



**Performance and
sustainability report 2011**

Hanson UK Performance and sustainability report 2011

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Cover: Hanson is creating one of the largest new wetland habitats in Europe at Needingworth quarry in Cambridgeshire. Sand and gravel is being extracted in small sections and progressively restored before being handed over to the Royal Society for the Protection of Birds for management as a nature reserve. When complete, the 700 hectare site will represent 50 per cent of the UK Biodiversity Action Plan target for reed bed.



2010 highlights

- ✓ Reportable and lost time injuries fell by **53 per cent**
- ✓ More than 500 energy-saving ideas were introduced during the year, reducing carbon emissions and saving more than **£1.5 million** a year in energy costs
- ✓ Over **300 managers** and supervisors received training in sustainability and responsible sourcing
- ✓ Use of both mains and controlled water has **fallen**
- ✓ Environmental complaints fell by **42 per cent**
- ✓ Use of GGBS as a cement replacement in our concrete remained at a high level of **35 per cent**
- ✓ We invested more than **£10 million** in a new business system for our aggregates, concrete and asphalt operations to improve efficiency and customer service
- ✓ The number of biodiversity and geodiversity action plans in place increased by **12**
- ✓ All our production sites are now certified to **ISO 14001** and **ISO 9001** systems
- ✓ We have exceeded our 2009 target of a **10 per cent** reduction in waste to landfill
- ✓ We are the largest building materials company to receive the **Carbon Trust Standard**

Our business

Hanson UK is a leading supplier of heavy building materials to the construction industry. We produce aggregates (crushed rock, sand and gravel), ready-mixed and precast concrete, asphalt, cement and cement-related materials, bricks and a range of building products. We are part of the HeidelbergCement Group, which has leading global positions in aggregates, cement, concrete and building products.

Turnover for the UK business in 2010 was £1.1 billion. Capital investment for the year totalled more than £36 million. Our principal markets are the major conurbations in England and Wales and the central belt of Scotland. We disposed of our aggregates and asphalt businesses in Scotland early in 2010, but continue to operate ready-mixed concrete plants and a cement depot. We have no production operations in Northern Ireland.

The location of our mineral deposits is determined by a number of factors, not least geology and planning constraints. Where practical, our production sites are located close to core markets to reduce the costs and impact of transport. We operate a series of depots and wharves, supplied by road, rail and sea, to ensure the efficient transfer of aggregates and cement to areas of greatest demand and where local materials are not readily available.

Hanson UK is split into three business lines – quarry products, cement and building products – which together operate over 300 manufacturing sites and employ some 5,300 people. Jobs range from specialist and professional managers through to production operatives.

Hanson Quarry Products produces sand and gravel from the land and sea, crushed rock and asphalt for road surfacing and is one of the UK's largest suppliers of ready-mixed concrete from a network of 191 plants. The division includes Hanson Contracting, a national road surfacing and infrastructure business, and Hanson Aggregates Marine, Europe's largest producer of marine-dredged sand and gravel.

The contracting business has a civil engineering division which specialises in construction of wind farms and waste-to-energy plants.

The marine business operates eight trailing suction hopper dredgers which deliver to a network of wharves in the UK, the Netherlands, Belgium and France. The dredgers vary in size from 1,300 to 5,500 gross tonnes and extract sand and gravel from the seabed at depths of up to 50 metres.

Cargoes are dredged from government-licensed areas and the vessels are fitted with self-discharging systems which can deliver dry material onto wharves at rates of 600 to 2,600 tonnes an hour.



Aggregate dredger Arco Dart.

Hanson Cement is a leading manufacturer of Portland cement, both in bulk and in bags, and produces ground granulated blastfurnace slag (GGBS) – a cement replacement in ready-mixed and precast concrete. The division includes the packed products business, which produces a range of bagged cement, cementitious and aggregate products, and the specialist solvent recycling and waste processing company Solvent Resource Management (SRM), which makes alternative fuels for the cement kilns.



Ketton cement works in Rutland.

Hanson Building Products is one of the UK's largest producers of clay bricks and also makes Thermalite (aircrete) and aggregate blocks. In 2010 the division was reorganised into three business units. *Material products* comprises the brick and block manufacturing operations. *Design solutions* brings together three businesses which all provide a design and specification service to customers – Hanson Formpave, which specialises in sustainable drainage systems, Hanson Bath & Portland Stone, a leading supplier of natural stone masonry, and Hanson Floors and Precast which manufactures bespoke precast concrete products.



Ready-mixed concrete delivery.

Build Solutions draws on the skills within Hanson Structherm, manufacturers and installers of structural cladding systems and experts in new build and refurbishment products, and Irvine-Whitlock, a specialist brick and block laying contractor.

Our business (cont)

Corporate governance

Hanson UK is part of the HeidelbergCement Group. The UK operations are managed within HeidelbergCement's Western and Northern Europe Group area. The managing board member responsible for this area is Daniel Gauthier. Hanson UK's chief executive officer Patrick O'Shea reports to Daniel Gauthier. You can find more details about our UK management structure and further information on our range of products and services on our web site

www.hanson.com/uk

For further information about corporate governance and investor relations visit www.heidelbergcement.com



Cement bagging plant at Ketton works, Rutland.

Scope of the report

The report covers Hanson UK's three principal divisions (quarry products, cement and building products) and its corporate functions with some specific exemptions. Environmental and health and safety incidents in Hanson Contracting are included, and its offices have also been taken into account. But other aspects of the division's performance have not been included due to the difference in the type of activity carried out. The same applies to two businesses within the building products division – Hanson Structherm and Irvine-Whitlock – which are primarily involved as contracting businesses. We are reviewing how data from these activities can be included in future years.

We have an interest in a number of joint ventures and associate companies, principally Smiths Concrete and Humber Sand & Gravel. Their active operations are included in the data as in previous reports. Midland Quarry Products, a quarrying and asphalt joint venture based in Leicestershire, is not included.

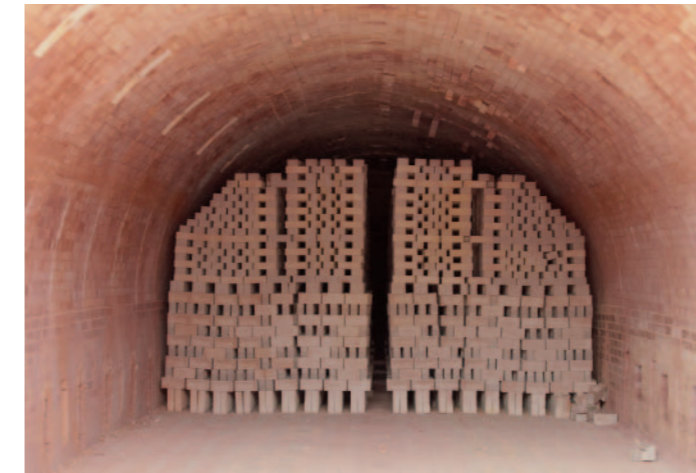
We report annually on our performance. Our last report, published in December 2010, covered the calendar year 2009. The new data in this report covers the calendar year 2010 and was collected from within the business with the help of

our Entropy software system and through our management accounting and business administration systems in combination with other non-automated methods. The report is available on our website at www.hanson.com/uk/sustainability

Our core key performance indicators have been developed from the UK concrete industry's Sustainable Construction Strategy. The report content is largely defined by these indicators and by the specific requirements of our parent company, HeidelbergCement. There are no significant changes from the previous reporting period in scope, boundary or measurement methods.

Global Reporting Initiative

This document is based on the Global Reporting Initiative (GRI) framework for sustainability reporting. We have self-assessed our reporting to be Application Level C. You can find a table giving the location of the GRI standard disclosures in the sustainability report section of our web site at www.hanson.com/uk



Brick kiln at Kings Dyke works, Whittlesey, Cambridgeshire.



Hanson UK's biggest quarry at Whatley in Somerset.

Production operations 2010

Hanson Quarry Products	
Quarries – sand and gravel	32
Quarries – crushed rock	30
Marine dredgers	8
Aggregates depots and wharves	12
Ready-mixed concrete plants	191
Site concrete plants	17
Asphalt plants	36
Recycling/landfill	4

Hanson Cement	
Cement plants	3
Cement depots and wharves	8
Ground granulated blastfurnace slag plants	3
Bagged products plants	14

Hanson Building Products	
Precast concrete and flooring plants	3
Brick works	9
Aggregate/aircrete block plants	5
Block paving plants	1
TOTAL	376

Sites certified to ISO 14001 – see page 15

Production volumes 2010 (million tonnes unless stated)

Hanson Quarry Products	
Aggregates	23.80
Asphalt	2.95
Ready-mixed concrete (million cubic metres)	3.65

Hanson Cement	
The Competition and Market Authority's market data order prevents us publishing our cement volumes.	

Hanson Building Products	
Precast concrete and flooring	0.188
Bricks (million)	427
Blocks (million cubic metres)	2.84

Our vision – to embed sustainability

Foreword by Patrick O'Shea, Chief Executive Officer, Hanson UK



This is our third report as Hanson UK following the integration of all our businesses into a single organisation in 2008. It provides stakeholders with an overview of our achievements and successes during 2010, and an update on how we are progressing against our targets. This year we are expanding the report to include more details about our performance to enable us to follow the internationally recognised guidelines of the Global Reporting Initiative (GRI).

Our business continues to face difficult market conditions, escalating energy costs and an increasingly demanding regulatory environment. These factors are largely beyond our control, but where we can make a real difference is by motivating and energising our people to improve performance and work together towards common goals, with sustainability at the core.

I wrote to all employees at the start of 2011 setting out my vision for the coming year. One of the four strategic aims agreed by the Hanson UK executive team was to embed sustainability into everything we do. We have made real progress with key functions such as health and safety and are aiming to do the same in every other facet of sustainability.

Management of safety, health, environment, quality and responsible sourcing is of prime importance to the continuing success of the business. We take an integrated approach to all our business processes and have developed a single sustainability policy, which was published in March 2011 and will continue to be regularly reviewed for suitability and appropriateness.

The policy, which appears in full on page 46, underpins the strategic direction defined by our parent company HeidelbergCement. The Group is committed to sustainability and builds on the three pillars of environment, economy and social responsibility. Its corporate governance places the primary focus on customers, employees, shareholders and communities close to our production sites. All these factors are built into our new policy.

These are challenging times for the UK construction industry and the outlook remains uncertain. But as a company we are determined to achieve our goal of achieving 'best in class' status in terms of performance management, customer focus and sustainability. We again made good progress in 2010, particularly in critical areas such as carbon emissions and health and safety. But there is still a lot of work to be done and we remain committed to the principle of continual improvement.

To support this aim we have set up a national sustainability steering group, chaired by an executive director, which has responsibility for identifying and driving through projects which will improve our sustainability performance.



Our staff are encouraged to work safely and care for the environment.

Responsible and sustainable

Overview by Martin Crow, Head of Sustainability, Hanson UK



Our report on the calendar year 2010 is again built around the UK concrete industry's Sustainable Construction Strategy, which is aligned with the government's four sustainable development priorities:

- sustainable consumption and production
- climate change and energy
- natural resource protection and enhancing the environment
- creating sustainable communities.

From these priorities, we initially adopted 14 key performance indicators (KPIs) for future reporting. The KPIs were developed through the Concrete Industry Sustainable Construction Forum (CISCF), of which we are founder members. Our core product lines – aggregates, cement and ground granulated blastfurnace slag – are the main constituents of concrete so it made good sense for us to adopt this approach. It also complements the over-arching

sustainability strategy of our parent company, HeidelbergCement, summarised on page 12. We do, of course, produce materials beyond concrete, such as asphalt, clay bricks and block paving, but we believe the principles we now embrace apply across the product range.

In 2010 we added a further four KPIs to our reporting schedule – three of which align with the requirements of HeidelbergCement and one which has been added by the CISCF to reflect the importance of responsible sourcing. Two of the three new internal KPIs relate to the important area of health and safety. These are an LTI severity rate and the total number of days lost through accidents. The third looks at quarries with high biodiversity value. These are defined as those located within 500 metres of a Site of Special Scientific Interest (SSSI) status or above where biodiversity action plans are being actively implemented.

Given the significance of climate change, we believe that the main impact of our business on the environment is CO₂ emissions from both production and transport. We continue to invest in more efficient production processes, particularly those which reduce the use of fossil fuels. Our products have a high weight-to-value ratio so managing transport efficiently

makes good business sense as well as reducing fuel consumption and carbon emissions. We are pursuing opportunities to increase the number of rail-linked sites and we are also looking at new technology to improve our logistics operations. We are also committed to conserving natural resources by minimising waste and water usage and increasing recycling.

A key achievement during 2010 was gaining the BES 6001 Responsible Sourcing of Materials (RSM) standard for asphalt and our range of building products including clay bricks, aircrete and aggregate blocks, block paving, and precast concrete products. The previous year we achieved the standard for two product lines – ready-mixed concrete and aggregates – and it now covers over 350 production operations and two complete business lines. We expect to achieve 100 per cent coverage in 2011.

We won a number of awards related to sustainability during the year, including a major commendation in the environmental leadership category of the Business Commitment to the Environment (BCE) awards for our £50 million soft mud brick factory at Measham in Leicestershire. Other awards received during the year are listed on page 13.

“Over the next 12 months we plan to introduce longer term targets to take us towards 2020”

Collection of accurate data from over 300 sites remains one of our biggest challenges but we have made further progress in establishing robust baseline data for all our KPIs. We will continue to work towards achieving and surpassing our sustainability targets and to set new and demanding goals for the business. Over the next 12 months we plan to introduce longer term targets to take us towards 2020 as part of our parent company's long term vision (see page 12). We will also continue to focus on biodiversity and geodiversity as part of a group-wide initiative within HeidelbergCement.

Looking ahead, our vision is to become a leading sustainable business, which is trusted and respected by our stakeholders for the ethics and standards we adopt. To support this vision, the management team has agreed a range of objectives which include encouraging understanding of sustainability by all employees and embedding our integrated management system (IMS) into the way we operate, enabling continual improvement and improved reporting of performance data.



Automated brick production at Whittlesey, Cambridgeshire.

Group sustainability strategy

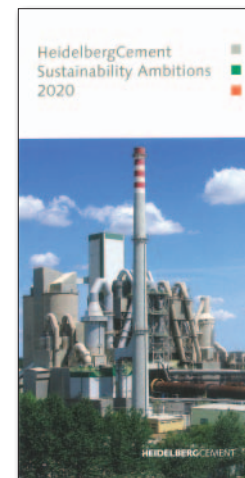


As a company that makes intensive use of raw materials, HeidelbergCement regards climate protection and the securing of resources as the principal foundation for future development. Efficient production processes and the increasing use of alternative fuels and raw materials make an important contribution to this vision. Group-wide standards for environmental protection and occupational health and safety help ensure ambitious goals are implemented worldwide. Quarries from which raw materials are extracted are returned to a natural state or put to agricultural use. We are increasingly opting for restoration to nature conservation, thus helping to preserve biological and species diversity.

The central parts of our sustainability strategy are derived from our core business and its effects on the environment and society. For us, sustainable development means ensuring a balance between making profit and securing future viability through good corporate governance. We therefore strive to act in a socially and ecologically responsible way, considering the needs of society as a whole.

Our publication 'Sustainability Ambitions 2020' clearly defines the long-term nature of our commitment. We have integrated sustainability and social responsibility into our corporate strategy as a vital pillar. Responsible economic activity is the basis of our long-term success.

You can read more about HeidelbergCement's sustainability strategy and ambitions for 2020 on the Group website at www.heidelbergcement.com



Awards 2010

Hanson UK

European Aggregates Association (UEPG) Sustainable Development Awards – winner of the health and safety best practice category for a project to improve the safety of mobile plant.

Business Commitment to the Environment (BCE) Awards – major commendation in the environmental leadership category for Measham brick works in Leicestershire.

British Precast Concrete Federation (BPCF) Awards – winner of the best project category for a new office development on the former brick works site at Stewartby, Bedfordshire.

Hanson Quarry Products

Mineral Products Association (MPA) health and safety best practice awards – highly commended in the *bitumen and asphalt safety* and *leadership and training* categories.

Hanson Contracting

British Safety Council international safety award for corporate safety systems Royal Society for the Prevention of Accidents Order of Distinction to mark 18 consecutive years of achieving its gold standard.

Hanson Cement

Cemco supplier of the year. Cemco is the UK's largest independent builder's merchant buying group.

Mineral Products Association (MPA) health and safety best practice awards – winner of the TUC Trophy for worker involvement for an apprentice safety rep scheme at Ribblesdale works in Lancashire. Runner-up in the *LGV and driver safety* category.

Hanson Building Products

Sustain magazine's refurbishment award to Hanson Structherm for its work with Liverpool Mutual Homes on a refurbishment project on the Daneville Estate.

Brick development Association (BDA) Brick Awards – specialist brickwork contractor of the year to Irvine-Whitlock. Three individual project awards.

British Ceramic Confederation safety pledge awards – nine employees honoured for commitment to health and safety.



Measham brick works received a major commendation in the environmental leadership category at the BCE awards.

Sustainable consumption and production

Environmental management

The ISO 14001 standard addresses various aspects of environmental management and includes commitments to legal compliance, prevention of pollution and continual improvement. The process involves independent external audits. We achieved our target of having all our sites certified to ISO 14001 by the end of 2010. The packed products bagging plants were the last to be audited, and in December achieved recommendation for certification. We also gained full certification for our marine aggregates dredging business.

Environmental management is only one part of the Hanson approach to systems and certification and we have embarked on a major project to integrate all our management systems – environment, health and safety and quality – into one system that will cover our main business lines. It is progressing well and scheduled for completion by January 2012. A separate project to create an integrated management system (IMS) for the contracting division is also under way. The overall objective is to align the division closely with major customers such as the Highways Agency, and to satisfy Tier One supplier requirements. It will also improve knowledge

sharing and risk management for employees, customers, the supply chain, the public and the environment.

In 2010, asphalt became the latest of our product lines to be certified with the BES 6001 Responsible Sourcing of Materials (RSM) standard. This followed certification earlier in the year for clay bricks, Thermalite (aircrete) blocks, aggregate blocks, and precast flooring. Our ready-mixed concrete and aggregates product lines were certified in September 2009. The RSM standard covers the environmental and social issues for organisational management and supply chain management, including all the processes from the origin of raw materials, through all stages of the manufacturing process to point of sale.

The RSM standard has been added as an additional industry performance indicator by the Concrete Industry Sustainable Construction Forum (CISCF) to reflect the importance of responsible sourcing. Achieving the standard for asphalt was the next step in our goal to obtain full certification across all sites and product lines.

You can find copies of our ISO and RSM certificates on our website at www.hanson.com/uk



Responsibly sourced asphalt (above) and Thermalite blocks (below).



“We achieved our target of having all our sites certified to ISO 14001”

Production sites certified to ISO 14001

Business line	Product line	2008			2009			2010		
		Sites	Number with certified MS	Coverage	Sites	Number with certified MS	Coverage	Sites	Number with certified MS	Coverage
Cement	Cement and GGBS	19	19	100%	15	15	100%	14	14	100%
Building products	All	32	32	100%	26	25	96%	18	18	100%
Quarry products	Aggregate quarries	80	80	100%	65	65	100%	62	62	100%
	Aggregate others ¹	28	28	100%	27	27	100%	23	23	100%
	Concrete	225	225	100%	210	210	100%	191	191	100%
Hanson UK		384	384	100%	343	342	99%	308	308	100%

¹ Includes wharves, depots and stand-alone asphalt plants

Non-production sites certified to ISO 14001

Hanson UK	All	24	5	21%	22	8	36%	21	21	100%
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We have 376 production operations (see page 7). This includes 29 asphalt plants which are situated within quarries and 17 mobile concrete batching plants.

BES 6001 RSM certification

Business line	Product line	Sites covered (2010)
Cement	Cement and GGBS	0%
Building products	All	100%
Quarry products	Aggregates	100%
	Asphalt	100%
	Concrete	100%
Hanson UK		93%

Cement products and GGBS received certification in July 2011.

Contracting services certified to ISO 14001

Division	Coverage (2010)
Hanson Contracting	100%
Hanson Structherm	0%
Irvine Whitlock	0%

Targets

- Maintain 100 per cent coverage of all sites.
- Achieve 100 per cent ISO 14001 for all contracting services by the end of 2011.
- Achieve BES 6001 for cement/GGBS production in 2011.

Sustainable consumption and production

Waste minimisation

Our data on waste generation is improving and we have already exceeded a target set in 2009 of 10 per cent reduction in waste to landfill by the end of 2012 across all business lines. As a result, we have set a new target of a 25 per cent reduction by 2012.

We are also making good progress towards a new target set last year of reducing by-pass dust from the cement operations being sent to landfill. In 2010 Hanson Cement worked with the Environment Agency to develop a regulatory position on the use of by-pass dust for agricultural use. An agreed protocol was

developed which allows the material to be spread on land as a soil improver. Each application is assessed and approved to ensure limits are complied with on trace metals and other pollutants. This practice has seen the amount of dust going to landfill fall by almost 50 per cent from 2008 levels.

In 2010 we established a single contract with a national waste disposal company to manage waste collection at many of our sites. This enables us to control the process more effectively and provide further improvements to the reporting systems on the quantity and types of waste being produced. Our BSI Entropy software records all waste generated across the business.

Our quarry products division signed up to the Waste Resources and Action Programme (WRAP) commitment to halve the amount of construction, demolition and excavation waste going to landfill by 2012. WRAP has secured the support of clients, developers, manufacturers, contractors and designers to reduce waste, recycle more, and increase the use of recycled and recovered materials. The aim is to ensure surplus materials are reused and do not become part of the waste stream.

Waste from the building products division rose by 53 per cent because it included arisings from the demolition of two old brick factories.

Dry leg reduces fines waste to zero

A new marine sand and gravel processing plant at Frindsbury on the River Medway near Rochester includes many areas of sustainable efficiency including waste minimisation. The plant receives marine dredged aggregate, largely from Hanson's dredger fleet and processes it for sale into the local market. Traditionally the main waste material from marine sand and gravel processing was the loss of fines during the washing process. This material used to be sent to landfill.

In order to wash materials only when necessary for certain uses, an innovative "dry" leg was introduced into the plant layout. This allows material to be produced with lower energy and water consumption and no waste

Furthermore, when washing is required in the new plant, due to the tight controls achieved on the system used to recycle the washing water, the fines can be reclaimed and re-introduced into specific products. As a result the quantity of aggregate fines waste has been reduced to zero.



The dry leg at Frindsbury.

“We have exceeded our target set in 2009 of a 10 per cent reduction in waste to landfill”

Waste disposal								
		2008		2009		2010		
Business line	Product line	Tonnes	kg waste / tonne product	Tonnes	kg waste / tonne product	Tonnes	kg waste / tonne product	Change 2009 / 2010 (kg / tonne)
Cement	Cement and GGBS	19,278	4.50	7,611	2.44	6,125	2.00	-18.35%
	SRM and packed products	No data	No data	2,006	1.36	2,104	1.37	0.79%
Building products	All	2,571	0.60	2,154	1.17	3,478	1.80	53.08%
Quarry products	Aggregates	2,955	0.10	8,246	0.38	7,414	0.34	-11.57%
	Concrete	No data	No data	4,722	0.63	3,381	0.42	-32.40%
Hanson UK		No data	No data	24,739	0.76	22,502	0.62	-19.13%

Cement specific waste			
	2008	2009	2010
By-pass dust produced	4,569t	7,808t	5,619t
By-pass dust to landfill	4,419t	4,584t	2,979t
By-pass dust diverted from landfill	3.28%	41.29%	46.99%

Targets

- Divert from landfill 50 per cent of by-pass dust generated by cement production by 2012.
- Reduce waste to landfill by 25 per cent by the end of 2012 based on 2009 data.

Environmental incidents and emissions

As part of our environmental management systems we record incidents (occurrences noted by our own staff which may or may not have led to a complaint) and complaints (arising from external sources). Reports are generated monthly and systems are in place for recording and tracking any required actions.

In 2010, although incidents rose by 47 per cent, complaints fell by 42 per cent. We believe these are linked and we encourage employees to report incidents and near misses so that we can deal with them before they have any potential external impact. We use our Entropy software to record incidents, near misses and complaints and improve reporting. This allows better data analysis and reporting so trends can be quickly and easily identified. Complaints in the cement division fell by over 50 per cent because two specific incidents in 2009 led to more than 300 complaints.

There was one prosecution during the year. In February 2010, Castle Cement (now Hanson Cement) was fined £250,000 for not complying with environmental permit conditions at Padeswood works in north Wales. The prosecution was brought by the Environment Agency for offences which

largely occurred between 2005 and 2007. They included failure to maintain plant in good operating condition, which was deemed to have contributed to two fires, minimise dust emissions and control excessive noise and vibration. The company also failed to comply with an agreed improvement programme and part of an enforcement notice.

Lessons have been learned from the case; further training of staff has been carried out and new procedures have been introduced.

Emissions from cement production

Emissions from cement production have reduced significantly over the last decade. These reductions have been achieved in the main through major investment in new plant and equipment.

The SO₂ emissions from cement kilns are related to the presence of naturally occurring volatile sulphur compounds found in the raw materials. In 2010 there were increases in the sulphide levels in the raw materials at Ketton and Ribblesdale, which in combination with higher production levels at these works compared with 2009, led to higher overall SO₂ emissions.

All three of our cement plants operate at emission levels significantly below the EU best available technique reference document levels of 200-400 mg/Nm³.

The annual averages for our three cement plants in 2010 were 56 mg/Nm³ (Ketton) 24 mg/Nm³ (Padeswood) and 110 mg/Nm³ (Ribblesdale).

We publish annual reports on emissions from our cement plants on our website www.hanson.com/uk. You can find them by clicking on 'Cements'; then 'Works and depots'.

Managing noise

A noise management plan was introduced at Chipping Sodbury quarry in South Gloucestershire following a series of complaints relating to out of hours operation of the site's asphalt plant.

Noise levels from the plant were within the limits prescribed for the site, but caused problems for local residents during late night and early morning working.

A package of engineering and procedural improvements was carried out on the plant, which reduced noise to a level considered to be acceptable by both residents and the local authority. To prevent lapses, a noise management plan was introduced. It sets out regular maintenance and monitoring requirements and details specific procedures to be adopted for night working. It also lists key site contacts to enable residents to make immediate contact with site staff.

Incidents, complaints and prosecutions

Business line	Product line	2008			2009			2010		
		Incidents	Complaints	Prosecutions	Incidents	Complaints	Prosecutions	Incidents	Complaints	Prosecutions
Cement	Cement and GGBS	78	268	0	44	363	0	83	157	1
	SRM and packed products	No data	No data	0	3	5	0	2	3	0
Building products	All	No data	No data	0	15	24	0	24	8	0
Quarry products	Aggregates	52	111	0	32	104	0	43	115	0
	Concrete	29	22	0	37	20	0	40	14	0
Hanson UK		159	401	0	131	516	0	192	297	1

Cement specific emissions – kilogrammes per tonne

Business line	Emission	2008	2009	2010
Cement	Dust to air	0.15	0.09	0.11
	NO _x to air	1.18	1.08	1.29
	SO _x to air	0.10	0.15	0.17
	Suspended solids to water	0.010	0.003	0.003

“Environmental complaints fell by 42 per cent”



Ketton cement works.

Target

- 100 per cent compliance with all environmental legislation.

Sustainable consumption and production

Stakeholder performance

We remain committed to engaging with our investors, customers, business partners, employees and other stakeholders in promoting sustainable development.

We see our employees as principal stakeholders and we continued to improve our internal communications with the launch of a new intranet platform, establishment of employee forums and staff briefing meetings throughout the country carried out by the CEO. In addition we produce a quarterly magazine for employees, which is delivered to home addresses.

In 2010 we announced plans to invest more than £10 million in a new and improved business system for our aggregates, concrete and asphalt operations to streamline our processes and make us easier to do business with. An enhanced version of the SAP system, which is used widely in our industry to deal with transactions from orders, invoices and statements to purchasing and payments, was introduced from May 2011. It allows us to respond more effectively to our customers and suppliers, provide service improvements and increase the availability of information to our regional customer service centres. A common set of processes and procedures will help provide a more consistent and high quality service across our product lines.

Five of our sites are within national parks and we are active members of the Corporate Forum for National Parks which encourages dialogue between the Campaign for National Parks, the park authorities and the businesses which operate within the parks. During 2010 we renewed our declaration of commitment to the national parks – you can find this on the CNP web site www.cnp.org.uk

Before submitting planning applications for new developments we consult widely with both statutory bodies and local residents. We held five public exhibitions during 2010 to present proposals for mineral extraction. The exhibitions provided an opportunity for local residents to view and comment on the proposals prior to planning applications being submitted.

Following the 2010 general election we wrote to every MP with a Hanson operation in their constituency, introducing the company and offering a visit. Fifteen newly-elected and re-elected MPs subsequently visited our sites.

Looking ahead, we have established an internal committee to identify and select key stakeholder groups and investigate how we can work more closely to develop sustainability programmes to our mutual benefit.

We identify our key stakeholders through analysis of how our business interfaces with our customers, suppliers, neighbours and the environment. The main groups with whom we engaged during 2010 included:

British Trust for Ornithology
Brick Development Association
Campaign for National Parks
Carbon Trust
Construction Products Association
Customers and suppliers
Environment Agency
Building Research Establishment
Mineral Products Association
Royal Botanic Gardens
Royal Society for the Protection of Birds
UK Green Building Council

Target

- To arrange one-to-one meetings with our top 30 customers to gain their feedback on our sustainability performance.

“We see our employees as principal stakeholders”



Our employees are key stakeholders



Mole Valley MP Sir Paul Beresford, centre, pictured with land and mineral resources manager Bob Smith, left, and quarry manager Graham Tucker during a visit to Tapwood quarry near Reigate in Surrey.



We produce a quarterly magazine for employees.

5

Sustainable consumption and production

Quality and performance

All our business lines operate comprehensive quality management systems to ensure our products are made to the required standards. We just missed our target of extending ISO 9001 systems to all production sites by the end of 2010 but achieved it in February 2011. Our aggregate block plants had systems in place at the end of the year but they had not been formally certified. Auditing of the packed products bagging plants was completed in December with a recommendation for certification.

In 2010 we became the first company in the UK to produce and lay low energy asphalt. The micro-foaming production process of Hanson era® reduces the level of carbon emissions associated with asphalt production for road laying by up to 50 per cent while enhancing durability and improving health and safety for contractors.

It is produced at temperatures of 80-95°C, rather than 130°C giving a reduction in fuel consumption of up to 50 per cent compared with equivalent hot-mix materials. It can also incorporate up to 50 per cent recycled material and allows faster completion of resurfacing works, minimising disruption for motorists.



Hanson era® is a new low-energy asphalt.

The new Hanson Ecostock® brick range has a number of environmental benefits. The latest technology reduces energy consumption by up to 50 per cent in the manufacturing process. Produced at our £50 million Measham plant in Leicestershire, the Ecostock® range reflects the future demands of manufacturing and the environment and also offers enhanced colour, dimensional accuracy and quality.

We produced a range of specialist concretes for many applications. In Glasgow we supplied concrete for the slip-form construction of the service towers for the new National Indoor Sports Arena and the Sir Chris Hoy Velodrome. The £92 million venue will be one of the centrepieces of the 2014 Commonwealth Games and will then regularly host international sporting events.

The slip-form process is less dependent on cranes, which is a benefit on a congested site. It also allows the contractor to get the vertical elements of the project completed quickly, reducing construction time and costs.

In Manchester we supplied Hanson EasyPile® piling concrete for the foundations of new facilities at Hope Hospital, Salford. Easypile® incorporates ground granulated blastfurnace slag, which reduces CO₂ emissions associated with its production by 40 per cent.

It was chosen for the hospital contract because it offers ease of placement in all ground conditions, improved cohesion properties and pumpability and reduced downtime and associated costs. These in turn lead to minimal wastage and improved working conditions.



The new Hanson Ecostock® brick range.

“All our production sites are now certified to ISO 9001”

Production sites certified to ISO 9001										
Business line	Product line	2008			2009			2010		
		Sites	Number with certified MS	Coverage	Sites	Number with certified MS	Coverage	Sites	Number with certified MS	Coverage
Cement	Cement and GGBS	19	19	100%	15	15	100%	14	14	100%
Building products	All	32	32	100%	26	18	69%	18	16	89%
Quarry products	Aggregate – quarries	80	80	100%	65	65	100%	62	62	100%
	Aggregates – other	28	28	100%	27	27	100%	23	23	100%
	Concrete	225	225	100%	210	210	100%	191	191	100%
Hanson UK		384	384	100%	343	335	98%	308	306	99%

Non-production sites certified to ISO 9001										
Hanson UK	All	24	6	25%	22	7	32%	21	21	100%

Contracting services certified to ISO 9001	
Division	Coverage (2010)
Hanson Contracting	100%
Hanson Structherm	100%
Irvine Whitlock	100%

Target

- Maintain 100 per cent coverage of ISO 9001 at all production and contracting businesses.

Climate change and energy

Energy efficiency

We are continuing to focus on reducing energy consumption and managing demand. In terms of consumption per tonne by product line, aggregates and concrete came down, building products showed a slight increase while cement went up by nearly seven per cent. This increase is principally due to a different product mix in 2010 when we made more energy-intensive cement than GGBS. Cement production was up 72,118 tonnes and GGBS down 116,675 tonnes.

The reductions in aggregates and concrete followed an energy awareness change management programme introduced for quarry products employees. Working closely with the Carbon Trust, we have been running a series of workshops to educate staff at all levels about what they can do to save energy. The programme empowers participants to identify where savings can be made and make the required changes.

More than 500 energy-saving ideas were introduced in 2010, reducing carbon emissions and saving more than £1.5 million a year in energy costs.

A project name ECCOR (energy consumption and cost reduction) was launched by HeidelbergCement at the end of 2009 with a target to reduce electricity consumption and peak demands at aggregates and asphalt production sites throughout Europe. It involves both procurement and operational staff and revolves around two key elements – improved purchasing of electricity from suppliers and better day-to-day management.

In the UK our office staff have joined the campaign to save power as part of a global commitment within HeidelbergCement to reduce energy consumption in buildings. Energy awareness groups have been set up at all the major locations, with individuals nominated to take a lead role in the drive to cut electricity, gas and oil bills.

“Office staff have joined the campaign to save power as part of a global commitment”



Electrical supervisor James Veakins reduced lighting costs by 75% by improving control systems at Whatley quarry.



Meters give half-hourly readings of power consumption.

Sustainability champions are acting as co-ordinators for collating ideas to improve energy awareness and implement ideas. Notice boards have also been installed to display electricity consumption graphs, information bulletins and top tips to save energy.

A system developed with meter suppliers Siemens called Sie-smart enables power consumption to be monitored at half-hourly intervals. It highlights big consuming items and the positive effect of timer switches. Further instant-read electricity monitors at our headquarters in Maidenhead give a visual reading of the electricity being used.

Energy consumption – kilowatt hours per tonne

Business line	Product line	Baseline 2005	2008	2009	2010	Change since 2005	Change since 2008	Change since 2009
Cement	Cement and GGBS	681.39	568.95	540.42	577.62	-15.23%	1.52%	6.88%
	SRM and packed products	510.20	111.78	117.37	82.01	-83.93%	-26.63%	-30.13%
Building products	All	265.25	341.15	340.44	344.26	29.79%	0.91%	1.12%
Quarry products	Aggregates	30.31	28.48	30.24	26.82	-11.50%	-5.82%	-11.29%
	Concrete	2.24	1.76	1.72	1.60	-28.59%	-9.11%	-6.74%
Hanson UK		95.33	80.02	81.80	80.71%	-15.34%	0.86%	-1.34%

Energy consumption – total megawatt hours

Business line	Product line	Baseline 2005	2008	2009	2010	Change since 2005	Change since 2008	Change since 2009
Cement	Cement and GGBS	3,263,929.00	2,431,461.00	1,682,768.28	1,772,869	-45.68%	-27.09%	5.35%
	SRM and packed products	131,672.00	161,635.00	173,106.06	125,838.82	-4.43%	-22.15%	-27.31%
Building products	All	1,507,481.00	1,029,088.00	627,332.42	666,169.19	-55.81%	-35.27%	6.19%
Quarry products	Aggregates	1,266,083.00	1,116,150.00	793,858.00	717,632.36	-43.32%	-35.70%	-9.60%
	Concrete	28,621.00	20,260.00	12,938.00	12,780.26	-55.35%	-36.92%	-1.22%
Hanson UK		6,197,786.00	4,758,594.00	3,290,002.77	3,295,290	-46.83%	-30.75%	0.16%

Targets

- Reduce energy consumption by five per cent per tonne between 2008 and 2012 across all business lines.
- Reduce energy consumption for the overall business by a total of 20 per cent by 2012 based on 2005 baseline.

Climate change and energy

CO₂ from production

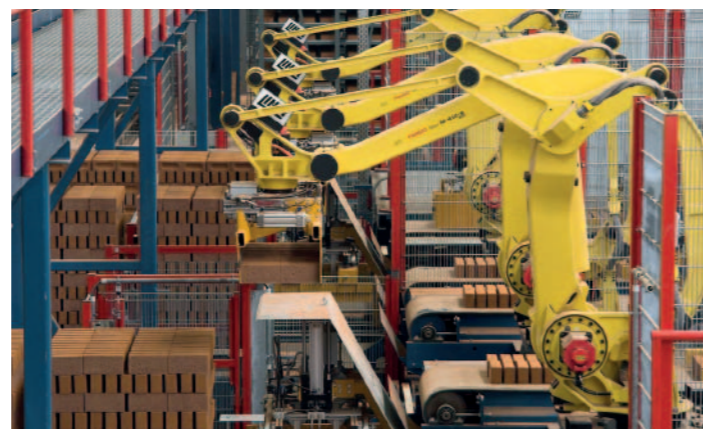
Our production volumes increased slightly in 2010 but there was a small decrease in absolute CO₂ emissions across all our business lines and overall emissions per tonne of product decreased.

We remain committed to achieving our target of reducing CO₂ emissions per tonne of product by five per cent by 2012 based on 2008 figures. But we accept that this will be difficult in the current market as increased production volumes will be critical to success.

In 2010 we became the largest building materials company to receive the Carbon Trust Standard across all its business lines after achieving a 33 per cent reduction in carbon emissions between January 2007 and December 2009. The standard is awarded to organisations that have acted on climate change and committed to ongoing emission reductions. It requires businesses to continue reducing carbon emissions and to recertify every two years.

We were able to reduce carbon emissions per tonne at many of our production sites against a backdrop of falling volumes by improving operational management, increasing energy from renewable sources and greater use of recycled materials as both fuel and raw material.

Our £50 million soft mud brick factory at Measham in Leicestershire, opened in 2009, is making considerable savings in energy consumption. The factory is the most modern and efficient in Europe with the capacity to produce 100 million bricks a year. It uses 50 per cent less energy than conventional soft mud brick plants. The 170 metre long tunnel kiln, fired by natural gas, is designed for maximum heat efficiency. Waste heat from the kiln is used to dry the bricks before firing.



The new £50 million brick works at Measham in Leicestershire is fully automated.

“We became the largest building materials company to receive the Carbon Trust Standard”

Kilogrammes of CO₂ per tonne of product

Business line	Product line	Baseline 2005	2008	2009	2010	Change since 2005	Change since 2008	Change since 2009
Cement	Cement	924.00	839.00	832.33	797.82	-13.66%	-4.91%	-4.15%
	GGBS	48.00	46.00	47.23	47.26	-1.54%	2.74%	0.06%
	SRM and packed products	202.78	33.68	31.95	23.05	-88.63%	-31.56%	-27.84%
Building products	Bricks	284.00	276.40	307.66	290.05	2.13%	4.94%	-5.72%
	Blocks, floors and precast	23.00	19.84	21.25	24.64	7.13%	24.20%	15.98%
Quarry products	Aggregates (inc marine)	4.65	4.03	4.63	4.99	7.26%	23.76%	7.72%
	Concrete	1.06	0.81	0.77	0.72	-32.19%	-11.26%	-7.25%
	Asphalt	29.20	28.10	27.66	29.65	1.52%	5.50%	7.16%
	Lime ¹	1,030.00	1,028.00	891.34	-	-100%	-100%	-100%
Hanson UK		57.66	50.45	50.09	48.97	-15.06%	-2.93%	-2.22%

Tonnes of CO₂ from production

Business line	Product line	Baseline 2005	2008	2009	2010	Change since 2005	Change since 2008	Change since 2009
Cement	Cement and GGBS	2,632,640.00	2,129,483.00	1,503,126.00	1,495,581	-43.19%	-29.77%	-0.50%
	SRM and packed products	47,563.00	48,710.00	47,116.18	35,370.73	-25.63%	-27.39%	-24.93%
Building products	All	598,910.00	409,605.00	250,980.53	278,999.28	-53.42%	-31.89%	11.16%
Quarry products	Aggregates	174,983.00	143,416.00	118,601.00	118,878.84	-32.06%	-17.11%	0.23%
	Asphalt	116,228.00	98,142.00	88,250.32	87,691.64	-24.55%	-10.65%	-0.63%
	Concrete	13,466.00	9,380.00	5,845.69	5,742.98	-57.35%	-38.77%	-1.76%
	Lime ¹	164,896.00	123,332.00	12,493.00	-	-100%	-100%	-100%
Hanson UK		3,748,686.00	2,962,068.00	2,026,413	2,022,265	-46.05%	-31.73%	-0.20%

¹ Lime kiln sold in 2009

Targets

- Reduce carbon emissions by five per cent per tonne for building products and quarry products by 2012 based on 2008 figures.
- Reduce net carbon emissions per tonne of cement by five per cent by 2012 based on 2008 baseline.

Climate change and energy

CO₂ from transport

Overall CO₂ emissions from transport increased. This is because the distance we transport our products has increased due to sites being rationalised.

We continue to invest resources in improving the efficiency of our delivery fleet. Each business line has dedicated logistics specialists tasked with ensuring our vehicles are operated to the maximum benefit of the business and the environment. We have a policy of purchasing low emissions vehicles for both our lorry fleet and site plant. A new company car scheme introduced in September 2010 specifies vehicles with restricted CO₂ emissions and high safety standards.

We again increased the proportion of cement transported by train and will be seeking further opportunities to increase the overall quantity of products delivered by rail and water. The amount of aggregates delivered by rail has fallen because of the volume downturn in our core markets of London and south east England.

In line with our commitment made in 2008, we have been working on the setting of improvement targets for the next five years. Because our vehicle fleet is diverse and in some parts of the business mostly operated by franchisee owner-drivers, collecting accurate fuel consumption data (and therefore measuring carbon emissions) is extremely difficult.

In developing our targets, the key areas we have considered are:

- reducing empty movements
- improving monitoring systems to allow knowledge of truck utilisation
- increasing the use of articulated vehicles with greater fuel efficiencies for aggregates and asphalt
- increasing the move to rail.

Trials are being carried out to evaluate the benefits of using articulated vehicles. Driver training in the building products division is ongoing, with Initial results showing a 2.7 per cent reduction in fuel consumption.



In the cement division we have a fuel champion tasked with cutting diesel consumption. Working in partnership with the company's 250 drivers, the measures introduced have saved 1,000 tonnes of CO₂ emissions and more than £300,000 on the fuel bill. We continue to audit the fleet's diesel use with onboard driving style diagnostics and carry out a detailed assessment of the fuel efficiency of all new vehicles.



“We again increased the proportion of cement transported by train”

Rock rolls in by rail

A £260,000 Environment Agency contract to supply rock armour stone from Whatley quarry to Minehead in Somerset was completed during the year. The stone was used to repair coastal defences at Warren Point and prevent flooding of nearby business and properties – and it was all delivered by rail, saving hundreds of lorry journeys.

The emergency coastal defence scheme required around 8,000 tonnes of stone in blocks ranging from one tonne to nearly six tonnes. Nineteen train loads, each carrying around 420 tonnes made the 82 mile journey from Whatley. The train services were planned and managed by Mendip Rail, our joint venture rail freight business and used the heritage West Somerset steam railway for the final 22 mile journey to Minehead.



A stone train approaches Minehead on the West Somerset Railway.

Climate change and energy

CO₂ emissions from transport (cont)

Material transported with associated CO ₂ emissions														
			2008				2009				2010			
Business line	Product line	Mode	Tonnes Moved	kg CO ₂ / tonne	Total distance travelled km	Tonnes CO ₂ / year	Tonnes Moved	kg CO ₂ / tonne	Total distance travelled km	Tonnes CO ₂ / year	Tonnes moved	kg CO ₂ / tonne	Total distance travelled km	Tonnes CO ₂ / year
Cement	Cement and GGBS	Road	4,333,578	7.68	38,009,447	33,290	3,159,862	8.87	29,631,826	28,043	3,228,834	7.74	26,539,766	24,997
		Rail	269,162	5.75	47,464	1,549	280,754	5.76	57,220	1,618	325,246	5.05	58,957	1,641
		Water	201,467	3.85	31,373	776	166,239	3.91	21,224	650	186,228	3.87	23,761	720
	SRM and packed products	Road	No data	No data	No data	No data	1,583,000	5.32	9,764,700	8415	1,426,715	8.65	14,268,598	12,345
Building products	All	Road	No data	No data	No data	No data	1,783,374	4.77	9,872,847	8,508	1,973,867	8.33	17,730,938	16,446
Quarry products	Aggregates	Road	15,277,000	3.78	66,409,322	57,696	14,100,293	4.27	65,709,623	60,204	15,976,839	4.33	71,119,679	69,224
		Rail	2,323,315	4.72	243,907	10,976	1,766,572	4.82	200,612	8,519	2,010,990	4.85	204,362	9,761
		Water	308,800	1.27	18,517	391	148,634	1.06	13,129	158	200,580	1.56	16,810	313
	Concrete	Road	11,331,520	1.37	16,905,750	15,489	7,263,082	1.56	12,397,460	11,359	7,601,327	1.71	13,353,068	12,997
Hanson UK			34,044,842	3.53	121,665,780	120,167	30,251,810	4.21	127,668,640	127,473	32,930,626	4.51	143,315,939	148,444

Mode of transport					
Business line	Product line	Mode	2008	2009	2010
Cement	Cement and GGBS	Road	90.20%	87.61%	86.33%
		Rail	5.60%	7.78%	8.70%
		Water	4.19%	4.61%	4.98%
	SRM and packed products	Road	100%	100%	100%
Building products	All	Road	100%	100%	100%
Quarry products	Aggregates	Road	85.30%	88.04%	88.42%
		Rail	12.97%	11.03%	10.47%
		Water	1.72%	0.93%	1.11%
	Concrete	Road	100%	100%	100%
Hanson UK		Road	91.23%	92.14%	92.17%
		Rail	7.33%	6.80%	6.67%
		Water	1.44%	1.05%	1.16%

Targets

Reduce carbon emissions per tonne delivered by:

- Reducing empty mileage by 10 per cent in cement and building products fleet by the end of 2012 based on end 2009 figures.
- Increasing average payloads of cement fleet by 2.5 per cent by the end of 2012 based on end 2009 performance.
- Completion of Euro 5 engine installations for cement and building products fleet by 2015 (with subsequent particulate and NO_x emissions reduction).
- Driver training in the building products fleet to achieve a three per cent reduction in fuel consumption.
- Fully implementing optimisation technology software within the aggregates and asphalt fleet by 2012.
- Carrying out a full review of vehicle movements throughout the UK leading to a new rail strategy with at least one project identified for progression by 2012.
- Preparing a programme to extend the use of articulated vehicles with annual reporting on progress. This will include completing trials of non-tipping articulated vehicle technology and a review of customer site limitations.

Natural resources and enhancing the environment

Materials efficiency

We have made limited progress in the additional use of recycled materials but we continue to look for ways in which we can preserve natural resources.

Our asphalt plants can use up to 25 per cent recycled material in base course mixes and our national average for all asphalt is nearly 10 per cent (including the use of filler dust, a by-product). The target for 2012 remains at 12 per cent but this will be tough to achieve in the current market as fewer new roads requiring base course materials are being constructed. In addition, local authorities are focusing on resurfacing rather than fully maintaining roads to reduce costs and there are technical restrictions on using recycled planings in surface course asphalts.

However, we remain committed to maximising recycled content in asphalt and to using cement substitutes, specifically ground granulated blast-furnace slag (GGBS), in concrete. GGBS reduces embodied CO₂ and provides a number of other benefits and its use as a cement replacement in our concrete remained at a high level of more than 35 per cent.

Use of other waste materials such as recovered fuel oil for burning in our asphalt plants, increased and the percentage of alternative fuels used in our cement kilns also rose.

The percentage of recycled aggregates used as a clay replacement in bricks has been steadily falling because market conditions have necessitated closing or mothballing the production plants with the highest capacity to use recycled material.

Changes to specifications means that washed and processed recycled aggregate can now be used in certain types of concrete. As a result, we are exploring at both company and industry level how we can take advantage. Dorset Works Organisation (DWO) is a public/private partnership established by Dorset County Council and Hanson in 2003. As part of this partnership, we have been using recycled aggregate in our concrete plants in the county. The material is produced by Raymond Brown Group at its Rookery Farm quarry from inert construction and demolition waste. The 4-20mm recycled aggregate has been used in groundwork concretes supplied to projects throughout Dorset. We are also evaluating its use in structural concrete for specific projects.

A new indicator introduced by our parent company HeidelbergCement in 2010 quantifies the percentage of sites which recover more than half of any surplus concrete generated. This is material which is returned from customers in mixer drums and recycled.



GGBS was used in the concrete for new sea defences at Blackpool, Lancashire.



Cement substitutes are used in the manufacture of Thermalite blocks.



Recycled, washed aggregate can now be used in ready-mixed concrete.

“Use of GGBS as a cement replacement in our concrete remained at a high level of 35 per cent, improving its sustainability”

Secondary/recycled aggregates and additions

Business line	Product line	Recycled material	2008	2009	2010	Definitions
Cement	Cement	Cement: by-products or waste used as raw material	49.00%	49.52%	45.28%	Total GGBS and any alternative materials divided by sum cement and GGBS production
Building products	Aggregate blocks	Recycled aggregates	46.76%	45.82%	55.51%	Total recycled aggregate as a % of total aggregates used
	Blocks, floors and precast	Cement additions	5.25%	12.05%	11.19%	% of cement substitutes that went into concrete
	Brick	Clay replacement	4.36%	3.90%	1.99%	Total recycled material used as clay replacement
Quarry products	Aggregates	Aggregates recycled – sold	1.20%	2.20%	1.63%	Sales
	Asphalt	Recycled aggregates into asphalt includes filler	10.20%	11.38%	9.74%	% of recycled aggregate and filler that went into asphalt
	Concrete	Recycled aggregates in concrete	0.10%	0.16%	0.08%	% of aggregate that went into concrete that was recycled
		Cement replacement (GGBS, PFA)	36.40%	38.46%	38.43%	% of cement substitutes that went into concrete
		Recovery of surplus concrete from own production	New indicator	New indicator	65%	% of sites recovering more than 50% of surplus concrete
	All	Total recycled aggregates	2.40%	2.81%	2.14%	Total recycled aggregates divided by aggs sold, used in concrete and asphalt

Fuels derived from waste – tonnes

Business line	Definition	2008	2009	2010
Cement	Waste used as fuel ¹	152,031 (45%)	143,254 (49.14%)	158,704 (53%)
	Biomass used as fuel	69,612 (16%)	68,171 (22%)	72,727 (23%)
Quarry products	Recovered oil used as fuel (asphalt)	18,497 (57%)	18,497 (57%)	16,118 (61.3%)

¹ Includes biomass

Targets

- Increase the use of alternative fuels used in cement production to 70 per cent and in particular increase the use of biomass by 2012.
- Increase recycled materials in asphalt to 12 per cent by 2012 (including filler).
- Increase the use of cement replacement materials in concrete to 40 per cent by 2012.

Natural resources and enhancing the environment

Water

Use of both mains and controlled water has fallen slightly in terms of litres per tonne. Mains water use at our Ribblesdale works fell after a leak was discovered and repaired following an exhaustive search and the replacement of a 50 metre stretch of pipe beneath a road.

During the year we extended the use of our Entropy data collection system into our building products division to monitor and track water usage more accurately. This resulted in increases in both mains and controlled water.

Our target for reduction in mains water consumption for cement has been changed. It is now based on 2009 figures, in line with product lines, instead of 2008 because we do not believe the 2008 figures are accurate.

We are working with the industry sector to define more clearly how ground water used for washing in closed systems should be best recorded.

In addition to controlling our own use of water we also make products which are designed to harvest and save water.

Waste water disposal eliminated

A recycling and water reduction project at the Hoveringham floors and precast plant in Nottinghamshire has eliminated waste water slurry disposal and reduced borehole extraction by 50 per cent. Water is used at the plant to suppress dust when cutting concrete flooring components and for cleaning batching plants and casting machinery. The waste water slurry was historically removed from site every day in a tanker and taken 45 miles for recycling. Installation of a waste water processing system means all the slurry is now treated on site and the water re-used, preserving natural resources and saving money.



The waste water processing tank.

Permeable paving system

Hanson Formpave, part of building products division, produces the Aquaflow® permeable paving system. Aquaflow® is a sustainable urban drainage system (SUDS) which prevents run-off and storm flooding from paved areas and collects and filters rain water for later use. It can also incorporate geothermal heating and cooling, reducing reliance on gas or electricity.

Over 10,000 square metres of Aquaflow® paving was installed in parking areas of the MOD's army accommodation development in Catterick. The system works by allowing rain to infiltrate through a permeable concrete block paved surface into a stone sub-base where it is cleaned by both filtration and microbial action. It is then released into sewers or water courses or stored in a tank and pumped back for secondary uses including flushing toilets and watering gardens.



The Aquaflow® permeable paving system allows filtered water to be stored and then pumped back for secondary use.

“Use of both mains and controlled water has fallen”

Water use – litres per tonne

Business line	Product line	2009		2010			
		Mains water	Controlled water ¹	Mains water	Controlled water ¹	Mains water – change since 2009	Total water – change since 2009
Cement	Cement and GGBS	51.57	82.62	50.70	84.89	-1.7%	1.0%
	SRM and packed products	101.41	18.33	106	0	4.5%	-11.5%
Building products	All	167.61	67.64	179.92	71.39	7.3%	6.8%
Quarry products	Aggregates	11.64	383.84	10.15	385.27	-12.8%	0.0%
	Concrete	68.21	19.33	63.90	22.08	-6.3%	-1.8%
Hanson UK		38.97	248.34	38.42	247.28	-1.4%	-0.6%

Water consumption – cubic metres

Business line	Product line	2009		2010			
		Mains water	Controlled water ¹	Mains water	Controlled water ¹	Mains water – change since 2009	Total water – change since 2009
Cement	Cement and GGBS	160,581	257,269	155,607	260,541	-3.1%	-0.4%
	SRM and packed products	149,559	27,031	161,993	0	8.3%	-8.3%
Building products	All	307,421	124,056	348,157	138,136	13.3%	12.7%
Quarry products	Aggregates	250,281	8,255,251	222,042	8,424,952	-11.3%	1.7%
	Concrete	514,542	145,825	510,556	176,434	-0.8%	4.0%
Hanson UK		1,382,384	8,809,432	1,398,355	9,000,063	1.2%	2.0%

¹ Controlled water comes from natural sources, mainly underground. Most of it is re-circulated in closed systems therefore is not consumed.

Targets

- All business lines to reduce mains water consumption per tonne produced by five per cent by the end of 2012 based on 2009 figures.
- Concrete and building products to reduce total water consumption per tonne produced by two per cent by the end of 2012 based on 2009 figures.
- Continue to improve data on ground water consumption in quarries and cement plants where we have water recirculation systems.

Natural resources and enhancing the environment

Site stewardship

In 2008 Dr Bernd Scheifele, chairman of the managing board of HeidelbergCement, signed up to the German environment ministry's 'Business and Biodiversity' initiative, committing the company to integrate biodiversity into the management of all its extraction sites. Business and Biodiversity was an official partner of the International Year of Biodiversity 2010 – a global campaign designed to persuade organisations and businesses to manage and safeguard biodiversity and create new habitats.

In the UK we played our part by creating new habitats and protecting rare species on our sites. The number of biodiversity and geodiversity action plans in place (BAPs and GAPs) increased by 12 – two ahead of our target. Our GAPs aim to protect and allow further study of the range of geological features exposed by mineral extraction. Our BAPs are focused on protecting and increasing habitats for flora and fauna on our sites.

This year we have introduced a new indicator looking at quarries with high biodiversity value. These are defined as those located within 500 metres of a Site of Special Scientific Interest (SSSI) status or above where BAPs are being actively implemented.



2010 International Year of Biodiversity

A project to establish a large area of Juniper at Horton quarry in the Yorkshire Dales National Park began in 2010. Juniper is a UK biodiversity action plan priority species whose population is in decline, despite efforts to encourage natural regeneration.

Working in partnership with the Park authority we are providing 480 locally sourced Juniper plants to be introduced over five years within a two-hectare stock and rabbit proof enclosure alongside the quarry. When complete it will be the largest Juniper plantation in the National Park.

The enclosure is on the Malham and Arncliffe Site of Special Scientific Interest (SSSI) and the Ingleborough Special Area of Conservation. This site was chosen because it encompasses the veteran Juniper trees on the edges of the Moughton Common and Ingleborough Nature Reserves. The plants are being grown from seed harvested from an adjacent natural population then propagated and established at Cheviot Trees in Berwick-upon-Tweed. The project has won the support of local conservation groups and Natural England.



The new locator site at Keepersshield.

Translocation site gains SSSI status

Part of a quarry in Northumberland which has provided a new home for one of Britain's rarest flowers is to be registered as a Site of Special Scientific Interest. The field adjoining Keepersshield quarry near Hexham is thought to be the first translocation site to gain SSSI status from Natural England.

It follows a two year project to transplant the *Alchemilla micans*, Britain's rarest lady's mantle, which is found on only a handful of sites in north east England, all of which are grasslands with shallow soils overlying whinstone or dolerite. One of the most prolific habitats at Keepersshield had planning permission for quarrying, so after widespread consultation it was decided to move the entire habitat onto bare level whinstone in an area that will eventually form part of the final restoration plan.

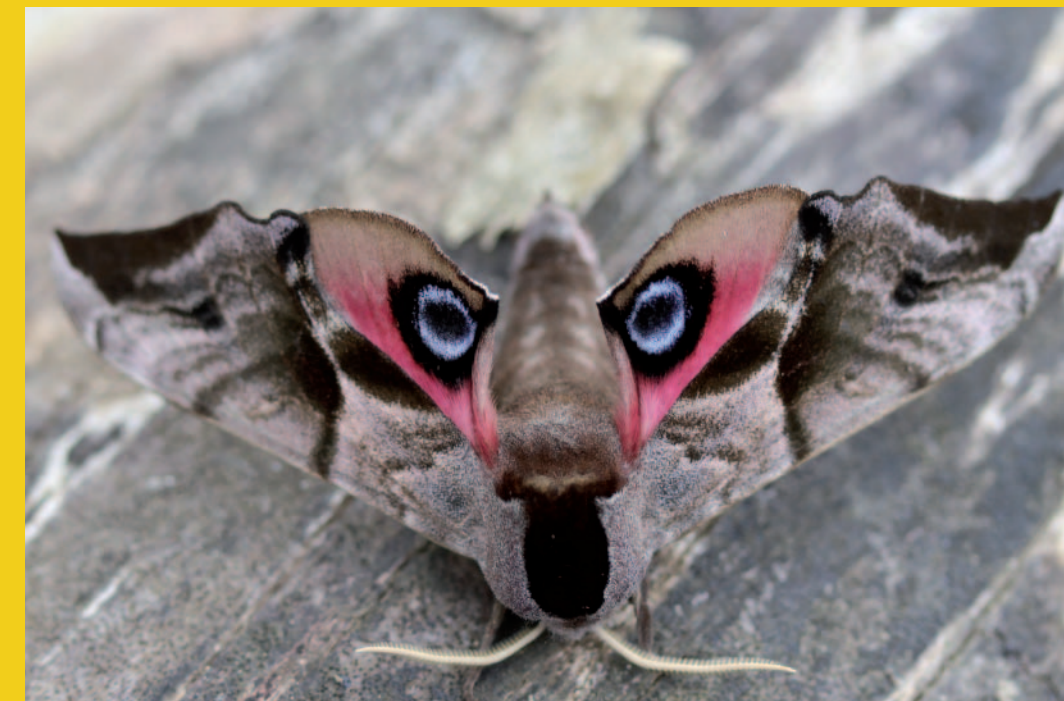
Natural England is normally reluctant to recognise translocation sites, but this project has shown what can be done with careful planning and commitment.



Mute swan at Needingworth quarry, Cambridgeshire.



Green woodpecker (above) and eyed hawk moth at Ripon quarry, North Yorkshire.



Natural resources and enhancing the environment

Site stewardship (cont)

Site stewardship			
	2008	2009	2010
Number relevant sites (mineral extraction sites)	102	102	102
Number of sites with approved restoration plans	98 (96%)	99 (97%)	101 (99%)
Sites with high biodiversity value	new indicator	new indicator	46
Sites with high biodiversity value which have BAPs	new indicator	new indicator	33
Active sites with BAP/GAP	39	50	58
Non active sites with BAP/GAP	2	2	3
Active marine sites with BAP/GAP	3	3	3
Total number of sites with BAP/GAP	44	55	64
Total number of BAPs (inc marine)	40	48	59
Total number of GAPs (inc marine)	21	21	22
Total number of BAPs and GAPs in place	61	69	81

Target

- Increase BAPs and GAPs by 10 per year for the next three years (established in 2009).



Reed bed creation at Needingworth, Cambridgeshire.

“The number of BAPs and GAPs in place increased by 12 – two ahead of our target”



Bittern at Ripon quarry, North Yorkshire.

Creating sustainable communities

Health and safety

The number of reportable and lost time injuries in 2010 fell by 53 per cent from 74 to 35 – well within our target of a 13 per cent year on year decrease. More importantly, the lost time injury (LTI) rate also fell based on the average number of people employed during the year. We are again reporting the rate of LTIs per one million hours worked, which is being adopted as a standard industry indicator.

We are also including a new indicator relating to health and safety to align us with our parent company. This is an LTI severity rate for our own employees, which is derived from the total number of days lost through accidents.

Our principal trade body the Mineral Products Association has set interim targets to halve the lost time injury frequency rate for direct employees and halve the cumulative number of contractor lost time injuries over five years to 2014. We were actively involved in setting these targets and expect to achieve them.

A lot of work has gone into improving safety performance, from awareness training and safety observations through to on-site support. The majority of our sites are operating very well with good procedures and a good safety record. Our aim is to lift every site to these high standards. Business lines are encouraged to take ownership of safety issues supported by, but not dependent upon, the company's professional health and safety advisers. Divisional directors deal with strategic issues and management of working groups through a steering committee. Beneath this, a pyramid structure of working groups and meetings involving site staff and safety reps feeds through information and share best practice. A national working group comprising representatives from the three divisional groups and chaired by the CEO ensures a co-ordinated company-wide approach.

A fresh approach to safety

Hanson Cement won the TUC Trophy for worker involvement at the Mineral Products Association's 2010 health and safety best practice awards. The award went to the division's Ribblesdale works, where apprentice safety reps have been introduced to bring a fresh approach and a new attitude to safety issues. Six other Hanson entries won certificates at the awards presentation.



Judith Hackitt, right, chair of the Health and Safety Executive, presents the TUC trophy to Hanson Cement.

We continued to invest in improved surveillance and screening, providing scheduled health surveillance for all staff to detect existing or underlying issues including lung function, noise induced hearing loss, hand and arm vibration, whole body vibration or skin conditions such as dermatitis. We are also training managers to be aware of the signs of work-related stress.

To support our staff we operate MySafeWorkplace, a personal, independent 24-hour incident reporting system, that allows confidential reports to be made about workplace incidents from unsafe working through to bullying and fraud. Every incident reported is relayed back via the human resources department for investigation and action.



Horton quarry in Yorkshire received a platinum award for 14 years without a lost time injury.

Awards scheme celebrates success

In 2010 we introduced a new awards scheme to recognise and reward production sites across the company with exemplary safety records. Sites which complete one year (bronze award), three years (silver) and five years (gold) without a lost time incident are recognised and praised.

Sites which have already recorded 10 or more years without an accident from that date – or reach that point in the future – receive a platinum award. In 2010, 58 sites received awards, 12 of which were platinum.

Creating sustainable communities

Health and safety (cont)

Lost time injuries – reportable and non-reportable ¹									
		2008		2009			2010		
Business line	Product line	Number	Number /100,000 employees	Number	Number /100,000 employees	Number per 1,000,000 hours worked	Number	Number /100,000 employees	Number per 1,000,000 hours worked
Cement	All	16	1,103	8	683	3.26	9	744	3.60
Building products	All	77	2,433	51	2,230	10.63	19	1,045	4.99
Quarry products	Aggregates	17	1,013	13	913	3.96	6	422.50	1.90
	Concrete	6	703	2	287	1.37	1	227	1.08
Corporate	Offices	0	0	0	0	0	0	0	0
Hanson UK		116	1,681	74	1,231	5.78	35	664.40	3.10

¹ Reportable injuries are as defined by the Health and Safety Executive (www.hse.gov.uk).

Lost time injuries – severity rate				
		2010		
Business line	Product line	Number	Number /100,000 employees	Number per 1,000,000 hours worked
Cement	All	81	6,700	32.40
Building products	All	670	36,866	175.96
Quarry products	Aggregates	49	4,053	21.56
	Concrete	0	0	0
Corporate	Offices	0	0	0
Hanson UK		800	15,828	71.77

Targets

- A 13 per cent year-on-year reduction in lost time injuries.
- Accredit all health and safety systems to BS OHSAS 18001.

“Reportable and lost time injuries fell by 53 per cent”

Creating sustainable communities

13 Employment and skills

The average number of staff employed during 2010 was 5,305. Spending per head on training and skills increased during the year with a focus on health, safety and environmental training. More than 300 managers and supervisors received training in sustainability and responsible sourcing, to increase awareness in these areas. This was supported by the use of toolbox talks to take the messages to the entire workforce.

Development of our current and future managers is critical if we are to maintain our competitive advantage in a challenging business environment. A primary issue for many staff is the relationship they build with their immediate manager, whose attitudes and behaviours are key influencers. A suite of training programmes has been introduced to support and develop all those who have responsibility for others, from team leaders and supervisors through to senior managers.

The programmes provide training based on real business issues and encourage managers to look at behaviours rather than take a task-oriented approach. The training is aligned to the principles of “think, act, behave” and provides clear links between management and leadership behaviours.

We continue to improve a range of benefits for employees. A service was put in place to help staff who face personal, legal or financial problems – or just need advice. FirstAssist provides a round-the-clock telephone counselling service through which employees can receive individual and confidential support on a broad range of work-related and personal issues, including financial management, stress, bereavement and relationships.



Sustainability awareness training.

Target

- 100 per cent of production employees to be covered by ISO 14001/9001 training systems.

Creating sustainable communities

Local community

Despite our overall size, we operate, in effect, as a series of independent local businesses, providing jobs mainly in rural areas and playing a part in those communities. Local managers are encouraged to build and maintain close links with neighbours and ensure the business remains both an accepted and acceptable part of the local community. Visits to Hanson sites, particularly from schools, are welcomed. Visiting groups include local residents, planning officers, environmentalists, professional associations and students.

Our larger sites, and those where local communities have expressed an interest, operate liaison committees attended by councillors, council officers and residents' representatives. We recognise that our operations are part of the local community and strive to be good neighbours. We also help charities and voluntary groups in the areas around our sites and offices by providing monetary or materials donations (see table opposite).

Our employees are encouraged to take on voluntary community roles and given appropriate time off work to pursue these interests. They range from relief fire-fighters and school governors to parish, district and county councillors.

We supported more than 100 organisations through the Hanson in the Community scheme which provides cash or materials for voluntary groups close to our operational sites.

We are corporate patrons of CRASH, the construction industry charity which provides accommodation for the homeless and we are Conservation Area Champions at the Royal Botanic Gardens at Kew. We are also involved in other smaller sponsorship projects with environmental and community-based voluntary organisations and charities.

Our employee charity matching scheme contributed more than £30,000 to 54 charities during 2010 and has helped raise more than a million pounds since its introduction in 1994. The scheme encourages employees to raise money for charity by matching their fund-raising up to £500.



Employee charity match cheque presentation at Shap quarry, Cumbria.

Woodland secured for community use

In 2010 we agreed to sell a 13-acre woodland at Waingroves in Derbyshire to a community trust for a fraction of its book value. The woodland was part of the company's landholding at the mothballed Waingroves brick works and had been put up for sale as part of a project to dispose of non-operational land. When villagers heard the land was to be sold they set about raising funds and wrote personally to Hanson UK CEO Patrick O'Shea.

A five acre section of the woodland had been on a long-term lease to the Waingroves Community Association for over 12 years, but they feared it would be lost under new owners. The company decided to sell to the association at a considerable discount in appreciation of the dedication and commitment they had shown to developing the land into a true community area.



Waingroves community trust members at the woodland.

Sculpture provides unique viewing platform

Dr Penelope Curtis, director of Tate Britain and a former curator of the Henry Moore Institute in Leeds, formally opened the 'Coldstones Cut' in September. The Cut is a major piece of sculptural art at Coldstones quarry near Pateley Bridge in North Yorkshire, which provides a viewing platform and interpretive facility for the quarry and the surrounding landscape within the Nidderdale Area of Outstanding Natural Beauty.

The £582,000 project, funded principally by the Aggregates Levy Sustainability Fund and the Arts Council of England, had been under development for two years. As the quarry owner we played an important part in helping to create the monument through planning, management support and the supply of raw materials.



The Coldstones Cut.

Community relations

	2008	2009	2010
Relevant sites	102	79	77
Sites with liaison activity	64 (63%)	54 (68%)	51 (66%)
Number of visitors	12,261	7,577	8,843

“Local managers are encouraged to build links with neighbours”

Target

Ensure all relevant sites are proactive in liaising with their local communities by 2012.

Our sustainability policy



Hanson UK considers effective management of safety, health, environment, quality and responsible sourcing to be of prime importance to the sustained success of the business. We take an integrated approach to all our business processes and have therefore adopted a single sustainability policy, which is regularly reviewed for continuing suitability and appropriateness.

We provide employment and economic activity and build our business on the basis of responsible practices. We empower our employees, contractors and supply chain to operate in accordance with these practices and we actively engage with our customers, communities and other stakeholders to promote their wider adoption.

We value our workforce and by recruitment, selection and development of employees, contractors and suppliers, ensure that they are appropriately skilled and competent to carry out their roles.

We engage with our stakeholders to encourage innovative development of our products and manufacturing systems to continually improve sustainable performance throughout the product lifecycle and build a profitable and sustainable business.

Management systems

We adopt a systematic and integrated approach to all aspects of our business and are committed to compliance with the requirements of BES 6001, ISO 9001, ISO 14001, BS 18001 and the CE certification marking schemes relevant to our products.

Legal and regulatory compliance

As a minimum, we comply with the law and other regulatory requirements applicable to our business.

Continual improvement

We are committed to continually improve performance and to develop our integrated management system processes and activities. We maintain a documented framework for setting, implementing and reviewing objectives to drive forward this improvement.

Communication

We communicate our policy to all employees and contractors and seek to ensure it is understood and implemented. Our policy is made available to our supply chain and other interested parties to inform and promote wider adoption of responsible practices. We identify and consult with local community stakeholders affected by our operations. We inform our customers about the functional, environmental and safety performance of our products.

Prevention

We strive for the prevention of injury, ill health, pollution and non-conforming products; the minimisation of environmental harm, and the fair treatment of our employees and everyone in our supply chain.

Procedures and work practices

We incorporate safety, health, environment, quality and responsible sourcing in the following business processes:

- design, selection and installation of plant
- management of suppliers and services
- identification of customer needs
- supply of products and services to meet or exceed customer expectation
- development of rules, standards and procedures
- provision of information and assistance to those who distribute, use, recycle or dispose of our products
- recruitment, induction and development of skilled, competent employees, contractors and suppliers
- consultation and involvement of employees, their representatives, contractors and suppliers
- reporting and investigation of incidents, near misses, hazards and non-conformances
- operation and maintenance of plant and processes
- provision of welfare facilities
- development and testing of emergency procedures
- management and supervision of practices and performance

Climate protection

We set targets for the reduction of carbon emissions and aim to reduce our use of fossil fuels by seeking alternative and renewable energy sources. We promote best practices in sustainable construction, including use of a life-cycle approach.

Environmental stewardship

We are committed to the principles of environmental stewardship and seek to apply these throughout our operations and our supply chain. We develop products that improve the quality and sustainability of the built environment. We manage and restore sites to ensure land remains valued in its local environment, protecting and enhancing biodiversity and safeguarding geodiversity where appropriate. We respect and protect our national heritage and we optimise our distribution operations to minimise social and environmental impacts.

Resource and waste management

We use resources appropriately and sustainably and, where appropriate, substitute primary resources with alternative materials. We adopt the waste reduction hierarchy of waste prevention, reuse of materials, recycling, and energy recovery to minimise waste disposal and maximise productivity. We use water efficiently and recognise that we must safeguard this resource by recycling where possible to reduce consumption and protect water quality in the natural environment.

Monitoring, auditing, reporting and review

We routinely audit the performance of our business in accordance with recognised standards and methods. We review the credentials of our supply chain for constituent materials in accordance with the principles of responsible sourcing. We respond to non-conformances against our standards. And we implement a thorough management review process to ensure we meet our objectives.

Responsibility

The resourcing and implementation of this policy is the responsibility of our management team.

Co-operation in the effective implementation of the policy is a condition of employment, partnership and supply.

You can download the policy from our website www.hanson.com/uk

Working together for sustainability

We recognise the need to work together with partners, stakeholders and competitors to maximise our sustainability credentials.

We work closely with many organisations to ensure we understand and influence the industry in developing robust sustainability policies across all our business lines.

We are members of the Mineral Products Association (MPA), the trade body which represents the aggregates, asphalt, cement, concrete, lime, mortar and silica sand industries, contributing £5 billion of value to the UK economy. We provide information and data for all MPA sustainability reports.

We are also founding members of the UK Green Building Council (UKGBC), whose mission is to improve the sustainability of the built environment, and we are members of the Construction Products Association (CPA), which represents UK manufacturers and suppliers of construction products.

We are members of the Corporate Forum for National Parks, which provides a platform for discussion and debate with the Campaign for National Parks and with other businesses, which operate within the parks.

www.mineralproducts.org
www.ukgbc.org
www.constructionproducts.org.uk
www.cnp.org.uk

Further information

Visit our website at www.hanson.com/uk for more information about the company, its products and our commitment to sustainability. You can also download copies of our sustainability report, sustainability policy and environmental and responsible sourcing certificates.

Your feedback

Each year we look to improve the content and quality of our report. Feedback from stakeholders is essential to this process. Please let us know your thoughts by ringing the marketing department on **01628 774100** or email us at enquiries@hanson.com.

Other useful sources of information

HeidelbergCement AG
www.heidelbergcement.com

The Carbon Trust
www.carbontrust.co.uk

The British Trust for Ornithology
www.bto.org

The Royal Society for the Protection of Birds
www.rspb.org.uk

Global Reporting Initiative

This document is based on the Global Reporting Initiative (GRI) framework for sustainability reporting. We have self-assessed our reporting to be Application Level C. You can find a table giving the location of the GRI standard disclosures in the sustainability report section of our web site at www.hanson.com/uk



SMARTPHONE SCAN CODE

Hanson UK

14 Castle Hill, Maidenhead SL6 4JJ T: 01628 774 100 E: enquiries@hanson.com W: www.hanson.com/uk