

**North Western Universities Purchasing Consortium Ltd**



## A blue plastic bag, partially filled, with a black bottle cap visible inside. The bag is crumpled and has a black drawstring at the top. The background is plain white.

**W**elcome the eleventh edition of EConnect, the NWUPC's e-newsletter focusing on Sustainable practices and projects from across our member and supplier base. There are some fantastic projects being undertaken by our members and suppliers alike and we are delighted to be able to shine a spotlight on them.

If you would like to feature in our next edition, please contact **Rikaya Knott**.

# A Weight Off Your Mind About Plastic Use



cromwell  
polythene



With concern mounting about global plastics usage, Cromwell Polythene – one of the UK's leading suppliers of sacks, bags and speciality products for the storage and collection of waste and recyclables-showcases a lighter, cost effective and more environmentally-friendly plastics range.

The LowCO2t™ range – including disposable aprons, laundry bags and now several varieties of refuse sacks – offers high performance, lightweight products.

Since the products require less material to achieve the same performance standards, they come packaged in smaller cartons meaning that the volume of plastic used is minimised, as are the carbon emissions during production and transport. Less storage space is required too.

These many positive attributes mean that the LowCO2t™ range is highly cost effective and with growing demand for a reduction in the volumes of plastic in circulation, LowCO2t™ offers customers a more resource efficient and environmentally responsible alternative to bigger, bulkier products in the marketplace.

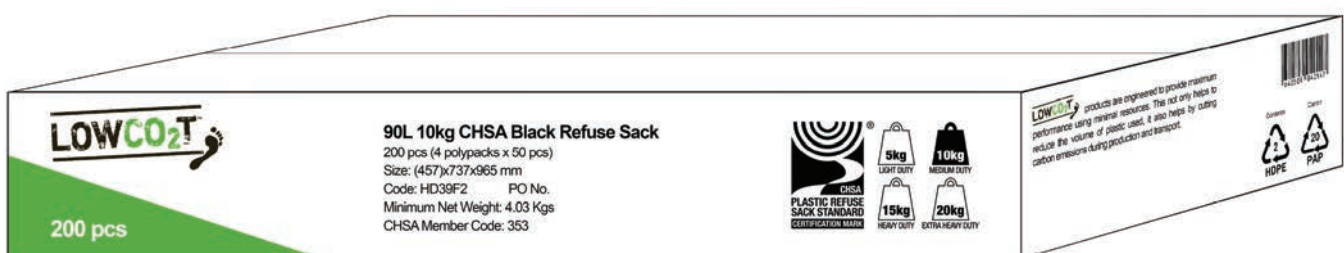
Cromwell Polythene Managing Director, James Lee, said:

*"We have been among the leading protagonists of 'closed loop' recycling, having used recovered waste packaging in the production of our recycled black refuse sacks for many years. During this time, we have pioneered the need for increased performance from polymers at lower thicknesses to reduce the amount of plastic used."*

*"The LowCO2t™ approach means we can offer a range of products that make the most efficient use of resources and provide a robust challenge to sacks made from other blends of polythene. For every tonne of plastic that is recycled, there is a 1.5 tonne saving in CO2, whilst thinner products can be transported in larger quantities, requiring fewer trips."*

*"Plastics have been having a hard time in the media recently, but they are essential for modern life, and, if manufactured and used responsibly, they can benefit the environment and enrich our lives."*

<http://cromwellpolythene.co.uk>



## The Sustainable Growth Plan

Our parent company, Kingfisher Plc, recently re-evaluated the group approach to sustainability. We spent time understanding how sustainability connects with what really matters to our customers.

Our research re-emphasised that most people find making sustainable choices hard work. Often it feels too complicated or time consuming. Four common themes emerged strongly from our research and have guided the update to our strategy.

### Creating good homes for everyone

How sustainability can create value for our business, our customers and their communities



## Sustainability at Screwfix

By integrating sustainability into our business, we can build a company that can grow and succeed in the long term. We want to help our customers get their jobs done quickly, affordably and right the first time. Our sustainability plan supports this mission in several ways. Sustainable product options, sourcing policies and supplier ethical auditing all contribute to our position of product

leadership. We also look at our own business operations to reduce environmental impacts. Improving the way we deal with product packaging, energy use and waste all mean that we can provide value and convenience across our multi-channel offer without a disproportionate environmental and human cost.

-Liz Bell, HR Director

*Liz Bell*

# Sustainable Products

## For Our Customers

We want to make it easy for our customers to choose great quality, affordable, sustainable products.

Sustainability credentials can mean that a product has been sourced ethically; has closed loop elements or helps customers to save money by saving energy and water. To help identify some of our products we have created helpful logos used in our catalogues and online.

**SAVE  
WATER**

### Save Water

Many of our water using products meet best practice standards, so whenever you see this symbol next to a product you know it can help save water. For example, our self-closing non-concussive basin taps turn off automatically after approximately 9-13 seconds.



**SAVE  
ENERGY**

### Save Energy

All sorts of products can save energy in a building, LED lighting, insulation and TRVs.



**SOLVENT  
FREE**

### Save Energy

All sorts of products can save energy in a building, LED lighting, insulation and TRVs.



## Brushless Motor Technology

In addition to products marked with logos we have a selection which make use of the latest technologies for more efficient or longer lasting products. Brushless drills are one of our many products that help customers live smarter, by getting more from less, re-using, or using longer. They are more reliable and efficient, giving a longer lifespan and better performance.

## Sustainably Sourced Timber

Timber is used in many more products than you might think. It is thought that demand for timber will triple by 2050 with implications such as wood shortages and possible global price increases. But we know that our customers rely on many of these products to get their jobs done. So, for the past 5 years, from the big items like sheds and doors to smaller ones like hammers and pencils we make sure the timber is sustainably sourced and certified by either FSC® (Forest Stewardship Council®) or PEFC (Programme for the Endorsement of Forest Certification).

Currently Screwfix have gained a 96% achievement of timber by volume for FSC or PEFC certified products. In addition, the paper we use within the business, including our catalogues and publications are also printed on sustainably sourced paper. We are proud of our achievements so far but there is still a lot of work ahead of us. For full details of our sustainability plans and achievements please visit [www.screwfix.com/environment](http://www.screwfix.com/environment)



# Creating a Smart City

## – The Triangulum Project

How can you make a city a better place to work and live? With 70% predicted to live in urban areas by 2050, we need to develop smart innovations on how we communicate, move around, manage our buildings and get our energy in our cities.

With electricity demand in the UK set to double by 2050, the energy system is developing into a more diverse network with many sources of power, combining the traditional centralised model of power generation and distribution, with renewable generation and more local, decentralised energy systems. But can the current energy system cope with this change and can buildings use energy in a smarter way?

The Triangulum project is looking at how to develop cities fit for the future focusing on three key themes of Energy, Mobility and ICT. It is a Horizon 2020 project funded by the EU, developing smart city innovations across three Lighthouse Cities of Manchester, Eindhoven and Stavanger, creating replicable solutions for follower cities.

Within the energy work stream, Siemens is working to transform Manchester Oxford Road's Corridor into a 'Smart Quarter', with three key partners Manchester City Council, The University of Manchester and Manchester Metropolitan University.

The aims of these innovations are to reduce energy bills and carbon emissions, flatten peak demand on the power network and increase the use of renewable and low carbon energy within the city. There are five main projects in the energy stream:

**Central Controller**

**Building management optimisation at Manchester Art Gallery**

**Battery storage at Manchester Met**

**Grid Independence study**

**Engagement campaign with Manchester Oxford Road residents**

## Central Controller

We have created a city-level cloud based energy management platform, known as a Virtual Power Plant. The platform provides visibility of energy consumption throughout core buildings in Oxford Road, enabling insights from data which enable us to put measures in place to reduce energy consumption and help show us where we can engage with people from

specific buildings. The platform integrates with individual Building Energy Management Systems (BEMS), which manage the environmental conditions of buildings. By doing this, Siemens are able to condition the BEMS to operate with an insight of the electrical grid. This means that at times of peak demand and high energy prices, the Central Controller can instruct the BEMS to reduce consumption - helping to reduce peak-load on the electrical network. Reducing peak-load decreases the likelihood of the UK's energy system operator instructing back-up generators for extra energy and avoids the associated pollution. The Central Controller coordinates asset output at either a building, campus or city level demonstrating how a new energy economy can be created throughout a smart city.

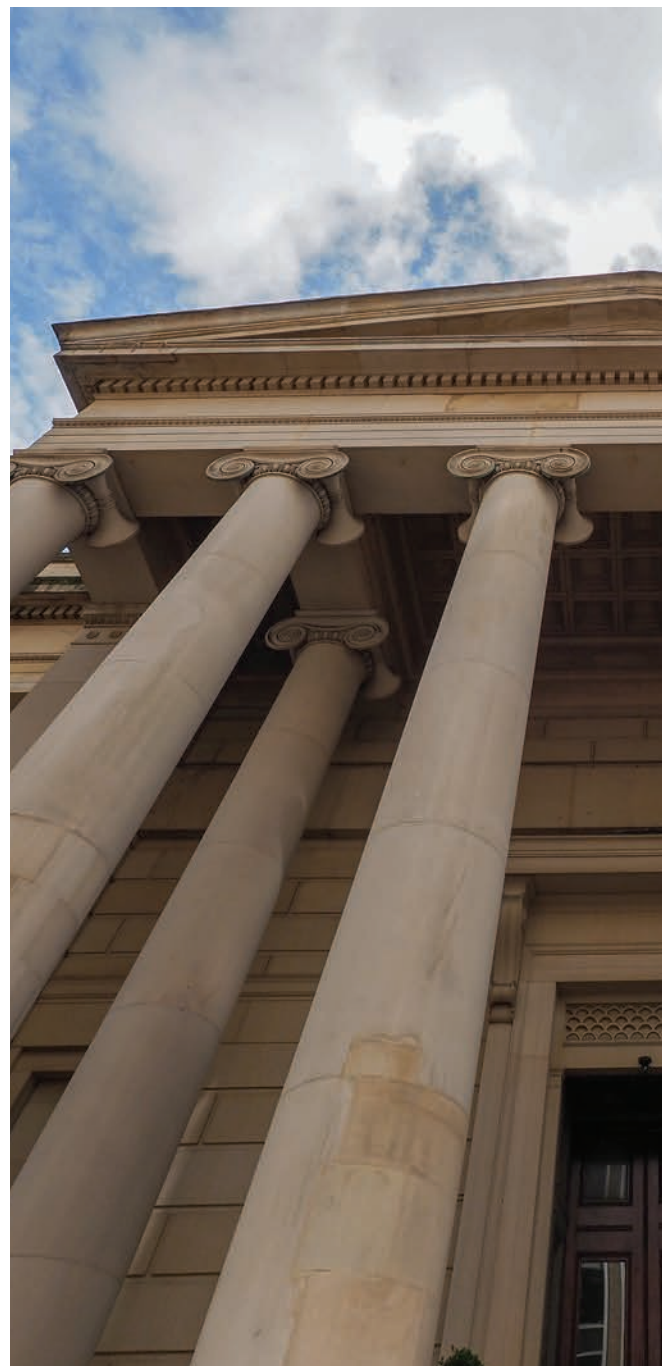
In demonstrating a smart and decentralized energy system, the Central Controller integrates with flexible electrical energy storage assets with green generation, and low carbon assets such as solar PV or wind turbines, which have a more intermittent generation, to ensure a constant electrical supply.

By bringing together flexible load, storage and generation assets throughout the city into a smart cloud-based management system, Siemens are demonstrating how sustainable solutions can drive operating cost reductions, reduce city emissions, engage citizens and also outline how city stakeholders can create additional revenues from their existing assets and estates.

## Building Management Optimisation

When making a building sustainable, looking at how much energy your building consumes and reducing this to its optimum is the first step in an energy improvement programme. Siemens worked with the Council to undertake a series of 'Investment Grade Audits' (IGA's) which assess how the Manchester Art Gallery is currently operating vs. its original design parameters; and how the introduction of new technologies could reduce energy consumption and benefit the buildings and its users.

The audit on the Grade-2 listed building in the heart of the city advised that a replacement BEMS would return significant savings for the site. As a result, the team installed a new Siemens Designo CC BEMS platform which is expected to deliver circa £40,000 savings, with a 24% reduction in gas consumption and 12% saving in electricity use. And an expected 190,404 kg/year of CO2 emissions savings. Such Behind the Meter (BtM) innovations help ensure a sustainable future for historic buildings, but also preserve the art at the correct temperature for the city of Manchester and its inhabitants.



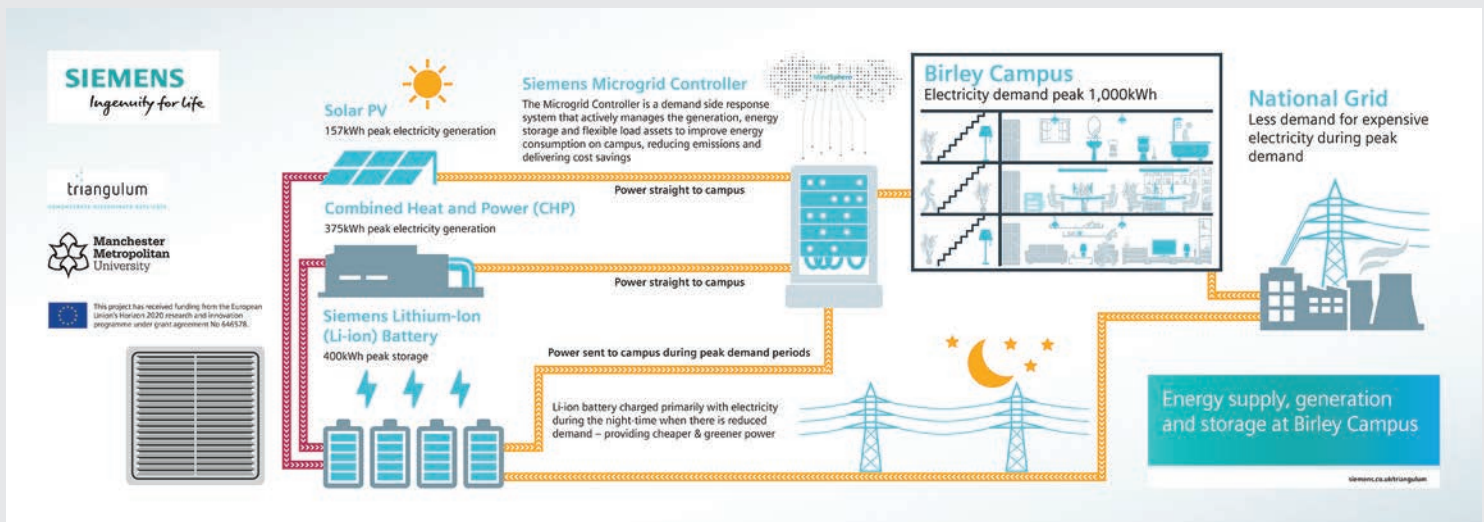
# Battery storage at Manchester Met

Siemens have been working with Manchester Metropolitan University (MMU) on their onsite energy system and have installed a Lithium-ion battery to integrate with their current onsite generation where solar panels have also been recently installed. Primarily charged at night-time from their grid supply, the 400kWh Lithium-ion battery storage works with the 375kWh Combined Heat and Power generation and the 157kWh solar panels to supply the Birley Campus with cheaper, greener power. These are all controlled by a microgrid controller with a demand side response system that actively manages generation, energy storage and flexible load assets to improve

energy consumption on campus, reduce emissions and deliver cost savings. As the UK's number 1 green university in 2017's People and Planet University League, sustainability is a key topic in the curriculum, with students learning about the energy centre and battery storage. The students will be actively involved in a campus energy consumption reduction trial via an app.

Time lapse video of installation:

<https://twitter.com/SiemensUKNews/status/1009420829942140928>



## Grid Independence Study

With the ambition to develop Oxford Road Corridor into a 'Smart Corridor' Siemens carried out a study to emulate conditions for partial or full 'Corridor' energy independence from the grid using unconstrained and constrained network analysis. With ambitions for the future of 20-25% of energy being delivered by local, low carbon resources, Siemens investigated how renewable technologies could be integrated into the existing electrical network. The current electrical system in the UK has been designed for energy to flow one way from the point of

centralised generation like power stations to the point of use. With the increase of local and onsite energy generation and traditional energy consumers becoming producers and trading their energy, the energy system now needs to be bidirectional so energy can flow both ways. The system has not been designed to have many points of local generation so it needs careful analysis as to where new generation can be put in with the right infrastructure sitting around it to enable it to balance with the existing grid.

# Engagement Campaign

We are coming to the end of the installation phase of the project and are moving towards engaging the residents of Manchester Oxford Road in this project to understand how they can have an impact on the energy they use. As part of Triangulum, Siemens are also investing in education on how each individual can impact the energy system and help reduce carbon emissions.

Daily routines and time of energy usage can impact individual energy consumption and the carbon emissions generated as extra energy generation will kick in at peak times – creating extra carbon emissions.

## Case Study: Manchester Energy

### Birley Campus Micro-grid

#### Key Facts

Through Triangulum, a number of interventions have been installed at Manchester Metropolitan University's Manchester Birley campus. To complement the existing Combined Heat and Power plant and the private heat and power network at the campus, the project has installed solar photovoltaic panels, Electrical Energy storage system capacity, an innovative Demand Side Response platform and a Siemens Microgrid Controller. The controller connects and manages assets throughout the private network whilst seamlessly integrating to the wider city Virtual Power Plant energy management system known as the 'Central Controller'.

#### Benefits

As a 'demonstrator' site, the Triangulum interventions will allow Siemens and Manchester Met to achieve;

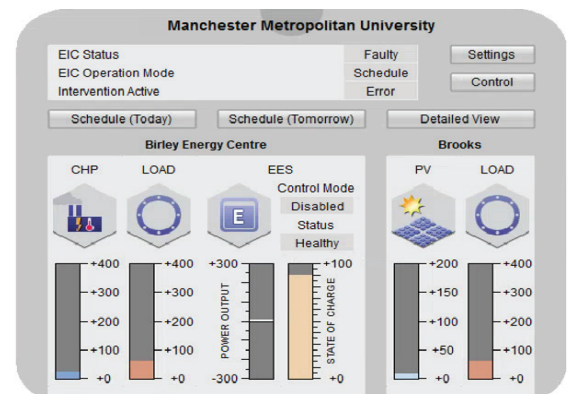
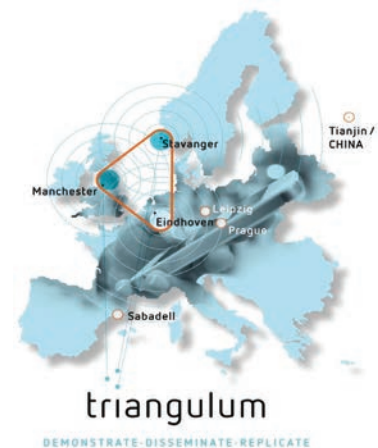
**Reduced energy bills - high energy prices at peak times**

**Flattening of peak demand, helping to balance the electricity transmission system**

**Significant carbon savings**

**Increased network resilience and improved energy management**

Energy savings will further endorse Manchester Met's 2018 standing as People and Planet University league's 'UK's Greenest University', based on environmental and ethical performance.



Manchester Met Energy dashboard



157kwp of solar pv panels have been installed

The Microgrid and Central Controller are capable of managing a series of different energy sources at different locations, from a single platform. This gives the capability to optimise energy generation and consumption across a range of sites.

## Lessons learned

Early identification and engagement of stakeholders is critical to the success of the innovation

Investment rationale for existing and emerging energy technologies are rapidly changing – utilising flexible control platforms enables new business model to be applied – ensuring organisations are not left with stranded assets.

## Implementation

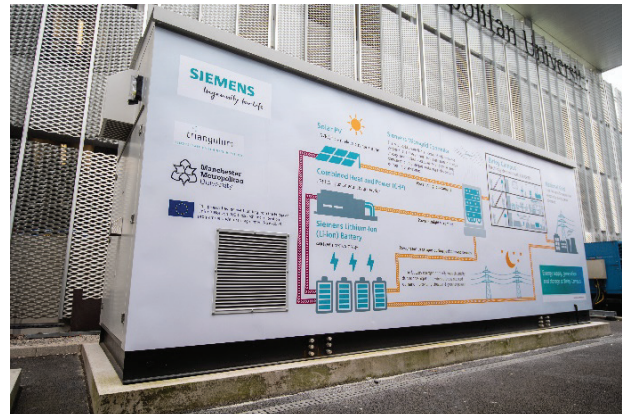
157kWp of solar photovoltaic panels were installed on the Brooks building by contractor HT Forrest Ltd.

The 400kW/480kWh Siemens Siestorage Electrical Energy Storage system, Microgrid Controller and Central Controller technology were installed by Siemens.

Works on the site were project managed by the partner organisations with specific resource from NPS NW Ltd.

## Triangulum Project Information

Triangulum is set to demonstrate, disseminate and replicate solutions and frameworks for Europe's future smart cities. The Lighthouse Cities Eindhoven (NL), Manchester (UK) and Stavanger (NO) are integrating sustainable mobility, energy and ICT to be replicated and disseminated in the three Follower Cities Leipzig (DE), Prague (CZ), Sabadell (ES) and beyond.



Siemens Energy Storage Container.

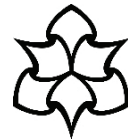
## Local Partners

**SIEMENS**

*Ingenuity for life*



**MANCHESTER  
CITY COUNCIL**



**Manchester  
Metropolitan  
University**

**nps group**

Follow us on Twitter @Triangulum\_EU or visit our website <http://triangulum-project.eu>



## Sustainable Energy Efficient Infrared Heating Solutions, Step Out of the Shade

Smith Bros (Caer Conan) Wholesale is proud to work in partnership with Orange Electric to provide Universities with a range of energy efficient Infrared Heating Panels through the NWUPC Electrical Materials Supply Framework. We are committed to provide cost effective energy efficient solutions with high performance and quality for the Universities Estate Buildings.

There is no better and healthier warmth than the principle of the sun. Infrared heating works like the sun; the sun's long waves do not heat the air but heat solids which store the warmth and then radiate back into the air. This is noticeable when you step out of the shade into direct sunlight where it immediately feels much warmer even though the air temperature is the same. Using this principle it is possible to create an agreeable room environment very effectively and much more cost-efficiently than with conventional convection heating.

Orange Electric produce a visually stunning Infrared Heating Panel range, designs and bespoke images that can be easily wall or ceiling mounted, providing the flexibility to design a tailored solution to the requirements and interior of the property. The Infrared Heating Panels do not require expensive piping, a socket is sufficient and thanks to its elegant design, the slim 2.5cm thick panels integrate harmoniously into any space.



There are no service or maintenance costs and improved energy efficiency compared with conventional heating systems as Infrared Heaters convert 100% of the energy consumed into warmth. They heat quickly and accurately in combination with room thermostats providing perfect heat according to your needs, essential for a comfortable and healthy climate promoting a dust and bacteria free air.

# Case Study

## Stockwood Discovery Park Luton Culture Museum

The Culture Museum required energy efficient and comfortable heating for their staff in the learning and education office. They required an innovative but sensitive solution to heat the office, which contains a vaulted ceiling design, to preserve the original features in the building such as exposed beams.



The solution was designed with a range of sleek glass wall mounted infrared panels. The panels were evenly mounted around the office and connected with Honeywell programmable controls, allowing for areas to be zoned for optimum control and efficiency, with optimisation controlling the maximum start up and earliest switch off determined by the learning mode from the thermostats. Energy monitoring equipment was installed before and after installation of the new Infrared solution to show the energy cost savings.

Sue Davis, Strategic Energy Manager for the Museum explained "The museum has been impressed with the performance of the Infrared Panel Solution and the savings made against the existing heating. Currently we are creating a proposal to install throughout the site". To learn more on how energy efficient Orange Electric infrared heating systems can improve your environment and save money on maintenance and running costs, call Smith Bros Wholesale today on **01302 366922** or email **info@smithbrosuk.com**



## Give It Don't Bin It!

### Hit Campaign from the University of Manchester

The 'Give It Don't Bin It' campaign aims to encourage students not to leave behind unwanted items, as they change from halls of residence to student houses, or even return home for the long summer break. Through this campaign, students are given the opportunity to donate unwanted items rather than items going into landfill, which can be costly to remove and environmentally damaging.

For the University of Manchester, the 'Give it Don't Bin it' campaign has raised over £1.3 million for British Heart Foundation, and are proud to be the first university partnership campaign in the UK to collect donations raising more than £1 million as part of an end of term scheme. The British Heart Foundation collect many of these items, from clothes, books, non-perishable food items, pans and crockery to electrical items and furniture.



Alongside the British Heart Foundation, The Partnership Group consists of The University of Manchester, Manchester City Council, Manchester Student Homes and Manchester Metropolitan University. It represents the equivalent of almost 80,000 students who live in central and South Manchester.

Approximately 80 University of Manchester students volunteer as part of the campaign, through putting 20,000 donation/recycle packs together, and then distributing the packs to all student houses across South Manchester, alongside raising awareness of the impact of the campaign on the environment and people with heart disease.

Through the hard work and generosity of those involved within the campaign, over 26,472 bags of unwanted items were donated in 2017, equating to 211.8 tonnes and resulting in a £74,500 saving from landfill. These donations have helped save 2,155,244kgs of CO2 greenhouse gas emissions and saved the weight of 35 elephants in waste going to landfill. Furthermore, they have raised over £376,000 for BHF and over 2,564 meals were donated to Manchester Central Foodbank from food which would have otherwise been discarded.



Professor James Thompson (Vice-President for Social Responsibility at The University of Manchester) said:

*"I am very proud of the work that the Manchester Partnership has delivered through the 'Give It Don't Bin It' campaign. It shows that by working together with our partners across the city we can make a huge impact to help the lives of people across Manchester".*



'Give It Don't Bin It' is the most successful end of term reuse campaign in the UK and has received some very prestigious awards, including:

-  **Best Reuse Project of 2017 (Chartered Institute of Waste Management, Sustainability and Resource Awards)**
-  **Manchester Evening News, Waste Prevention Project of the Year (2014)**
-  **Highly Commended 2016 Award (EAUC Green Gown Awards for Community Innovation)**
-  **Finalist for the Guardian University Awards in 2015**
-  **Winner of the Innovation In Student Experience category at the CUBO (Colleges & University Business Officers) Awards 2018**
-  **Winner of the Environmental Sustainability Category at the University of Manchester Social Responsibility Awards 2018**
-  **Winner of the People's Choice Category at the University of Manchester Social Responsibility Awards 2018**
-  **Winner of the Reaching Higher Category for the AUDE (Association of University Directors of Estates) Awards 2018**
-  **Winner of the Best Reuse and Waste Prevention Category for the CIWM (Chartered Institute of Waste Management) Awards 2017.**

Simon Gillespie (Chief Executive for the British Heart Foundation) said:

*"Thank you and congratulations on this remarkable achievement by the Manchester Partnership. The generous donations and amazing volunteering have supported vital life-saving research, including 58 projects across the city, into devastating and often life-threatening heart and circulatory diseases that affect 7 million people in the UK and hundreds of millions globally".*

# Thomas Kneale

## Register their Commitment to Equality

Thomas Kneale & Co Ltd (TK) is an Approved Supplier to the NWUPC Soft Furnishings Framework Agreement and uniquely enjoys the distinction of being recognized across all three constituent Commodity Group Lots of Bedding and Bathroom Textiles, Student Starter Packs and Window Coverings. The organisation has ensured that people-based policies and development have remained as strategic core objectives and feel that rather than simply 'saying it', being able to evidence this to internal and external stakeholders and customers is a crucial way of demonstrating their active commitment.

Thomas Kneale is a member of The Equality Register which is managed by The Association of Equality Scheme Providers (AESP). There are almost 6,000 organisations across the UK who are members of the Register, a very small fraction of the total eligible to apply. Thomas Kneale's equality practices and policies have been examined and approved as part of the registration process. Certification facilitates access to the very latest equality information only available to members via the Equality Register website. Importantly it ensures that not only can Thomas Kneale prove their compliance with all relevant legislation but also prioritise incorporation in a way which drives corporate culture and informs objectives.

A pertinent example of just how Thomas Kneale applies equality culture in a very clear way is through its membership of The Living Wage Foundation. TK are one of only 4,500 UK organisations who voluntarily commit to guarantee all employees are paid a minimum independently-assessed LWF hourly rate, currently £8.75 per hour across the UK and £10.20 in London. Thomas Kneale applies this rate as a base point for all staff remuneration regardless of who they are, the job they do, or their age. This is in distinct contrast to, and



should not be confused with, HM Government's National Living Wage whose required hourly rate is currently more than 10% less than that of the Living Wage Foundation, with a best rate only for those over 25. There is no London weighting either. Thomas Kneale strongly believe that under 25's should not be penalised financially for doing the same or similar jobs to those over 25 and that staff remuneration must, at the very least, afford individual staff and their families a standard of living which fairly incorporates a cost of living calculated to include the purchase of a basket of household goods and services wherever they may live.

Thomas Kneale also works closely with their long established partners in their global supply chain to ensure compliance with these equality policies and practices. By offering advice and support and through conducting audits to monitor best practice Thomas Kneale ensure that products supplied under their Arbry® brand are manufactured through a process where their principles of fairness and equality are consistently applied regardless of country of origin.



# The HE Sector Leads the way on **Sustainable Procurement!**

Thanks to the commitment of Higher Education purchasing consortia, the leadership being demonstrated by NWUPC and over 40 universities who support their suppliers to develop sustainability action plans; we are seeing the emergence of a very powerful sector story.

As well as the impressive statistics we are seeing an increasing number of universities utilising the data and other outputs from the tool within core procurement practice, this includes;

**Including the data as part of Category Strategies to support the targeted supplier engagement on sustainability**

**Using the action plans as part of Contract Management meetings and reviews**

**Interrogating the supplier data to identify the needs and challenges for SME's on a range of environmental and social issues – and then developing plans to help them!**

**Universities working together to demonstrate HE contribution to regional targets**

The leadership being demonstrated by the sector is encouraging other sectors to take an even more proactive approach to sustainability and social value including Local Authorities.

The inclusion of actions on the Sustainable Development Goals and the strengthening of actions on Modern Slavery as part of the recent tool refresh, means that the opportunity for users and the sector to demonstrate a positive sustainable impact continues to grow. This is one of the factors which have led to record numbers resigning to use the tool.

NETPositive Futures are committed to supporting the sector use the data and the tool in the most effective ways possible. We have committed to providing free training webinars to users wanting to get more out of the tool, and providing advice on how to demonstrate the positive impact of sustainable procurement. If you would like your free webinar get in touch.

For any further information or to book a webinar please contact [jimmy@netpositivefutures.co.uk](mailto:jimmy@netpositivefutures.co.uk) and lastly why not have a look at our **bespoke website** for further ideas.

## The **Contribution** of the **HE Sector** in Numbers

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# 4,030

businesses supported to  
develop sustainability  
action plans

# 90%

of which are SME's

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# 40,000

sustainability actions committed  
to with over

# 15,000

started or completed

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# 5,000

pieces of evidence demonstrating  
impact across

# 50

action areas

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# 73%

of businesses are aware  
of the Sustainable  
Development Goals and

# 93%

are aware of Modern Slavery

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# 32%

of suppliers to the sector have  
a named individual responsible  
for sustainability

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