



MIDLANDS
GREEN
INNOVATION
NETWORK

Together for net-zero

WELCOME

HOW TO DECARBONISE YOUR BUSINESS AND SAVE ENERGY

Thursday 30th March 2023
11:00 to 13:30
Energy Innovation Centre
Tyseley Energy Park, Birmingham

Delivery partners

MIDLANDS
ENGINE

ERA ENERGY
RESEARCH
ACCELERATOR

fsb^{co2}
Experts in Business



HOW TO DECARBONISE YOUR BUSINESS AND SAVE ENERGY

EVENT SCHEDULE

11:25	Welcome and overview of the Midlands Green Innovation Network and ERA	ERA team
11:30	Decarbonising your business and demystifying Net Zero	Andy Whyte Sustainability and Circular Economy Practitioner Sustainability West Midlands
11:50	How to save energy and reduce carbon emissions	Gregor Hoefter Founder GridDuck
12:10	Developing a sustainability strategy	Tommy Allsopp Net Zero Delivery Lead Tyseley Energy Park
12:30	Audience Q&A	Delegates
12:50	Event closing with sum-up of findings	ERA team
13:00	Lunch hospitality along with tours of the Tyseley Energy Park	

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INSIGHTS SESSION 1

DECARBONISING YOUR BUSINESS AND DEMYSTIFYING NET ZERO

Andy Whyte
Sustainability and Circular Economy Practitioner
Sustainability West Midlands

HOW TO DECARBONISE YOUR BUSINESS AND SAVE ENERGY

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Midlands Green Innovation Network 30-3-23

Sustainability West Midlands:

Decarbonising your business and demystifying Net Zero



30 March 2023

Andy Whyle

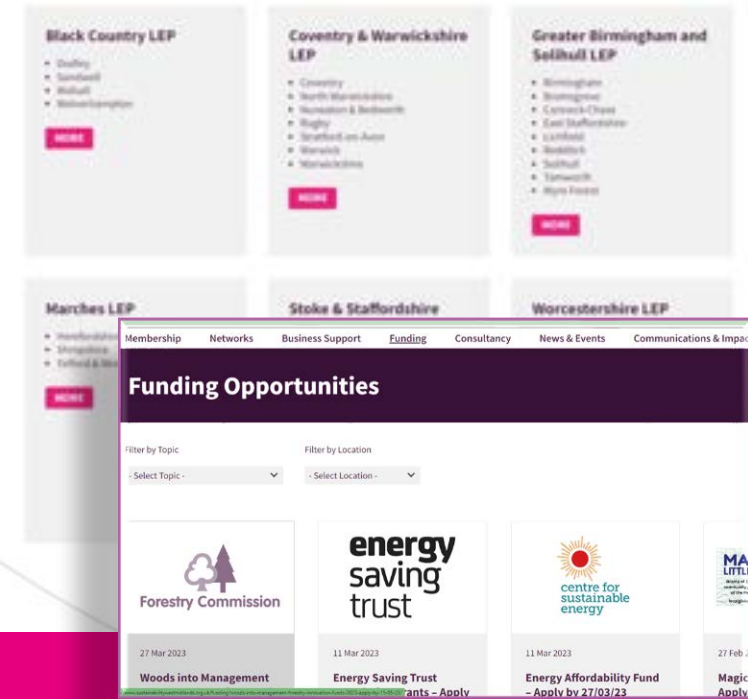
andy.whyle@swm.org.uk

@SWMtweet 



About Us

- Sustainability adviser for leaders of the West Midlands
- Established 21 years
- Independent, not-for-profit company working across all sectors
- **Our vision:** The West Midlands is leading in contributing to the national target of net zero greenhouse gas emissions by 2050 whilst addressing health inequality and driving inclusive growth
- Coordinate and monitor the only existing regional Sustainability Roadmap; a framework to 2030
- WM Sustainable Business Support Hub



About Us

- Three main areas of work:
 - **Membership:**
 - We are a cross-sector membership organisation with a difference; we connect, promote, and prioritise our members throughout everything we do.
 - **Consultancy:**
 - We provide trusted independent, expert advice across all sectors and areas of sustainability.
 - **Engagement:**
 - We use the power of storytelling and sharing of best practice to inspire action on sustainability. We use our communications, events and networks as platforms for engagement.

Our 150 members:



Contents

- What is Net Zero?
- Why should you bother?
- What can be done - Case Studies
- What can you do - Net Zero Business Pledge

The 2021 IPCC report

- Human activities **affect all** the major climate system components.
- Some recent hot extremes observed over the past decade would have been **extremely unlikely** to occur **without human influence**.
- Human influence has unequivocally warmed the planet.
- This is the first IPCC report to say with *full confidence* that humans are the cause of increased warming.



So what?

- If we do nothing to reduce GHG:
 - Temperatures will continue to rise
 - Overwhelming consensus of impacts expected:
 - Flooding
 - Heatwaves
 - Storms
- Level of temperatures rise will determine how severe and irreversible such impacts will be.

<https://www.theccc.org.uk/uk-climate-change-risk-assessment-2017/>



So what?

If not for the climate...reducing emissions has other benefits...

- Saves us money on utility bills
- Insulation = warmer, more comfortable buildings
- Low emission vehicles = Cleaner air
- More active transport = Less congestion
- More active transport = Better health
- Better waste management = Less rubbish
- Improved biodiversity = more and cheaper food
- Less Business disruption = better business continuity



Cossington Meadows © Leicestershire & Rutland Wildlife Trust

What is Net Zero?

- When man-made emissions of greenhouse gases (GHG) to the atmosphere are balanced by removals over a specified time period.
 - Carbon Dioxide
 - Methane
 - Nitrous Oxide



Net Zero Guidelines

- Launched at COP27 (Nov 22)
- Set a common path for:
 - Definition of “net zero” and other related terms
 - Clarifying the differences in emissions scopes
 - High-level principles for anyone wanting to achieve climate neutrality,
 - Actionable guidance on getting there as soon as possible, by 2050 at the very latest
 - Transparent communication, credible claims, and consistent reporting on emissions, reductions and removals.
- [ISO - Net Zero Guidelines](#)

The **UK Net Zero Strategy** sets out how the UK will deliver on its commitment to reach net zero emissions by 2050.



ISO at
COP27

ISO Net Zero Guidelines (IWA42)
Press launch at COP27 (2022)



Carbon Footprint



Amount of carbon dioxide (CO₂) emissions associated with all activities of a business or other entity (e.g. individual, building, country, etc.)

Can include **indirect emissions**

e.g. how much energy did it take to produce the things you own?

Metric to understand how efficient your business operations are.

<https://footprint.wwf.org.uk/#/>

What does Net Zero mean for businesses?

[Climate Change Act 2008 \(2050 Target Amendment\) 2019](#)

Committed the UK to reduce all GHG emissions to net zero by 2050

Press release

UK enshrines new target in law to slash emissions by 78% by 2035



Risks of not reducing emissions

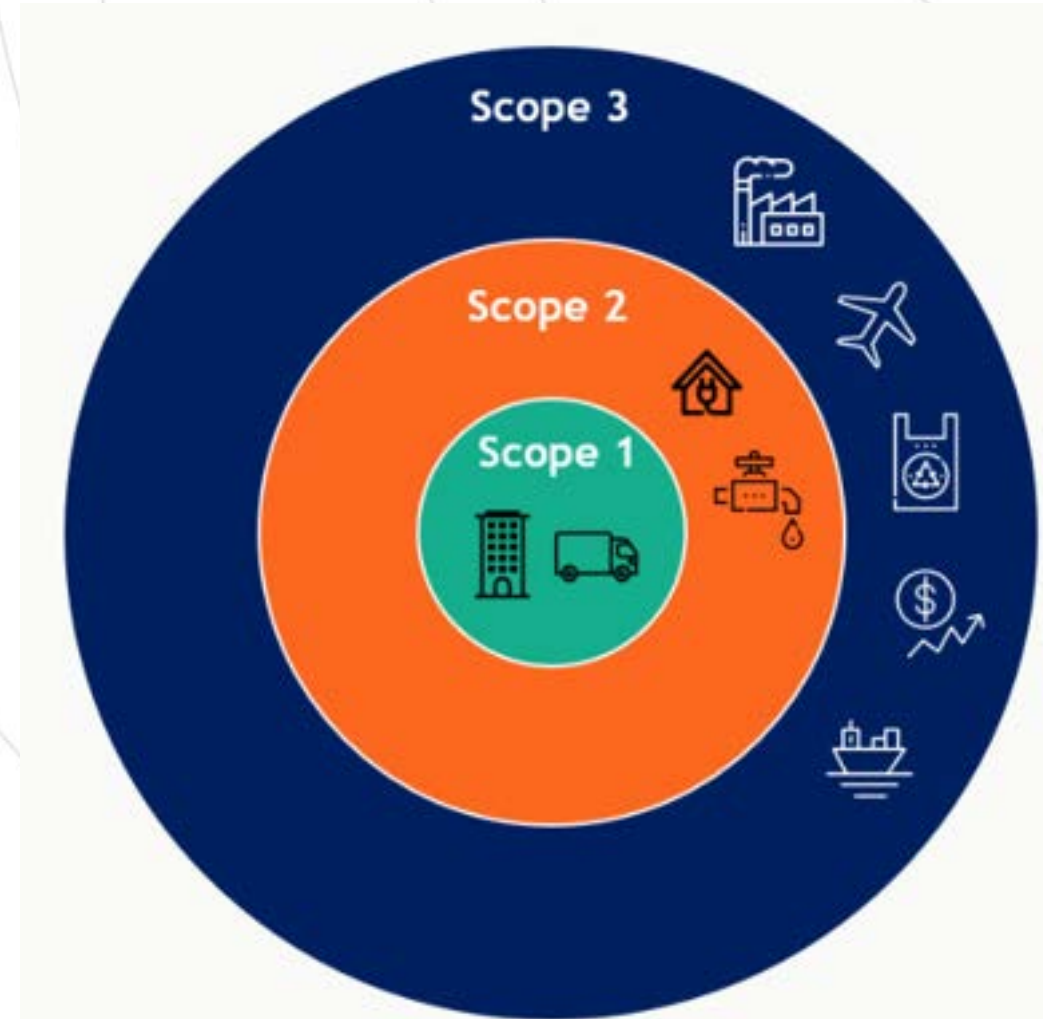
- Increased costs and taxes
 - From international markets, like the EU
 - From Climate Change Levy's
 - Future carbon tax expected to increase
- Not meeting consumer demand
 - 73% of global consumers stated they would definitely or probably change their consumption habits to reduce their environmental impact
- Losing contracts with your customers because you don't align with their Net Zero goals (Crown Commercial Services PPN06/21, NHS)



What are the emission scopes?

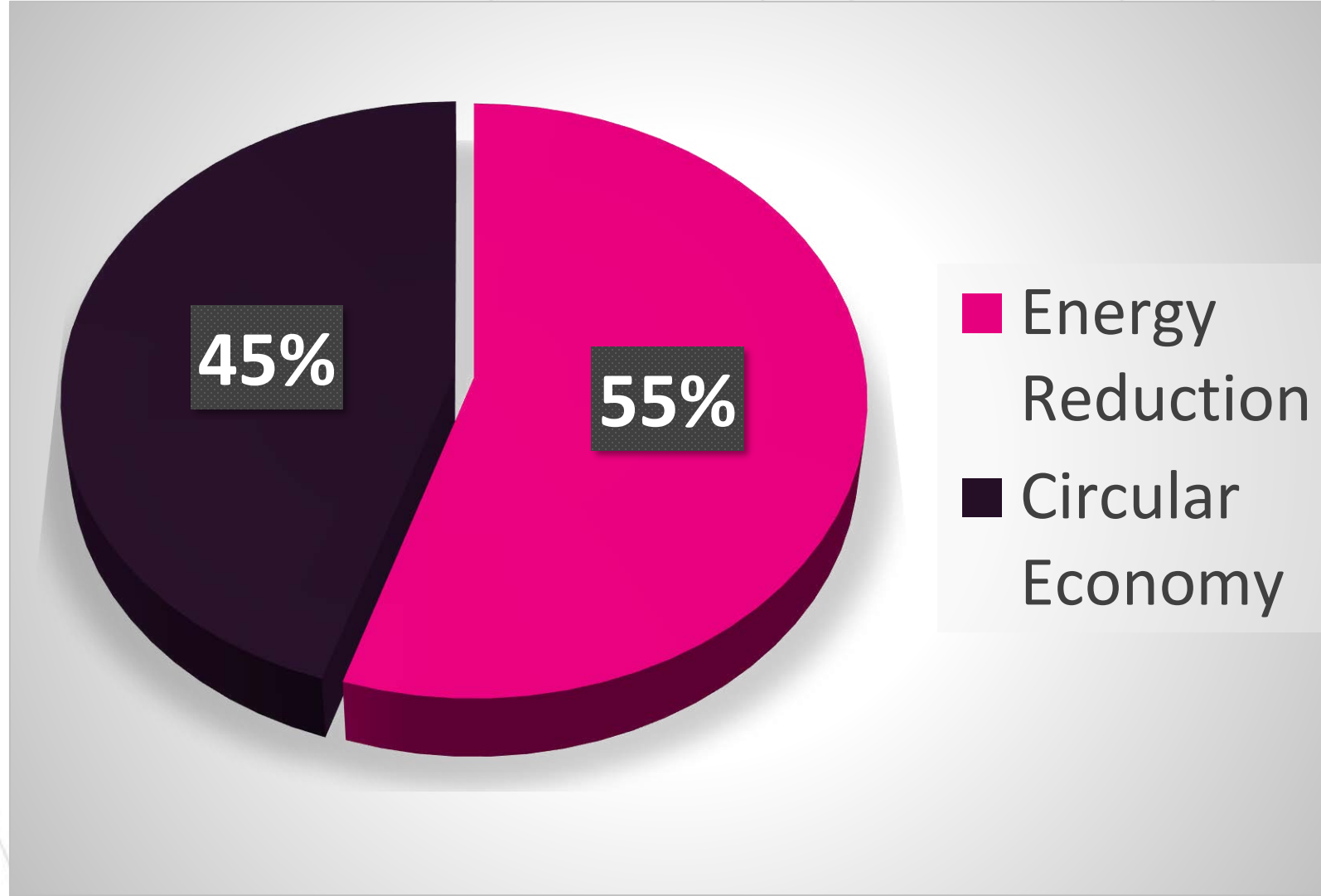
Carbon emissions are calculated in 3 scopes:

- **Scope 1: Direct emissions** produced within an organisations control, such as burning fuel, company vehicles and processes.
- **Scope 2: Indirect emissions** associated with procured energy, such as electricity, heat or steam
- **Scope 3: Emissions throughout your value chain**, both up and downstream.



Source: Anthesis: [What are Scope 1, 2 & 3 Emissions?](https://www.anthesisgroup.com/what-are-scope-1-2-3-emissions/) - Anthesis Middle East & Africa (anthesisgroup.com)

Net Zero Components



What does a Net Zero SME look like?

- The [Science Based Target Initiative](#) is a globally recognised Net Zero standard for businesses.
- The SBTi Net-Zero Standard covers a company's entire emissions, including scopes 1, 2, and 3.
- The typical cost for an SME to obtain a SBTi Net Zero standard is estimated at £750.
- More simple and streamlined [route](#) for SMEs:
 - Choice of two targets (aligned with well-below 2°C of warming, or below 1.5°C).
 - Less intensive requirements around Scope 3 emissions.

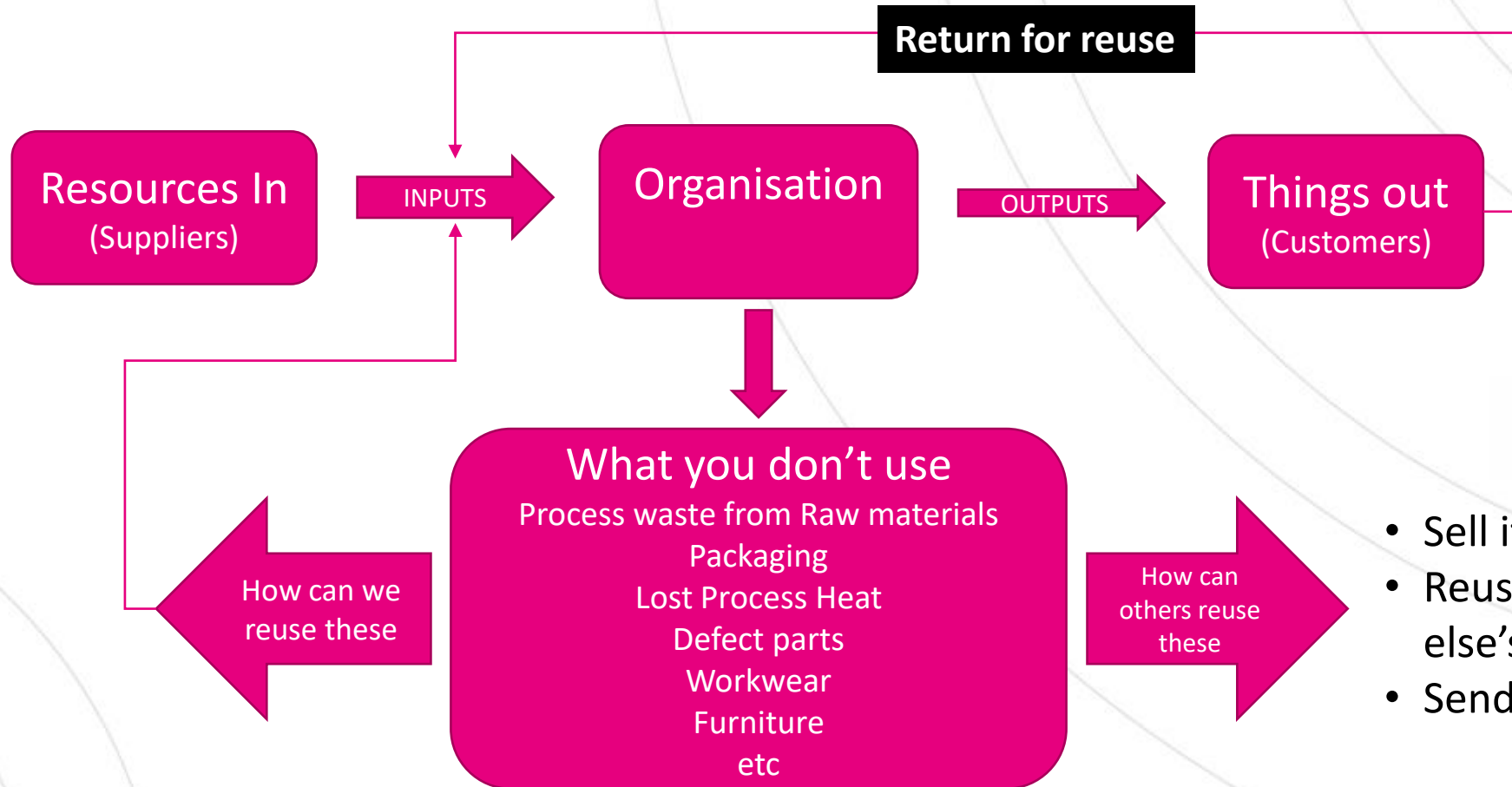
Carbon trust: Route to Net Zero Standard

- The Carbon trust has also developed a Net Zero standard:
 - Helps organisations measure and manage emissions
 - Inform carbon reduction strategies
 - Align targets for the future
- Experts at the carbon trust offer guidance through the whole process.



Case Studies and Examples

Waste : Circular Economy Mass Balance



Solutions

- Sell it as it is (reuse)
- Reuse in someone else's process
- Send for Recycling

Waste and Carbon Saving

- **Case Study: Staysafe PPE Ltd** – Reuse (SWM Resource Efficiency Award 2022)
- Cignpost -Mobile covid testing sites across UK (airports, film studios, universities and technology centres)
- Lab coats - **£25** Sent for disposal (incineration)
- Now washed and repaired (NHS approved process)
- Up to 200 per week at £5 each (saving **£20** each)
- Cost saving **£208,000** per year
- Waste saving **13 tonnes**
- Carbon saving: **191 tonnes** CO₂e



Net Zero

Carbon Saved
191 tonnes

Energy

- Reduction in stages
 1. **Data** – establish what your usage is (base line)
 2. **Eliminate** – switch off what doesn't need to be running
 3. **Energy efficiency** – relace with more efficient equipment (ROI)
 4. **Generate** your own energy



Energy: Easy – Small measures

LED lighting:

- Replace fluorescent, halogen, tungsten etc lighting
- A range of different types
- Available with Person-in-Room sensors to further increase savings
- Can save around 60% in cost over fluorescents, so quick payback



Draught proofing

- Draught-free buildings are comfortable at lower temperatures
- Cheap and easy to do using brush strips/adhesive foam strips/fillers

Energy: Intermediate – Insulation

- At least 1/3 energy consumption is for space heating
- Lofts/roofs/floors/cavity walls/solid walls can be insulated.
- May need planning permission if there is a change to appearance of building.
- **Case Study:** BTS Procurement Ltd installed insulation (with £7,000 grant), expect to save £2,300 annually on heating bills



Energy: Intermediate - Voltage Optimisation

- Voltage optimisation/regulation
 - Reduces and regulates incoming voltage
 - Works well for high energy consumers with long operating hours and older inefficient systems

Case Study: Powerstar (SWM member)

- Provided M.I. Dickson Ltd with voltage regulation system
- **Reduced energy consumption by 13%**
- Reduced maintenance costs as lower voltages reduce operating temperature of equipment



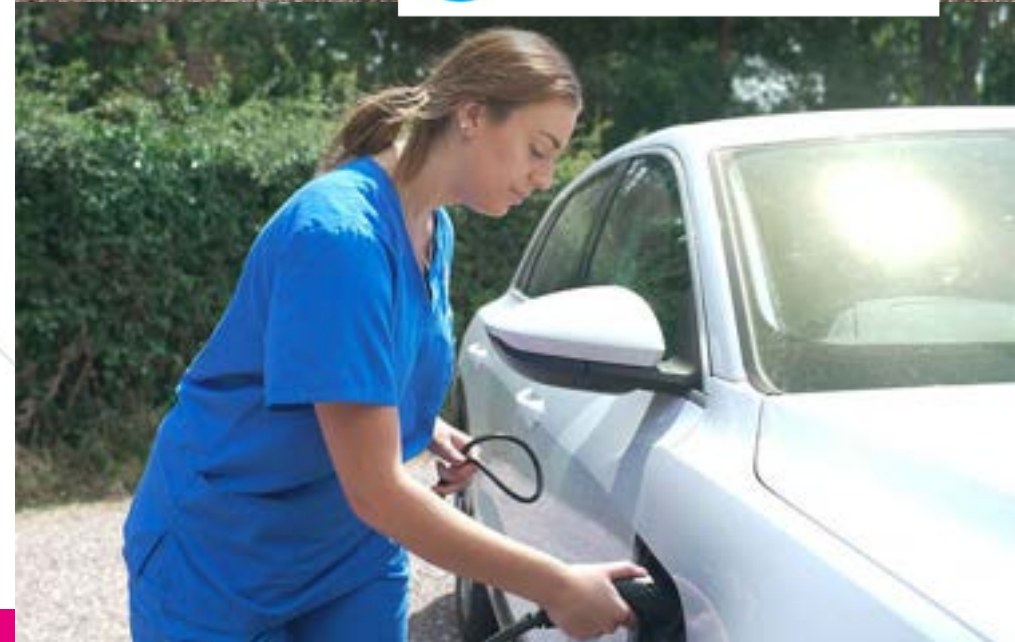
Stretch – Decarbonise Your Energy

- Solar photovoltaic panels – generate electricity from sun
- Need southerly orientation and minimal shading
- Can be combined with battery storage
- Co-Op Solutions
 - Working with commercial energy users
 - Co-op's explore feasibility, manage installation and keep ownership of panels
 - Commercial energy user enters into a Power Purchase Agreement with– offers lower cost for electricity from day 1



Transport - EV

- 2030 : All cars manufactured in the UK will be fully electric or hybrid
- Businesses need access to electric vehicle charge points either for their own vehicles, their staff or their customers.
- Scope 3 Carbon savings for your Net Zero Plan



Case Study: Lord Combustion



West Midlands Net Zero Business Pledge:

- Designed with business, administered by SWM
- Launched by WM Mayor Andy Street in March 2021
- ~100 diverse pledged businesses
- >25% industrial including manufacturing
- Most need support with decarbonisation:
 - Measuring
 - Monitoring
 - Reducing
 - Reporting



Pledge activity 2023

- SWM will continue to support WMCA with management of the Pledge
- New website!
- Net Zero Toolkit
- Drop in sessions throughout the year to hear from businesses around key issues
- Celebration event later in the year to celebrate pledger's net zero efforts
- Offers to pledgers for support through WMCA's energy and environment programme areas
- Opportunities for organisations that want to play a more active role in the Pledge:
 - Peer to peer networks around topics or sectors if there is interest and not duplicating other activity
 - Attracting sponsors



Welcome to the home of the West Midlands Net Zero Business Pledge

As a leader in the green industrial revolution, we plan to become a net zero carbon economy by 2041.

Join a growing number of organisations in the West Midlands leading the way, by making a net zero pledge.

Start your Pledge



What is a Net Zero Pledge?

By making a Net Zero pledge, organisations across the West Midlands demonstrate their commitment to reducing their carbon footprint and reaching net zero. Through their pledge, organisations have access to expert advice and guidance around translating their pledge into...

By making a Net Zero pledge, organisations receive:

- ✓ Access to a network of other organisations taking on the shared journey to net zero.
- ✓ Access to quality guidance materials and support sessions.
- ✓ Updates about regional efforts to become net zero by 2041.
- ✓ Opportunities to showcase their net zero activities and share best practice.
- ✓ Promote a demonstrate their commitment to accountability around Environmental, Social & Governance (ESG) agendas.

We work with Sustainability West Midlands (SWM) who administer the pledge and provide pledger guidance and support.

Make Your Pledge



How to make your pledge

Once your pledge has been submitted and reviewed, your business will be able to:

- ✓ publish the official pledge logo on your website and marketing material
- ✓ get involved in opportunities to showcase your net zero activities
- ✓ gain access to business networks and guidance to support your pledge commitment
- ✓ receive updates about regional efforts to become net zero by 2041

Find out how?

Some of our Pledgers:

Wylde Connections Shoosmiths Cemex SIPS Education Ellisons

Net Zero Pledge Case Studies

Register and connect with other members within the West Midlands to learn more about their Net Zero journeys.

- Birmingham Airport Net Zero Case Study**
- Shoosmiths' Net Zero Case Study**
- Wylde Connections Ltd Net Zero Case Study**

The Net Zero Business Pledge Directory

All the following Business have pledged to the Net Zero Green Revolution

Search

Sort by: Company Name

More filters

Organisation Location	Sector	Number of Employees
Birmingham Airport Ltd Birmingham	Hospitality Industrial Engineering Information Technology Legal Services Manufacturing Media	Large 250+ employees
Brandenburg UK Dudley	Manufacturing	Medium 50-249 employees

West Midlands Combined Authority NET ZERO Business Pledge

Home Pledged Businesses Guidance & Support Contact Us

Welcome to the West Midlands Net Zero Business Pledge (WM NZBP) Guidance and Support Page.

Here you will find a range of resources that can support you in your organisation's journey to net zero.

Sustainability West Midlands Business Support Hub

The Business Support Hub on the Sustainability West Midlands website pulls together help and funding available across the region to drive your net zero journey. WMCA work in partnership with Sustainability West Midlands to deliver the pledge.

What is this toolkit process for?

The toolkit net zero process



Any questions?

Midlands Green Innovation Network 30-3-23

Sustainability West Midlands:

<https://www.sustainabilitywestmidlands.org.uk/>



Andy Whyle

andy.whyle@swm.org.uk

@SWMtweet 





INSIGHTS SESSION 2

HOW TO SAVE ENERGY AND REDUCE CARBON EMISSIONS

Gregor Hoefter
Founder
GridDuck

**HOW TO DECARBONISE
YOUR BUSINESS AND
SAVE ENERGY**

Delivery partners



Using data to reduce energy use

Midlands Green Innovation Network

Agenda

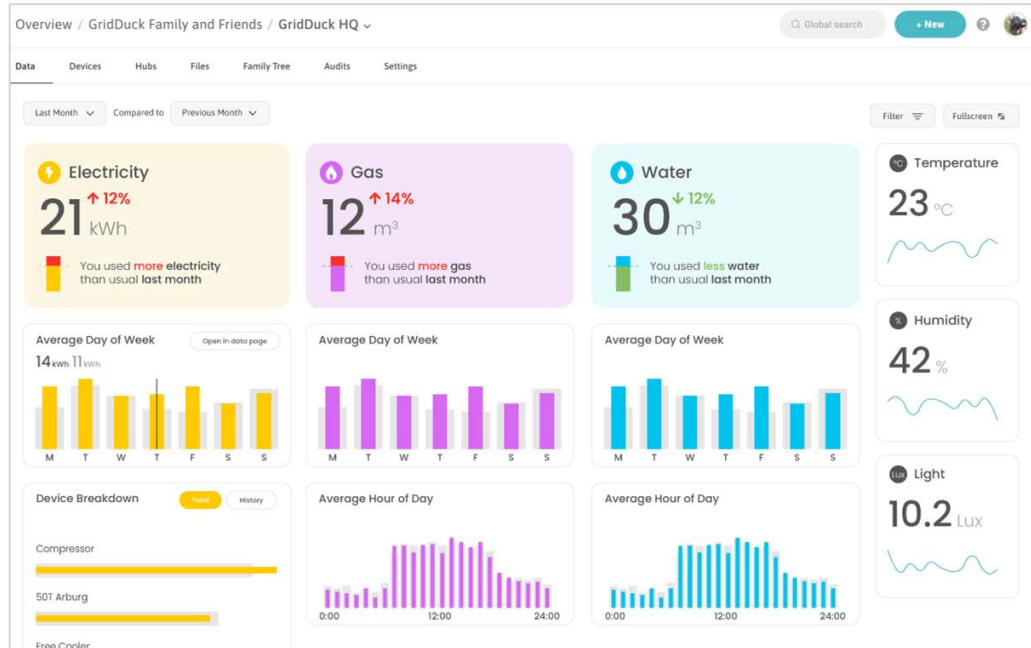


1. Quick intro about GridDuck

1. Process of reducing energy waste

1. A few examples

A Cloud-based IoT SaaS platform to monitor, control and optimise energy consumption



Dashboard & API *



Monitoring & Control devices and direct integrations

(wireless ZigBee, Bluetooth, M-Bus, ModBus, APIs etc.)**

Appliances, Meters, Circuits

* You can view our dashboard [here](#) (GridDuck office)
** Wireless hardware sourced from multiple providers

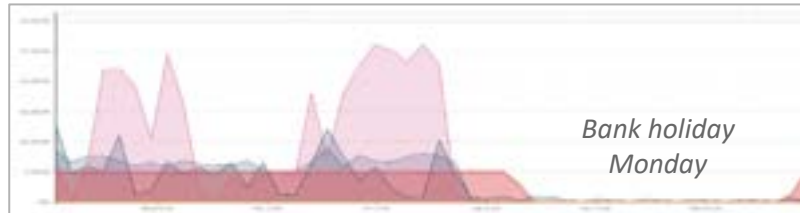
GridDuck



Selected Use Cases

Monitoring

A furniture factory used their data to save £35k from simple changes, and to plan capex for more savings



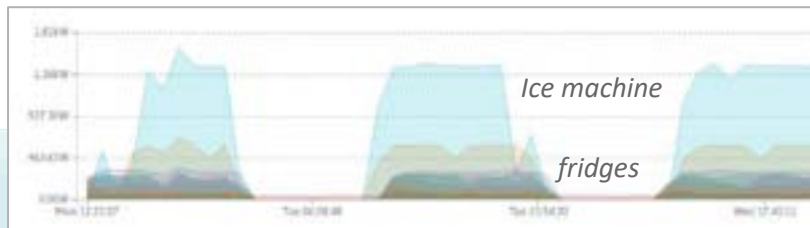
Alerts

A strawberry farm cut energy use at staff caravans by 56% with alerts



Automation

A cocktail bar cut energy use of their drinks fridges & ice machines by 35% by switching them off overnight



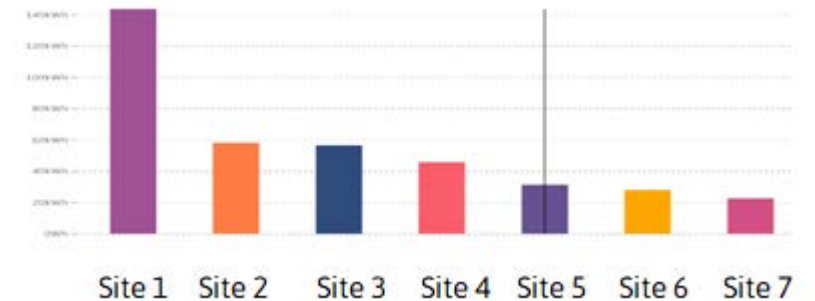
Utility bills

A dark kitchen operator can now bill its tenants for all utilities



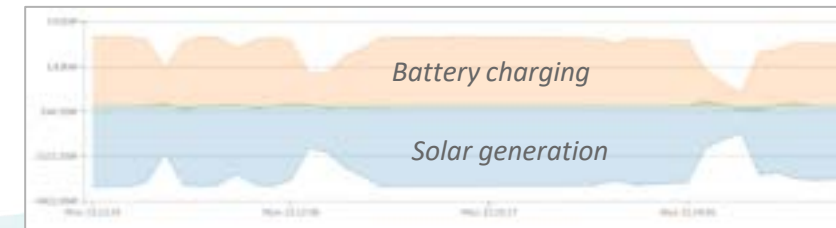
Reporting

A government agency can now easily report on its carbon emissions



Balancing

Connecting EV chargers, solar PV and batteries for an energy supplier and an apple farm



Agenda



1. Quick intro about GridDuck

- 1. Process of reducing energy waste**

1. A few examples

Energy Costs Likely to Stay High



Energy prices have tripled in the last few years



The forecast is for “several years”

FINANCIAL TIMES myFT

Twitter Facebook LinkedIn Share Save

Tom Wilson in London and Richard Milne in Oslo AUGUST 29 2022 356

Shell chief executive Ben van Beurden has warned that **Europe may need to ration access to energy for several years** as the crisis confronting the region is likely to last more than one winter.

The forecast from the head of Europe’s largest oil and gas company came after further cuts to Russian supplies sent European wholesale gas prices to a record high last week, threatening to plunge the continent’s economy into a deep recession.

Sustainability is High on the Agenda

Consumers have less disposable income, where will they choose to spend?



In 2021 the ONS found that

75% of adults in Great Britain worry about climate change.

In 2022 a Nestlé Professional study found that

82% of UK consumers agree sustainability is important when they're choosing what to eat.



Options for Businesses



1. Negotiate better contracts

1. **Consume less** (our focus today)

1. Generate (some of) your own



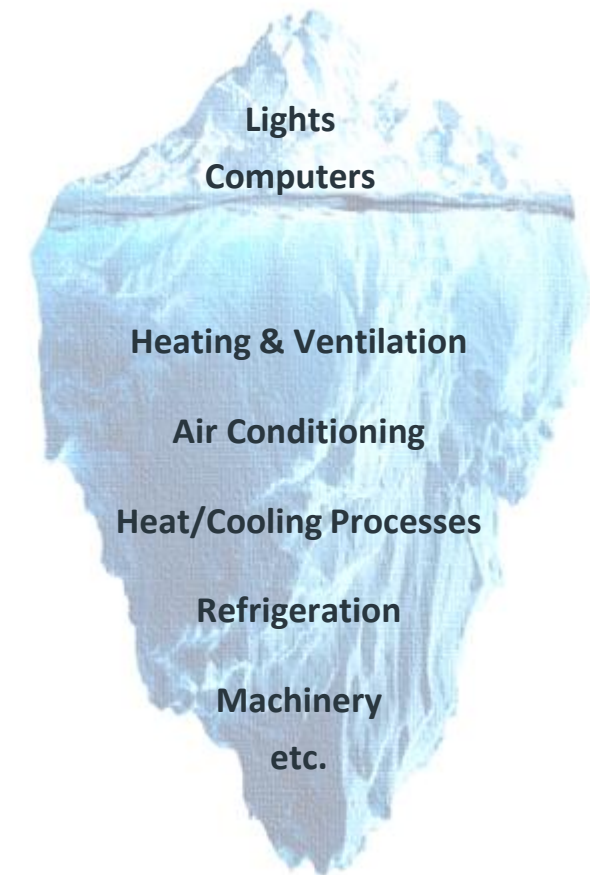
The Energy Waste Iceberg



Businesses in the UK and EU waste £100bn*

Energy waste is like an iceberg: larger part unseen

How can we get a better handle on waste?



* Estimate by The Green Alliance

Energy Waste needs Data & Insights



How are you monitoring your utilities?

	GAS	WATER	ELECTRICITY
Monthly bills	One number per month		
Manual meter readings	As many numbers as you can write down		
Remote meter readings	Each meter, half hourly. Ask your energy supplier!		
Sub-metering	Each machine, each shop, each floor etc. real time		

Energy Waste needs a Process



Process needs to fit the business

Motorway restaurants

- Manual measurement of water use
- Sequenced water use (e.g. all toilets at once) overnight with manual meter readings

Shoe shop chain

- Real-time readings from 18 shops
- Comparing to see behavioural or maintenance factors
- KPI (per sq ft, per £ in revenue)

Carpet factory

- Small install in one corner
- Later expansion to rest of factory
- Ongoing monitoring (in-house energy manager)

Process: Generic Steps



- Site visit
- Find data
- Analyse data

- Trial installs
- Roll-out later

- Data analysis
- Prioritisation

- Maintain machinery
- Change processes
- Set up automations
- Make investments

Agenda



1. Quick intro about GridDuck
1. Process of reducing energy waste
- 1. A few examples**

Maintenance Issue: Provender food mill (animal feed)



Comparison of two identical mills (Roller 1 and 2)

Roller 1 gets clogged up regularly (mix of cereal dust and steam)

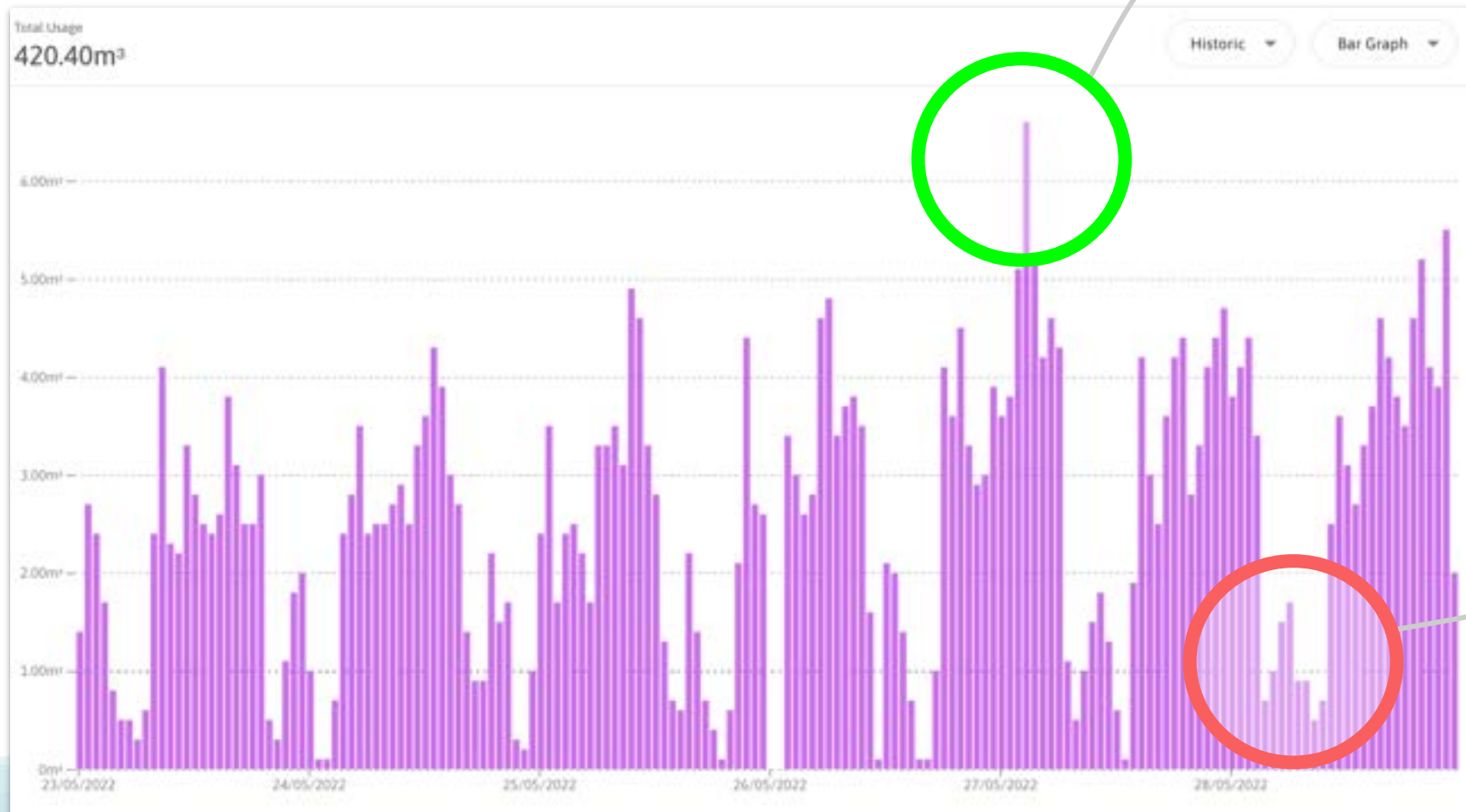


Out of Hours Consumption: Premium Fast Food Outlet



This is an example of a weeks worth of gas data at a city centre site.

Peak Consumption
Friday 7pm- 8pm



Nightly Peak
3am - 4am **Closed**

Out of Hours Consumption: High Street Retailer



Comparing 10 sites within a large chain- targeting out of hours consumption as a savings opportunity

Site	Out of hours vs in hours as %	Saving Potential in %	Savings @ 80p/kWh	CO2 saving
1	72%	30%	9,221	2,686
2	68%	29%	8,696	2,533
3	51%	21%	5,926	1,726
4	44%	17%	4,597	1,339
5	44%	17%	4,831	1,407
6	44%	16%	4,619	1,345
7	41%	15%	4,606	1,341
8	37%	13%	3,535	1,030
9	30%	7%	2,020	588
10	22%	2%	477	139

Out of Hours Consumption: High Street Retailer



Comparing best and worst performing out of 10 shops:

'Blue' shop has 4.4x higher out of hours consumption than 'orange' shop



Systematic Approach: Silverline



54MWh Saved

Silverline **saved an estimated £35,000** in costs through GridDuck energy monitoring.

Dashboard data used to:

- long-term energy savings strategy: compressors
- cost benefit analysis of large scale investments, such as lighting installation and machine motors.
- inform net zero strategy



“before installing GridDuck, we had just a monthly bill saying we have used a certain amount of kWh; it didn’t tell us the specifics of where, when and exactly how much we were using.”

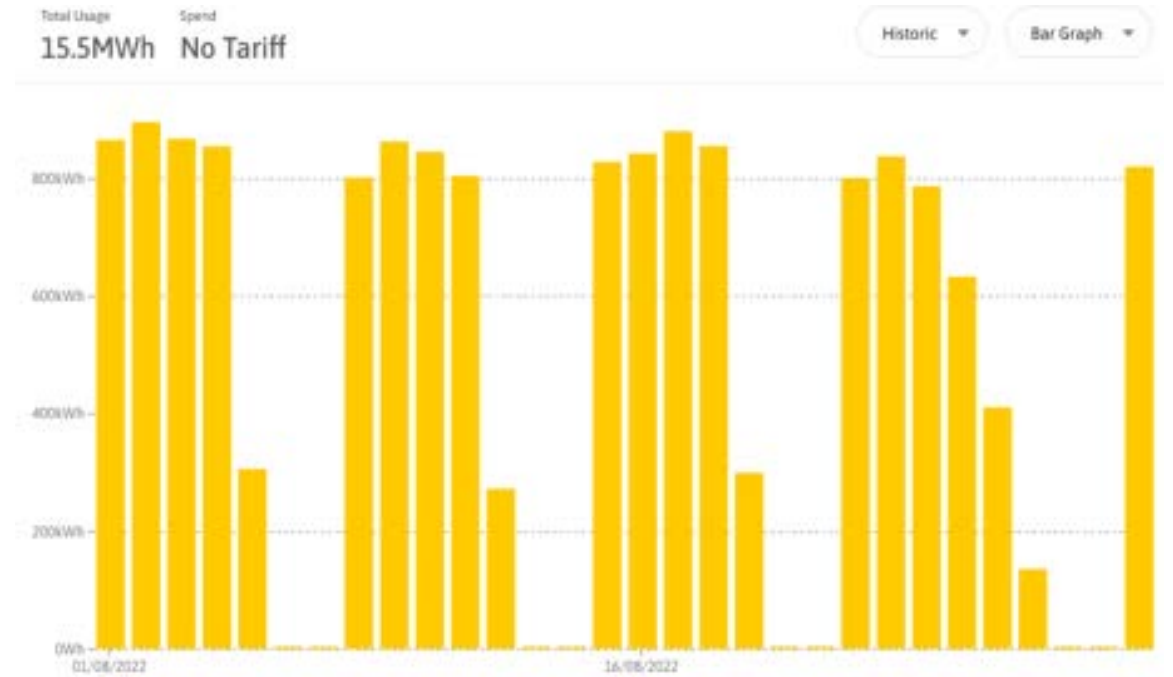
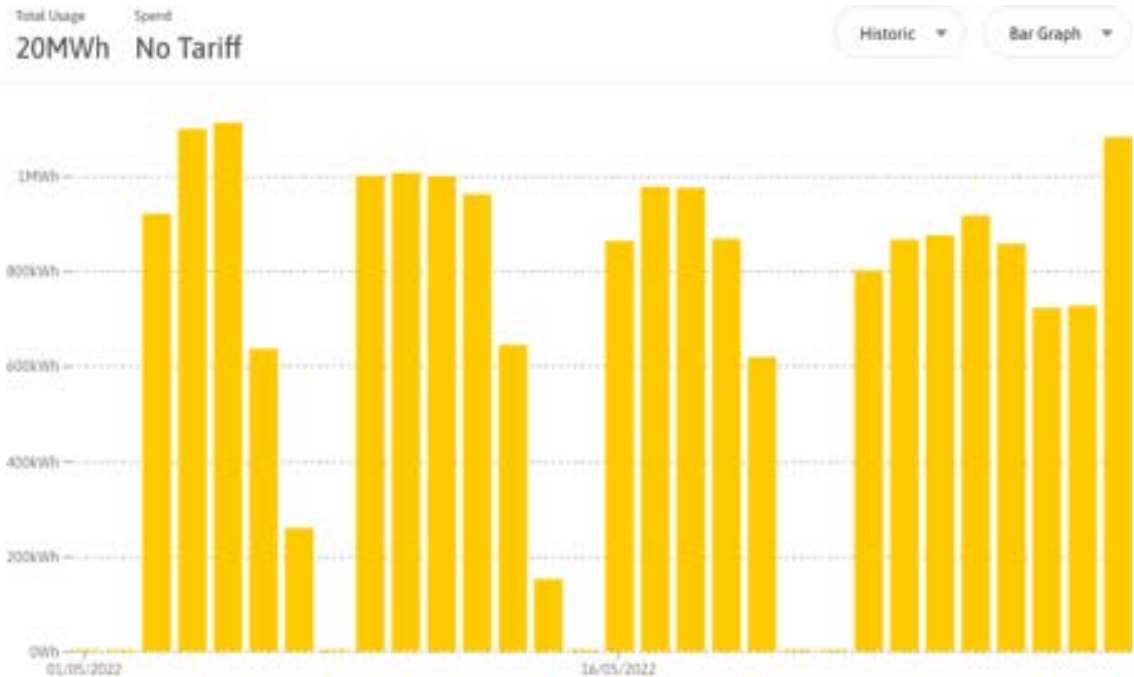
Chris Fatibene, Financial Director, Silverline

Systematic Approach: Silverline



Started with compressors to test for leaks.

23% reduction from 20 MWh to 15.5 MWh per month (May vs Aug)



Systematic Approach: Silverline



Lights: business case for LED install.

17% reduction from 3.2 MWh to 2.67 MWh per month (Aug vs Feb)



Process Change: Priors Grove



45% Reduction

Priors Grove were able to cut their energy spend by almost half with GridDuck energy monitoring.

- Using data from GridDuck's dashboard, Priors Grove were able to instil more energy efficient habits and procedures on the farm.
- They identified and reduced energy waste through real-time monitoring.
- With daily, weekly, monthly and annual graph visualisations, they were able to identify both subtle and more overarching data trends.

"We didn't realise our savings would be that great. GridDuck has helped us to realise what we've got to do to save. It's definitely been worth it."

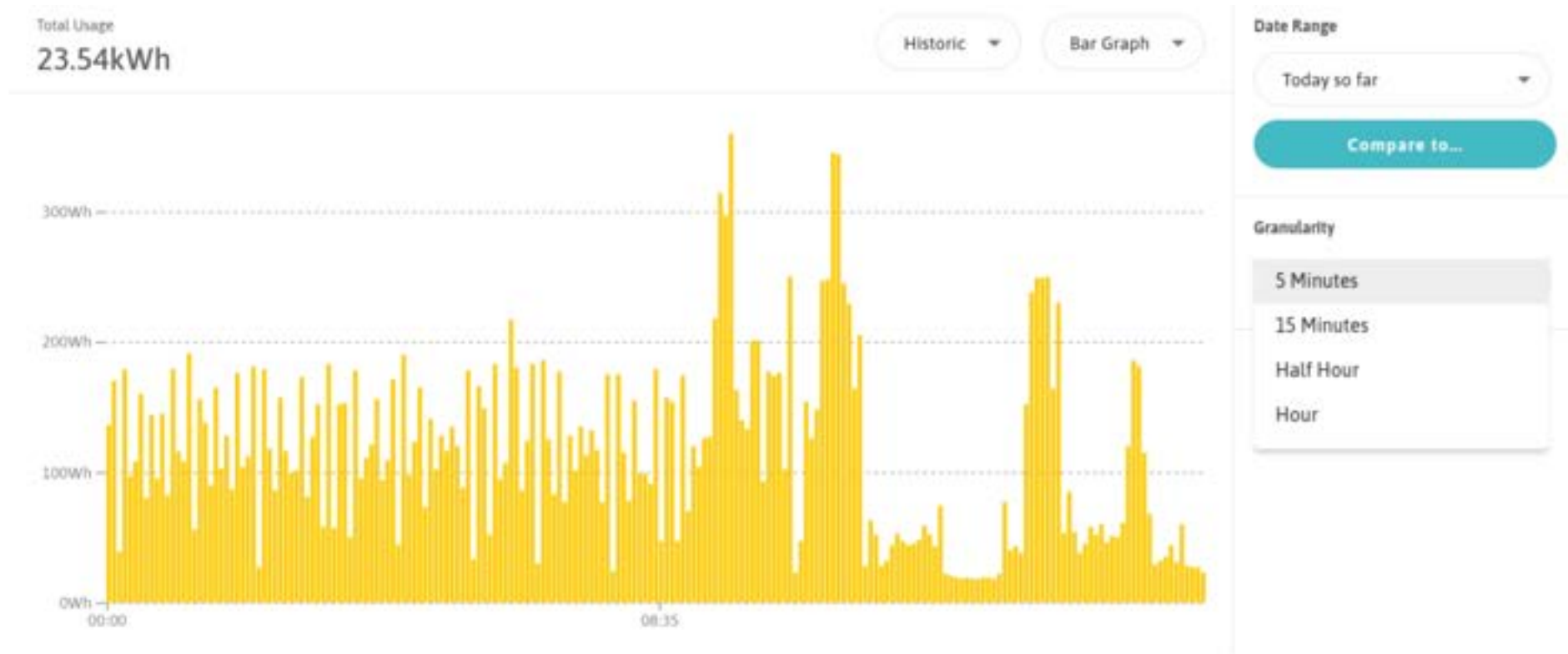
Joe Pardoe, Owner, Priors Grove

Process Change: Priors Grove



“We have been getting up early in the morning to shift our operations and fill the cold stores up then.

For that reason, being able to see daily and hourly has been very helpful”



Experimentation: Foster Coldstores



58% Reduction

Foster Cold Store were able to cut their energy spend by over half with GridDuck energy monitoring.

- Foster Coldstores makes specialist fridges for hospitality and healthcare.
- The business identified that their Manni polyurethane heater could be switched off at closing hours and rebooted to the right temperature in 3-4 hours for the following day.
- 58% usage reduction of 5.5 MWh per month, worth £3,575

“Our factory lighting, compressor and Manni Presse polyurethane heating system have now been put on timers to only be on during our working hours. This has created a huge saving.”

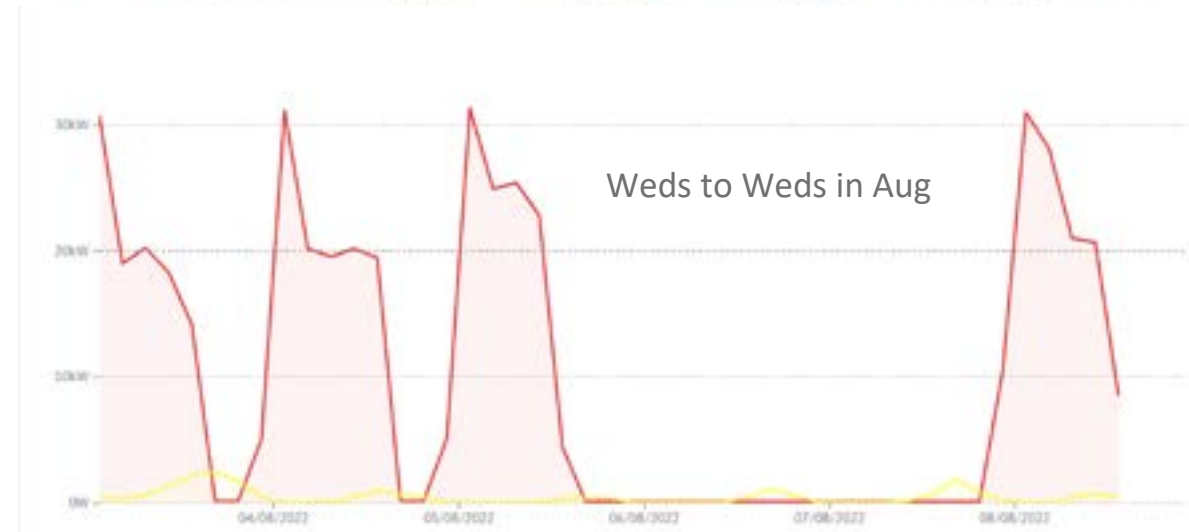
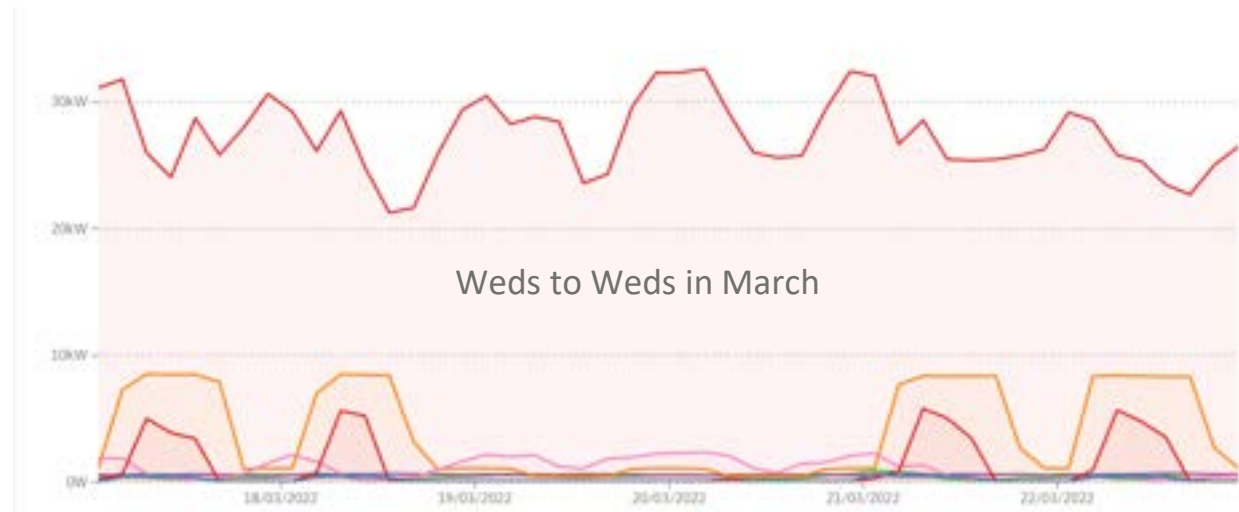
Lee Farnsworth, Maintenance Engineer at Foster Coldstores

Experimentation: Foster Coldstores



Manni Presse polyurethane heating system

Was previously always on, now timed



Savings, Generation & Storage: Drink Stuff



- E-commerce store for bars and pubs - furniture, glasses, cutlery etc.
- Saved 27% from analysing energy data, despite addition electric forklift trucks

Sustainability:

- Generation and storage
- Rooftop solar and electric forklift trucks



Summary: from low-hanging fruit to high-ROI changes



Use energy data to:

- **Spot cleaning/maintenance issues** (provender mill, furniture maker)
- **Spot anomalous consumption** (night-time gas at burger restaurant)
- **Analyse difference between similar/same units** (retail outlets)
- **Make process changes** (apple farm, fridge manufacturer)
- **Create business case for investment** (LED lights, new motors, HVAC etc.)
- **Prepare for more sustainable energy** (rooftop solar, battery, EV chargers etc.)



Thank you

gregor@gridduck.com

 **Rushlight Awards**
Winner 2019/20


CYBER
ESSENTIALS



Backed by
Innovate UK


Department for
Business, Energy
& Industrial Strategy

Testimonials



We have installed GridDuck on several of our fruit and poultry sites, and as a result we can easily monitor, manage and analyse our energy usage.

Staying on top of our energy consumption is more crucial than ever. GridDuck provides the platform to help us do that.

**Alun Howard, Finance Director,
EC Drummond farms**

GridDuck provides us with the additional granularity of our electricity consumption data and we need that for our carbon reporting, but also to be able to identify improvement opportunities in our operations.

We recently moved and made a point of ensuring GridDuck was installed as part of the fit-out.

**Kevin Denney - Energy Strategy Manager,
National Highways**

We chose GridDuck because we wanted to reduce our outgoings and build a greener brand.

We have set a target of reaching net zero emissions by 2035, so efficiency is a big focus for us moving forward.

**Chris Stringer, Head of
Engineering,
Go-Ahead Ireland**

The dashboard is a dream to set up and breaks up consumption into simple elements, making it easy to cut down.

Overall, the system is amazingly user-friendly.

**Andy Walsh - Energy Consultant,
London Cocktail Club**

I could see exactly how much energy my farm and cold stores were using.

The data showed me that I was wasting loads in my refrigeration, allowing me to make huge savings.

**Julian Cotton - Director
Pomona Farm, Hereford**



INSIGHTS SESSION 3

AN INTRODUCTION TO TYSELEY ENERGY PARK AND HOW TO DEVELOP A SUSTAINABILITY STRATEGY

Tommy Allsopp
Net Zero Delivery Lead
Tyseley Energy Park

HOW TO DECARBONISE YOUR BUSINESS AND SAVE ENERGY

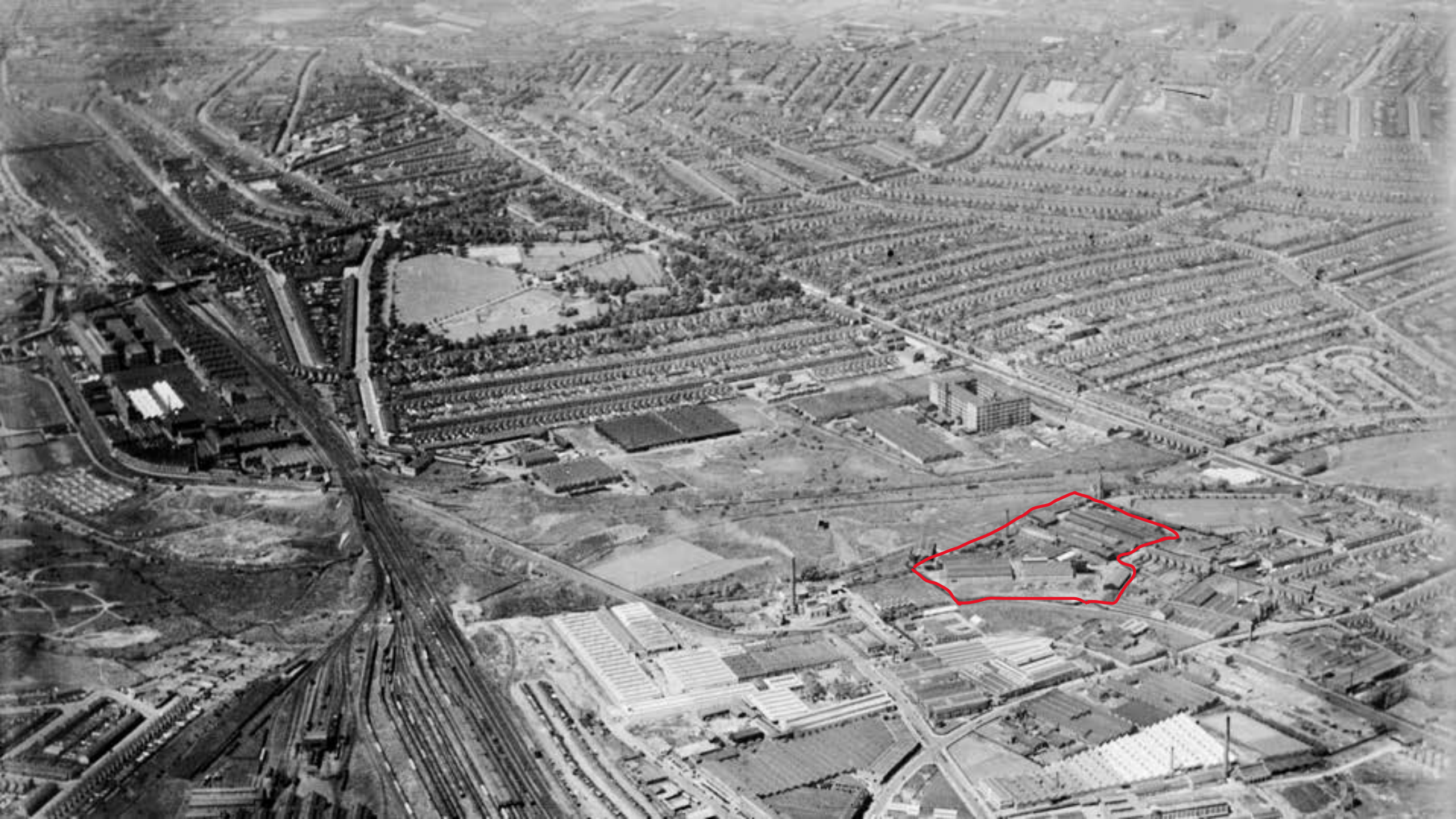
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Tyseley Energy Park

Powering Clean Energy Growth









The Site



Phase 4a



Phase 1



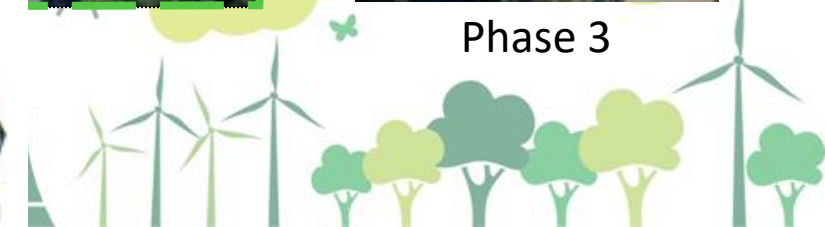
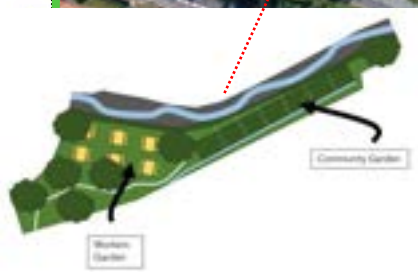
Phase 2



Phase 3



Phase 5



Climate Innovation Platform & TEP Business Space



Climate Innovation Fund 2023

- The Climate Innovation Fund is offering climate-focused innovators grants between £2,000 and £10,000 to support low carbon innovations.
- This funding can support entrepreneurs developing their ideas through to SMEs striving to take their business to the next level. Application deadline: 13:00 on Friday 10 February 2023.

Climate Innovation Platform - Springboard

- Launching in Spring 2023, the CIP Springboard is a bespoke business development programme designed to support early-stage climate innovators and entrepreneurs.
- This four-day programme scheduled to take place between Monday 27 February - Friday 31 March 2023 will be delivered by business experts to take successful applicants through all the areas that a fledgling business needs to develop their core business offer. Application deadline: 13:00 on Friday 10 February 2023.

Climate Innovation Platform - Cohort Three

- The Climate Innovation Platform (CIP) offers businesses a package of tailored support to drive the commercialisation of innovative energy products and services. This programme will be delivered by the University of Birmingham in partnership with the Energy Systems Catapult (June - December 2023).



climateinnovation@contacts.bham.ac.uk





3.2 Vision Statement





TYSELEY ENERGY PARK

For further information visit

www.tyseleyenergy.co.uk

@TyseleyEnergy

Development of Sustainability and Decarbonisation Strategy



Tommy Allsopp
Net-Zero Delivery Lead

Understanding Sustainability

“*Meeting our own needs without compromising the ability of future generations to meet theirs*”

Social



The social pillar of sustainability focuses on promoting well-being, inclusivity and equality within communities and organisations.

Environmental



The environmental pillar of sustainability involves the responsible use and management of natural resources to minimise negative impacts on ecosystems, biodiversity and the planet.

Economic

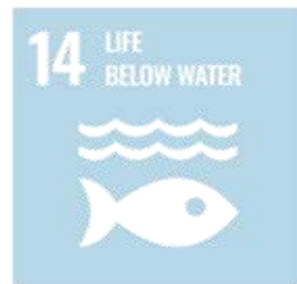


The economic sustainability refers to the pursuit of economic growth and development in a manner that ensures long-term financial stability, equitable wealth distribution, and responsible resource allocation.

SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY 	2 ZERO HUNGER 	3 GOOD HEALTH AND WELL-BEING 	4 QUALITY EDUCATION 	5 GENDER EQUALITY 	6 CLEAN WATER AND SANITATION 
7 AFFORDABLE AND CLEAN ENERGY 	8 DECENT WORK AND ECONOMIC GROWTH 	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	10 REDUCED INEQUALITIES 	11 SUSTAINABLE CITIES AND COMMUNITIES 	12 RESPONSIBLE CONSUMPTION AND PRODUCTION 
13 CLIMATE ACTION 	14 LIFE BELOW WATER 	15 LIFE ON LAND 	16 PEACE, JUSTICE AND STRONG INSTITUTIONS 	17 PARTNERSHIPS FOR THE GOALS 	

Target Relevant SDGs...



Our SDG targets:



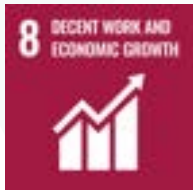
“*To remain committed to delivering affordable and more accessible low and zero carbon energy for a cleaner, healthier and greener Birmingham.*”



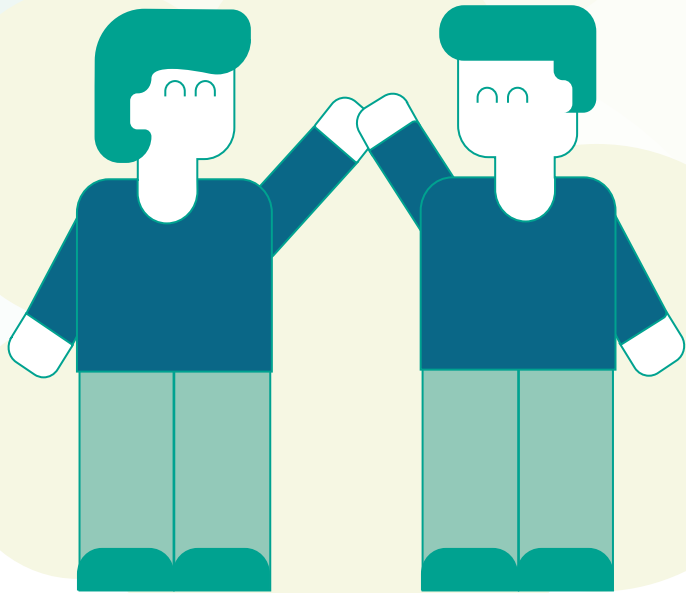
Develop state of the art sustainable manufacturing operations in the Webster & Horsfall Group through the promotion of regional industrial symbiosis, the radical reduction in waste production and minimisation of virgin resource consumption.



“*Through partnership with academia, industry and local community. We seek to promote a sense of identity for Tyseley as Birmingham’s Green Innovation Quarter, reversing the region’s spiral of decline whilst curating employment opportunities.’*”



What SDGs can your business make the greatest positive impact towards?



Identify Focus Areas

Classify *'Focus Areas'* that relate to focal SDGs

For example:

Improvements in *'Waste Management'* contribute to the overarching targets of the following SDGs:



Tyseley Energy Park Focus Areas...

- Carbon and Energy Management
- Water Management
- Travel and Mobility
- Waste Management
- Sustainable Construction/Refurbishment
- Sustainable Procurement
- Ecology and Biodiversity
- Community Engagement and Outreach

Identify KPIs...

Establish Baseline...

Measure Performance...

420

tCO₂E (Scope 1 and 2) Carbon Emissions in 2020

22,150

kg of wood waste recycled (100%) in 2022

38%

of office staff commute to/from work in an EV (from December 2022 Survey)

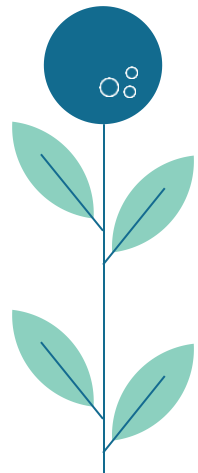


Set an overall aim per focus area...
Set interim 'SMART' targets to work towards the overall aim

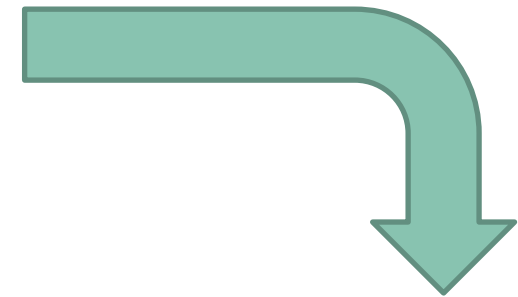
For example:

Waste Management

To minimize and manage waste year on year through continuous improvement of circular practice and resource consciousness



Specific
Measurable
Achievable
Realistic
Time-bound



Reduce waste per full time employee (FTE) by 10% per annum

Carbon and Energy Management



Overall Aim(s):

“ *Net Zero Scope 1 and 2 Carbon Emissions by 2030*
Net Zero Scope 3 Carbon Emissions by 2045 ”

Interim (SMART) Targets:

“ *Adhere to a minimum 10% reduction in Scope 1 and 2 Carbon Emissions per year from our 2020 carbon audit baseline...* ”

“ *Adhere to a minimum 5% reduction in Scope 3 Carbon Emissions per year from our 2020 carbon audit baseline...* ”

Key Performance Indicators:

- *Scope 1 Carbon Emissions (tonnes/y)*
- *Scope 2 Carbon Emissions (tonnes/y)*
- *Scope 3 Carbon Emissions (tonnes/y)*
- *Renewable energy share in annual electricity consumption across site (%)*

Develop Your Action Plan

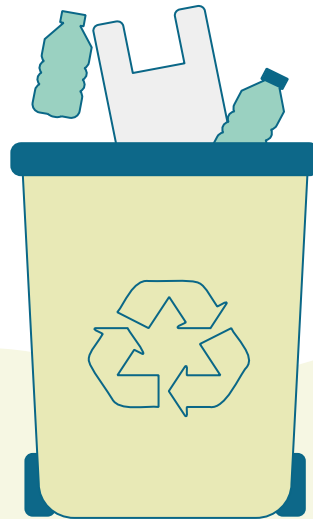
Identify

For each focus area, identify potential projects to work towards your set targets



Prioritise

Analyse the listed projects. Prioritise those that have the highest impact and are the most cost effective to maximise return on investment



Implement

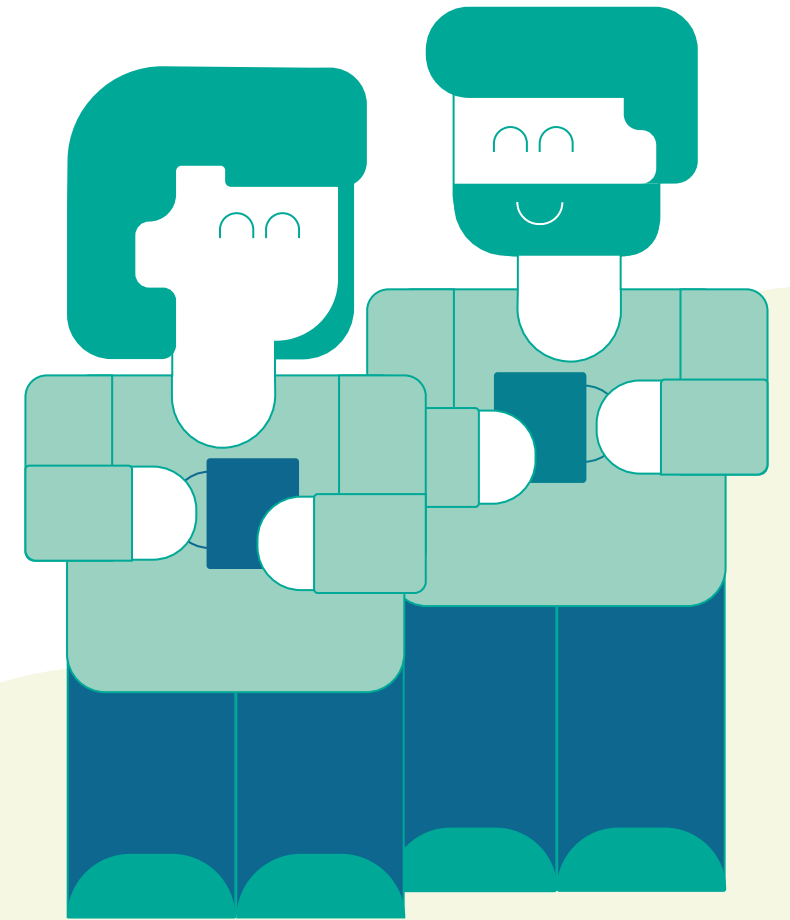
Execute prioritised projects. Continuously measure and report KPIs to assess project performance



Engaging your workforce

Foster a culture of sustainability within your organisation by encouraging employee participation and buy in!

- Clearly communicate the organisation's sustainability vision and goals to create a shared understanding and commitment
- Establish employee-driven 'green teams' to foster collaboration, innovation and continuous improvement
- Organise volunteer events and community outreach programs to connect employees with local sustainability initiatives and foster a sense of purpose
- Encourage employee feedback and involvement in decision making





THANKS!



Do you have any questions? T.allsopt@tyseleyenergy.co.uk

07908872035

www.tyseleyenergy.co.uk



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HOW TO DECARBONISE YOUR BUSINESS AND SAVE ENERGY

INTERACTION

AUDIENCE Q&A

Andy Whyte
Sustainability and Circular
Economy Practitioner
Sustainability West
Midlands

Gregor Hoefter
Founder
GridDuck

Tommy Allsopp
Net Zero Delivery Lead
Tyseley Energy Park

Delivery partners





MIDLANDS
GREEN
INNOVATION
NETWORK

Together for net-zero

**THANK YOU FOR
PARTICIPATING TODAY**

Thursday 30th March 2023
11:00 to 13:30
Energy Innovation Centre
Tyseley Energy Park, Birmingham

Delivery partners

**MIDLANDS
ENGINE**

ERA ENERGY
RESEARCH
ACCELERATOR

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Experts in Business

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INNOVATION
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Together for net-zero

FUTURE MGIN EVENTS

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Experts in Business

MIDLANDS GREEN INNOVATION NETWORK

Together for net-zero

THE IMPACT OF SUSTAINABLE DESIGN

Thursday 20th April 2023

11:00 to 13:30

Vijay Patel Building; De Montfort
University



EVENT SCHEDULE

11:00	Guests arrive with morning reception	Presenters
11:25	Event opens with an overview of the Midlands Green Innovation Network and ERA	ERA Team
11:30	Welcome to the Impact of Sustainable Design event by Christine White, Deputy Dean of Art, Design and Humanities and Director of the Design Unit	Christine White Deputy Dean of Art, Design and Humanities and Director of the Design Unit De Montfort University
11:35	A series of short presentations by DMU discussing the impact of sustainable design from a variety of disciplines and it's relation to industry: Karl Letten, Mark Charlton, Carolyn Hardaker, Angela Davies, Claire Lerpiniere, Kyungeun Sung, and Christine White	Karl Letten ; Sustainability Manager Mark Charlton ; Associate Director of Sustainable Development Goal Impact/Net Zero Carolyn Hardaker ; Head of School of Fashion and Textiles Angela Davies ; Programme Leader MSc Textile Design, Technology and Innovation Claire Lerpiniere ; Associate Professor in Sustainable Textiles Kyungeun Sung ; Senior Lecturer in Product Design Christine White ; Deputy Dean of the Faculty of Art, Design and Humanities
12:35	Audience Q&A with all presenters	All presenters
12:50	Event closing with sum-up of findings and debates	ERA Team
13:00	Lunch hospitality along with tours of the building	

Delivery partners



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**GREEN
INNOVATION
NETWORK**

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UKENERGYFEST

The Race to Net Zero
Discover how to play your part

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