, recorded and reported. The performance data in scope was the health and safety, environment and climate change, and people and community KPIs.

We understand that the reported financial data and information are based on data from CRH's Annual Report and Accounts 2015, which are subject to a separate independent audit process. The review of financial data taken from the Annual Report and Accounts is not within the scope of our work.

We planned and performed our work to obtain the evidence we considered necessary to provide a basis for our assurance opinion. We are providing a 'moderate level' of assurance.

# Responsibilities of CRH and of the assurance providers

CRH has sole responsibility for the preparation of the Report. In performing our assurance work, our responsibility is to the management

of CRH; however our statement represents our independent opinion and is intended to inform all CRH stakeholders. DNV GL was not involved in the preparation of any statements or data included in the Report except for this Assurance Statement and the CSI Assurance Statement.

We have no other contract with CRH. DNV GL did not provide any services to CRH or its stakeholders during 2015 that could compromise the independence or impartiality of our work.

DNV GL's assurance engagements are based on the assumption that the data and information provided by the client to us as part of our review have been provided in good faith. DNV GL expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement

#### Basis of our opinion

A multi-disciplinary team of sustainability and assurance specialists performed work at CRH headquarters and at eight of CRH's production facilities. We undertook the following activities:

- Review of the current sustainability issues that could affect CRH and are of interest to stakeholders;
- Review of CRH's approach to stakeholder engagement and interviews with four external stakeholders:
- Review of information provided to us by CRH on its reporting and management processes relating to the Principles;
- Interviews with senior management, selected in conjunction with CRH, with responsibility for management of sustainability issues and review of selected evidence to support issues discussed;
- 1-day visits to sites selected in conjunction with CRH, including: Ozarow Cement (Poland), Bouwmaaten Breukelen (Netherlands), Rohoznik Cement (Slovakia), Karsdorf Cement (Germany), Irish Cement Platin (Ireland), APAC Terrell (USA), OBE, Terrell (USA), Oldcastle Precast Mansfield (USA). The primary purpose of the visits was to assess adequacy and effectiveness of the processes being implemented by these reporting units to collect, aggregate, analyse and report the sustainability data within scope. This was carried out mainly through interviews with data owners, on-site review of the data repositories and performance records, and desktop study of performance data sent from site to Group. The interviews also enabled DNV GL to assess compliance with Group procedures, processes and guidance;
- Visit to CRH headquarters in Ireland to review the processes for gathering and consolidating the

- specified performance data and, for a sample, checking the data consolidation;
- Review of supporting evidence for key claims and data in the report. Our checking processes were prioritised according to materiality and we based our prioritisation on the materiality of issues at a consolidated headquarters level; and
- An independent assessment of CRH's reporting against the Global Reporting Initiative (GRI) G4 Guidelines.

#### Opinion

On the basis of the work undertaken, we provide a moderate level of assurance over the 2015 CRH Sustainability Report. DNV GL believes that the Report provides a reliable and fair representation and that it meets the Principles as described under Observations below. Nothing came to our attention to suggest that performance data have not been properly collated from information reported at operational level, nor that the assumptions used were inappropriate. We believe that the report is in line with the "Core" requirements of the GRI G4 Guidelines. Further conclusions and observations on the adoption of reporting principles and specified performance information are made below.

#### Observations

Without affecting our assurance opinion we also provide the following observations.

As in previous years, we found continued commitment to sustainability performance at all sites visited. We observed that CRH continues to place a strong emphasis upon the safety of its employees, contractors and third parties working on, or visiting, its sites. We observed a high level of internal scrutiny of data at CRH headquarters, including a thorough review of performance at Board level, which demonstrates a commitment to the robustness of data collected and reported.

CRH has measures in place to communicate requirements around sustainability data collection and reporting to sites through regular contact via email, through its sustainability questionnaires, and through videoconferencing with sites in certain regions. Although new sites were provided with data requirements for the reporting process, more detailed communication of requirements around sustainability reporting to newly acquired sites is recommended. A number of minor issues were identified at newly acquired sites around communication of scope of reporting entities, reporting period, and definitions of certain indicators. However none of these issues had a material impact on the data reported at Group level.

We have noted that CRH plans to develop a Group level sustainability strategy and associated targets in 2016, which is a positive measure. Evidence of internal engagement around the strategy and improvements



### CRH Sustainability Report 2015

in collaboration and cohesion across business units were observed, which should help further strengthen governance structures.

#### Stakeholder inclusiveness

# The participation of stakeholders in developing and achieving an accountable and strategic response to sustainability.

The Report reflects CRH's commitment to provide information and data that enables stakeholders to evaluate the organization's economic, social and environmental performance. Stakeholder engagement is undertaken from Group level through to individual sites. The methods of engagement differ across sites, relating to the nature and scale of the activities. Each subsidiary manages external stakeholder engagement practices individually, and these are tailored to the local context. Feedback received from the Stakeholder interviews conducted as part of the assurance process, demonstrated a high level of senior management buy-in and involvement in engagement activities. CRH engages with a range of external stakeholders, including SRI rating agencies, investors and shareholders, governments and regulators, and participates in industry associations such as the WBCSD-CSI, NAPA and CEMBUREAU to address sustainability issues material to its sector and its business.

#### Materiality

### The process for determining the issues that are most relevant to an organisation and its stakeholders.

It is noted that CRH updated its materiality matrix in 2015, to take into account its expanded product portfolio. CRH also maintains a range of internal processes which are effective in identifying sustainability issues of relevance and importance to the business and stakeholders, including a number of knowledge sharing and best practice workshops with local environmental and health and safety officers as well as regional executives. Through these processes, CRH is able to continue to identify and address material sustainability issues and is able to stay informed of trends and changes in sustainability issues over time.

We recommend that CRH carry out an updated full materiality exercise in 2016 to ascertain whether its material issues have changed, or whether the priority levels for certain issues have changed following integration of the new acquisitions. The materiality exercise would be of particular benefit if linked to sustainability strategy development.

#### Responsiveness

### The extent to which an organisation responds to stakeholder issues.

At Group level, employees are regularly involved in setting strategies, plans and actions through best practice meetings established around a product or regional grouping to review environmental or health

and safety matters. In addition, CRH holds regular feedback meetings on environmental, health and safety and social matters across different regions and business lines.

We recommend that CRH continues to explore the implementation of a systematic approach to stakeholder engagement, and increase reporting of how it has responded to stakeholder needs.

#### Completeness

# How much of all the information that has been identified as material to the organisation and its stakeholders is reported.

CRH undertook a number of acquisitions last year, and we note the challenges associated with communicating CSI requirements to new sites and integrating new sites into CRH's reporting systems in 2015. For certain newly acquired sites visited it was noted that there was uncertainty over the reporting period, particularly since the reporting period for CSI data was different from the reporting period for other data in the report. We recommend enhanced communication on these issues particularly for new sites and understand that measures are already being put in place for 2016 to address these issues.

It is noted that in addition to legacy sites, all newly acquired cement plants have been included in the reporting process, which together account for the sites with the largest environmental impact. We recommend that a check is carried out to ensure that all new non-cement plants have been included in the reporting process. Verification of coverage of all new non-cement sites could not be completed this year, although this is unlikely to have a material impact on reported data.

#### Neutrality

# The extent to which a report provides a balanced account of an organisation's performance, delivered in a neutral tone.

In general, the Report provides a fair and balanced representation of CRH's Sustainability approach and performance in 2015, as well as explanations for changes in performance trends.

#### Reliability

# The accuracy and comparability of information presented in the report, as well as the quality of underlying data management systems.

The data measurement techniques and basis for calculations have been duly described to DNV GL and can be replicated with similar results. Across all of the sites visited, health and safety and social data were found to be accurate and supported by established data collection systems. At one of the newly acquired cement plants, errors identified in environmental data were corrected. Although these errors were immaterial in aggregation with the rest of the Group, and included air emissions data and the

incorrect completion of the CSI questionnaire, there was not a high level of confidence in the aggregation of data reviewed at the site. This, however, does not materially affect CRH's reported sustainability data. It is recommended that more extensive internal auditing is carried out at this site and all new sites to ensure robustness of sustainability data in the future. It is understood that CRH has already initiated plans to address this issue in 2016

We recommend that CRH use updated conversion factors for calculation of group  $\mathrm{CO}_2$  emissions in 2016, and review these annually in line with good practice. It is noted that cement plants, which are the most material contributor to emissions, use updated conversion factors based on site-level measurement and testing.

The use of an online system which provides additional guidance to sites continues to reduce the need for data manipulation at Group level, resulting in a higher level of data reliability. We note that CRH plans to introduce a number of new functionalities within its system, aiming to further enhance data input, and further reduce manual data manipulation.

The Report presents information in a clear manner which facilitates the comparison of environmental and health and safety performance over a five year period. For cement, which accounts for a significant share of the Group's environmental impact, CRH reports specific (per tonne of product)  $\rm CO_2$ ,  $\rm SO_x$ ,  $\rm NO_x$  and particulate emissions values in line with the CSI KPIs.

For and on behalf of DNV GL Business Assurance Services UK Limited, London, UK 25th May 2016



#### **Gareth Manning**

Principal Consultant and Lead Assuror

UK Sustainability, DNV GL – Business Assurance



Regional Assessment Services Manager and Reviewer UK Sustainability, DNV GL – Business Assurance

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### DNV GL Assurance Statement

#### Key Performance Indicators reported to The Cement Sustainability Initiative 2015

#### Scope and approach

CRH Group Services Limited ("CRH") on behalf of CRH Plc, commissioned DNV GL Business Assurance Services UK Limited ("DNV GL") to undertake independent assurance of the Key Performance Indicators ("KPIs") reported for 2015 to the World Business Council for Sustainable Development - Cement Sustainability Initiative ("WBCSD-CSI"), as well as underlying management and reporting processes. The indicators are included in CRH's 2015 Sustainability Report (the "Report"), and DNV GL's CSI data assurance was part of the broader assurance engagement described in DNV GL's main Assurance Statement within this Report. This Assurance Statement on WBCSD-CSI KPIs should not be referred to in isolation from the main Assurance Statement. Data assured was for the year ended 31st December 2015.

This assurance engagement was planned and carried out in line with AA1000AS (2008). We performed our work using DNV GL's assurance methodology VeriSustainTM, details for which can be found in our main Assurance statement. In addition, our assurance approach for CO<sub>2</sub>, NO<sub>2</sub>, SO, and Particulates performance information draws on the WBCSD-CSI Protocol "CO, and Energy Accounting and Reporting Standard for the Cement Industry" (May 2011), and the WBCSD-CSI Protocol "Guidelines for Emissions Monitoring and Reporting in the Cement Industry" (March 2012). Our assurance for H&S performance information draws from the criteria set out in the WBCSD-CSI Protocol "Safety in the Cement Industry: Guidelines for Measuring and Reporting" (May 2013).

The scope of DNV GL's CSI assurance engagement included assurance of:

- The reported greenhouse gas emissions (specific and total direct CO<sub>2</sub> emissions, gross and net) as well as NO<sub>x</sub>, SO<sub>x</sub> and particulates, specific and total emissions, generated within cement production facilities wholly or partially owned by CRH;
- The reported Health & Safety ("H&S") KPIs (fatalities, lost time injuries, lost days, LTI and severity rates) for wholly owned cement production facilities;
- The reported emissions monitoring coverage rates:
- Group procedures, processes and guidance for measurement and reporting of CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, Particulates and H&S KPIs, and compliance with these at the sites visited;
- Processes for data collection, aggregation, analysis and reporting at site, Company and Group level; and

 Alignment of site, Company and Group level procedures, processes and guidance with the WBCSD-CSI performance measurement and reporting guidelines for CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, Particulates and H&S, and other relevant standards identified below.

We understand that the reported financial data and information are based on data from CRH's Annual Report and Accounts, which are subject to a separate independent audit process. The review of financial data taken from the Annual Report and Accounts is not within the scope of our work.

We planned and performed our work to obtain the evidence we considered necessary to provide a basis for our assurance opinion. We are providing a 'moderate level' of assurance.

### Responsibilities of CRH and of the assurance providers

CRH has sole responsibility for the preparation of the Report. In performing our assurance work, our responsibility is to the management of CRH; however our statement represents our independent opinion and is intended to inform all CRH stakeholders. DNV GL was not involved in the preparation of any statements or data included in the Report except for this Assurance Statement.

We have no other contract with CRH.

DNV GL's assurance engagements are based on the assumption that the data and information provided by the client to us as part of our review have been provided in good faith. DNV GL expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

#### Basis of our opinion

A multi-disciplinary team of sustainability and assurance specialists performed work at CRH headquarters and four of CRH's cement production facilities. We undertook the following activities:

- Reviewed Group procedures, policies and guidance for data collection, aggregation, measurement, analysis and reporting of specified performance information at site, Company and Group levels, and assessed their alignment with WBCSD-CSI Protocols referenced above;
- Conducted 1-day site visits to four cement production facilities: Rohoznik Cement (Slovakia), Ozarow cement (Poland), Karsdorf Cement (Germany) and Irish Cement (Ireland). Together these four production facilities represent approximately 19% of CRH's total CO<sub>2</sub> emissions for cement facilities on a 100% share basis in 2015 and 20% of CRH's total CO<sub>2</sub> emissions for

cement facilities on an equity share basis in 2015. The primary purpose of the visits and meetings was to assess adequacy and effectiveness of the processes being implemented by these reporting units to collect, aggregate, analyse and report CO<sub>2</sub>, SO<sub>x</sub>, NO<sub>x</sub>, Particulates and H&S data. This was carried out through interviews with data owners, on-site review of the data repositories and performance records, and desktop study of performance data sent from site to Group. The interviews also enabled DNV GL to assess compliance with Group procedures, processes and guidance;

- Verified the boundary setting and accounting processes for CO<sub>2</sub>, SO<sub>x</sub>, NO<sub>x</sub>, Particulates, and H&S data;
- Performed tests, on a sample basis, of selected CO<sub>2</sub>, SO<sub>x</sub>, NO<sub>x</sub>, Particulates, and H&S data, in order to assess the reliability of data and information managed at site, Company and Group levels; and
- Reviewed the relevant sections of the Report and assessed the reliability of information presented on CO<sub>2</sub>, SO<sub>x</sub>, NO<sub>x</sub>, Particulates, and H&S performance.

#### **Opinion**

On the basis of the work undertaken, we provide a moderate level of assurance over the 2015 CRH Sustainability Report. DNV GL believes that the Report provides a reliable and fair representation of the CSI data. Nothing came to our attention to suggest that CSI performance data have not been properly collated from information reported at operational level, nor that the assumptions used were inappropriate.

Further conclusions and observations on the adoption of reporting principles and specified performance information are made below.

#### **Observations**

Without affecting our assurance opinion we also provide the following observations and recommendations.

CRH undertook a number of acquisitions last year, and we note the challenges associated with communicating CSI requirements to new sites and integrating new sites into CRH's reporting systems in 2015. A number of gaps were observed in the completion of the CSI questionnaire for one site during the site visit, and verification of certain KPIs such as air emissions could not be conducted on site. It should be noted that this data is not a material contributor to overall Group level data, and we understand that the site has since then correctly



### Key Performance Indicators reported to The Cement Sustainability Initiative 2015 (cont.)

filled out the CSI questionnaire and the data has been incorporated into Group-wide reporting.

We note that community engagement, biodiversity action plans and quarry rehabilitation will be areas for focus in the next year for new acquisitions, and we recommend a systematic approach for providing guidance to sites on these areas to facilitate the adoption of best practice.

#### Reliability

The accuracy and comparability of information presented in the report, as well as the quality of underlying data management systems.

The CSI data measurement techniques and basis for calculation of  $\mathrm{CO_2}$ ,  $\mathrm{SO_x}$ ,  $\mathrm{NO_x}$ , Particulates and H&S CSI KPIs have been duly described to DNV GL and can be replicated with similar results. No systematic errors were detected for data and information verified in accordance with the above-described scope of assurance. Furthermore, we have not found any material inaccuracies or gaps that would significantly affect the way performance is perceived by stakeholders.

DNV GL has tested the reporting systems currently in place for CO<sub>2</sub>, SO<sub>x</sub>, NO<sub>x</sub>, and Particulates, and found that these systems demonstrated a robust and well-managed process for collection, management and reporting of performance data. Boundary setting (at Group and site levels) meets the mandatory requirements of the relevant performance measurement and reporting standards and guidelines. Relevant exceptions have been noted by CRH in the Sustainability Report.

Comprehensive corporate procedures, guidelines and processes for H&S data collection, management, internal quality assurance and reporting exist at Group level. A review of site processes for the collection and management of H&S performance indicated the processes to be robust. These processes are aligned with the Principles and fulfil the requirements of the relevant measurement and reporting guidelines referenced above. Relevant exceptions have been noted by CRH in the Report.

For and on behalf of DNV GL Business Assurance Services UK Limited, London, UK 25th May 2016 GM

Principal Consultant and Lead Assuror UK Sustainability, DNV GL – Business Assurance



#### Jon Woodhead

Regional Assessment Services Manager and Reviewer UK Sustainability, DNV GL – Business Assurance

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## Mapping to GRI G4 Guidelines

CRH's 2015 Sustainability Report is prepared in accordance with the GRI G4 Sustainability Reporting Guidelines at a core level. The table below lists the GRI - G4 reference indicators, gives a brief summary of the indicator requirement and shows where the information may be found in CRH's external reporting. The number under the heading "Page" refers to the page number within this Report, while "AR p." refers to the page number within the CRH 2015 Annual Report.

General	Standard Disclosures	Page	Comment/Omissions	External Assurance
Strategy &	Analysis			
G4-1	Statement from most senior decision-maker	2-3		Yes
G4-2	Key Impacts, Risks and Opportunities	8, 10, 11, 13		Yes
Organizatio	nal Profile			
G4-3	Name of the organization	6		Yes
G4-4	Primary brands, products and services	9, AR front inside cover		Yes
G4-5	Location of organization's headquarters	6		Yes
G4-6	Countries of operation	7, AR p. 224-231		Yes
G4-7	Nature of ownership and legal form	6, 72	CRH is a public limited company, incorporated in Ireland.	Yes
G4-8	Markets served	7, 9		Yes
G4-9	Scale of organization	7, 8, 9, 53; AR p. 24-25		Yes
G4-10	Employees by employment type, gender and region	53, 54		Yes
G4-11	Employees covered by collective bargaining agreements	57		Yes
G4-12	Description of the supply chain	58-59		Yes
G4-13	Significant changes during the reporting period	2, 12, 53	LH Assets acquisition doubled CRH's cement capacity, increased the number of employees by 16,000, and opened new geographies.	Yes
G4-14	Precautionary approach or principle	11, 13, 72	CRH takes sustainability considerations at operational level when developing and introducing products.	Yes
34-15	External charters	2-3, 20, 25, 28, 32, 57		Yes
34-16	Membership of associations	2-3, 20, 25, 28, 32		Yes
dentified M	laterial Aspects and Boundaries			
G4-17	List of entities included in the organization's financial statements	AR p. 224 -231		Yes
G4-18	Process for defining report content and Aspect boundaries	11, 80		Yes
G4-19	List of material aspects	11, 72 - 79		Yes
G4-20	Internal aspect boundaries	80		Yes
G4-21	External aspect boundaries	80		Yes
G4-22	Restatements of information	72	No restatements.	Yes
G4-23	Scope or aspect boundary changes	72, 80	For the locations acquired as part of the LH assets acquisition, in the main body of this Report, data is included from the date of acquisition in 2015 to year end 2015. However, please note the footnotes in relation to the reporting of the Cernent Sustainability Initiative Key Performance Indicators on page 65.	Yes
Stakeholde	r Engagement			
G4-24	Stakeholder groups engaged	16-17		Yes
G4-25	Basis for identification of stakeholders	11, 16-17		Yes
34-26	Approach to stakeholder engagement	16-17, 61-63		Yes
94-27	Topics raised by stakeholders	16-17, 61-63		Yes
Report Prof	iile			
34-28	Reporting period	80		Yes
G4-29	Date of most recent previous report	80		Yes
G4-30	Reporting cycle	80		Yes
G4-31	Contact point	inside back cover		Yes
G4-32	GRI Content index	72-79		Yes
G4-33	External assurance	80		Yes

General	Standard Disclosures	Page	Comment/Omissions	External Assurance
Strategy &	Analysis			
Governanc	e			
G4-34	Governance structure	46-49, AR p. 52 - 55		Yes
G4-35	Governance process	48-49, AR p. 52 - 55		Yes
G4-36	Responsibility for sustainability	10, 47		Yes
G4-37	Stakeholder consultation processes	16-17, 53, AR p. 67-68		Yes
G4-38	Board composition	46-47, AR p. 52-55		Yes
G4-39	Chair status	47		Yes
G4-40	Board Nomination and selection process	46-47, AR p. 56-58, 62-64		Yes
G4-41	Avoidance of conflict of interest	46-49, AR p. 51-53		Yes
G4-42	Board role in Sustainability	47, AR p. 16, 65		Yes
G4-43	Board knowledge	48-49, AR p. 52-55,62-64		Yes
G4-44	Board evaluation	49, AR p. 52-55		Yes
G4-45	Board's role in risk	13		Yes
G4-46	Board's role in ERM oversight	13, AR p. 112		Yes
G4-47	Frequency of Board risk review	13, AR p. 112		Yes
G4-48	Review and approval of Sustainability Report	80		Yes
G4-49	Critical concern reporting process	48-49, AR p. 52 - 55		Yes
G4-50	Detail on critical concerns	72	Confidentiality concerns: CRH does not disclose the minutes of Board meetings as this may include commercially-sensitive information.	Yes
G4-51	Remuneration policies	AR p. 70-106		
G4-52	Remuneration processes	AR p. 70-106		Yes
G4-53	Stakeholder input to remuneration	AR p. 70-106		Yes
G4-54	Ratio of highest pay to median pay	72	Currently unavailable. CRH does not centrally collect data on the level of pay to each of its 89,000 employees in all 31 countries (required for median pay figure). CRH reviews annually the scope of data collection and where appropriate and practicable in future will gather and report on this topic.	Yes
G4-55	Ratio of increase in highest pay to median	72	Currently unavailable. CRH does not centrally collect data on the level of pay to each of its 89,000 employees in all 31 countries (required for median pay figure). CRH reviews annually the scope of data collection and where appropriate and practicable in future will gather and report on this topic.	Yes
Ethics and	Integrity			
G4-56	Values and codes of conduct	48-49		Yes
G4-57	Advice mechanisms	49		Yes
G4-58	Concern mechanisms	49		Yes

# Mapping to GRI G4 Guidelines (continued)

Specific	Standard Disclosures	Page	Comment/Omissions	External Assurance
Category: E	Economic			
Aspect: Ecc	onomic Performance			
G4-DMA	Disclosure on management approach.	2-3, 6, 8, 9, 12		Yes
G4-EC1	Direct economic value generated and distributed.	7, 62, AR p. 24-25	CRH discloses financial information in the Annual Report and Annual Report Form 20-F in line with International Financial Reporting Standards (IFRS).	Yes
G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change.	10-11, 14, 32-35, AR p. 116		Yes
G4-EC3	Coverage of the organization's defined benefit plan obligations.	AR p. 190-198		Yes
G4-EC4	Financial assistance received from government.	74	No significant assistance.	Yes
Aspect: Mai	rket Presence			
G4-DMA	Disclosure on management approach.	54, 55, AR p. 52-55		
G4-EC5	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation.	55	Not available. CRH does not centrally collect information to report on this indicator in the breakdowns required by GRI. CRH is currently developing its internal reporting in this area.	
G4-EC6	Proportion of senior management hired from the local community at significant locations of operation.	54, AR p.52-55	Not available. CRH does not centrally collect information to report on this indicator in the breakdowns required by GRI. CRH is currently developing its internal reporting in this area.	
Aspect: Indi	irect Economic Impacts			
G4-DMA	Disclosure on management approach.	6, 8, 9, 58-63		
G4-EC7	Development and impact of infrastructure investments and services supported.	6, 8, 9, 61		
G4-EC8	Significant indirect economic impacts, including the extent of impacts.	6, 8, 9, 58-63		
Aspect: Pro	curement Practices			
G4-DMA	Disclosure on management approach.	58-59		
G4-EC9	Proportion of spending on local suppliers at significant locations of operation.	59	Not available. CRH does not centrally collect information to report on this indicator in the breakdowns required by GRI. CRH is currently developing its internal reporting in this area.	
Category: E	Environmental			
Aspect: Mat	terials			
G4-DMA	Disclosure on management approach.	28-31, 40		Yes
G4-EN1	Materials used by weight or volume.	31		Yes
G4-EN2	Percentage of materials used that are recycled input materials.	31, 40		Yes
Aspect: Ene	ergy			
G4-DMA	Disclosure on management approach.	28-31, 36-37		Yes
G4-EN3	Energy consumption within the organization.	36		Yes
G4-EN4	Energy consumption outside of the organization.	33		Yes
G4-EN5	Energy intensity.	64	Refers to kiln fuels (internal energy).	Yes
G4-EN6	Reduction of energy consumption.	30, 32, 35-37		Yes
G4-EN7	Reductions in energy requirements of products and services.	28, 30, 32, 35		Yes
Aspect: Wat	ter			
G4-DMA	Disclosure on management approach.	28-29, 41		Yes
G4-EN8	Total water withdrawal by source.	41		Yes
G4-EN9	Water sources significantly affected by withdrawal of water.	74	None identified as significantly affected.	Yes
G4-EN10	Percentage and total volume of water recycled and reused.	41		Yes

Specific	Standard Disclosures	Page	Comment/Omissions	External Assurance
Aspect: Bio	diversity			
G4-DMA	Disclosure on management approach.	28-29, 42		Yes
G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	42-43, 75	Not available. CRH does not centrally collect information to report on this indicator in the breakdowns required by GRI. CRH is currently developing its internal reporting in this area.	Yes
G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	42-43		Yes
G4-EN13	Habitats protected or restored.	42-43, 75	Not available. CRH does not centrally collect information to report on this indicator in the breakdowns required by GRI. CRH is currently developing its internal reporting in this area.	Yes
G4-EN14	Total number of IUCN red list species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	75	Not available. CRH does not centrally collect information to report on this indicator in the breakdowns required by GRI. CRH is currently developing its internal reporting in this area.	Yes
Category: I	Environmental			
Aspect: Em	issions			
G4-DMA	Disclosure on management approach.	28-29, 32-35, 38-39		Yes
G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1).	33, 64		Yes
G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2).	33		Yes
4G-EN17	Other indirect greenhouse gas (GHG) emissions (Scope 3).	33		Yes
G4-EN18	Greenhouse gas (GHG) emissions intensity.	33, 64		Yes
G4-EN19	Reduction of greenhouse gas (GHG) emissions.	28-30, 32-37		Yes
G4-EN20	Emissions of ozone-depleting substances (ODS).	75	No significant emissions.	Yes
G4-EN21	$NO_{x'}$ , $SO_{x'}$ , and other significant air emissions.	38-39, 64		Yes
Aspect: Effl	uents and Waste			
G4-DMA	Disclosure on management approach.	28-29, 30-31, 40-41		Yes
G4-EN22	Total water discharge by quality and destination.	41		Yes
G4-EN23	Total weight of waste by type and disposal method.	40		Yes
G4-EN24	Total number and volume of significant spills.	41	No significant spills.	Yes
G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous.	40		Yes
G4-EN26	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff.	75	None identified as significantly affected.	Yes
Aspect: Pro	ducts and Services			
G4-DMA	Disclosure on management approach	30, 31, 40	Refer to note 1.	
G4-EN27	Extent of impact mitigation of environmental impacts of products and services.	30	Refer to note 1.	
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category.	31-40	Refer to note 1.	
Aspect: Cor	mpliance			
G4-DMA	Disclosure on management approach.	28-29		Yes
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations.	29		Yes
Aspect: Trai	nsport			
G4-DMA	Disclosure on management approach.	33, 36-37		
G4-EN30	Significant environmental impacts of transporting products and other goods and materials.	33, 36-37		
Aspect: Ove	erall			
DMA	Disclosure on management approach.	28-29		Yes
G4-EN31	Total environmental protection expenditures and investments by type.	29		Yes

# Mapping to GRI G4 Guidelines (continued)

Specific	Standard Disclosures	Page	Comment/Omissions	External Assurance
Category: E	Environmental			
Aspect: Sup	pplier Environmental Assessment			
G4-DMA	Disclosure on management approach.	58-59		
G4-EN32	Percentage of new suppliers that were screened using environmental criteria.	58-59	Note that CRH's Supplier Code of Conduct, available on www.crh.com, includes safety, environmental, labour practice, human rights, society and other people & community criteria; screening and audits reflect all these criteria.	
G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken.	58-59		
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms.	58-59		
Category: S	Social			
Aspect: Em	ployment			
G4-DMA	Disclosure on management approach.	52-56		Yes
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region.	54-55		Yes
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation.	55		Yes
G4-LA3	Return to work and retention rates after parental leave, by gender.	76	Not available. CRH does not centrally collect information to report on this indicator in the breakdowns required by GRI. CRH is currently developing its internal reporting in this area.	Yes
Aspect: Lab	or/Management Relations			
34-DMA	Disclosure on management approach.	55	Refer to note 1.	
34-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements.	55	Refer to note 1.	
Aspect: Occ	cupational Health and Safety			
64-DMA	Disclosure on management approach.	20-25		Yes
94-LA5	Percentage of total workforce represented in formal joint management—worker health and safety committees that help monitor and advise on occupational health and safety programs.	21		Yes
G4-LA6	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.	22, 23, 25, 53		Yes
94-LA7	Workers with high incidence or high risk of diseases related to their occupation.	25		Yes
94-LA8	Health and safety topics covered in formal agreements with trade unions.	21		Yes
Aspect: Trai	ning and Education			
94-DMA	Disclosure on management approach	24, 48, 56, 57		Yes
34-LA9	Average hours of training per year per employee by gender, and by employee category.	56		Yes
34-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	56		Yes
34-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category.	56		Yes
spect: Dive	ersity and Equal Opportunity			
G4-DMA	Disclosure on management approach.	52, 54		Yes
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	54, AR p. 64		Yes
Aspect: Equ	al Remuneration for Women and Men			
G4-DMA	Disclosure on management approach.	52, 54-55		Yes
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.	76	Currently unavailable. CRH does not centrally collect data on pay to each of its of its 89,000 employees in all 31 countries by gender. CRH reviews annually the scope of data collection and where appropriate and practicable in future will gather and report on this topic.	Yes

Specific	Standard Disclosures	Page	Comment/Omissions	External Assurance
Aspect: Sup	plier Assessment for Labor Practices			
G4-DMA	Disclosure on management approach	58-59		
G4-LA14	Percentage of new suppliers that were screened using labor practices criteria.	58-59	Note that CRH's Supplier Code of Conduct, available on www.crh.com, includes safety, environmental, labour practice, human rights, society and other people & community criteria; screening and audits reflect all these criteria.	
G4-LA15	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken.	58-59		
Aspect: Lab	or Practices Grievance Mechanisms			
G4-DMA	Disclosure on management approach	48-49, 57		Yes
G4-LA16	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms.	49, 77	The CRH Hotline is available for employees with grievances, full details on individual grievances handled locally are not collected centrally. CRH does not centrally collect information to report fully on this indicator and is currently developing its internal reporting in this area.	Yes
Sub-Categ	ory: Human Rights			
Aspect: Inve	stment			
G4-DMA	Disclosure on management approach.	12, 48, 57		Yes
G4-HR1	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening.	12		Yes
G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	48-49, 77	Note that in 2015 there were 62,000 hours training in human rights and 94% of relevant employees received training covering human rights topics.	Yes
Aspect: Nor	a-discrimination			
G4-DMA	Disclosure on management approach.	52, 54		Yes
G4-HR3	Total number of incidents of discrimination and corrective actions taken.	77	There was a total of 3 alleged instances of discrimination. All were investigated fully with policies and training reinforced wherever necessary and disciplinary action taken as appropriate.	Yes
Aspect: Free	edom of Association and Collective Bargaining			
G4-DMA	Disclosure on management approach.	57-59		
G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk.	57-59	Not available. CRH does not centrally collect information to report on this indicator in the breakdowns required by GRI. CRH is currently developing its internal reporting in this area.	
Aspect: Chi	ld Labor			
G4-DMA	Disclosure on management approach	57-59		
G4-HR5	Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor.	57-59	Not available. CRH does not centrally collect information to report on this indicator in the breakdowns required by GRI. CRH is currently developing its internal reporting in this area.	
Aspect: For	ced or Compulsory Labor			
G4-DMA	Disclosure on management approach	57-59		
G4-HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures.	57-59	Not available. CRH does not centrally collect information to report on this indicator in the breakdowns required by GRI. CRH is currently developing its internal reporting in this area.	
Aspect: Sec	curity Practices			
G4-DMA	Disclosure on management approach.	52, 57		Yes
G4-HR7	Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations.	77	Note that 42% of Group companies have security personnel on site and 84% of these personnel have received relevant training on social and human rights.	Yes
G4-HR8	Total number of incidents of violations involving rights of indigenous peoples and actions taken.	77	Not applicable: CRH does not have a presence on countries of concern.	Yes

# Mapping to GRI G4 Guidelines (continued)

Specific	Standard Disclosures	Page	Comment/Omissions	External Assurance
Aspect: Asse	essment			
G4-DMA	Disclosure on management approach	57-59	Refer to note 1.	
G4-HR9	Total number and percentage of operations that have been subject to human rights reviews or impact assessments.	57-59	Refer to note 1.	
Aspect: Supp	plier Human Rights Assessment			
G4-DMA	Disclosure on management approach	57-59		
G4-HR10	Percentage of new suppliers that were screened using human rights criteria	58-59	Note that CRH's Supplier Code of Conduct, available on www.crh.com, includes safety, environmental, labour practice, human rights, society and other people & community criteria; screening and audits reflect all these criteria.	
G4-HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	58-59	-	
Aspect: Hum	nan Rights Grievance Mechanisms			
G4-DMA	Disclosure on management approach.	48-49, 57		Yes
G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms.	55, 78	None known.	Yes
Sub-Catego	ory: Society			
Aspect: Loca	al Communities			
G4-DMA	Disclosure on management approach.	61-63		Yes
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs.	61, 62		Yes
G4-SO2	Operations with significant actual and potential negative impacts on local communities.	38, 39, 42, 43, 61		Yes
Aspect: Anti-	-corruption			
G4-DMA	Disclosure on management approach.	48-49		Yes
G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified.	48-49, AR p. 116	All operations are assesed for risks related to corruption. Further details on risks are disclosed in the 2015 Annual Report on Form 20-F, p. 52-63.	Yes
G4-SO4	Communication and training on anti-corruption policies and procedures.	48-49, AR p. 67, 116	Breakdowns requested by GRI are currently unavailable. CRH does not centrally collect data on employee category etc.	
G4-S05	Confirmed incidents of corruption and actions taken.	49		
Aspect: Publ	lic Policy			
G4-DMA	Disclosure on management approach.	48-49, 62		Yes
G4-S06	'Total value of political contributions by country and recipient/beneficiary.	78	No significant contributions.	Yes
Aspect: Anti-	-competitive Behaviour			
G4-DMA	Disclosure on management approach.	48-49		Yes
G4-S07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	49		Yes
Aspect: Com	npliance			
G4-DMA	Disclosure on management approach	48-49		Yes
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with laws and regulations.	49		Yes
Aspect: Supp	plier Assessment for Impacts on Society			
G4-DMA	Disclosure on management approach.	58-59		
G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society.	58-59	Note that CRH's Supplier Code of Conduct, available on www.crh.com, includes safety, environmental, labour practice, human rights, society and other people & community criteria; screening and audits reflect all these criteria.	
	Significant actual and potential negative impacts on society in the supply	58-59		

Specific	Standard Disclosures	Page	Comment/Omissions	External Assurance
Aspect: Gri	evance Mechanisms for Impacts on Society			
G4-DMA	Disclosure on management approach.	49		
G4-SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms.	49	Not available. CRH does not centrally collect information to report on this indicator in the breakdowns required by GRI. CRH is currently developing its internal reporting in this area.	
Sub-Categ	ory: Product Responsibility			
Aspect: Cus	stomer Health and Safety			
G4-DMA	Disclosure on management approach.	60		Yes
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement.	60		Yes
G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	79	None known.	Yes
Aspect: Pro	duct and Service Labelling			
G4-DMA	Disclosure on management approach.	60	Refer to note 1.	Yes
G4-PR3	Type of product and service information required by the organization's procedures for product and service information and labelling, and percentage of significant product and service categories subject to such information requirements.	60	Refer to note 1.	Yes
G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes.	79	None known. Refer to note 1.	Yes
G4-PR5	Results of surveys measuring customer satisfaction.	60	Refer to note 1.	Yes
Aspect: Ma	rketing Communications			
G4-DMA	Disclosure on management approach.	60	Refer to note 1.	
G4-PR6	Sale of banned or disputed products	60	Refer to note 1.	
G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes.	60	Refer to note 1.	
Aspect: Cus	stomer Privacy			
G4-DMA	Disclosure on management approach	60	Refer to note 1.	Yes
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	79	None known. Refer to note 1.	Yes
Aspect: Co	mpliance			
G4-DMA	Disclosure on management approach.	60	Refer to note 1.	Yes
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	79	No significant fines. Refer to note 1.	Yes

<sup>\*</sup> Note 1: The page references provided are intended to cover the topic in general terms rather than meet the precise requirements of the GRI for this indicator. This is because the aspect within which this indicator exists has not been identified as "material" in the formal materiality assessment. Many are not applicable for building materials in general, or CRH's businesses in particular.

## About this Report

### CRH Sustainability Reporting: History, Scope and Structural Aspects

### Reporting History

The first CRH Corporate Social Responsibility (CSR) Report was published in October 2004. Since then, the content and transparency of the report has been continuously evolving in line with the development of sustainability reporting in the industry, and also taking into account stakeholder feedback. In 2011, CRH adopted "Sustainability" concept, and changed the format of its reporting to reflect this. This Report, published mid-year in 2016, is CRH's 13th annual Report in the area and covers activities in 2015.

### Independent Verification

CRH was among the first companies in its sector to achieve full independent verification of its CSR reporting in 2005, repeated every year since. This Report has been independently verified by DNV GL. The detailed verification statements are included on pages 69-71.

### Global Reporting Initiative (GRI)

CRH has voluntarily adopted sustainability reporting guidelines developed by the GRI. CRH declares that its 2015 Reporting is prepared in accordance with the GRI G4 Sustainability Reporting Guidelines using the Core option. The GRI content index is provided on pages 72-79 and this has also been verified by DNV GL.

### Reporting Scope and Methodology

Data from 100% of Group subsidiaries covering the period from 1 January to 31 December 2015 forms the basis of this Report. For the locations acquired as part of the LH Assets acquisition, in the main body of this Report, data is included from the date of acquisition in 2015 to year end 2015. However, please note the footnotes in relation to the reporting of the Cement Sustainability Initiative Key Performance Indicators on pages 64-65. CRH's principal subsidiaries are listed on pages 224 - 230 of the CRH Annual Report 2015. In common with other large companies, CRH also owns shareholdings in several joint ventures and associates, and a listing of these

is provided on page 231 of the CRH Annual Report 2015. Most of these companies supply sustainability data to the Group and actively participate in Sustainability and CSR Programmes. Their key data is included on an appropriate % shareholding basis at appropriate points in this Report.

Data in this report has been collated from 3,900 locations spread across 31 countries. CRH has a robust data collection and management process in place, as verified by DNV GL, which has been developed and continuously improved. Data is mostly based on measured or metered physical quantities. Where actual data is not available, best estimates based on industry knowledge and established calculation factors and representative samples are used. Such estimates have been refined over the years, and therefore are fairly representative.

The transparency of this report has been improved compared with previous years, as exact data breakdown are provided in graphs, however, graphs are for illustration purposes only and are not to a precise scale.

 ${
m CO}_2$  emissions are calculated according to the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development GHG Protocol for cement plants. All Key Performance Indicators (KPIs) defined by CSI are reported in accordance with the CSI conventions. No universally accepted methodology yet exists for calculating  ${
m CO}_2$  emissions for activities other than cement, for example lime or asphalt. Such emissions are estimated from established fuel and activity air emissions factors. Metric units are used throughout, unless stated otherwise.

The scope of the Report addresses the full range of economic, environmental and social impacts of the organisation. CRH has considered the GRI's Reporting Principles for Defining Report Content. A formal materiality assessment carried out with the assistance of an independent third party incorporating stakeholder inputs ensured the identification and prioritisation of material topics and aspects.

The boundary for all material aspects was considered to be within the organisation. CRH has considered the principles of stakeholder inclusiveness, sustainability context, materiality, completeness, balance, comparability, accuracy, timeliness, clarity and reliability and believes that this Report meets these principles. This Sustainability Report is informed by internal reports on sustainability performance that are formal Board Agenda items and the Sustainability Report is approved by Group executive management prior to publication.

### Structure of the Report

The Report presents information on CRH's material sustainability focus areas grouped under four headings; Health & Safety, Environment & Climate Change, Governance, and People & Community. Each section records CRH's policies and practices in the relevant area, gives details of how these are implemented, and describes material issues. The various Socially Responsible Investment Agencies ratings that have been awarded for the Group's performance in sustainability are provided in the Appendices. The Appendices also cross-reference the content of the Report to the requirements of the GRI guidelines and include a glossary of terms. The DNV GL verification statement on this Report is also included in the appendices, together with WBCSD CSI KPI data and the associated DNV GL verification statement.

### Intended Audiences

The key audiences for this report are CRH stakeholders – employees, neighbours and local communities, current and potential investors, sustainability rating agencies, customers and suppliers, government and regulatory bodies, academia and scientific community, media, Non-Governmental Organisations (NGOs) and pressure groups. CRH believes that this Report provides a reasonable and balanced representation of the Group's material sustainability areas of impact and opportunity, and enables stakeholders to assess the Group's performance in the area.



CRH welcomes feedback and comments from stakeholders on its sustainability reporting.

Mark Lowry
Group CSR & Sustainability Director



This Report is printed on FCS paper, manufactured by an FSC certified paper mill to the highest environmental standards. The wood pulp comes from forests that are continuously replanted.



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Front cover: Oldcastle BuildingEnvelope® offers products that meet the most stringent thermal performance requirements and reduce energy consumption and solar heat gain, resulting in increased energy efficiency of buildings throughout their life-cycle. Shown is ExxonMobil's new global campus in Houston, Texas, for which Oldcastle BuildingEnvelope® designed, engineered, tested, manufactured and delivered 2.6 million square feet of custom-engineered curtain wall, 1.6 million square feet of high performance and silk-screened architectural glass, 20,450 sunshades and 4,000 square feet of custom-engineered skylights. This project was awarded LEED Gold status, in part for a high recycling rate in the building envelope.