

Organisation:	Ibstock plc
Sector:	Manufacturing
Requirements:	Demonstrate energy and carbon reduction
Services provided:	Awareness and training for ISO50001 Energy Management
Provider:	Mulholland Energy
Achievements:	17% less carbon per tonne of production compared to 2015 baseline
Transferrable Principals:	People first approach

IPMVP ★★★
level

The Customer

Ibstock plc is a leading manufacturer and supplier of clay and concrete building products and solutions to the UK construction industry specialising in products and systems for the residential building envelope and infrastructure markets. Our core business focuses on the residential construction sector and we have built strong relationships with our house builder, developer, builders' merchant and distributor customers over many years

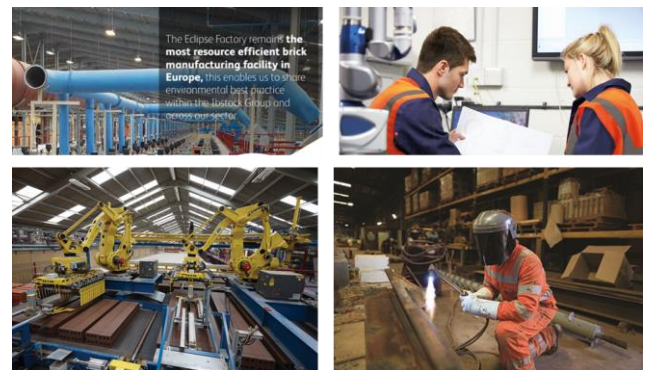
With a proud history dating back 200 years, we are extremely conscious about our environmental impact and have taken steps to build a sustainable future.

In the last decade, we have invested more than £150 million in our people, sustainable performance, implementing decarbonisation measures, production efficiencies and transformational technologies that reduce the carbon intensity and environmental impact of our operations and products whilst accelerating our journey to Net Zero.

Objectives

To demonstrate via ISO 50001 the Global Energy Management Standard to long-term programme that a people first approach to energy training and awareness could have a significant and measurable impact on reducing both energy and carbon emissions

2018 Ibstock Brick opens £55m factory



Ibstock Brick's Eclipse Factory has the capacity to produce 100 million bricks a year. Its objective was to raise the bar for the utilisation and management of energy.

The company wanted to install the latest technologies to help save on energy consumption and CO2 emissions.

Services provided

The initial approach was to support Ibstock Brick in its rollout programme establishing an Energy Management System (EnMS) designed to be compliant with the global Energy Management System Standard, ISO50001 with guidance on the overall strategy and a programme roadmap to meet Ibstock needs.

As part of the overall process, a Centre of Excellence was identified at one of Ibstock factories and selected as a pilot site for the introduction of ISO 50001. As key part of this was to carry out a Training Needs Analysis after which ISO 50001 awareness training sessions were held for two groups of employees: Significant Energy Users (SEUs) and All Energy Users (AEUs).



This training was, successfully completed with the records/results recorded in a report. Similar training was delivered across all other brick sites

In addition to covering the specific technical areas (detailed below) from an energy perspective, the training also included the practical identification of energy savings by surveying different areas of the site during each training session

Training modules included

- ❖ Key Requirements of ISO50001 and background
- ❖ Energy quiz at the start and end of each session
- ❖ Meaning of SEU and AEU
- ❖ Energy Use and Costs
- ❖ Policy, Review, Baseline, EPIs
- ❖ Energy objectives, targets and energy management action plans
- ❖ What are the benefits of improved energy performance
- ❖ Communication
- ❖ Operational Control
- ❖ Design & Procurement
- ❖ Monitoring, measurement and analysis
- ❖ Management Review
- ❖ Evaluation and Action Plans

This programme was designed in conjunction with Ibstock's desire to identify people as a 'Significant Energy User' or 'All Energy User' as it was believed that all sites were already aware of what the significant energy uses are at each site.

As part of the roll-out Ibstock also produced:

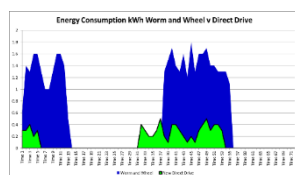
- ❖ Pocket Guide - Save energy at home and work. Given to all employees as part of the training sessions



- ❖ Sustainability DVD developed with interactive sections – energy a key focus
- ❖ Quality DVD produced – getting it right makes a difference to energy also



Projects – Setting motor and gearbox



Picture of the original team at the Centre of Excellence Pilot Site. Also shown is a simple project of replacing an old and inefficient motor gearbox with a modern efficient direct drive unit saving on energy and less components to replace. Savings included 80% less energy old to new, £700 cost savings annually and positive contribution to energy and carbon reduction

Results

The Global Energy Management System Standard, ISO50001 has been embedded into our systems since 2014 to ensure our people stay focussed and engaged. There have been some key changes as a result of piloting and implementing ISO50001 include:

- ❖ Motors and drive policy across the entire business
- ❖ Led lighting standard approach
- ❖ Compressed air survey carried out as standard
- ❖ Awareness and training embedded into systems
- ❖ Mass balance of kilns carried out as standard
- ❖ Energy performance reports produced at each factory

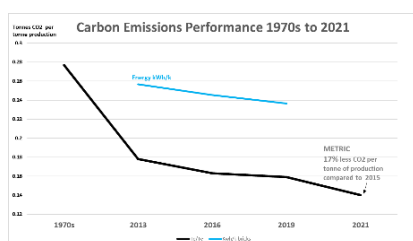
All improvements from ISO 50001 were low/no-cost behavioural projects/benefits.

- ❖ Lighting awareness
- ❖ Idling conveyor systems
- ❖ Idling motors and replacement
- ❖ Water use
- ❖ Compressed air
- ❖ Efficient use of machinery



Our key focus is on carbon as part of our journey to becoming a net zero carbon business by 2040. The chart below shows positive performance for this. It also demonstrates that as carbon is reduced energy (blue line) comes down along with it.

We can demonstrate that since the 1970s, through investment in people and technologies, the carbon intensity of our products has reduced by 63%. We launched our Sustainability Roadmap 2025 with a baseline year of 2015 with a 15% reduction target for CO2 per tonne of production; at the end of 2021, we achieved a 17% reduction.



Summary

The significant 17% energy reduction was measured using the principles of IPMVP, the internationally recognised verification methodology.

Energy savings from energy awareness and training alone is difficult to quantify but it was never the intention to measure it specifically. The key focus was on a people first approach as they are fundamental to the long-term success of any leading business.

We are extremely proud of what the ISO 50001 process has achieved as it has given us a clear road map, effective communication tools, supportive external partnerships and, above all, employee involvement at all levels

With an ever fast changing world and building on our success through ISO 50001 our approach is get our people to focus on carbon and how they can play their part in reducing it across the business. That is why we are now using tonnes of carbon per tonne of production.

Recognition

Recognition is always welcome and is testament to the hard work of all employees at Ibstock. Below are some of the awards we have received over the past few years



- ❖ Behaviour Change/Employee Engagement Award at Energy Awards November 2019
- ❖ Edie Energy Efficiency award 2019
- ❖ Energy Manager of the Year at the edie Sustainability Leaders Awards in 2020
- ❖ Ibstock plc scoops Manufacturer of the Year award at prestigious Business Green Leaders Awards in 2022