

Stopping Carbon Spiralling out of control

Construction sector
Low Carbon Case Study
Spiral Construction

UK leader and Cornish based business aim for high environmental standards.

This case study demonstrates the business benefits of **improved energy efficiency** and **carbon abatement** to a leading construction company.



The UK's leading manufacturer of spiral and helical staircases, Spiral Construction, of Helston, is aiming for the highest international environmental standards. The company has a burgeoning national reputation for the outstanding design and build quality of its concrete, steel, timber and glass staircases and is expanding to meet customer demands. The company are taking advantage of the expansion of their premises to bring all its buildings and processes up to the highest international environmental standards.

“Controlling our environmental impact has always been at the heart of our business”.

The company are forward thinking in their approach, seeing the expansion as a great opportunity to bring everything up to the highest achievable level, at the same time as preparing to realise the **ISO 9001** and **14001 quality and environmental standards**.

The business' first point of call was Business Link entering into discussions regarding the planned extension. After the primary advice and support Spiral Construction were able to access the enhanced Business Link Convergence service, which provides a dedicated range of support services for businesses, including help for improving their environmental performance.

As part of this service the company were referred to the Carbon Trust who carried out a full environmental audit, which found several areas where they could make immediate improvements in their existing buildings. These included recommendations for more efficient lighting, heating and cooling systems, as well as better power factor control and improved environmental policies.

Having now implemented a number of these suggestions, the benefits are already showing. An energy management system from Light Water Environmental has been installed at a cost of £11,000. **This investment is estimated to help reduce energy consumption by 17.9%.**

However the management system is already reporting **savings above 18%.** **The system is estimated to:**

- Save £1,588.71 per year
- Save 36,431KWh per year
- Save 15.7 tonnes of CO2 per year

Background

The company was established in 1985 and now Spiral Construction are the UK's leading manufacturer of spiral and helical staircases. Operating nationally, the company offers the most extensive range of design and materials available on the market. Using state of the art 3D CAD and CNC manufacturing systems, combined with highly skilled craftsmen working in stainless steel, wood and stone, they produce a stunning range of quality staircases.

Resource efficiency projects and initiatives

The company are planning to replace all the lighting in the factory in order to improve their environmental credentials. The intelligent lighting system will replace all the existing strip lights. The cost of installation is estimated to be £17,100, which will be part funded with a loan of £5,100 from the Carbon Trust. **The new lighting system is projected to save 35,292 kWh of energy per annum resulting in a carbon saving of 15.2 tonnes.** The estimated **cost saving of the system is £3,449** with a payback period of **4.96 years**. This payback period is further reduced to 3.47 years when taking into account the Enhanced Capital Allowance (ECA) tax relief.

Furthermore;

- The company are also planning to replace their current air conditioning systems with more energy efficient heating and cooling systems as one of the recommendations from the Carbon Trust.
- Another recommendation is to build in a rainwater harvesting system to the factory to capture and reuse this vast and free resource. However this investment has been deemed unviable as the company do not consume enough water to justify the system.
- Transport - this is an ongoing exercise. The company are replacing all the existing fleet with fuel efficient diesel vans as and when they need upgrading.
- Spiral Construction are keen to curb resource miles and so source the majority of their materials locally.
- All scrap metal is sold on to a metal recycling centre. There is also a timber recycling skip on site and all day-to-day office and factory paper and cardboard are taken for recycling on a monthly basis.
- The company have introduced a cycle scheme to encourage staff to travel to work without their car. Furthermore the management team are currently mapping a car share scheme and working out the exact cost savings for staff in order to encourage those living further a field to share transport. This will be particularly important when the extension is built and the car park is diminished slightly.
- The Carbon Trust will soon be visiting the company to audit their progress to achieving the recommendations made by the initial report.

Comments from Spiral Construction:

There is a hard-nosed commercial imperative for us to act now. Many of our customers, which include Government departments like the MoD, other public sector organisations and large private sector businesses, are increasingly demanding that their suppliers have strong environmental credentials – we need to ensure that we can compete just as vigorously on this front, as any other.

Pete Bell, Purchasing Manager

Business support

Business Link – A free business advice and support service, available online and through local advisers.

T: **0845 600 9966**

W: **www.businesslink.gov.uk**

Carbon Trust – A not-for-profit organisation with the mission to accelerate the move to a low carbon economy.

T: **0800 085 2005**

W: **<http://www.carbontrust.co.uk/cut-carbon-reduce-costs>**

Light Water Environmental – recommend solutions that can make a significant difference to your Carbon Footprint.

T: **01326259951**

W: **www.lightwateruk.com**

In addition to the services provided by Business Link, they are helping the company find funding for their ISO9001 and 14001 systems and seeking support to help Spiral build the new extension to full BREAM standards. Finally, Business Link have also assisted Spiral Construction with the development of their environmental policy.

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