UNIVERSITY OF DERBY

DERBYSHIRE County Council

GREEN ENTREPRENEURS FUND PROGRAMME

Reporting on Green Entrepreneurs Fund Programme progress, actions, and impact achieved in relation to supporting sustainable regional development

Green Entrepreneurs Programme

Report at a **Glance**

WELCOME TO THE **GREEN ENTREPRENEURS** FUND PROGRAMME

The Green Entrepreneurs Fund Programme was started in April 2021 as a direct response by the Council to an urgent and pressing need – climate change. In 2018, Derbyshire households and businesses produced 10.5 million tonnes of greenhouse gases from transport, gas and electricity use in homes and other emissions from business and industry. Derbyshire County Council has pledged that by 2050 the county will be carbon net zero. To achieve this, a significant amount of work needs to be done to bring those emissions down.

Green Entrepreneurs Fund Programme was launched because it was recognised that in order to reduce the emissions of businesses, support was needed to encourage them to be able to undertake the work needed to not only make the necessary changes to their business practices, but also to take the risks to develop new products and services that are low carbon and innovative to help the wider Derbyshire economy to also grow, whilst also helping to move to a greener future. It was also recognised that there was a gap in the skill set of the Derbyshire workforce around the fast-moving world of low carbon/green technologies, that needed to be plugged.

Although the programme has now closed, the need for the support it provides to businesses and individuals looking to move to net zero, and/or introduce new and innovative low carbon products and services has not stopped and will likely continue for the foreseeable future. Therefore, it is now important that we look to continue the good work that the Green Entrepreneurs Fund Programme has done, through future support programmes. This evaluation report is the first stage of that, as it allows us to examine what worked with the programme, what did not work, and why. This will then help to shape and improve any future programme.

Councillor Barry Lewis,
Leader of Derbyshire
County Council

Since its launch the Green Entrepreneurs Fund Programme has been dedicated to supporting organisations and individuals across Derbyshire to develop and invest in green energy and carbon reduction schemes as well as projects that create sustainable and innovative solutions, introduce new green economy products and services, and to nurture a community of visionary leaders who are committed to making a positive difference.

This impact assessment report highlights not just the achievements but also the challenges supported organisations have encountered, and the success stories that hopefully inspire others. This report marks a significant milestone and provides a comprehensive evaluation of the programme's efforts to foster green entrepreneurship and its far-reaching impacts. Also, it includes a series of policy recommendations and next steps drawn from survey responses from our supported organisations.

The findings within this report are a testament to the resilience and creativity of Derbyshire's green entrepreneurs. From decarbonisation projects though to pioneering renewable energy solutions and new waste recycling management systems, the projects supported by the programme demonstrate the range and scope of activity currently happening in the county. Moreover, for organisations implementing these measures for the first time, the nudge effects of their success extend beyond immediate environmental benefits, contributing to wellbeing and economic growth in the communities they serve.

The University has played a key role in the partnership with Derbyshire County Council through our management and administration of the programme, and I am delighted that some of our 'zero carbon' academics are now engaged in additional projects with supported organisations and we hope that we can continue to impact many more as they progress on their own net zero pathways.

I extend my thanks to all the participants, partners, and supporters who have contributed to the success of the Green Entrepreneurs Fund Programme.

Prof. Kathryn Mitchell CBE DL
Vice-Chancellor
University of Derby

EXECUTIVE SUMMARY

The Green Entrepreneurs Fund Programme (GEF) is a £2 million grant scheme established by Derbyshire County Council (DCC) to address both national and local priorities in low carbon and alternative energy sectors.

Developed in partnership with the University of Derby as part of DCC Climate and Carbon Reduction Manifesto, GEF champions the green economy by supporting organisations with projects and investments in green energy and carbon reduction initiatives as well as individuals in Derbyshire committed to skills development in this sector.

The programme evaluation confirmed GEF funding to be highly successful in providing support to various organisations in Derbyshire to invest in low-carbon and green technologies, leading to significant reductions in carbon emissions and operational costs. The support has been instrumental in promoting clean energy generation, enhancing energy efficiency, and accelerating the adoption of alternative energy sources.

Data from the impact survey shows that 97% of supported organisations reported meaningful reductions in their carbon emissions across a broad range of organisation size and various sectors.

Participating organisations have expressed appreciation for GEF's crucial role in overcoming pre-existing barriers to innovation, facilitating economic growth and sustainability.

"Having looked at various sources of funding to help with the costs of installing PV panels we have always hit brick walls. Finally finding this programme was somewhat unbelievable. The application process, guidance, support and most importantly speed of decision making (without requiring lots of quotes) has been a pleasant surprise."

(Farm business, micro**)**

"The Green Entrepreneurs Programme has had a significant impact on our business, we now have solar panels, heating controls, LED lights and ventilation systems in the factory, that had very little investment since it was built in the 1970s. This has led to reduced energy costs, less energy waste and usage, leading to a lower carbon footprint and a better facility for our staff to work in"

(Engineering business, medium-sized**)**

SUSTAINABLE DEVELOPMENT GOALS

You will see references throughout this report to how activity associated with GEF supported projects can also relate to the Sustainable Development Goals (SDGs). The SDGs were adopted by the United Nations in 2015. They are a group of 17 integrated global goals designed as a 'blueprint to achieve a better and more sustainable future for all' and are to be met by 2030. Some of the global challenges that the SDGs are designed to overcome include climate-change and sustainability, environmental degradation, inequality, peace and justice.

The full list of SDGs is as follows:

PART 1

ABOUT THE **GREEN ENTREPRENEURS** FUND PROGRAMME

PROGRAMME OVERVIEW

The Green Entrepreneurs Fund Programme (GEF) was set up in collaboration with the University of Derby as part of Derbyshire County Council's COVID economic strategy and climate change commitments. It aimed to position Derbyshire at the forefront of technological advancements and serve as a model for national demonstrator projects. The programme included both a capital and revenue fund open to organisations and individuals based in Derbyshire excluding Derby City Council boundaries. The grants were awarded by the GEF Board including representatives from the County Council and the University of Derby.

> **"OUR AIM OF BEING CARBON NEUTRAL HAS BEEN HUGELY IMPACTED WITH THE AID OF THE PROGRAMME"**
>
> **(Manufacturing business,** micro**)**

GEF had three funding strands: Demonstrator Fund, Small Grant Fund, and Scholarship Fund. The GEF Demonstrator Fund had an allocation of £1.2 million, offering support to organisations with a sound investment plan leading to local low-carbon or alternative energy projects/interventions. This strand encouraged innovative solutions beyond current mainstream thinking, contributing to future-oriented innovation. The GEF Demonstrator Fund supported projects developing local energy sources and low-carbon initiatives for communities and businesses, alongside the development of equipment for alternative/low-carbon energy and reskilling opportunities. This strand offered grant awards up to £200k with an intervention rate of up to 40%.

The GEF Small Grant Fund, with an original allocation of £500k, supported organisations developing projects leading to local low-carbon and alternative energy projects/interventions. GEF Small Grant Fund awards ranged from £6-20k with a minimum project spend of £15k and an intervention rate of up to 40%. Funded projects were expected to be completed within 12 months following the start of the project.

The GEF Scholarship Fund, with an allocation of £100k, offered grant awards for training and skills of up to £1,500 per individual to retrain with skills and qualifications enabling entry into the low carbon and alternative energy fields. The training could take place online, face-to-face, or a combination of both.

70+
SMES AND ORGANISATIONS SUPPORTED ACROSS DERBYSHIRE

97%
PROJECTS STATE THAT GEF HAS BEEN HIGHLY **EFFECTIVE IN REDUCING CARBON EMISSIONS**

71%
PROJECTS INCORPORATING **RENEWABLE OR ALTERNATIVE ENERGY MEASURES**

1,610
TONNES OF CO2e FORECAST REDUCTION

81%
PROJECTS REPORT **INCREASE IN ENERGY EFFICIENCY**

77%
PROJECTS INCORPORATING **REDUCTION IN OPERATIONAL COSTS**

93%
PROJECTS STATE THAT GEF WILL **IMPROVE THE UPTAKE OF NEW TECHNOLOGIES**

91%
AGREE THAT WITHOUT GEF THEIR **GREEN PROJECT WOULD HAVE BEEN DELAYED OR REDUCED IN SIZE AND IMPACT**

PROGRAMME PRIORITIES

1 Promoting Sustainability:
The programme promoted sustainable practices and initiatives among businesses and organisations in Derbyshire. By encouraging the adoption of green technologies, renewable energy solutions, and environmentally friendly practices, it sought to reduce carbon emissions and mitigate the impacts of climate change.

2 Supporting Economic Growth:
While prioritising sustainability, the programme also supported economic growth and development in Derbyshire. By fostering green entrepreneurship and innovation, it created opportunities for businesses and organisations to thrive in emerging sectors related to renewable energy, clean technologies, and environmental services.

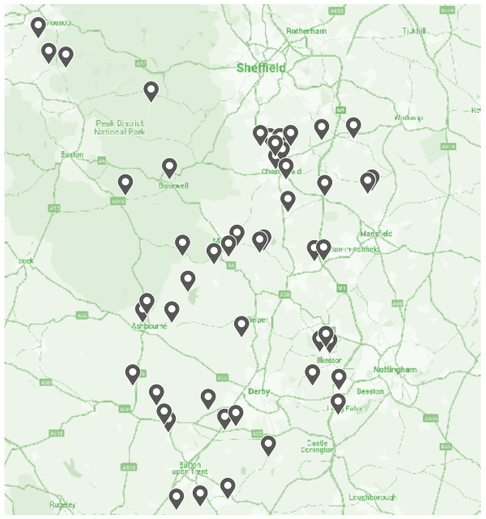
3 Facilitating Innovation:
By providing support, funding, and resources to entrepreneurs, businesses and organisations, GEF enabled the development and commercialisation of innovative solutions that contribute to the transition towards a low-carbon economy.

4 Building Resilience:
By encouraging businesses and organisations to integrate sustainability into their operations and recovery plans, it enhanced their ability to adapt to future challenges and uncertainties.

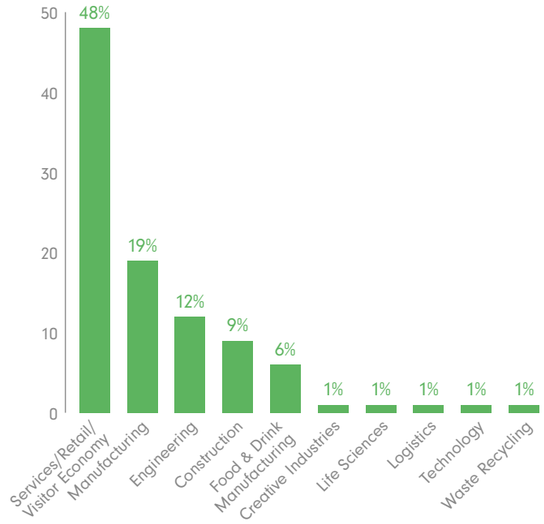
5 Demonstrating Leadership:
The programme sought to position Derbyshire as a leader in sustainable development and green innovation. By supporting national demonstrator initiatives and facilitating collaboration with partners such as the University of Derby, it showcases Derbyshire's commitment to addressing climate change and promoting environmental stewardship.

PROGRAMME UPTAKE

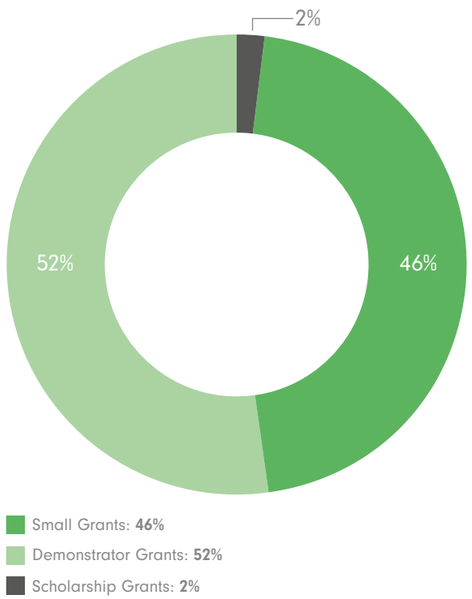
GEF Projects by location



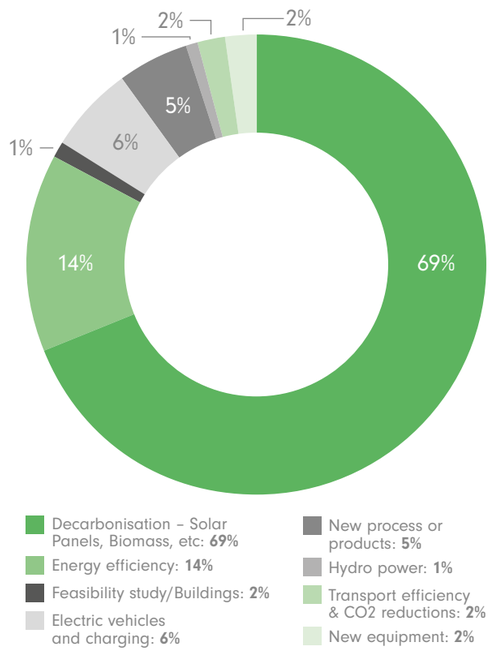
GEF Projects by sector



GEF Funding Strands by £ value



GEF Projects by type



SCHOLARSHIP GRANTS

The Scholarship Grants strand supported 44 applications with over £35k of funding over the programme period and some of the courses undertaken included:

- Solar PV and Battery Storage Installer
- Certificate in Environmental Management
- BPEC DSHP Heat Pumps
- BPEC Air and Ground Source Heat Pumps
- BPEC Energy Efficiency
- Domestic Energy Assessor
- Water regulations qualification
- BPEC Solar Thermal Panel Course
- HETAS H003 Dry Stove Installer
- Energy Efficiency in older and traditional building, retro fit

CASE **STUDY**

Scholarship Fund – Tim Hibbert

The Green Entrepreneurs Programme Scholarship Fund allowed individuals to apply for grant funding up to £1,500 to undertake training and/or gain qualifications in the low carbon and alternative energy sector.

Tim Hibbert applied for training to assist him in becoming a Domestic Energy Assessor, which means he is now able to produce Energy Performance Certificates for domestic properties. He now has a City & Guilds Level 3 in Domestic Energy Assessment and has received accreditation that lists him on the registered national database of Domestic Energy Assessors.

Tim commented: "Completing the course has led me to start up as self-employed, and so far, I have had paying clients and there are signs that this will continue to increase, as DEAs will be an important element in the future of the domestic property sector in the UK".

PROGRAMME DELIVERY

The programme was managed and delivered by a dedicated team from the University of Derby who have extensive experience in managing programmes of this nature. The team developed and oversaw processes and operations for all aspects of the programme including for applicant guidance and criteria, expression of interest and full application, assessment, due diligence, contracting, grant claims and project monitoring. The programme team were able to call on academic expertise from the University of Derby for technical and viability appraisals of applications.

The team regularly liaised with DCC colleagues on an operational level for the appraisal of expressions of interest and updates on programme performance and coverage.

Governance of the programme was overseen by a Green Entrepreneurs Fund Programme Board chaired by the Leader of Derbyshire County Council with support from the Cabinet Member for Clean Growth and Regeneration, alongside members from East Midlands Chamber, Federation of Small Business, Business Peak District, and the University of Derby.

Businesses said about the programme delivery:

"We have found everybody we have communicated with to be extremely helpful, efficient and supportive throughout the whole process."

(Construction business, micro**)**

PART 2

IMPACT OF THE PROGRAMME

METHODOLOGY

The evaluation methodology was largely based on an online survey for participating organisations supported by GEF through both small and demonstrator grants. The survey included a mix of quantitative and qualitative questions aimed at gathering views and perspectives of businesses and organisations regarding the impact of GEF grants on their carbon reduction and opportunities for green growth and development.

The survey was distributed electronically to organisations via email with an invitation to participate and was completed by senior staff at each organisation, with a response rate of 69%. Quantitative data collected from the survey responses were analysed using statistical methods to identify trends, patterns, and relationships. Qualitative data, such as open-ended responses, were subjected to thematic analysis to extract key themes and insights. The survey was conducted in adherence to ethical principles, including voluntary participation, informed consent, and confidentiality. Participants were assured that their responses would be anonymised and used solely for research purposes.

In addition to the survey, some organisations were invited to provide qualitative testimonials about the effectiveness of GEF design and delivery for supporting green growth and environmental initiatives, and the value of the GEF programme for supporting green entrepreneurship in the region.

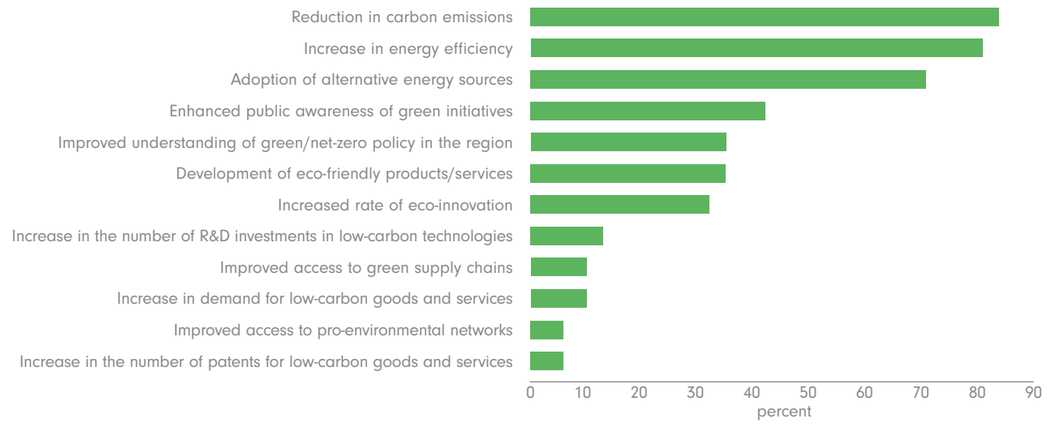
Original evaluation was undertaken by the University of Derby Team:
Dr Ghulam Mustafa, Dr Bruno Gallotta, Dr Hassam Waheed.

ENVIRONMENTAL IMPACT

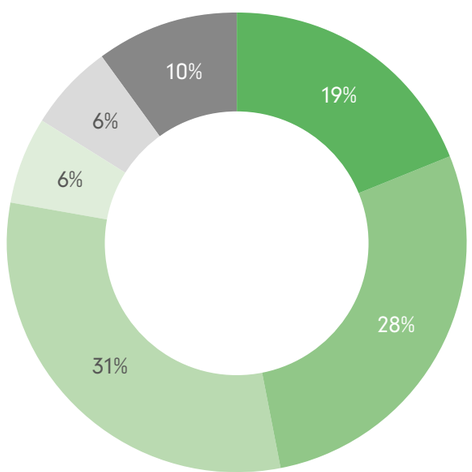
GEF support has greatly influenced various environmental impacts. The following tables highlight that GEF has been highly effective in reducing carbon emissions, increasing energy efficiency, and promoting the adoption of alternative energy sources. This is consistent with the programme's focus on promoting renewable energy and low-carbon technologies. Enhanced public awareness of green initiatives and the development of eco-friendly products/services were also significant.

- **77% strongly agree** GEF support will help their organisation in reducing energy consumption
- **Over 60% agree** GEF support will help their organisation in reducing waste
- **26% of businesses acknowledged** the main long-term benefit of GEF support as development of innovative green technologies

Types of environmental impact, %



GEF Projects by type



- Reduction in scope 1 emissions: **19%**
- Reduction in scope 1 and 2 emissions: **28%**
- Reduction in scope 2 emissions: **31%**
- Reduction in scope 3 emissions: **6%**
- Reduction in scope 1, 2 and 3 emissions: **6%**
- No change observed yet: **10%**

Most respondents **reported:**

- Reduction is scope 2 emissions - 31%
- Reduction is scope 1 and 2 emissions - 28%
- Reduction in carbon emissions - 84%
- Increase in energy efficiency - 81%
- Adoption of alternative energy sources - 71%

WHAT ARE SCOPE 1,2,3 EMISSIONS?

Scope 1 emissions:

This covers the Green House Gas (GHG) emissions that a company makes directly – for example while running its boilers and vehicles.

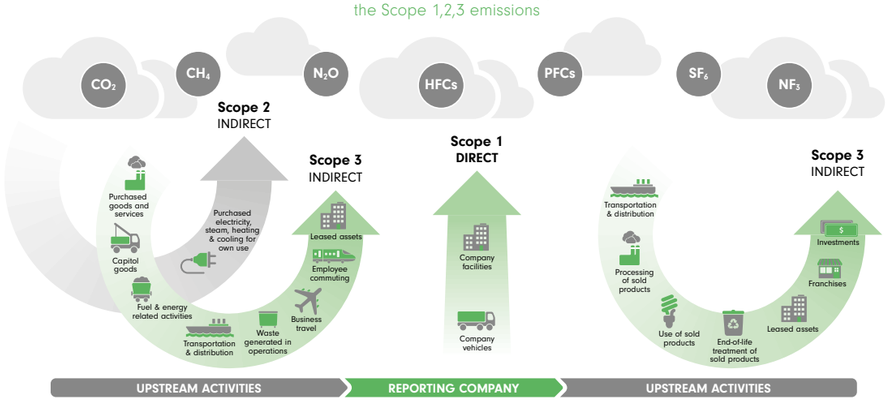
Scope 2 emissions:

These are the emissions it makes indirectly – like when the electricity or energy it buys for heating and cooling buildings, is being produced on its behalf.

Scope 3 emissions:

In this category go all the emissions associated, not with the company itself, but that the organisation is indirectly responsible for, up and down its value chain. For example, from buying products from its suppliers, and from its products when customers use them. Emissions-wise, scope 3 is nearly always much larger than scope 1 and 2 emissions.

Diagram helpful in visualising the Scope 1,2,3 emissions



OUR **BUSINESSES SAY**

Green 4 Developments provide design services and development of building projects, predominantly in the residential market.

The GEF funded Demonstrator project saw investment in the G4-MASTER construction system, an innovative and environmentally friendly, rapid construction light gauge steel framing system. Funding was utilised for R&D and supply chain development to help bring the system to market. The G4-Master system significantly outperforms an average Building Regulations compliant counterpart in terms of energy consumption and carbon emissions and has the potential to be net zero carbon.

"The support has allowed us to carry out critical testing both externally and internally. When we first started on the programme we had a very tough set of outcomes to achieve. We have moved the whole concept from design stage and theory through to the almost completion of the first house. In terms of sustainability initiatives the programme has allowed us to surpass all of our expectations. We have now received our 250 year Steel Construction Institute certification which was essential to the success of the programme. We have achieved a carbon negative house which is beyond what we expected but are very pleased with. All of this would not have been possible without the support of the programme."

ECONOMIC IMPACT

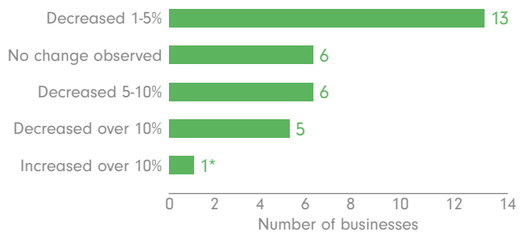
Responses from survey participants highlights that GEF has been successful in reducing the operational costs of most supported organisations.

Other areas where a significant proportion of survey respondents reported structural changes as a result of GEF support include the creation of new products or services, increase in production or output volume, improved ability to handle disruptions, and expansion into new markets or regions.

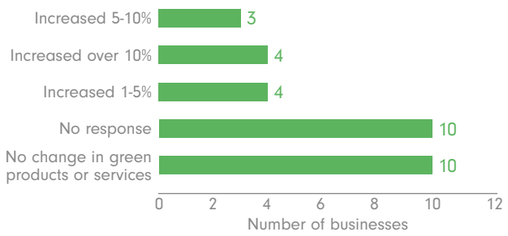
Changes in **business practice:**

- Over 80% of businesses report reduction in operating costs
- Over 30% report increases in revenue
- Over 25% report creation of new product and services

Changes in operating costs as a result of GEF support

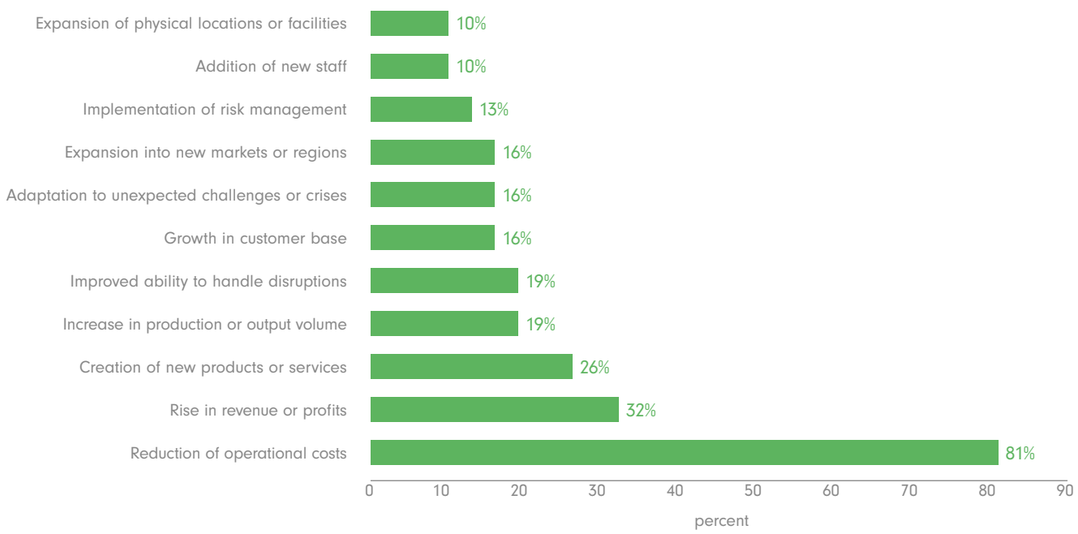


Changes in sales of green products and services as a result of GEF support



*A construction business that claimed increased in operating costs as a result of the GEF support had to invest heavily in the operational facilities expansion and hire new staff to ensure successful business growth

Structural changes as a result of GEF support, %



As a result of **GEF support:**

- 94% of businesses will further reduce operating costs long term 48% of businesses will increase a number employees medium-long term
- 68% of businesses will have an enhance brand reputation as a green organisation
- 94% of businesses will increase uptake of new technologies

"Without GEF support we would struggle to fund our innovative sustainable products."

(Construction business, small**)**

"The support provided by the Green Entrepreneurs Programme has been invaluable. Without access to funding, the project may not have been able to proceed."

(Retail business, medium**)**

"This funding is an essential support mechanism to drive innovation and local enterprise as well as facilitating impactful research that will help to mitigate the effects of climate change."

(Energy and water supply business, micro**)**

OUR **BUSINESSES SAY**

Brilliant Ideas

Brilliant Ideas are inventors and manufacturers of a myriad of construction safety and environmentally sustainable products.

The GEF funded project saw investment in the development of a lifting pin used in the production of precast concrete units. Primarily this would be an environmentally friendly solution that would remove the need to use an embedded steel pin in the concrete and will provide substantial carbon savings for the construction sector.

"The Green Entrepreneurs Programme has been invaluable in enabling us to continue with our lifting pin project. In all honesty with all the expenditure involved in developing the pin product, without the financial support from the Green Entrepreneurs Programme, we would of in the short term found it hard to continue with this product. We know the pin will be a fantastic product which will save thousands of tons of carbon in the construction industry. With the support we have received from the programme, this is a worthwhile investment in the short and long term as we know while this money is available, our development costs have been massively reduced saving money, both now and in the future."

SOCIAL IMPACT

Overall, the data suggests that the GEF had a positive impact on both the workforce of the participating businesses and the local community, with a particular focus on social mobility and staff wellbeing. In addition to this, the programme contributed to business resilience through effective collaborative relationship building opportunities.

"Since starting the project, the world has become a more unstable place to work in, but the understanding and financial backing from the Green Entrepreneurs Programme have provided stability."

(Manufacturing company, micro**)**

Social impact of the GEF by type, %

OUR **BUSINESSES SAY**

ARKWRIGHT SOCIETY

AT SIR RICHARD ARKWRIGHT'S CROMFORD MILLS

The Arkwright Society was created to preserve the heritage and history of Cromford Mills which is a UNESCO World Heritage Site.

The GEF funded project aimed to reinstate renewable hydro power through the installation of a waterwheel at Cromford Mills, as well as reinstating a hydro scheme in Cromford village. The project will see the Arkwright Society Ltd reduce its annual operating costs, enable it to reduce its carbon footprint, and support the local community and local economy.

"The support provided by GEF has been invaluable to us and its sustainability initiatives. With the financial support, we have been able to pursue our ambition of reintroducing water power to this historic site, which holds significant international heritage importance. The installation of the turbine and water wheel has not only started generating electricity, leading to tangible benefits in reducing our electricity bills, it is providing our visitors and educational groups / schools with an immersive and enhanced educational experiences, deepening their understanding of water power. This project shows what can be achieved on a community level and we see this project as a catalyst for developing further renewable energy potential on site and striving towards carbon neutrality."

GREEN ENTREPRENEURS PROGRAMME FUNDING FOR KEY LOW-CARBON PROJECTS

Derbyshire businesses have become trailblazers in the field of green technology and business innovation with the help of grant funding from Derbyshire County Council's Green Entrepreneurs Fund Programme.

Derbyshire County Council, which is working in collaboration with the University of Derby to deliver the Green Entrepreneurs Programme, is supporting small businesses, sole traders, partnerships and charities in Derbyshire with innovative low-carbon or alternative energy projects.

Councillor Tony King, Derbyshire County Council's Cabinet Member for Clean Growth and Regeneration, said:

"We set up our Green Entrepreneur Fund Programme to offer businesses and organisations in Derbyshire the confidence and financial back-up they need to help turn their pioneering ideas into reality.

These projects will help us along on our journey to cutting the county's carbon emissions to net zero by 2050. And by championing this type of business innovation, we believe that Derbyshire can become a leader of the field of the development of green energy, bringing a unique opportunity to bring greater benefits to local communities and local economic conditions to create high quality jobs driven by utilising the local skills base in engineering and manufacturing."

CASE **STUDY**

BM Tech Limited in Foston

BM Tech Recycling

Brothers Ben and James Morley are making great strides in the world of plastic recycling thanks to their grant from the Green Entrepreneurs Demonstrator Fund.

Having started out in 2005 as an engineering company specialising in designing equipment for pumping sand and gravel for quarries, they spotted a gap in the market for recycling plastic stripped out of water treatment plants and power station cooling towers at the end of its useful life.

Following a decade spent trialling different methods to turn the redundant plastic into a material that people wanted to buy and use, the duo are now able to recycle the plastic into a flake which is sold for use in manufacturing products such as drainage pipes, gutters, and ducting.

BM Tech Ltd are taking their operation to the next level with the help of a c.£112,000 grant to help them design and build two key pieces of kit.

The first piece of equipment will shred and compact the material removed from the cooling towers increasing the transport capacity from three or four tonnes per lorry load to up to 26 tonnes.

And the second piece of machinery is a 'pre-cleaner' to remove any unwanted debris from the plastic before it is processed. This is currently carried out by hand and significantly slows down the operation.

James said:

"Applying for the Green Entrepreneurs Fund has been a really positive process. We knew that the project would reduce carbon emissions by nature of us recycling PVC which has in the past proved hard to reuse.

But GEF has really challenged us to think about the carbon emissions generated in the production process and come up with solutions – which are to reduce the number of lorry journeys, and speed up our processes to reduce the time we need to have a large diesel generator running.

From a cash flow perspective, we just wouldn't have been able to run both these projects at the same time without the GEF grant. It's helping us to accelerate and make this project happen."

CASE **STUDY**

Callow Top Holiday Park

Callow Top Holiday Park (Callow Top) is a leisure, tourism, hospitality, and retail business. They run a caravan, camping and self-catering holiday park, which includes an on-site pub, restaurant and mini supermarket.

At the time of applying to GEF in November 2022, Callow Top had already begun their net zero carbon journey by introducing decarbonisation measures such as installing energy efficient LED lighting (largely motion sensor) and a large air source heat pump for their swimming and paddling pools. The introduction of roof mounted solar panels was the next phase of their plans, with it having both significant cost and energy saving potential, at a time when utility price increases were having a crippling effect on businesses.

Callow Top were successful in applying for GEF small grant funding of £20,000 in February 2023, which enabled them to purchase and install an 86.25 kW solar array on their property, which can generate in excess of 60,000 kWh of green energy per year.

Following the successful delivery of the project, Sue Deane, a partner at Callow Top, commented "The grant funding helped persuade all the business partners to make the investment. The economy was very volatile and unpredictable, so this financial help was very much appreciated. Without it I am sure this investment would not have taken place".

Not only has the business realised a significant reduction in their operating costs and reliance upon electricity from the grid, due to the investment they have realised some wider impacts with Sue reporting "Our customers are showing an interest in our solar installation and our commitment to being greener and cleaner. They are genuinely impressed. This is definitely beneficial for our reputation and will increase our customer base."

Following their positive experiences to date, Callow Top are keen to continue with ambitions to run a carbon neutral business. They have plans in place to install electric vehicle charging points on site for use by both customers and staff and are in discussions with GEF over potential additional support.

CASE **STUDY**

Longcliffe Quarries

Over the last 90 years Longcliffe Quarries (Longcliffe) have established their name in the UK limestone industry, becoming one of the largest suppliers of calcium carbonate powders and aggregates.

The company employs 170 people and they supply over 1 million tonnes of high-purity calcium carbonate products every year from their quarries in Derbyshire. Longcliffe's products include calcium carbonate, powders and granules, aggregates, as well as agricultural and speciality limes.

The company's Brassington Moor Quarry was established in 1927 and remains an integral part of the operations at Longcliffe. Following an on-site energy assessment undertaken by an external consultancy in 2020, an opportunity was highlighted to apply the use of the latest inverter drives on specific air distribution fans on one of Longcliffe's onsite Atritor mills, which grinds crushed quarried stone into fine aggregate powders.

To support the timely delivery of this investment Longcliffe were successful in applying for GEF grant funding of £20,000, which enabled them to purchase, install and commission the inverter drives with resulting significant energy and cost savings, as well as improved capacity and system control capabilities. The project was completed in April 2023.

Following the successful delivery of the inverter drives project, Ian McDonald, a director at Longcliffe, commented "The grant funding support from GEF enabled the project to secure enough internal financial support for it to be actioned".

The project was focussed on both growth in volume and the reduction in energy to produce the material for sale, with Ian reporting that in the first year they "achieved energy savings of over 90% of the original estimated savings".

These totalled 160,000 kWh, equating to over 33,000 kgCO2e. Such annual savings are comparable to 120,000 miles in a car, or the CO2 absorbed by over 1,500 trees.

Following their successful interventions to date, Longcliffe are continually looking at efficiencies on site, and have an ambitious wider strategy to achieve net zero carbon by 2030. Following on from their GEF supported project, the company will be installing a new re-designed Air Swept Mill, which reduces the energy required to produce their cementitious replacement powders. The company are now looking for solutions and to replace their current diesel engines.

PART 3

POLICY RECOMMENDATIONS

The programme evaluation included an analysis of the feedback and suggested recommendations from survey participants and supported organisations. This has been collated into the following priorities and recommendations.

PRIORITY 1 >

INCREASE FUNDING ALLOCATION, AWARENESS AND OUTREACH

1.1 Increase Funding Allocation

Allocate additional funds to support a wider range of green initiatives, enabling more organisations and individuals to participate and benefit from the programme.

1.2 Diversify Grant Types

Introduce a wider range of grant categories, such as seed funding, scale-up grants, and small and demonstrator/innovation grants, to cater to different stages of green businesses and projects.

1.3 Enhance Programme Outreach and Awareness

Develop targeted marketing campaigns across various channels, including social media, industry events, and local media, to reach a diverse audience and raise awareness about the programme. Develop a portfolio of impact case studies.

1.4 Engage Green Entrepreneurs Ambassadors

Collaborate with influential figures in the green sector to serve as programme ambassadors, promoting the benefits and opportunities offered by the programme.

PRIORITY 2 ›

STRENGTHEN INNOVATION, TECHNOLOGY AND CIRCULARITY FOCUS

2.1 Incorporate Innovation and Technology

Promote tech-driven solutions: Encourage the adoption of technological innovations, such as IoT, AI, and blockchain, to enhance the efficiency, scalability, and impact of green initiatives.

2.2 Facilitate Tech Collaboration

Create platforms and networks that connect green entrepreneurs with tech developers, innovators, and solution providers, fostering collaboration and co-creation of sustainable solutions.

2.3. Encourage Next Generation Innovation

Support student-led green projects and startups through dedicated funding, mentorship, and access to resources, fostering innovation and entrepreneurship among the next generation.

2.4 Promote Circular Economy Principles

Educate and train: Offer workshops, courses, and resources on circular economy principles, emphasizing waste reduction, resource efficiency, and sustainable product design.

2.5 Incentivise Circular Practices

Provide incentives, such as grants, tax breaks, or certifications, to businesses that adopt and implement circular economy practices in their operations and products.

PRIORITY 3 ›

ADDRESS KNOWLEDGE & INFORMATION GAPS

3.1 Introduce Mentorship and Training

Establish Mentorship Programme: Create a programme where experienced green entrepreneurs and industry experts provide guidance, support, and insights to new participants.

3.2. Offer Training Workshops

Organise regular training workshops, webinars, and seminars on topics such as green technology, sustainable business practices, and financial management tailored to the needs of green entrepreneurs.

3.3. Offer Training Workshops for Business Support Professionals

Develop and Launch a comprehensive training programme for business support professionals to develop their green skills and competences.

3.4 Green Growth Focus

Provide information and guidance, establish online platforms for businesses to take opportunities for green growth regionally, nationally and internationally. Strengthen competitiveness and encourage internationalisation strategies of regional businesses.

PRIORITY 4 ›

STRENGTHEN COLLABORATION, GOVERNANCE, NETWORKING

4.1 Strengthen Partnerships

Forge strong partnerships with universities, colleges, and research institutions to integrate green entrepreneurship into academic curricula, facilitate research collaboration, and offer student placements.

4.2. Business Ecosystem Governance

Develop business support governance system in the region to ensure variety, continuity and place specificity of the business support provision long term.

4.3 Organise Networking Events

Host regular networking events, industry conferences, and collaborative workshops that bring together green entrepreneurs, industry experts, investors, and policymakers.

4.4 Build Strong Communities

Create online platforms and communities where participants can connect, share knowledge, collaborate on projects, and access resources and support.

PRIORITY 5 ›

MONITOR AND EVALUATE IMPACT

5.1 Implement Programme Monitoring Framework

Develop a comprehensive monitoring and evaluation framework with key performance indicators (KPIs) to track the programme's progress, measure impact, and identify areas for improvement

5.2 Ensure Feedback Mechanism

Establish a feedback mechanism that allows participants to share their experiences, challenges, and suggestions, enabling continuous learning and adaptation.

ACTIONS

ACTION STEP 1.

Disseminate findings of this report to the business support providers and local authorities in the region and wider, and hold supporting discussions and action planning.

ACTION STEP 2.

Collect and ensure accessibility and transparency of the evidence-based data about the effectiveness of the green business support programmes in the region.

ACTION STEP 3.

Initiate conversations with green business support providers in the region and ensure co-ordination in delivery, provision and governance of the support.

ACTION STEP 4.

Develop and deliver training for business support advisors to support green skills development and awareness about the latest advances in technology, business practice and governance to support regional green growth.

ACTION STEP 5.

Establish a Regional Forum and/or Steering Group for green business support providers to ensure co-ordination of provision, exchange of ideas, innovation and development of join opportunities for word-class green business support eco-system.

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