



Funded by
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BUSINESS
BOLSOVER

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The Bolsover

Net Zero

Innovation Programme

Impact Report Year 1



Nottingham Trent
University

Bolsover
District Council



NETZERO
CARBON

This report celebrates the outcomes and insights from the first year of the

Bolsover Net Zero Innovation Programme



The programme supports small and medium-sized enterprises (SMEs) in the Bolsover district through a package of fully funded support for the adoption of energy and carbon reduction initiatives, and to identify solutions to common Net Zero barriers.

Foreword Nottingham Trent University

Thanks to the funding from the Bolsover District Council UK Shared Prosperity Fund, Nottingham Trent University is now one year into this two-year programme, which, to date, has supported over 90 businesses to improve their energy efficiency and work towards reducing carbon emissions.

NTU is the UK's most sustainable university and ranked second globally. Through the Bolsover Net Zero Innovation Programme, our goal is to link NTU academic expertise with Bolsover's SMEs, helping them to innovate, solve problems, and make informed decisions around decarbonisation, green skills and technology adoption. The programme will lead to the long-term transition of businesses to Net Zero, including those businesses which have not yet started or are in the early stages of their journey to Net Zero.

We know how important this is. The UK must meet Net Zero by 2050, in line with the target set out in legislation. The UK has also committed to an 81% reduction in emissions by 2035 compared to 1990 levels¹.

SMEs might individually have a low carbon footprint, but collectively are estimated to account for around half of the UK's business-related emissions². National research shows smaller businesses are generally at an early stage of transitioning to Net Zero - investing in sustainability is vital to the future of UK SMEs, with consumers, investors, suppliers and regulators all demanding more environmentally responsible products and services.

The opportunity to deliver programmes such as the Bolsover Net Zero Innovation Programme enables NTU to serve as a

champion for climate research, education, and action within our local economies and communities. To date, 83% of the businesses who have taken part in the programme have never worked with the university before. NTU is looking forward to developing further new relationships with Bolsover's businesses over the coming year.

Thank you for your interest in this programme and the work we do to support local SMEs in achieving their Net Zero goals.

Jeremy Hague, Director of Knowledge Exchange at NTU

¹ Source: United Kingdom of Great Britain and Northern Ireland's 2035 Nationally Determined Contribution (NDC)

² Source: British Business Bank (2021), Smaller businesses and the transition to net zero

71% of the businesses supported by the Bolsover Net Zero Innovation programme are now implementing, or committed to implementing, carbon reduction activity



'The Carbon Management Training made what seems like a daunting task actually quite simple. I've been keen to get going with a Carbon Management Plan for some time now but didn't know where to start. This training has given me the tools and knowledge I needed to finally get going'

Lauri Smith,
CEO of Josh's Care Company

Part-funded by the Bolsover District Council UK Shared Prosperity Fund, and running from January 2024 to March 2026, the Bolsover Net Zero Innovation Programme (NZIP) has already supported 93 SMEs to access knowledge and skills support in relation to the adoption of green skills and technology, identify solutions to common Net Zero barriers, take advantage of low carbon opportunities, develop

new partnerships, and develop new market opportunities within the low carbon sector.

To achieve these outcomes, the programme delivers specialist support against three strands of activity: business carbon reduction and sustainability networking events, premises retrofit audits, and carbon management workshops and 1:1 support and advice.

Of the 93 businesses we have worked with so far:



How Bolsover Net Zero Innovation Programme support SMEs

UNLOCKING NTU EXPERTISE – School of Architecture, Design, and the Built Environment

Premises Retrofit Audit

The programme offers bespoke on-site premises retrofit audits to businesses to identify retrofiting opportunities and create a more resource and energy efficient building, thereby reducing the business' carbon footprint.

This element of the programme includes a site visit, a detailed client report and a wrap-up meeting to discuss the report and answer any queries.

Businesses are provided with a list of actionable considerations that include straightforward, low-cost ways to improve their resource efficiency along with suggestions for more fundamental building changes as part of any long-term carbon reduction plan. Support also includes thermal imaging inspections

for assessing heat loss caused by poor continuity of insulation, thermal bridging, low U value and air leaks.

- **29 businesses** have been supported with a **premises retrofit audit and recommendations** by the Sustainability Consultant Architect so far.
- The **premises retrofit audits** have, to date, provided recommendations that, if implemented, could lead to a reduction of **almost 400 tCO2e per annum across Bolsover.**
- **57% of businesses** who have received a premises retrofit audit to date told us: that they **would not have undertaken this work without the programme.** A further 29% were not sure if they would have undertaken this type of work without the support.

What did you appreciate the most about the premises audit?

'The support and advice offered by a very professional team'

'The detail about every aspect of reducing waste heat through the building fabric'

'Simplicity and ease of reading the report'

'The honesty of the report'

'Confirmation of our suspicions'

'Confirmation of requirements needed, and approved figures to take to committee'

SUCCESS STORY

Care Staffing/ Transport Sector Business

A care sector business operating in a building that was built in the early 2000s reported that they have spent £50,000 following their work with the Bolsover NZIP, including £46,000 for solar panels and batteries. 'It's quite an array – I think we are probably visible from space now! We haven't analysed the impacts in detail yet, as we only installed in November, but we are expecting to generate 24,000 kw of clean electricity every year and deliver 5,107 kg of carbon savings per year.'

When asked to what extent the Bolsover NZIP has supported this investment they told us:

'Getting involved in the whole thing - with Bolsover Net Zero Innovation Programme – it's given me the ability to firstly start the dialogue, secondly it's given me the vocabulary, thirdly it allowed me to engage in all of the different levels of discussion - it created the trigger to get the directors involved - to get them to release money. To be really honest, it was an opportunity for me to encourage my directors to look at this in more detail, and look at our environmental impact and encourage them to invest.'

The business reported 'It's not just the carbon saving we are thinking about - it's the wider things - like are we recruiting the right people to support us with this, do we have the right tools to do this? Since the programme I've done extra workshops, such as fleet management decarbonisation.'

The business also reported that they have been able to use the work undertaken through the Bolsover NZIP to secure a government grant for £800 to install EV charge points.



BUILDING IN HOUSE CAPACITY - Nottingham Business School

Carbon Management Programme

One day interactive carbon management workshops are delivered through the programme which focus on supporting businesses to reduce their carbon emissions to help meet the government's Net Zero target by 2050. The workshop programme is designed for managers and staff who want to understand carbon management, measure their business' carbon footprint, and develop a Decarbonisation Plan for their business.

At the sessions, businesses learn:

- Basics of climate change and the role of business
- Definition of key terms such as Net Zero, Carbon Neutral, Carbon Offsetting, Greenwashing
- Policy context for carbon management
- The business case – drivers for carbon management
- Defining scopes and organisational/operational boundaries

- Identifying business resource data for carbon footprinting
- Carbon footprinting (carbon accounting)
- Creating a Decarbonisation Plan and strategy for implementation
- Learning from good practice case studies
- Communicating carbon management performance and reporting

After the workshops, businesses are able to access 1:1 support from a carbon management specialist to further discuss their plans in more detail and seek tailored consultancy support.

During the first year of delivery:

- Participants from 83 businesses learnt how to measure and reduce their carbon footprint, set carbon reduction targets, and develop a carbon management implementation plan
- 11 carbon management workshops were delivered

- 15 businesses were supported with additional 1-2-1 consultancy support
- 79 Decarbonisation Plans were developed

40% of businesses who have taken part in the training to date told us that they would not have undertaken this type of training without the programme. A further 44% were not sure.

Businesses who took part in the workshops have since:

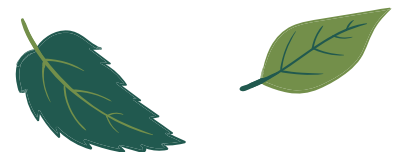
Investigated and progressed battery storage, implemented LED lighting, considered heat pumps, installed solar panels, reduced printing costs, moved from kerosene to gas, implemented a cycle to work scheme, installed EV charging, reduced email traffic, moved to online meetings with clients, reduced plastic in the business, made their own mycelium packaging, amplified the message of climate crisis through artistic output, reviewed all suppliers to source environmentally better products and services, and planted trees to offset carbon.

BUILDING RELATIONSHIPS – Nottingham Business School and The School of Architecture, Design and the Built Environment

Sustainability Events and Networking

To date, the programme has held four business events hosted by NTU academics and professionals within the Knowledge Exchange Team. Those attending heard from industry leaders and practitioners at major firms in the district who provided their own experience and success stories in implementing carbon reduction strategies and how these contributed to a significant reduction in expenditure and carbon use.

The events were used to raise awareness of the programme, to allow businesses to network and meet other businesses in the area who were interested in the low carbon agenda, and to share ideas and best practice around low carbon.



'It has been refreshing to engage in open, unbiased discussions on environmental matters, free from hidden political or financial agendas. The programme fostered meaningful learning and collaboration, supporting real-world sustainability initiatives'

Whitwell Community Centre

Insights and Impacts

Beneficiaries complete a carbon management survey before and after receiving the support as part of ongoing research at NTU to assess the impact of the programme. Analysis of the data shows carbon management and sustainability practices have progressed significantly as a result of the programme.

'There are procurement changes coming to our industry, with sustainability becoming more important – I am sure that the support we have received through the programme will help us to win more business in the future'

Business supported by Bolsover NZIP

BUSINESS IMPACTS

- 33% of businesses reported that the programme has supported them to make cost savings
- 21% of businesses reported that the programme has supported them to be able to tender for / win more business
- 46% of businesses reported that the programme has supported them to adopt new technologies and processes
- 25% of businesses reported that the programme has supported them to deliver new products or services
- 42% of businesses reported that the programme has supported them to develop new partnerships, make new connections, and improve networking with local businesses
- 31% of businesses reported that the programme has supported them to improve their productivity

'We have just been through the ISO process and the work we have done through this programme has helped the process – the assessors really liked all of the work that we had done through the programme'

Business supported by Bolsover NZIP

AWARENESS, ENGAGEMENT AND STRATEGY	BEFORE	AFTER
We are aware of the risks and opportunities associated with carbon emissions	58%	98%
We have effective procedures and knowledge/ information for calculating an accurate carbon footprint	16%	76%
Carbon management is central to our business activities & decision-making processes	33%	47%
We communicate our carbon reduction targets, strategies and performance to all relevant stakeholders	11%	40%
We have carbon reduction behavioural change and awareness raising programmes for staff engagement	20%	49%
We are able to manage the conflicts between carbon management and core business activities/growth in the business	20%	53%

KNOWLEDGE AND CAPABILITY	BEFORE	AFTER
Do you have a measurement for your current carbon emissions/ carbon footprint or is this in progress?	18%	78%
Has your business set carbon reduction target/s?	2%	40%
We are effectively managing our carbon emissions and successfully implementing carbon reduction projects as planned	13%	56%

'The support enabled us to understand our carbon footprint, allowing us to take steps to fully carbon neutralise our business'

Business supported by Bolsover NZIP

MONITORING

The support led to a marked improvement in business resource monitoring. Capacity to collect resource data was a significant barrier for some businesses accessing the programme. Many businesses received considerable help to identify and collect data in the correct format prior to formal support commencing.



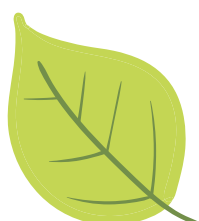
MONITORING RESOURCES	BEFORE	AFTER
Electricity	56%	84%
Gas	3%	40%
Water	18%	31%
Waste	20%	51%
Fuel – owned fleet vehicles	22%	36%
Refrigerant gases	2%	4%
None	33%	7%

IMPLEMENTATION

Many more businesses are now implementing low carbon measures post programme than pre-programme. This is a significant success for the programme.



IMPLEMENTING CARBON REDUCTION ACTIVITY	BEFORE	AFTER
Buildings energy	16%	71%
Procurement and supply chain	4%	29%
Water	4%	29%
Own transport fleet	7%	27%
Waste	11%	64%
Business travel	16%	40%
Staff commute	9%	22%



Case Studies

Lauri Smith CEO of Josh's Care Company



Josh's Care Company are a trusted provider of personalised home care services. Their goal is to empower individuals to live independently.

Lauri, CEO of Josh's Care Company attended the Carbon Management training provided by the Bolsover Net Zero Innovation Programme. She told us:

'I've been keen to get going with a carbon management plan for some time now but didn't know where to start. This training has given me the tools and knowledge I needed to finally get going.'

Attending the training gave Lauri lots of ideas for reducing carbon emissions, which she further developed on a 121-consultancy call. One of the first steps she identified was holding focus groups with employees to support engagement and development of ideas to reduce emissions.

Since many of Josh's Care Company employees work in client's homes, Lauri felt supporting clients to make energy reductions through increased awareness and education could drive a positive impact in reducing indirect scope 3 emissions and supporting clients with their cost of living. Within the central office, exploring opportunities to digitise documentation to reduce printing may help reduce emissions and operational costs. Lauri is looking forward to receiving recommendations from The Carbon Audit Report to identify additional opportunities to drive energy efficiencies.

On the Carbon Management Training, Lauri met another business owner based on the same business park. Together they intend to engage the wider business park in improving sustainability by holding

an event to help develop initial ideas, such as enhancing recycling. Lauri commented, 'The carbon management training made what seems like a daunting task actually quite simple. Despite my own personal interest in reducing carbon emissions there has also been a big push within the healthcare industry for providers to take action. I now have the basis of a carbon management plan, ideas and a drive to start showcasing the work we are doing, and venturing into new projects all thanks to the carbon management training.'



Michelle Slater Director of UR Solar



UR Solar are a sustainable energy company offering comprehensive solar solutions for both commercial and domestic installations.

Michelle has attended the Carbon Management training provided by the Bolsover Net Zero Innovation Programme.

'This is not about doing anything too big, you know, depending on what your budget is - but if you take small steps and you review it every year, then you can make a huge difference. She told us:

I went on the carbon Management workshop a few weeks ago now

and the standout thing is understanding the 'why', because we always talk about carbon management, but don't understand the bigger picture and what it means for our business.

It really dug deep into what it means for my business and the impact that we're having on the environment - how we can manage that impact to reduce it significantly or just reduce it slowly over the course of the next few years.

We can now calculate what our emissions are looking like at our premises and for some of the processes that we use. For example, we do an awful lot of printing in our business and we have now looked at how we can reduce that printing, which will help carbon emissions, but will also help our bottom-line cost savings.'



Capital Refractories



Capital Refractories is a leading independent refractory company in the UK with over 70 years of experience in manufacturing, supplying, and installing high-quality refractory products for metal melters worldwide.

With a global presence, including locations in the UK, US, Europe, China, and India, Capital Refractories has built a reputation for excellence in the industry. The company employs around 250 people and serves customers in over 40 countries.

The Bolsover NZIP Carbon Management Workshop provided Capital Refractories with a wealth of information on calculating and managing carbon emissions. The carbon management workshop helped de-mystify carbon footprint calculation and emphasised starting with small, manageable steps and creating a carbon reduction plan

for continuous improvement. The company are now measuring Scope 1 and 2 emissions and working on Scope 3 emissions.

Capital Refractories found that one of the most valuable aspects of the workshop was the follow-up 1:2:1 consultation which helped explore operational boundaries relative to new manufacturing capabilities. It also helped align Capital Refractories' strategies with the United Nations Sustainable Development Goals, identifying areas where the company was already making progress and areas where improvements could be made.

Capital Refractories also benefited from a premises retrofit audit. Through this, recommendations were made for improving insulation, voltage optimisation and installing solar panels with batteries, with an estimated combined saving of up to 97.54t CO₂e per annum and associated energy cost savings. Though Capital Refractories is still in the early stages of implementing a full decarbonisation plan and continues to measure Scope 3 emissions to assess its total carbon footprint, the support received from Bolsover Net Zero Innovation Programme has laid the foundation for future initiatives to improve the sustainability of the organisation.

'The carbon management workshop helped me to feel more confident about how to calculate and measure the carbon footprint of our business, during a period of growth in our manufacturing capabilities. Support received from the Bolsover Net Zero Innovation Programme also helped me to see the role of decarbonisation as part of our wider sustainability plans. Whilst we still have work to do to fully measure Scope 3 emissions, this programme has helped accelerate our thinking and galvanise wider employee engagement with our sustainability journey'

Capital Refractories



NET ZERO MICROTIPS FOR SMES

MICHELLE JOHANSSON – SUSTAINABILITY CONSULTANT / ARCHITECT

- First, invest in improving the insulation of your building envelope to ensure you aren't wasting money and energy through heat loss. Work with neighbouring factory buildings to organise bulk asbestos cladding removal and replacement at scale and apply for funding for the work, as a group. Solar PV arrays should be considered once the envelope is improved, appliances are energy efficient and occupant behaviour change is underway.
- Have certified electrical and HVAC consultants do a review of your electrical, HVAC systems and voltage optimisation if applicable. Energy costs can generally be reduced by removing redundancies and ensuring your systems work efficiently and are the right fit for your building's needs.
- Electric Air Source Heat Pumps work very well and are very energy efficient. As an emerging technology that is not always well understood, think about having a certified heat pump consultant provide a feasibility appraisal.

ALICE VELDTMAN - CARBON MANAGEMENT CONSULTANT

- Don't let a perceived lack of influence over landlords, suppliers, or other stakeholders prevent you from requesting data. Requests may not be immediately accommodated, but by asking, you are supporting a shift towards greater carbon-consciousness and helping to drive positive change.
- Create a culture of continuous improvement when working to decarbonise. Remember not to let perfectionism get in the way of making a start. Achieving 100% data accuracy, especially for calculating Scope 3 emissions, is often a work towards - remember to document your methodologies and demonstrate transparency as you work to improve accuracy over time.
- Inviting all colleagues to be part of the solution and celebrating quick wins, builds a solid culture of sustainability. Excellent ideas can originate from any organisational level and supports wider engagement.



DR MUHAMMAD MAZHAR – ASSOCIATE PROFESSOR OF SUSTAINABILITY AND CARBON MANAGEMENT

- Take time to define what sustainability and carbon reduction means for your business, and how it can be translated into actions.
- Make carbon management part of normal business practice by developing an action plan with clear responsibilities.
- Understand your impact and start the journey with low or no cost measures. Don't forget to regularly monitor progress against targets and celebrate success.
- Communicate your commitments and progress as well as good practice to internal and external stakeholders.
- Seek support from peers and local business networks to enhance learning. We can only achieve net zero through collaboration.

Make carbon management part of normal business practices by developing a realistic action plan with clear responsibilities for delivery. Start with the low or no cost measures and regularly monitor progress against targets. Don't forget to celebrate successes.

DR MUHAMMAD MAZHAR – ASSOCIATE PROFESSOR OF SUSTAINABILITY AND CARBON MANAGEMENT



OVER 80 DIFFERENT BUSINESSES SECTORS SUPPORTED INCLUDING:

domiciliary care, civils and plant, **property investment**, **recruitment**, catering, butcher, **high friction surfacing & road marking**, wellness, print & design, IT consultancy, **retail**, bakery and confectionery, **manufacture of electrical goods**, manufacture and supply of construction products, software development, **GPS/QR coded products**, joinery, **children's role play centre**, sustainable fashion and accessories, **charity farm park**, mobile pedicurist, **convenience store**, distillery, restaurant and pub, engineering, community arts, lavender and gourmet mushroom farm, performing arts, animal healing, virtual assistant services, yoga studio, hair salon, coaching and business services, dog boarding and grooming, **entertainment**, health care, video production services, **accountancy**, community cricket club, public house, consultancy, fabrication in steel/composites and textiles, **website design**, catering, property maintenance, **online fabric retail**, sign industry suppliers, motor factors, photography and video, shot blasting and paint spraying, garden design, **sale of children's books**, village hall, **community centre**, café, warehousing, estate agency, garment decorators, security provider, supplier of woodworking machinery & accessories, countryside woodland management, boarding cattery, gardening, **textiles and fabrics**, tearoom, zero-waste shop, photography studio, technology consultant, mechanical repairs on push bikes, **injection moulder**, **hairdressing and beauty salon**, new and pre-loved shop, **travel agency**, training services, **florist**, insurance broker, **glass manufacture**.



Partner with NTU

Together, let's step up for Net Zero and build a sustainable future.

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