

Interim Sustainability  
Report **2015-2016**

**KNAUF**

*Build for the world we live in*

# Introduction

We live in changing and uncertain times, but we also live in an era where sustainability is high on the agenda. At Knauf, sustainable working and a commitment to the environment, the community and the workforce is a core value.



Welcome to the latest sustainability report for the UK – an audit of that commitment. We hope you find it informative and inspiring. In 2013 Knauf became the first company in the manufacturing supply sector to publish such a document. Each year we set higher hurdles, more onerous targets and tougher standards to maintain our improvement in sustainability at each of our 150 production facilities worldwide.

Sustainability is not a theory, it is a working practice. Knauf is an 84-year-old global company, and takes seriously its duties to safeguard the planet while building a successful and socially responsible business, supporting our wide customer base and trying to provide a lead in everything we do.

With 26,000 employees across the globe, sales of more than 6bn euro and representation in over 60 countries, Knauf stands by its ecological obligations, its conservation programmes, its life-enhancing projects and its determination to create better living spaces for the human race.

The statistics gathered for this report conform to the G4 Sustainability Reporting Guidelines of the Global Reporting Initiative (ensuring organisations disclose their environmental impact) and the BES 6001 standard on the responsible sourcing of construction products (the framework which enables manufacturers to prove that constituent materials meet sustainability criteria).

This builds on the company's 2013 and 2014 sustainability reports, and the firm's published code of conduct which contributes to the integrity of the business. The earlier reports remain online, to allow everyone to chart our progress.

We hope that publication of the figures and reporting on Knauf's sustainable initiatives will give you, our stakeholders, an insight into our operations and working methods. By publishing our data and offering transparency on Knauf's sustainability statistics, we hope to provide a benchmark for our workforce to maintain the momentum of our programme of continual improvement, and inspire others to follow suit.

First Manchester



ACROSS  
THE GLOBE

26,000  
EMPLOYEES

60 COUNTRIES

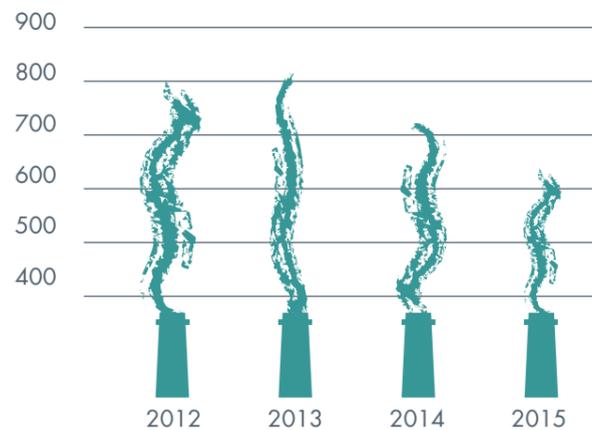


**94% RECYCLED CONTENT**  
IN OUR PRODUCTS  
FOR 2015 - CALCULATED IN ACCORDANCE WITH ISO 14021



**Direct greenhouse gas emissions**

Tonnes CO<sub>2</sub>e per £1 million/turnover



**Recycled content**

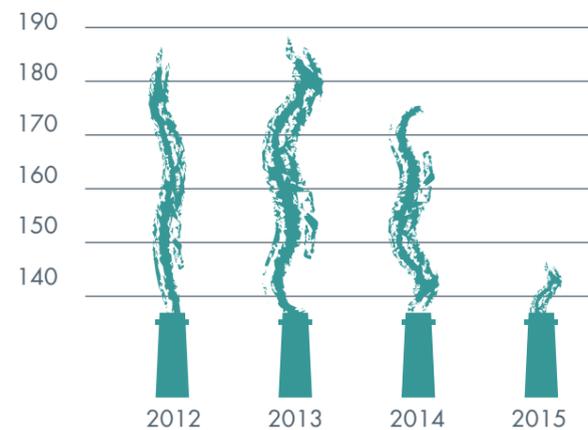
At Knauf we believe in achieving a sustainable approach to the manufacture of gypsum-based building products, balancing the needs of the business with the responsibility to safeguard the planet's precious resources.

Today, no natural gypsum is used in any of our products, with the content coming instead from reclaimed flue gas desulphurisation gypsum from coal-fired power stations, and recycled gypsum from manufacturing, construction and demolition activity. In order to meet emissions targets we are seeing a decline in coal fired power stations, hence FGD gypsum is becoming scarcer, which will, in the longer term mean a move to the use of natural gypsum. We are therefore working to increase the proportion of recycled gypsum in our products to protect natural resources as far as possible.

Recycled content now accounts for 94% of our finished product, calculated in accordance with ISO 14021. This is an improvement of 2.5% from 2014 figures.

**Indirect greenhouse gas emissions\***

Tonnes CO<sub>2</sub>e per £1 million/turnover



**Greenhouse gas emissions**

The company's carbon footprint has reduced in the past year... the third year in succession that this has been achieved.

Comparing 2015's greenhouse gas emission levels with 2014's shows a 13% fall.

Revisions to the methodologies the Department for Food and Rural Affairs (Defra) uses to calculate emission factors mean all past years' data has been updated, to allow meaningful comparison.

Overall, despite increased production levels, our total carbon footprint (both direct and indirect greenhouse gas emissions) has gone down as a result of energy reduction measures.

Direct emission reductions can be attributed to improved energy efficiency in the plants. Initiatives that have made this possible include the installation of a heat exchanger at Sittingbourne, upgrades to the Immingham plant which have increased the speed of production and therefore efficiency, and a project to update the lighting at Greenford to energy efficient light sources.

\* Indirect emissions relate to Scope 2 and 3 carbon footprint measurement which includes electricity, waste to landfill, water consumption and business travel.

**Case study**

Knauf has been producing plasterboard in the UK for nearly 30 years, with the site at Sittingbourne, Kent, closely followed by the one in Immingham, Lincolnshire. The £100m investment in plant has made Knauf one of the largest, most technologically advanced, suppliers of gypsum-based building materials.

Increasingly tough UK and European landfill disposal legislation has driven the determination to boost recycling and clamp down on waste, culminating in a 2007 law change making it illegal to dispose of discarded plasterboard in landfill.

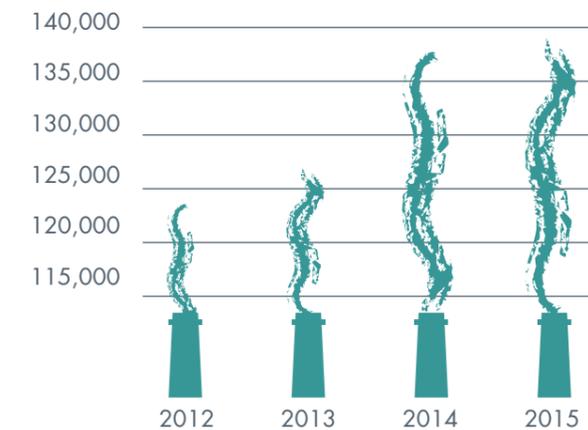
This led to a 2011 partnership deal with Countrystyle Recycling, which established a £750,000 bespoke waste plasterboard recycling line alongside Knauf's Sittingbourne site, capable of recycling up to 40,000 tonnes of waste plasterboard every year.

The bulk product is separated into paper and gypsum powder, with the powder around 80% of the total input by weight. That powder is returned to Knauf, and is reintroduced into the manufacturing process, while the paper liners used in the plasterboard production are 100% recycled, and supplied from a mill less than a mile away – an excellent example of closed-loop recycling.

Countrystyle (a founder member of the gypsum reprocessors' trade body) collects discarded board from building sites, and also recycles production scrap from Knauf and other manufacturers. The operation is set to undergo significant expansion in 2017, with Countrystyle adding a further gypsum processing line.

**Total greenhouse gas emissions**

Tonnes CO<sub>2</sub>e



**Immingham upgrade**

Knauf's plant in Queens Road, Immingham, underwent a major energy-saving drive in 2015, with an upgrade of the board line delivering improved speed.

Large sections of the board line process were replaced, with the old IE1 standard efficiency motors being replaced with IE3 high efficiency motors to improve energy performance. It is estimated that this will deliver a 3% efficiency improvement.

A secondary benefit of the increased line speed at Immingham is a reduction in electrical energy consumption per unit volume. Knauf also replaced the three largest transformers at Immingham with high efficiency units. Data is still being gathered to assess the full benefits of the upgrade work, but Richard Gibbons, Knauf's Energy Manager for northern Europe, reports that the latest figures show electrical energy consumption per unit volume being down 8% on the previous year.

## SOx and NOx emissions

As part of the requirement of its environmental permit, Knauf monitors air emissions. Compliance is assured by setting the monitored alarm levels well below prescribed limits, so we are aware of any issues long before emission levels are exceeded.

The 2015 rise in NOx emissions is due to increased production and output, but efforts are being made to reduce the figure. SOx emission levels continue on a downward curve.

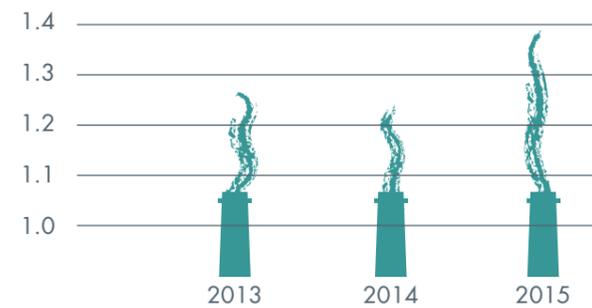
## Water usage

There has been a significant fall in water usage in 2015, thanks to a twin-pronged strategy. The graph shows the number of cubic metres of water used per million pounds of turnover.

Knauf has reduced the water required in its production lines while at the same time improving water management in its production plants. The manufacturing of plasterboard requires large supplies of water and energy. By reducing the water content of boards, by revising composition formulae, there is less need for lengthy, energy-heavy drying procedures.

### NOx emissions

Tonnes CO<sub>2</sub>e per £1 million/turnover



A steady reduction in water content has also had the advantage of making Knauf boards lighter, while still conforming to industry standards.

All water used on the Sittingbourne site derives from a borehole, while on-site waste water is recycled there and then.

## Haulage

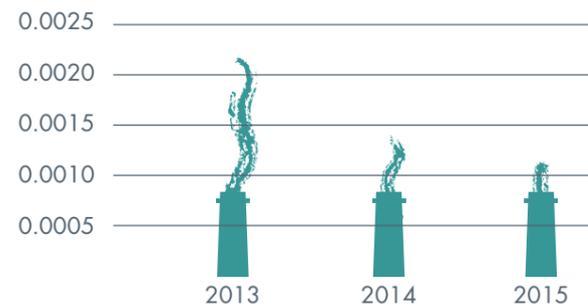
Knauf's efforts to protect the climate by optimising loads and truck routes continues, bolstered by the further introduction of new Euro VI vehicles – the latest standard for diesel engines.

The firm collaborates with haulage contractors to reduce emissions when collecting raw materials and delivering finished goods, with Euro VI diesel engines reducing NOx (Nitrogen oxides) levels by 75% compared to the previous industry standard Euro V engines.

An increasing focus on aerodynamics and lighter equipment has increased payloads, but improved tyre pressure monitoring, vehicle tracking (to avoid lorries returning to base with empty trailers) and greater use of vehicle telematics and driver performance charts also form part of the continuous programme of environmental evaluation. Knauf's haulage partners are on board in the commitment to continuing driver training.

### SOx emissions

Tonnes CO<sub>2</sub>e per £1 million/turnover



Since 2015 there have been marked improvements in energy consumption by Knauf forklifts and other site vehicles, thanks to fuel usage monitoring and staff training on optimal operation of plant and equipment.

## Protecting biodiversity

Knauf has a fine record on managing the natural environment and safeguarding wildlife near our factories, but we are not resting on our laurels.

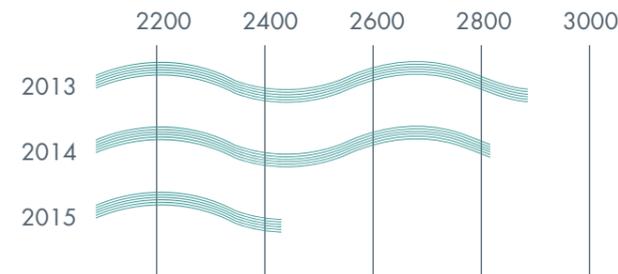
The buildings at Sittingbourne are alongside a site of special scientific interest, so there is an enhanced sensitivity to our activities there. And while the Immingham site is in an industrial zone, we apply the same care to environmental protection measures there.

Sittingbourne's factory is by the mudflats of The Swale, the strip of sea between the Isle of Sheppey and North Kent; a national nature reserve providing a habitat for grey plovers, redshanks, black-tailed godwits, marsh harriers and avocets.

It is a wetland haven which water voles, waders, bats and overwintering birds call home, so Knauf management strategies are geared around minimising our impact.

### Water usage

m<sup>3</sup> per £1 million/turnover



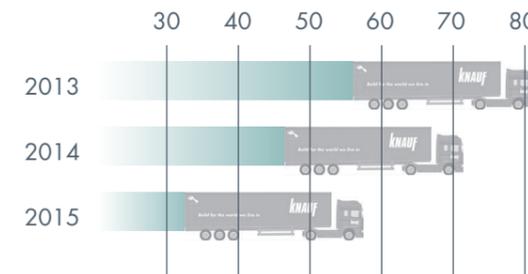
At Immingham, reed beds are established in the dykes, helping filter water and improve its quality. The reed beds are managed with the selective removal of weeds. This activity ensures that there is a clear route for the dyke to run while the remaining reeds provide an ecosystem of their own.

We are starting to see birds nesting in the reeds and in recent months we have also seen minnows starting to populate the dyke while its slow moving water provides an ideal habitat for frogs, toads and newts. The water in the dyke is analysed monthly and results always show biological oxygen and solids being lower at the dyke outlet than at the inlet to site – a result which is likely due to the reed beds acting as a filter system.

As at Sittingbourne, the Lincolnshire site shares the land with water voles – a native wild mammal which has undergone one of the most serious declines in the past century. Their re-appearance at Immingham is a great wildlife success story.

### Haulage

Tonnes CO<sub>2</sub>e per £1 million/turnover



## Minimising waste

A concentrated effort to reduce waste from the manufacturing process is resulting in an increasing quantity of manufacturing waste being reprocessed back into plasterboard.

A recent legislative change has reduced the outlet for recycled gypsum to agriculture, with a correspondent rise (see table) in waste to landfill in 2015.

	Reused, recycled and recovered waste (tonnes)	Waste to landfill (tonnes)	Gypsum waste reprocessed back to plasterboard (tonnes)
2013	1,218	64.7	20,484
2014	5,137	55.5	15,415
2015	3,574	77.24	26,376

Knauf's commitment to waste reduction does not end when the products leave the factory. We have an ongoing programme to manage waste through the supply chain, including a consultation service to minimize waste at the point of specification.

## Specification consultancy

The aim of the specification consultancy service is to reduce waste on site and eliminate the generation of needless wasteful offcuts.

Working with architects and contractors as they design the detailed construction specification enables our Product Specification Managers to advise on the most efficient board sizes and product choice to meet the project requirements.

It's an issue which can create quick wins. For example, a higher specification board may eliminate the need to have two layers of board, reducing the volume required on site while minimizing the number of different board types used on a site can also reduce wastage.

Managing the product range, and having a detailed understanding of project demands and the construction process, are key. For instance, it might initially appear to be a good idea to use 3.5m boards, but if the hoist taking product up to the fourth story can only carry 3m boards then it is pointless.

Knauf can produce bespoke board and stud sizes for individual projects if it is the most efficient way to reduce waste.

Our Product Specification Team estimates that their involvement at the early stages of the specification process can reduce waste by as much as 15%.



# Our workforce

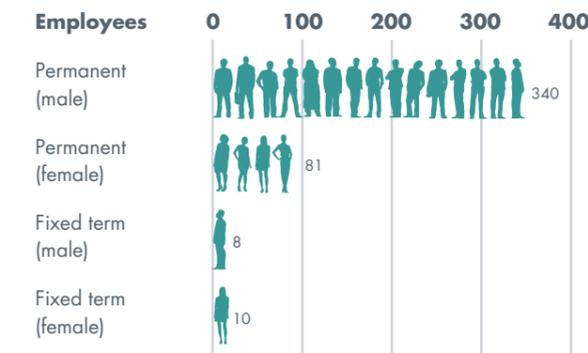
Knauf can only achieve its sustainability goals with the wholehearted commitment of its workforce, and we pride ourselves on a supportive and embracing employment ethos, a commitment to diversity and a promise to provide training (particularly vocational) to enable our workforce to achieve their full potential. On average, every employee is trained for approximately 25 hours a year.

We monitor employee numbers by employment type, contract, region and gender, and review the statistics regularly to address any shortcomings.

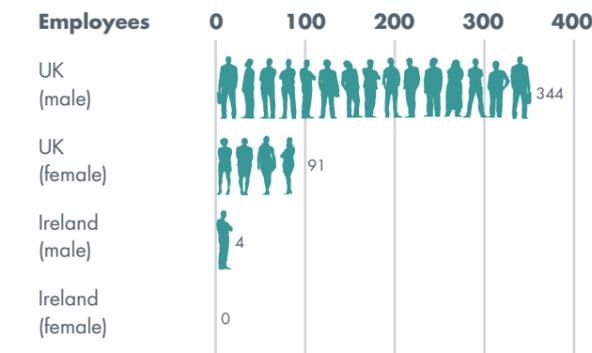
## Employment type



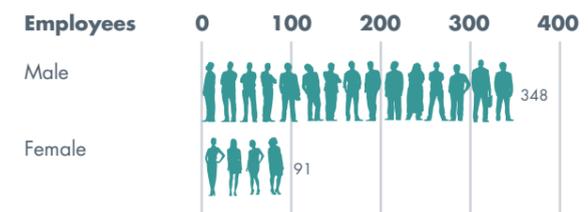
## Contract type



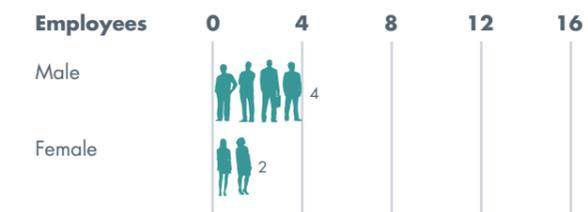
## Gender by region



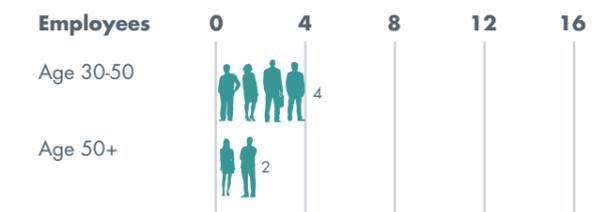
## Gender



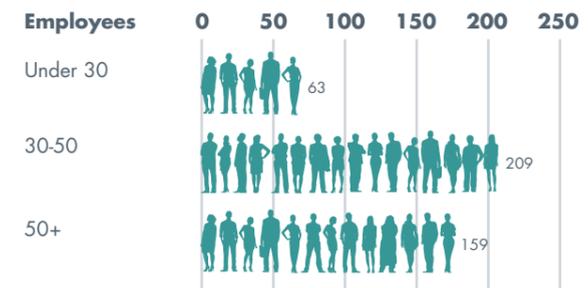
## Senior Management Team – gender



## Senior Management Team – age



## Age of workforce



## New hires to September 2016





## Building a better you

At the start of June 2016 the company launched Knaf Wellbeing, an initiative which will play an active role in promoting healthy living via events within the firm, and externally.

Knaf UK has always encouraged its staff to work towards a sustainable work-life balance, with a sympathetic approach to flexible working patterns and job sharing.

Past initiatives have included healthier eating, with dietary advice being offered, and fresh fruit made available to all staff in all premises.

But Knaf Wellbeing goes a step further, encouraging staff to get involved with physical challenges while also helping raise money for individuals' charities.

Improving mental and physical health is the goal, with the 2016 programme already including:

## The Three Peaks Challenge

**June 10-13 2016**

In the space of 24 hours, hikers had to climb the three highest peaks in England, Wales and Scotland. The Knaf team rose to the challenge by scaling Ben Nevis, Scafell Pike and Snowdon in aid of the Starlight Children's Foundation, which grants wishes to half a million terminally ill children in the UK every year. The target was to raise £1,000, but a tremendous fundraising drive resulted in more than £2,200 (including gift aid) being donated by sponsors.



## Sittingbourne to Immingham Bike Ride

**September 9-11 2016**

A team of Knaf riders cycled between the company's Sittingbourne and Immingham plants, a four-day odyssey spanning 400 miles. They raised money for the Demelza Hospice for Children, providing care and support for seriously ill youngsters. Again, the sponsorship drive was testament to the generosity of friends, family and colleagues, with two and a half times the original £1,000 target being pledged.

## The Windsor Half Marathon

**September 25 2016**

The Knaf team were pounding the streets and running through Windsor Great Park to raise money for CRASH, the construction and property industry's charity for the homeless. More information at: [www.justgiving.com/fundraising/knaufun](http://www.justgiving.com/fundraising/knaufun)

## Charitable donations

Knaf is committed to supporting charitable initiatives, with our largest contributions taking the form of donated material. In the last year, the company has donated £69,288 to various projects including DIY SOS, the BBC programme which supports worthwhile community projects: the show that famously recruited Princes William and Harry to roll up their sleeves and help renovate 62 semi-derelict homes in Manchester for occupation by UK war veterans.

The construction industry charity CRASH is one of our chosen recipients with a regular donation at Christmas when, instead of posting cards, the organisation sends electronic Christmas greetings, donating the money it saves to CRASH.

# £12,841

RAISED BY OUR STAFF FOR GOOD CAUSES IN 2015



Our staff are also key to supporting our charitable initiatives, which in 2015 amounted to £12,841 to good causes. This total is reached through a range of different activities:

Knaf staff participate in the annual Macmillan coffee mornings, backing the cancer support charity while enjoying a cuppa and slice of cake, with the firm matching sums raised by individual staff.

Five years ago, Knaf created Beardtober as an alternative to Movember, with volunteers starting the month of October clean-shaven, then pledging not to trim their whiskers until the end of the month. It is now established as an annual fundraiser.

For further information about Knaf's charitable work and commitment to employees, follow the link: [www.knaf.co.uk/about-us/knaf-policies/safety-and-wellbeing-policy](http://www.knaf.co.uk/about-us/knaf-policies/safety-and-wellbeing-policy)

## Up for the cup

Knaf was one of the industry sponsors of the Construction Cup in summer 2016 – the five-a-side football tournament played in the shadow of Wembley stadium.

The competition supports the Construction Youth Trust. Over the past six years the tournament has raised more than £19,000.

The firm entered two teams into the tournament – one from the Sittingbourne site and one from Immingham. Despite neither making it out of the group stages, everyone enjoyed the experience. "We were taking part as a little bit of fun and to keep in touch with our customers, so any football success would have been an added bonus," said Stuart Elliot, Service Management System Administrator at Knaf.

# JUST ONE COMPLAINT IN 2015

FROM COMMUNITIES LOCAL TO OUR SITES



The firm provided a Thames sightseeing cruise as one of the prizes in the raffle. The charity helps young people in England and Wales build a better future, with access to training, education and jobs in construction.

As part of the industry's wider effort to boost diversity, all teams had to have at least one female player. Congratulations to Willmott Dixon, the 2016 cup winners.

## Meeting customer needs

Using a simple scale and pitching a single research question to customers (and yet-to-become customers, to build a more realistic picture) produces a Net Promoter Score, which allows Knaf to assess its strengths and weaknesses in customers' eyes and gauge performance year on year. The scores help inform our customer communication strategies, highlighting immediately when specific action is required.

The question? How likely is it you would recommend Knaf to a colleague or business contact, on a scale of 1 to 10?

Comparative net promoter scores:

2012 +34

2013 +31

2014 +45

2015 and 2016\* +11

\* It should be noted that between 2014 and 2015 our NPS capture methodology changed, contributing to the change in score.

During 2015 the company only received one community-based complaint, about our activities at Immingham. It was fully reviewed in accordance with our procedures, and was closed out to the satisfaction of everyone.

# 268 VISITORS

DURING 2015 ON OUR FACTORY TOURS



## Plant tours help spread the word

Knaf is proud of its state-of-the-art production plants, and is keen to show interested parties around to let customers, suppliers, environmentalists, students and the local community see just what goes on behind the factory gates.

In 2015 there were 268 visitors, including 126 customer visits. In the first nine months of 2016 the number of customer visits was double 2015's figures.

Site visits have become a regular event for students at Westlands School in Sittingbourne, with teenagers studying engineering and related subjects at the secondary school touring production lines and chatting to staff.

The idea is to encourage students to consider futures in the manufacturing, engineering and construction sectors, both supporting their curriculum studies and helping to foster career interest in manufacturing and engineering-based roles.

During 2015 the Sittingbourne factory also hosted visits from students at Southbank University and the newly opened Medway University Technical College, a new concept offering technical and vocational training.

All new Knaf staff, whatever their role, also visit the factories to understand how the products are made. Visits to Sittingbourne start and finish at The Cube, Knaf's multi-million pound training, visitor and administrative centre, which demonstrates the company's commitment to sustainability, from the PV panels on the roof to generate electricity to the energy saving products and systems that it showcases.



## Carbon Trust Standard

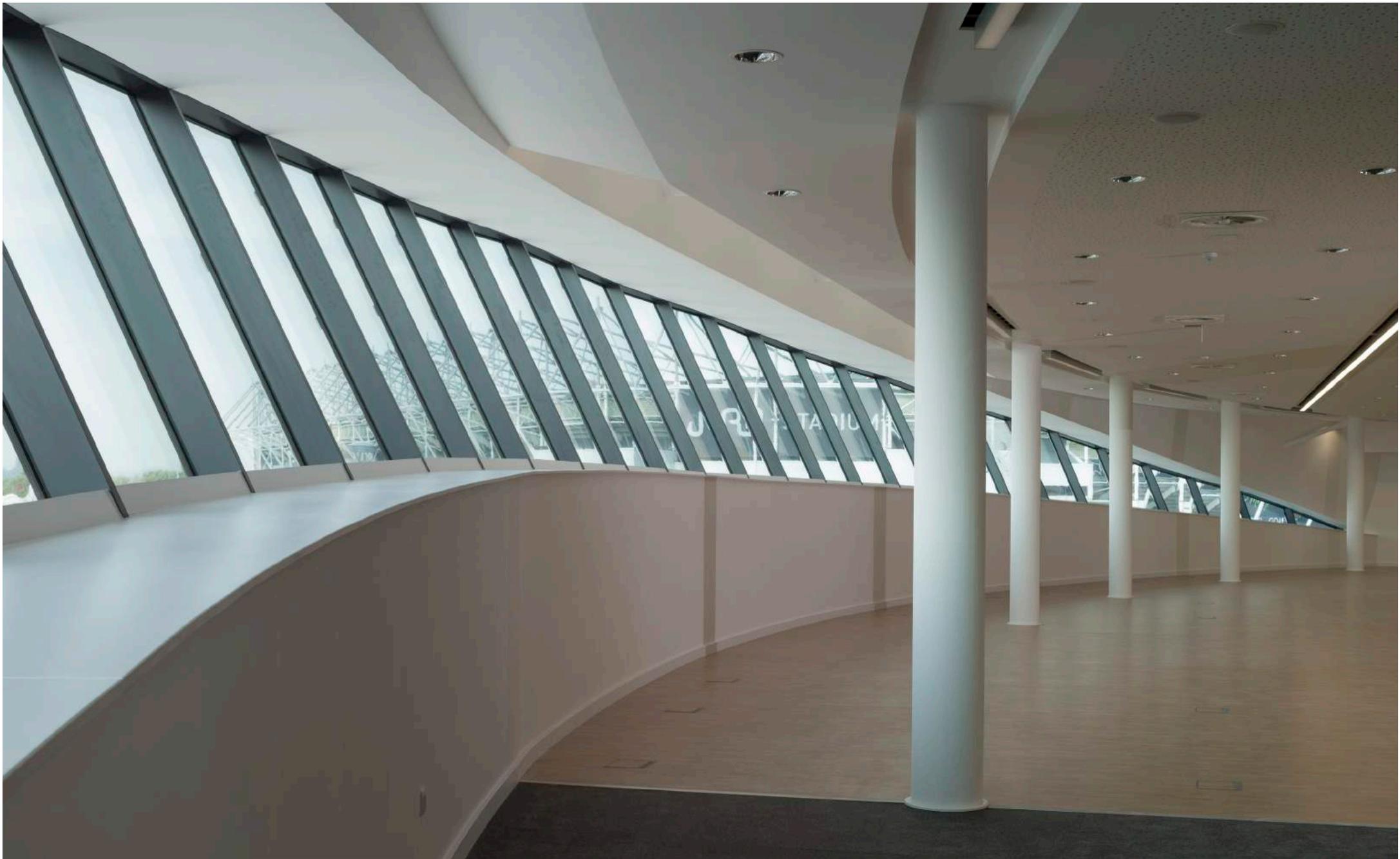
Knaf UK was awarded the Carbon Trust Standard in 2015 in recognition of a sustained record of reducing carbon emissions, making us the only gypsum manufacturer in the UK to hold the accreditation.

The Carbon Trust is the world's leading independent certification body, and the standard is acknowledged as recognition of significant greenhouse gas emission reduction.

"We're particularly proud to have achieved the Carbon Trust Standard because it reflects the company's commitment to sustainability throughout its operations," said Lorna Stork, Knaf's Sustainability Manager. "We manufacture products that are energy-intensive to make, so this achievement not only owes a lot to improvements at factory level but also shows that we believe in managing carbon and energy use in other areas."

She reiterated Knaf's pledge that achieving the standard was one thing, but that keeping it requires a continued commitment to sustainability as a core value.

Darran Messem, Managing Director of Certification at the Carbon Trust, commented: "Knaf's attitude towards carbon reduction is commendable and the company's efforts have led to a significant reduction of over 5%. The company is an example of what can be achieved going beyond business-as-usual and innovating to improve your environmental impact."



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