



Our verifier was impressed by the fact that all employees had received training with a third party and we had orientated our energy management system around employees' behavioural patterns as a priority rather than the manufacturing processes and machinery.

Everyone has a shared responsibility to make the most efficient use of energy supplies.



Overview of 2013

2013 saw the first indications of a sustained improvement in demand since before the recession. As a result we hope that the operation of our kilns and dryers at sub-optimal performance may be coming to an end.

During the year we commissioned a major upgrade to one of our installations where we expect the energy consumption per tonne of product to be significantly reduced and the consequent CO₂ emissions also reduced.

However, despite all of the promising signs in the market and the benefits of our investments we are increasingly aware that environmental levies and taxes placed upon energy supplies in the UK will risk making the UK brick industry less competitive than European competitors. The Government has made some monies available to energy intensive industries to offset these levies and taxes but unfortunately they are all related to exemption from the indirect costs of the European Union Emissions Trading Scheme (EU ETS) for electricity generation. Because of the way that the rules for this exemption are drawn up they specifically exclude heavy clay ceramics such as bricks from any benefits which are available to many other energy intensive industries. We are left with either having to pass these increasing costs on to our customers (which European competitors do not have to do) or reduce the accrued benefits of our investments.

One piece of good news received in 2013 was the acceptance by the Government that the Climate Change Levy (CCL) should not apply to processes that involve mineral transformation by direct heating - which is the case for ceramics. Whilst this is welcome this levy is dwarfed by other taxes and levies that we are still obliged to continue to pay without compensation (please see above). Additionally, in the future we may be liable for a replacement levy in a few years' time which may in fact be a larger sum of money due than the savings from not paying the CCL.

We continue to be very concerned about the cumulative burden of taxation on energy for heavy ceramics and we are mindful that the UK is moving faster than many other EU countries which we are competing with.

It is established that imports of manufactured products from China, India and some other EU countries have increased by some 150% in magnitude in less than ten years whilst CO₂ from UK industrial output has decreased by around 18%. Summing these issues together the net overall UK carbon footprint including CO₂ in these imports *has increased* by some 39% in the same time. Such a scenario is unsustainable in the longer term.

Environmental Management Systems

During 2013 all Istock Brick Ltd manufacturing sites continued to be compliant with ISO 14001 as assessed by third party inspections. In addition, we have now extended the management system to be compliant with the requirements of BES 6001 and maintained our “Very Good” status. We successfully achieved our first registration to ISO 50001 on energy management systems at the end of the year.

During 2013 we maintained the supplier assessment scheme to assist us in maintaining high environmental and quality standards. This scheme is also being used to encourage the remainder of our suppliers, who do not already have them, to adopt formalised systems such as ISO 9001 and ISO 14001.

Board Member with Responsibility

During 2013 the responsibility for our environmental systems was the Technical Director who reported to the Director of Manufacturing Operations.

The Environmental Continuous Improvement Working Group (ECIWG) met during 2013. It has since been decided that the name of this meeting will be changed to the Sustainability Working Group to account for a wider remit on many matters. The meetings are chaired by the Sustainability Manager and the group has at least three members of the Istock Brick Ltd Board together with the Company Secretary, as attendees.

The group has begun to construct Key Performance Indicators (KPIs) to monitor progress with achieving objectives.

Corporate Environmental Policy

The policy is freely available for downloading on the Company Internet site at:
<http://www.istock.com/sustainability-more-info.asp>

We have incorporated the principles of BES 6001 on responsible sourcing into our environmental management systems. However, at this time it is considered to be marginally more convenient to have an additional policy on responsible sourcing rather than combining the two.

Corporate Environmental Targets for 2013

Sustainability and the customer / stakeholder perspective

A sub-group is to be formed to design a marketing questionnaire to determine what information is of importance to our customers.

Sustainability Seminar

These are well received. The 2013 event was hosted at Drax power station and attended by some 50 or more delegates including representatives from the Netherlands branch of our parent company. These will be repeated at regular intervals.

KPIs

There is an industry set of KPIs as a result of work on a Resource Efficiency Action Plan (REAP). Istock have accepted these albeit possibly with a different baseline year to allow comparison with other UK reporting mechanisms. These will be added to (as required) with site-specific targets etc.

Sustainability DVD

It was considered that a new DVD would be a useful training tool for both employees and contractors etc. It will include all aspects of awareness and give examples of good and bad practice.

Energy Management / ISO 50001

This was considered to be a highly desirable development within the EMS and a first within the industry. It was decided that at least one site would be registered by the end of the year. This was achieved.

Water discharges

It was decided that more information should be gathered on all discharges to controlled waters. A system has been devised to quantify the quality of discharges. A water discharges group is looking after these issues.

Working with Wildlife

The company has a good advisory document. Greater liaison with the Properties team will result in greater awareness of many issues surrounding planning and working of quarries etc.

2014 Corporate Environmental Objectives

The group is now moving towards a set of key Performance Indicators (KPIs) with a 5 year strategic plan as a supporting mechanism. Consequently we are moving away from the concept of annual corporate objectives set each year and these will not be set in future years, operational site objectives will still be set. An important first step for 2014 is to analyse a comprehensive customer survey on attitudes to sustainability.

Review of Discharges into the Environment

2013 saw increases in production for the first time in several years. Consequently it should not be surprising to see some mass emission figures also increase. This does not infer that manufacturing was less well controlled than previous years where outputs were lower. [All figures below are annual total Tonnes]

	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
HF	27	25	59	52	44	18	63	39	80	81	64	103	125	207
SOx	668	560	455	453	648	466	730	730	650	706	661	450	700	990
NOx	450*	206	320	251	173	154	259	259	150	154	150	250	255	251
HCL	52	51	131	73	27	46	121	121	100	102	106	97	95	90
Particulates	113	53	54	77	60	101	115	115	100	173	86	116	101	126

* This company aggregated figure is strongly influenced by two results from one testing organisation which appear untypically high compared to previous years. The cost of re-testing is significant so we propose to re-check this at the next set of testing.

Average Specific Energy Consumption (SEC) & Carbon Dioxide emissions to Atmosphere.

During 2013 increased output has assisted in bringing the overall kilowatt hours per tonne saleable product down from previous lower output years. The commissioning of a new kiln and dryer arrangement within an existing installation has also helped to reduce energy usage. However such investments require substantial capital and cannot be performed every year. We anticipate that 2014 may bring yet further savings in energy usage per saleable tonne of product.

As stated earlier in the report the Climate Change Levy (CCL) and associated targets will not apply to ceramic processes from April 2014. However, this does not infer that we shall be dealing with energy consumption with any less vigour. Some 85% of our CO₂ emissions are covered by the European Union Emissions Trading Scheme (EU ETS) and this has a target of a 21% reduction in CO₂ to be achieved by 2020.

In line with European Union Emissions Trading Scheme (EU ETS) rationale, we no longer consider emissions from electricity generation as included within our process definition these are the responsibility of the generators themselves. We estimate that the Carbon Dioxide released by our activities according to this breakdown is shown below. [Note the apparent significant reduction in some figures since 2008 is due to reduced outputs].

Figures in the table below are in thousands of tonnes rounded to whole numbers:

	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
Tonnes from combustion of Natural Gas	184	173	187	180	151	193	235	234	278	293	292	285	291
Tonnes from combustion of LPG	4	4	3	3	3	4	5	4	5	5	5	5	6
Tonnes from combustion of Coke	5	5	3	3	4	3	2	3	4	6	5	5	5
Total combustion Tonnes CO₂	193	182	194	187	158	199	242	241	284	303	302	295	301
Process emissions (see note below)	94	83	80	93	77	96	137	128	N/A	N/A	N/A	N/A	N/A
Total CO₂ emissions	287	265	274	280	234	295	378	369					

It has only been possible to estimate process emissions since 2006 when a data collection system was implemented in preparation for EU ETS in 2008.

Our principal haulier (Wincanton) reports to us that with the removal of the tax incentives to use Biodiesel together with the continued reluctance of engine manufacturers to guarantee the performance warranties of their engines at high levels of biodiesel fuels, their current usage is “negligible”. They would be happy to increase the usage of biodiesel if the situation changes.

Whilst we do not deliver product on our own fleet of vehicles, we can calculate that approximately 12% of all sales are collected by customers, where in many instances we may not know the ultimate destination. It is possible to reasonably accurately calculate the emissions from our contracted product delivery using reliable radial delivery mileage. We estimate that delivery emissions are approximately 0.066 kg of CO₂ per tonne mile.

Discharges to Watercourses

We have established a matrix of water discharge testing at all of our sites in our internal reporting system. However, the intermittent nature of the volume and concentration of very low levels of suspended solids in water at consented discharge points to controlled waters continues to make assessment of total quantities discharged very difficult. No "Red List" substances are discharged at any Ibstock clay brick site or any List 1 or List 2 substances.

All Ibstock sites have now been mapped for underground drains and all discharge points on all sites are known and are monitored.

All Ibstock sites are fully compliant with the Oil Storage Regulations contained within the PPC Regulations. Contamination of watercourses with traces of oils should be a very remote possibility.

We are waiting in particular for the implementation of the Water Act 2003 which we now believe will no longer require transfer permits and abstraction licences at many of our sites. Until these requirements are known in detail we do not propose any substantial investment programme of monitoring devices.

Disposals to Landfill etc (all figures in Tonnes / Annum)

	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Non-hazardous	1,446	1,459	1,632	1,365	1,145	1,735	2,167	1,903	2,715	2,991	2,980	5,018	3,135	5,000
Hazardous	117	121	96	116	92	104	193	200	179	295	271	321	201	N/A
Kiln flue gas cleaning media *	322	665	559	559	563	547								

Inert fired brick hardcore is either used for our own purposes as an alternative to primary aggregate for building quarry access roads or it is sold or given FOC for use as secondary aggregate. We estimate that overall some 45 thousand tonnes of primary aggregate are saved each year by using these non-saleable items in this manner.

*We have begun to recycle the limestone materials from flue gas scrubbers back into our products where it can be absorbed into the body of the product without any health and safety issues arising with the product in either handling or use. Consequently the amount of these materials being sent for disposal to landfill has decreased. Additionally we are happy to see waste contractors taking these materials for recycling for beneficial use.

Both non-hazardous and hazardous categories have seen improvements since the implementation of ISO 14001 (2000-2002). Variations from one year to another are due to various factors including partial rebuilds of installations. However, it is clear to see the impact of the recession since 2007. We continue to work with waste contractors who will recover materials and put these back into beneficial use at waste transfer stations. Our ultimate goal is for 100% recovery of materials taken off site.

Hazardous Waste

This category of waste is significantly represented by refractory materials in particular ceramic fibres. These are necessary to maintain our energy reduction programme by maintaining high levels of insulation at high temperature interfaces and it is difficult to foresee a substantial reduction in the use of ceramic fibre if the programme is maintained. The second highest category in this group is oil contaminated materials which are an inevitable part of our maintenance programme.

During 2013 some asbestos-containing materials were discovered during the major refit of an installation. All were dealt with by qualified contractors and disposed of to an appropriately licensed tip that could accept them.

Recycling of Materials / Resources

	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
Water (Thousand M ³ / annum)	*	Est. 60	Est. 90	Est. 90	N/A	N/A	111	98	100	96	122	85	69
Metals (Tonnes/annum)&	995	621	821	519	672	1,101	1,061	1,306	1,133	1,436	1,404	1,500	1,240
Oils (Thousand litres/annum)	22	37	52	31	26	44	66	50	67	103	100	45	6
Wood (Tonnes/annum)&	133	433	149	127	157	193	232	124	159	313	290	est 200	est 200

*The quantity of recovered water is calculated by taking the known purchased mains water and the actual water requirement from output levels and it is estimated by difference. We have found that at least two water meters are reading excessively high and this figure cannot be accurately estimated by difference for 2013.

& indicates in addition to our PRO obligation quantity that is satisfied via Comply Direct.

NB The quantity of oils sent for recovery is variable year-on-year as tanks are emptied when nearly full.

Internal Environmental Audit

An internal Environmental Audit was conducted at every manufacturing Ibstock site. An external audit (third party verification) was also conducted at every site. Results are shown in the table below.

The company uses a risk based approach to auditing. Ratings of 1-5 are used where 1 is totally unacceptable performance which has to be *immediately* addressed. A score of 5 represents an industry best practice performance level.

During 2013 we included Energy Management (EnMS) into our EMS to address one of the major environmental aspects to our business. The energy management systems are audited as a component of our EMS.

We had made significant changes to our reporting structure under our EMS in 2011 which we believe will result in greater clarity for improvements moving forwards. The “Total” figure is the average across the nine individual categories.

Factory	Environmental Management	Emissions to Atmosphere	Water Management	Noise Management	Fuel & Chemical Storage	Waste Management	Housekeeping	Training Records	Total
Aldridge	3.38	3.23	3.13	3.29	3.45	3.35	3.09	3.27	3.30
Ashdown	3.38	3.23	3.25	3.57	3.18	3.35	3.36	3.27	3.32
Atlas	3.25	3.23	3.25	3.14	3.27	3.48	2.91	3.18	3.25
Birtley	3.33	3.69	3.00	3.43	3.36	3.13	3.18	3.36	3.31
Cattybrook	3.29	3.00	3.00	3.29	3.64	3.13	3.36	3.09	3.22
Chailey	3.58	3.08	3.22	3.43	3.09	3.25	3.27	3.18	3.29
Chesterton	3.42	3.08	3.22	3.29	2.91	3.21	3.55	3.27	3.25
Dorket Head	3.33	3.46	3.00	3.43	3.36	3.42	3.64	3.55	3.40
Ellistown	3.21	3.38	3.38	3.29	3.18	3.35	3.45	3.09	3.29
Laybrook	3.33	3.38	3.38	3.43	3.36	3.22	3.18	2.73	3.25
Leicester	3.08	3.15	3.38	3.71	3.18	3.13	3.18	3.18	3.19
Lodge Lane	3.42	3.23	3.00	3.71	3.27	3.39	3.64	3.36	3.38
Nostell	3.29	2.92	3.00	3.43	3.36	3.42	3.27	3.27	3.26
Parkhouse	3.29	3.46	3.44	3.57	3.18	3.33	3.27	3.18	3.33
Ravenhead	3.13	2.92	3.22	3.29	3.36	3.30	3.18	3.00	3.17
South Holmwood	3.54	3.38	3.50	3.57	3.36	3.52	3.36	3.09	3.44
Swanage	3.21	3.08	3.22	3.00	3.09	3.33	3.09	3.36	3.20
Throckley	3.33	3.46	3.25	3.43	3.27	3.13	3.64	3.00	3.30
West Hoathly	3.58	3.31	3.56	3.57	3.00	3.46	3.36	3.55	3.44
Mean	3.34	3.25	3.23	3.41	3.26	3.31	3.31	3.21	3.29
Minimum	3.08	2.92	3.00	3.00	2.91	3.13	2.91	2.73	3.17
Maximum	3.58	3.69	3.56	3.71	3.64	3.52	3.64	3.55	3.44

2012
3.15
3.00
3.34

All three basic indices of company mean score, company minimum and company maximum score have all improved since the 2012 report.

We are now also showing the number of observations (an opportunity to improve matters but not a significant deviation) and non-conformances on both the internal and external audits conducted in 2013. These results are shown below.

Factory	Internal NCRs	Internal OBSS	External NCRs	External OBSS	Total NCRs	Total OBSS
Aldridge	0	0	1	3	1	3
Ashdown	0	1	0	3	0	4
Atlas	0	1	0	3	0	4
Birtley	0	2	1	0	1	2
Cattybrook	0	0	1	3	1	3
Chailey	0	0	0	0	0	0
Chesterton	1	2	0	1	1	3
Dorset Head	0	2	0	0	0	2
Ellistown	0	1	0	4	0	5
Laybrook	2	2	3	2	5	4
Leicester	1	3	1	2	2	5
Lodge Lane	0	0	0	1	0	1
Nostell	0	3	0	1	0	4
Parkhouse	0	0	0	2	0	2
Ravenhead	2	1	1	3	3	4
South Holmwood	0	0	1	3	1	3
Swanage	0	3	0	0	0	3
Throckley	1	1	0	0	1	1
West Hoathly	0	0	0	0	0	0
Total	7	22	9	31	16	53
Maximum	2	3	3	4	5	5

2012
86
10

Continuous improvement groups at each site have an environmental co-ordinator.

Environmental objectives / targets are set by each site each year and these are reviewed annually at the Environmental Review Meeting to ensure that progress is being made and new objectives are continually introduced in addition to any corporate objectives (see earlier in this report).

A new method of addressing the regulatory requirements has been established using the established database CEDREC which will enable us to continually update our environmental aspects and impacts, an important starting point for environmental management.

During 2013 approximately £600,000 was spent on regulatory permitting, water monitoring and waste removal. £20,000 was spent on environmental training (in particular to support work on ISO 50001). A further £45,000 was spent on third party verification. Some £1.7 million was spent on environmental capital projects. £10,000 was also spent on ecological surveys.

Environment Focused Supplier Scheme

We are now operating a supplier assessment scheme whereby all suppliers receive a rating dependent on their capability to supply consistent high quality materials and their performance during delivery etc. We also take into account their registrations to standards such as ISO 9001 or ISO 14001 in the assessments. A nominated representative will visit a selection of suppliers each year and assess their capabilities and report back.

We also intend to visit each supplier at a frequency of not more than every three years; this will be conducted in relation to the rating given to any supplier. Those delivering to a consistent high standard of promptness, correct vehicle and quality of goods etc will be visited at a lower frequency but still within the three year maximum.

Inevitably there are instances where only a single supplier is available for some materials or services, where such suppliers receive a low rating greater levels of monitoring / supervision and testing are applied.

This task supports our own certification to BES 6001 accreditation on Responsible Sourcing.

Environmental Stewardship

Despite the best endeavours of all employees of Ibstock situations will arise from time to time. Some of these towards the end of 2013 were out of our control due to some of the worst weather encountered in living memory. Brief details of all of the reported incidents are shown below together with corrective actions taken. For the sake of completeness the references to "EA" are the Environment Agency of England and Wales. Of the nine complaints two occurred outside of our site and beyond our control (both at Birtley).

All instances that are reported to us are investigated. In a very few cases the individual instances shown in the table below may be a summary of events relating to the same issue. We will always (as the absolute minimum) meet our statutory obligations and use established best practice wherever suitable. We will always engage with our neighbours to attempt to resolve any issues arising at the earliest opportunity once circumstances are known to us. However, we are mindful that it may not be possible in all instances to resolve matters to everyone's total satisfaction.

The company operates a policy of self-reporting to the relevant regulator if an instance is known to arise which we believe has not already been reported by the public.

Factory	Month	Noise	Water	Air	Others	Details	Corrective Actions
Birtley	Jan			X		Staff complaining of dense smoke from waste being burned on adjacent site	Reported to EA, incident raised but investigation delayed due to non-availability of staff.
West Hoathly	Feb			X		Neighbour complaining of foul smell. Mid Sussex conducted site visit.	Agreed smell similar to usual emissions. Factory tour offered to neighbour.
Parkhouse	Feb			X		Dust deposits on cars at Fedex premises.	On-going (May 2013) with laboratory analysis. Initial findings indicate it is not brick dust.
Dorket Head	Mar	X				Low noise can be heard by neighbours at night	LEV fan Impellor design modified.
Birtley	April		X			Site drains (surface and foul) blocked with Fats and Grease. Danger of overflow into Rowleth Burn	EA informed, Northumbria Water employed a contractor to jet wash drains. Contractor took over 2 days to arrive. Work completed successfully. No origin determined.
Knutton Quarry	Aug		X			Discharge limit exceeded. EA taken statutory samples	Discharge ceased immediately. Potential prosecution pending.
Parkhouse	Nov			X		Complaint from Fedex deposits on parked cars.	Initially believed to be dry leaves. Awaiting detailed analysis from laboratory. Indications of some marking from deposit when wetted.
Dalton Quarry	Dec				X	Dirt on roadways	New access road to be made available in 2014. Road sweeper in use during movements of clay.
Ravenhead	Dec	X				Various received during 2013 from neighbours around factory site.	Noise appears to be within Planning Permission levels. Noise may also be partly from elsewhere. Mounds to be built to reduce noise transmission.

As part of our programme of training to meet our high environmental standards we conduct training courses using external trainers on the Institute of Environmental Management and Assessment (IEMA) foundation course.

Biodiversity and Property Matters

During 2013 the following were conducted:

- Eleven biodiversity surveys to investigate the presence of bats, newts and other protected species.
- There is on-going work at our Maltby quarry and Keele quarry to relocate Great Crested Newts.
- Three open days were held at our West Hoathly factory near to East Grinstead.
- Sixty four educational visits were hosted throughout Ibstock.
- A badger sett was carefully relocated at Moor Farm quarry with assistance from Natural England (Licence WLM/2013/1167) to enable a new working area to be opened. Post closure monitoring was continued for an agreed period.

The company has developed and maintains a wildlife and nature conservancy plan.

Community Relationships

Ibstock Brick Ltd together with Cory Environmental Ltd founded the Ibstock Cory Environmental Trust (ICET) in 2001. The Trust uses funds available via the Landfill Tax Credit Scheme to provide grants to approved community projects.

Since a dramatic revision of the rules was imposed by Government on the qualification of schemes for funding (following abuses of the funding provisions to install facilities that should have been paid for by other means) the monies available to ICET to distribute to such projects has diminished tremendously.

The number of donations of product to good causes continues to be frustratingly under-reported throughout the company as are the instances of support to local football teams, Scout groups etc. One of our aims is to report this more fully. Importantly though we must remember that whilst it is under-reported it is taking place which is the important thing.

Stakeholder Communication

Ibstock continues to play a major part in developments in conjunction with Trade Associations. These include consultations on many papers issued by the Environment Agency, DECC (Department of Energy and Climate Change) and BIS (Business Innovation and Skills). Considerable amounts of time are also spent on issues with our European trade association TBE (Tiles and Bricks Europe) on developments with the European Union Emissions Trading Scheme EU ETS.

Ibstock continues to be a major contributor and supporter of the Brick Development Association (BDA) and the publication of annual KPIs for the industry which are available on the BDA website (www.brick.org.uk).

Further information is available from:

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