

# Eco-I North West: Supporting England's North West businesses innovate to deliver low carbon solutions in all sectors.



This £14m project delivered by 6 of the region's leading universities follows 8 years of award-winning R&D activities. Eco-I NW opens up huge regional resource to businesses, facilitating resilience, innovation, collaboration and the development of new low carbon products, processes and services.

# Why work with us?

- Access award-winning business and innovation support
- Benefit from knowledge and skills demonstrated to be world leading in a UK Science Innovation Audit
- Gain access to people, facilities, understanding and resources to support your business in 6 leading regional research institutions
- Double the potential return on R&D investment through working with a university
- Address key challenges and lead a sustainable revolution in your sector
- Discover and work with a network of like-minded businesses, peers, stakeholders, collaborators and global contacts



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Get in touch to discuss your project today!

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Eco-I NW can support your organisation with short-term innovation or research projects and with long-term technical R&D. Please see the diagram below for overview outlining how we can help.



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## Case Study 1: Stephenson's Dairy



Lancaster University Management School's Low Carbon Innovation Forum supports businesses interested in adopting low carbon practices. Stephenson's Dairy signed up with a view to making savings.

Steph Stephenson, company owner explained, "The great thing about the programme is that it's shown me nothing is outside your reach, and that everything you do, no matter how small, has a positive impact."

Right from the start, the programme opened her eyes to possibilities for reducing both costs and carbon footprint. For Stephenson's Dairy, the standout experience was the company visit to Lancaster City Council, at which the participating SMEs saw for themselves the scale of today's plastic waste challenge.

This hot topic of plastic waste remains at the forefront of Steph's thinking, "We're looking at delivering milk in glass bottles and we're also moving forward with supplying customers with pergal machines, so we can stop delivering 2L containers. It all adds up, and I'm keen to carry on looking at alternatives."

Research has shown that reusing glass bottles up to 50 times gives a lower carbon footprint than single use plastic containers.

Steph adds that the Forum has really cemented her belief in people working together to come up with new ideas – and says that having access to the support from the University has been fabulous. "It's great for a small business – a real positive impact!"



## Case Study 2: North West Recycling Limited



The University of Central Lancashire are working with North West Recycling Limited (NWR) to investigate reducing their environmental and carbon impacts, whilst developing business opportunities. NWR operates in and around Cumbria and the North West.

NWR wanted to evaluate its business operations and energy consumption with regards to processing construction and demolition waste. NWR engaged in the internship support and the University undertook an energy and waste analysis for them, this generated options for low carbon solutions.

The site manager at NWR Mr Dave Bamber, said: "Lacking in time, knowledge and expertise, the collaboration with the University helped our company to investigate the options available for on-site generation of sustainable and renewable energy. What we have learned with is that we have the potential to generate 60% of the energy required on site from readily available waste".

The Centre for Waste and Resource Management at UCLAN supports SMEs in the areas of resource management, minimisation of waste, and improvement of processes and controls. This expertise coupled with the state-of-the-art facilities can help North West SMEs adopt and benefit from new and innovative technologies and processes which allow them to continue to prosper in a low carbon future.



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### Case Study 3:

## Kendal Mountain Festival



The University of Cumbria provided valuable support to Kendal Mountain Festival (KMF) through partnering the company with a PhD researcher. The researcher investigated how Kendal Mountain Festival could roll out their business model and vital eco-messages to other international festivals.

The Festival consists of 200 events over 4 days and celebrates outdoor culture, films, literature, and art. With climate change gathering momentum, the festival encourages young local activists and has implemented important carbon reduction measures. Organisers aim for sustainability at every level, including cutting waste, exemplary recycling - and creating a business model for touring events.

With the support of the university's knowledge and expertise the PhD research project successfully produced a sustainability tool-kit which KMF could share with festivals around the world.

CEO Jacqui Scott said it was about delivering long lasting impact by inspiring thinking through entertainment. "We are acutely aware of the complexities of delivering a pro-environmental festival with integrity, which actually challenges behaviour. The plan is to share our expertise among those with the same objectives at heart."



### Case Study 4:

## Energy Fairies Limited



Award-winning energy efficiency company Energy Fairies Ltd accelerated product development thanks to the low carbon business support provided by Liverpool John Moores University.

The company required support to develop an innovative idea for a thermal blind system made from sustainable materials. Assistance included rigorous investigations, and with access to the university's exemplar facilities the team developed a proof of concept and created a prototype retrofitted thermal insulation kit. In addition, a carbon assessment for the product was conducted.

Energy Fairies now have a good idea of the performance, comfort level, heat loss, and potential reduction in greenhouse gas. The team are hopeful that in due course, the project will result in a new product to market.

"Being a small business, accessing support for R&D and prototype testing has been invaluable" said Rechelle Griffin, Director at Energy Fairies Ltd.

Liverpool John Moores University has several years' experience in delivering Low carbon programmes, bringing millions of pounds of benefit to the economy, increasing the effectiveness of businesses in a variety of sectors and reducing carbon emissions by thousands of tonnes.



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## Case Study 5:

# Marlan Maritime Technologies Ltd.



The University of Liverpool has partnered with Marlan Maritime Technologies Ltd since 2012 through various PhD research projects.

Through this partnership a business opportunity was identified that led to the development of a new product providing a unique radar-based solution to coastal hydrodynamic and bathymetric monitoring. This technology reduces the need for traditional large scale carbon intensive sea defences such as concrete structures.

The current research project is using digital photography to determine coastal morphology and track changes due to tides, waves, sea-level rise and storms, to provide a full spectrum of tools for monitoring coastal changes.

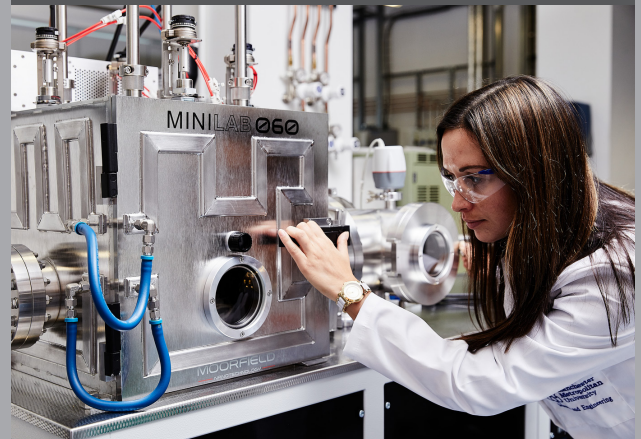
This award winning (three Mersey Maritime Awards, 2017-20) R&D collaboration, has led to the University of Liverpool, the National Oceanography Centre and Marlan working closely on a wide variety of commercial and academic projects in the UK and internationally.

This is a prime example of how developing relationships with the regions research expertise can increase a company's R&D capacity, create new products and open new markets.



## Case Study 6:

# Engine Clean UK



Engine Clean UK were able to develop a new commercial product with the business support provided by Manchester Metropolitan University's state of the art Fuel Cell Innovation Centre.

The Centre helps businesses develop new products and services utilising hydrogen and fuel cell technology. The facility provides access to fuel cell, micromechanics and analytics laboratories and the university's academic team. To date the centre has successfully supported organisations to iterate new business models and to develop new innovations in transport, energy management and electricity generation.

Engine Clean UK benefitted from access to the centre's facilities and with the support of university experts, have developed a commercial product which utilises hydrogen to increase the efficiency and reduce the emissions in diesel engines.

Mandy Parkinson, Head of Business and Public Engagement at Manchester Metropolitan University said, "Now more than ever supporting our regions businesses to meet the net-zero target is essential and this consortium brings together expertise from across the region to help them meet that challenge."



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## Case Study 7:

# Silverwood's Waste Management



Silverwood's Waste Management Ltd identified a waste product as a potential soil treatment and crop enhancer and is now working with a PhD researcher on a 3 year R&D collaboration with Lancaster University's Centre for Global Eco-innovation (CGE).

The UK produces 100,000 tonnes of waste cement bypass dust (BPD) every year, which typically goes to landfill. Silverwood's have recognised this waste material as a potential alternative to fertilisers and lime, due to its alkalising properties and high potassium content.

In partnership with the university, Silverwood's have investigated and substantiated the benefits if utilising this waste within UK agriculture, both to sustainably manage soil health, acidity and to increase crop yields. Research indicates that this product works well and could lead to higher crop yields, improved soil health and reduced waste going to landfill.

Julian Silverwood Managing Director at Silverwood's said, "Working with CGE has allowed us to take steps to produce research-led products that provide sustainable alternatives to conventional agricultural management practices. Obtaining a greater understanding of the environmental effects of applying BPD within agricultural situations will undoubtedly provide Silverwood's with a commercial advantage."



# We work across a range of sectors and research disciplines. Our key themes are:



Energy



Water



Natural Capital



Food



Resource Efficiency



Waste



Air Quality

## Get in touch to discuss your project today:

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