

Energy Institute

“Delivering Net Zero for the Midlands”

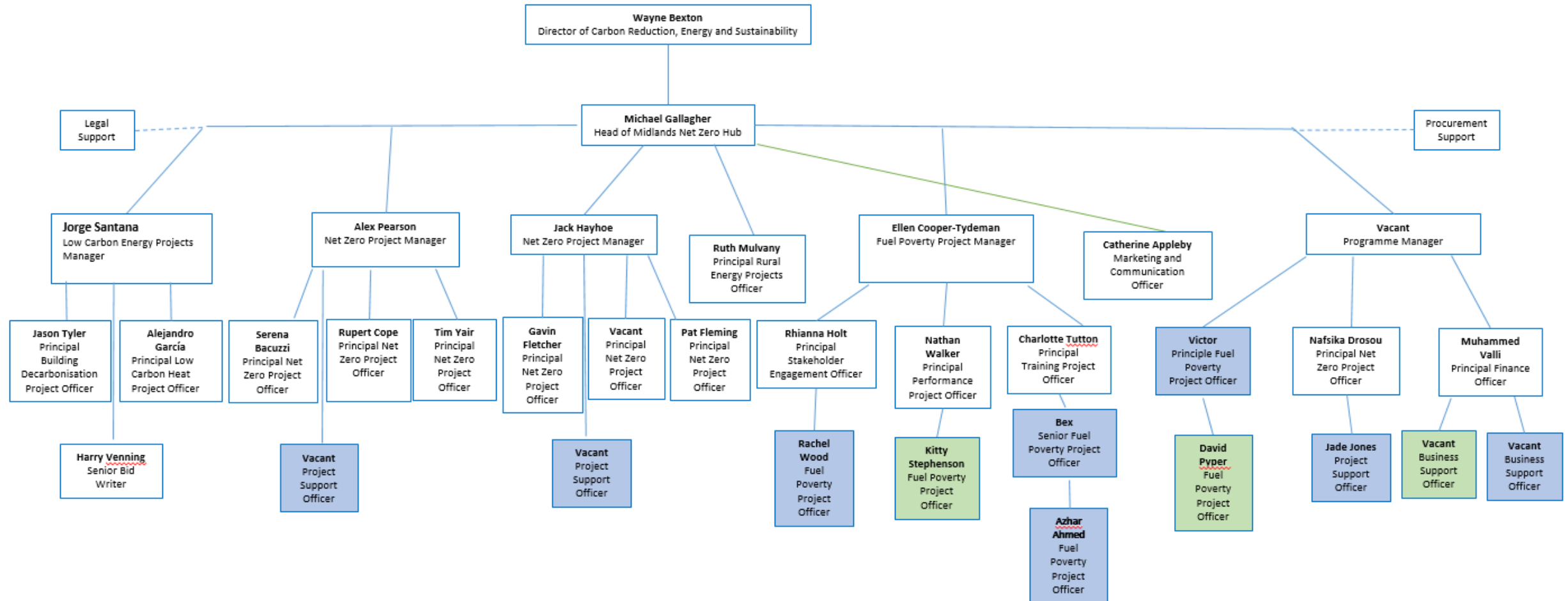
2022

Michael Gallagher
Head of Midlands Net Zero Hub

Who are the Midlands Net Zero Hub

- The Hub is fully funded by the department of Business Energy and Industrial Strategy (BEIS) & Nottingham City Council are the accountable body.
- The Regional Team works with LEPs and LAs across the Midlands to support the development of energy projects and programmes in line with the LEP Energy Strategies and in support of the UK Government's commitment to Net Zero.
- The Hub also delivers Regional and National programmes for BEIS including:
 - Local Capacity Support Programme - regional
 - Local Authority Delivery Phase 2 - regional
 - Sustainable Warmth Competition -regional
 - Social Housing Decarbonisation Fund - regional
 - GHG Skills Training [programme completed] – national
 - HD Skills Training 2 - national
 - Private Rental Sector Minimum Energy Efficiency Standard Enforcement Competition - national
 - Public Sector Decarbonisation Skills Fund - regional
 - Rural Community Energy Fund (funds fully allocated) - regional

MNZH Team

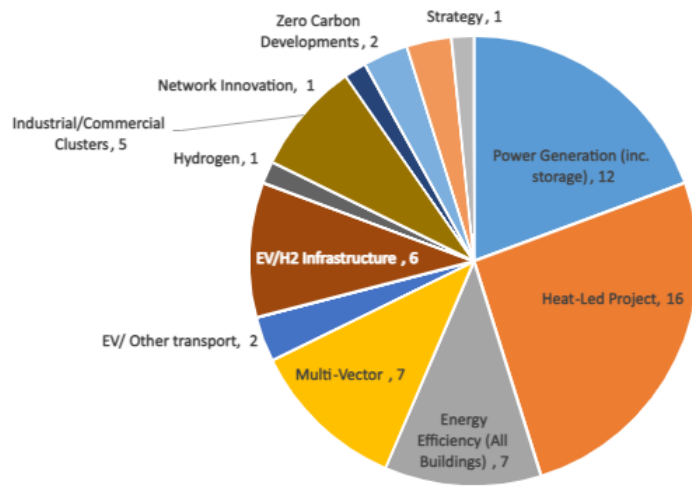


Regional Team

Activities

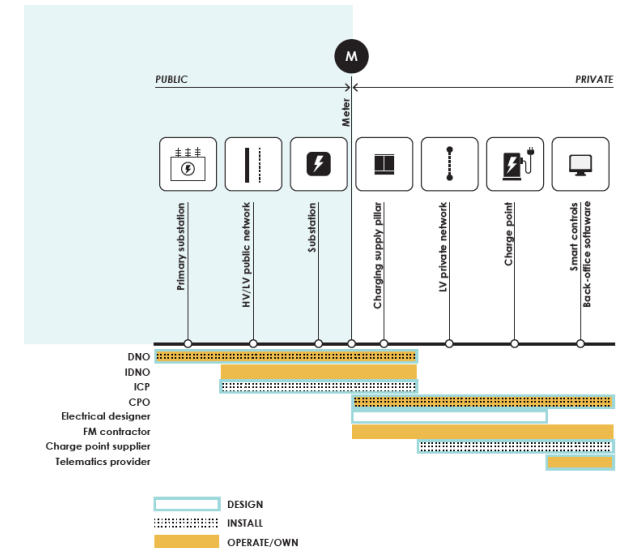
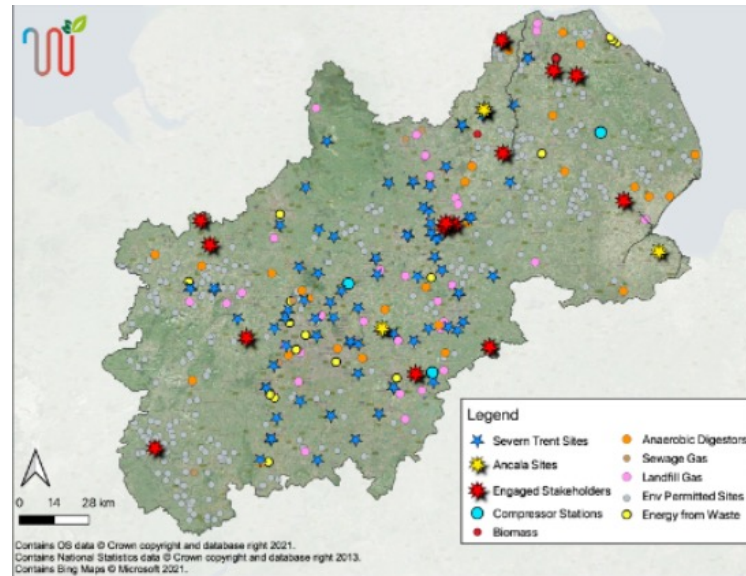
- Supported 158 projects, to date
- 62 live projects in the Midlands

No. of Projects by Sector/Workstream (Midlands)
Enabled/Direct - Live w/Hub Involvement



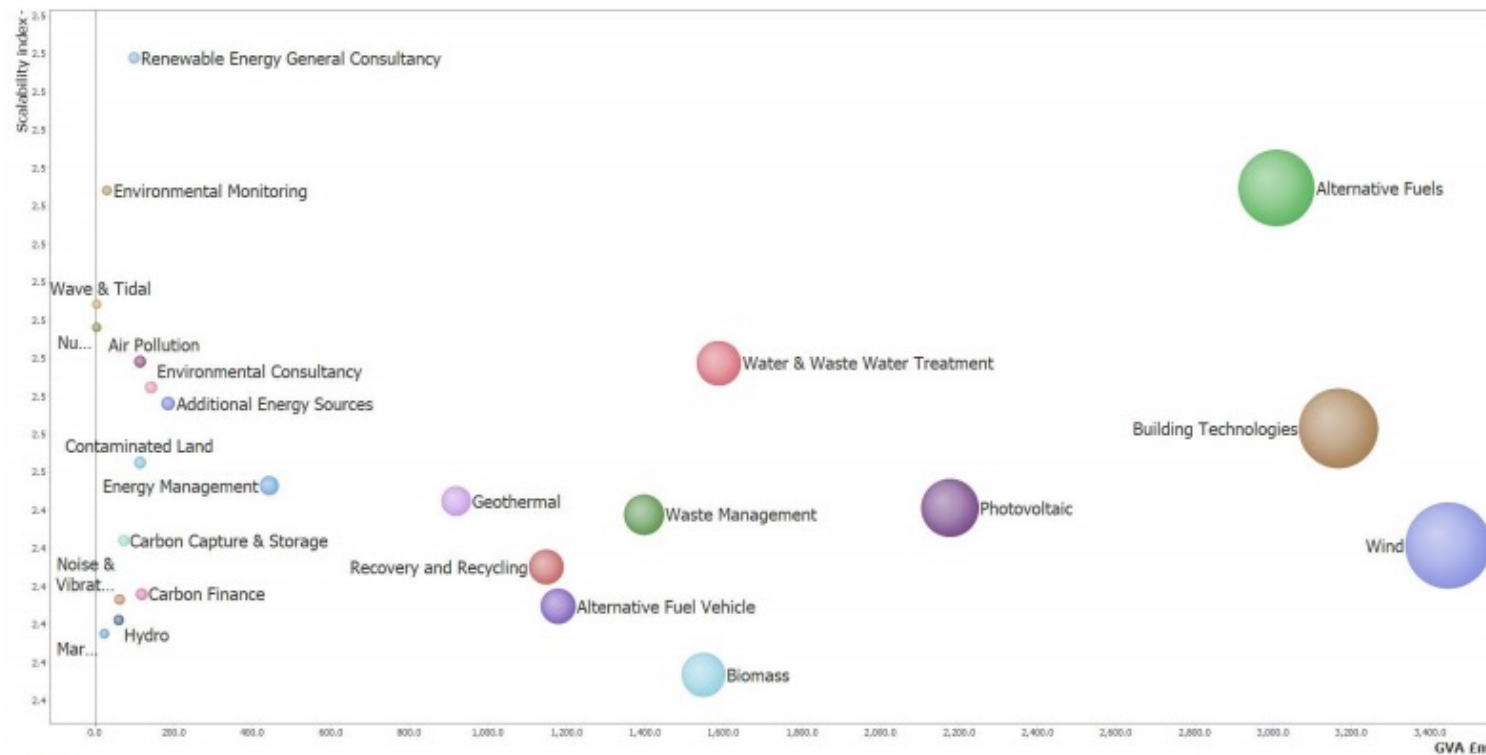
Recently completed projects

- Electrification of Depots
- Low Carbon Horticulture
- Transport Hubs
- Low Carbon & Environmental Goods and Service Sector Report



Low Carbon and Environmental Goods and Service Sector

Figure 36: MEH Scalability vs. GVA of Level 2 Sub-sectors – Bubbles Sized by GVA



MNZH's Low Carbon and Environmental Goods & Services (LCEGS) sector is worth **£26.6bn**.

The five largest sub-sectors in the LCEGS sector by sales account for 64% of the MNZH's total sales and are made up of:

- Wind (£4.4bn)
- **Building Technologies (£4.0bn)**
- **Alternative Fuels (£3.8bn)**
- Photovoltaic (£2.8bn)
- Water & Waste Water Treatment (£2.0bn)

Report available from:

<https://www.midlandsnetzerohub.co.uk/energy-projects/low-carbon-goods-and-services/>

Low Carbon Transport Hub study

Midlands Energy Hub supported Coventry City Council and Cenex to produce a report mapping out potential sites across the Midlands for Low Carbon Transport Hubs:

<https://www.energyservices-ncc.co.uk/uploads/documents/Midlands-Regional-Transport-Hubs-Final-Report.pdf>

This, report along side the LCEGSS Report clearly lays out the huge potential of the Midlands in low carbon transport and alternate fuels

- Alternative Fuels contributes £3.8bn – this includes R&D functions, alternative fuel providers, designers and consultancy, process implementation, sales and accounting and application development specialists
- Alternative Fuel Vehicle contributes £1.5bn - include selling agencies, alternative fuel development companies and consulting and applications development for vehicle conversion specialists
- Furthermore, Alternate Fuel Vehicles saw stronger growth in the Midlands than the UK average between 2017/18 and 2019/20 at 11.4% compared to the UKs 5.7%

Low Carbon Transport Hub study

In stage 1 of the project, a set of criteria were proposed to the MEH team. Figure 2 displays the final agreed criteria, colour-coded as required (dark blue) or ideal (lighter blue):

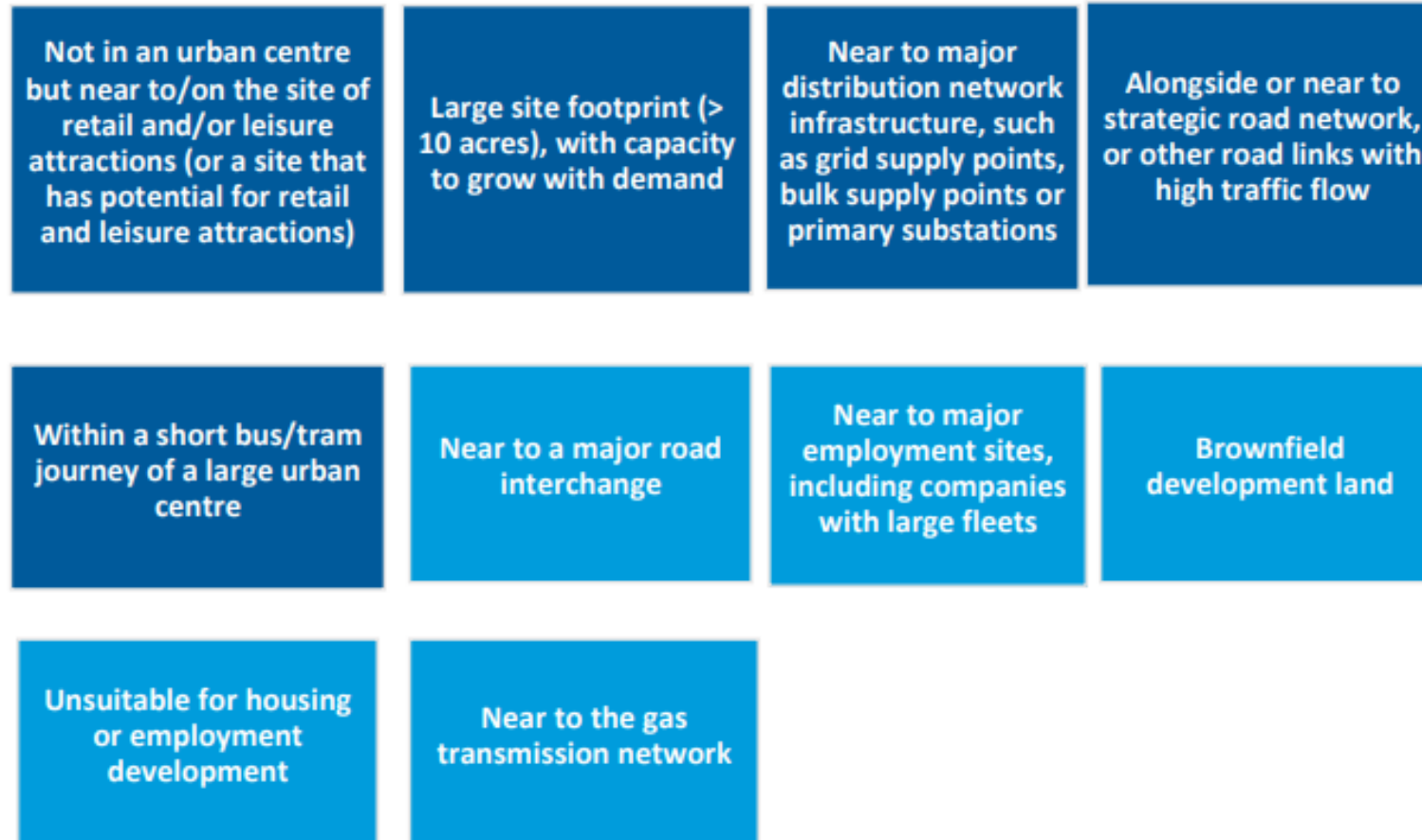


Figure 2: Criteria for transport hub site selection

Low Carbon Transport Hub study

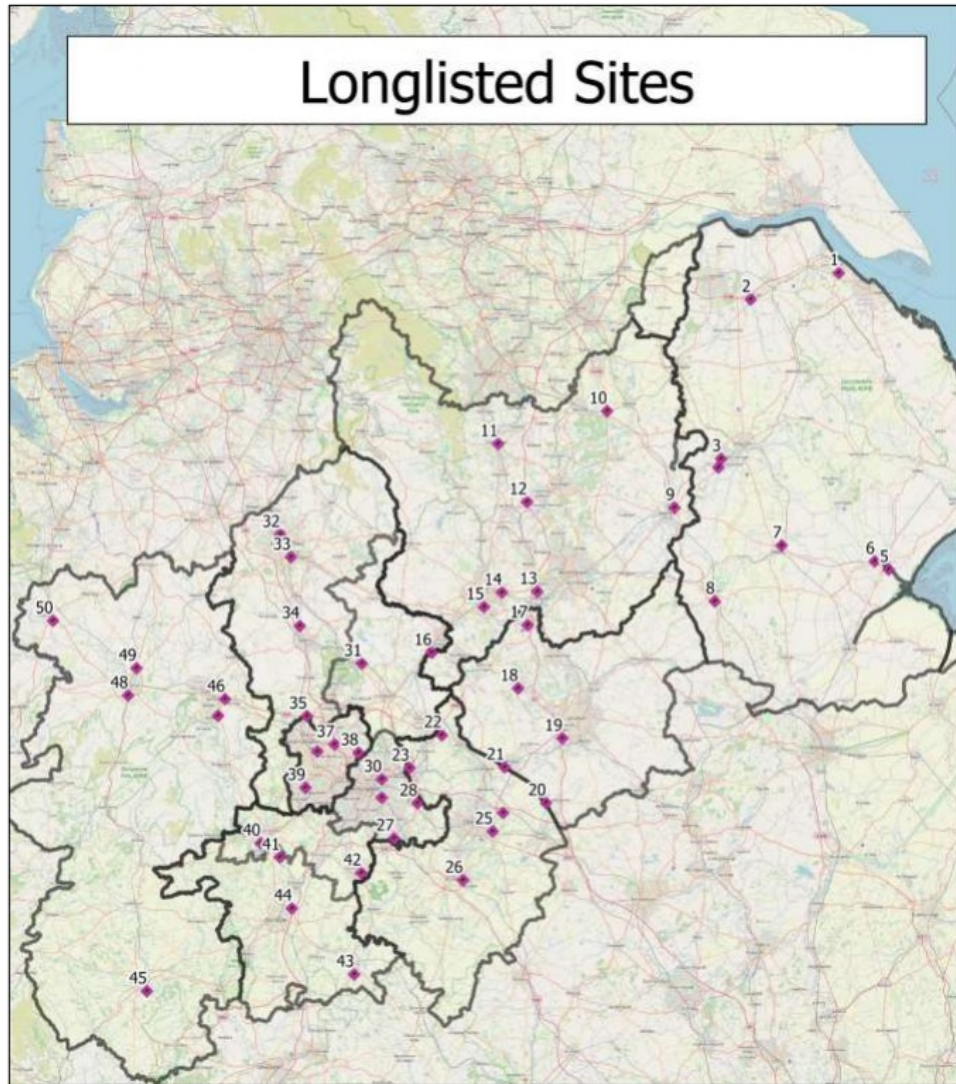


Figure 3: Map showing all longlisted sites across the Midlands

The Hub are now looking to provide match funding to three sites across the Midlands to support development of business cases.

The work compliments that of Midlands Connect who in tandem did a similar exercise but focusing on Heavy Freight.

<https://www.midlandsconnect.uk/news/plans-released-for-800million-alternative-fuels-network/>

This work also supported **H2GV Mids** an Innovate UK project which involved identifying all of the necessary infrastructure, including hydrogen refuelling stations, developing the business case and delivery system, and establishing a trial lease system for truck operators. <https://www.era.ac.uk/H2GVMids>

Farm of the Future - Brief

The core theme of the project was to investigate how farming might adjust to the challenges posed by climate change.

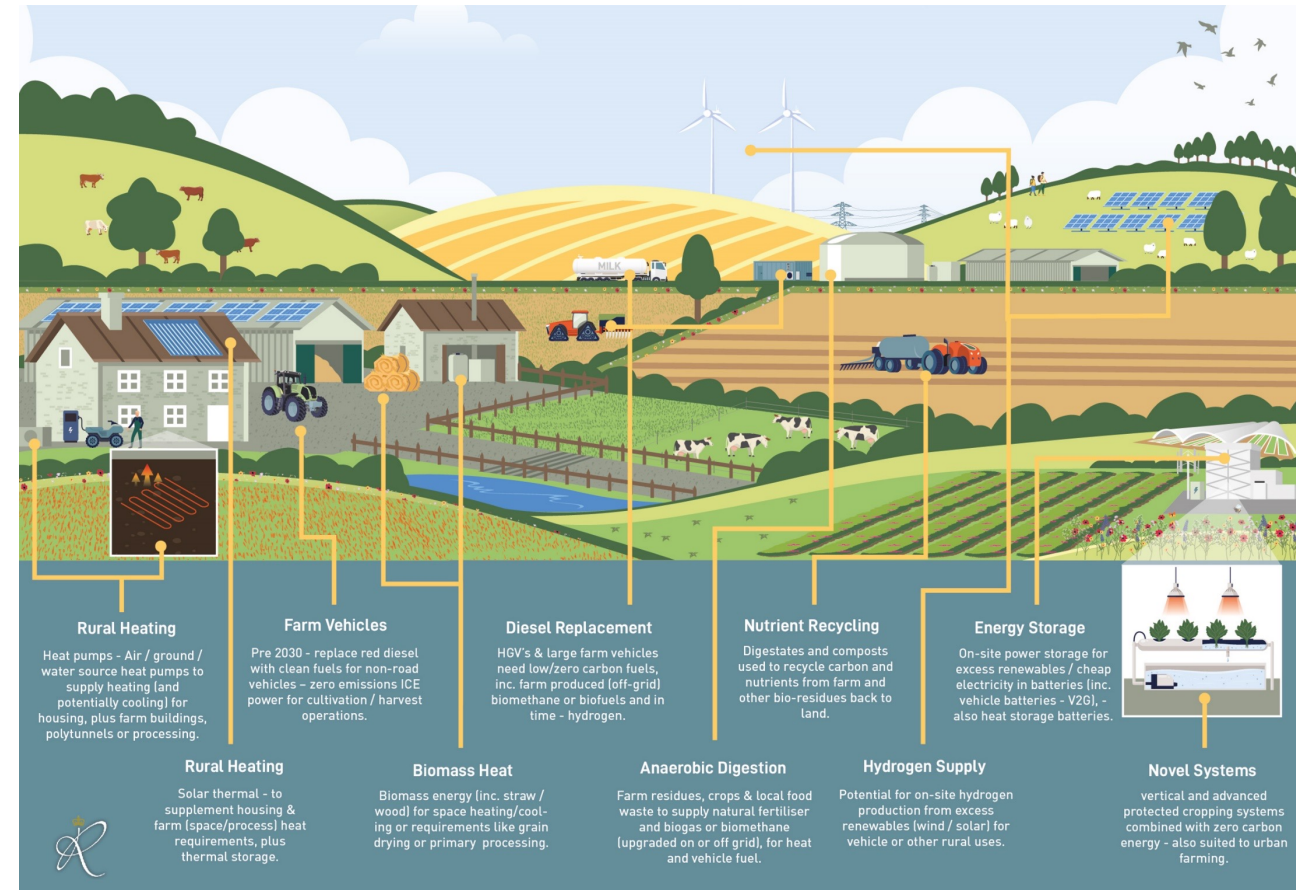
- Examine mechanisms for change.
- Propose policy adjustments and support mechanisms.
- Outline Farm Sector Journeys
- Highlight agri-food supply chain opportunities and new business models.
- Engage with, and support farmers, growers and rural communities.

Report & Sector Papers

- Farm Vehicles & Future Fuels
- Cereal Production
- Horticulture Production
- Intensive Meat Production
- Dairy Production

Download the main report [here](#).

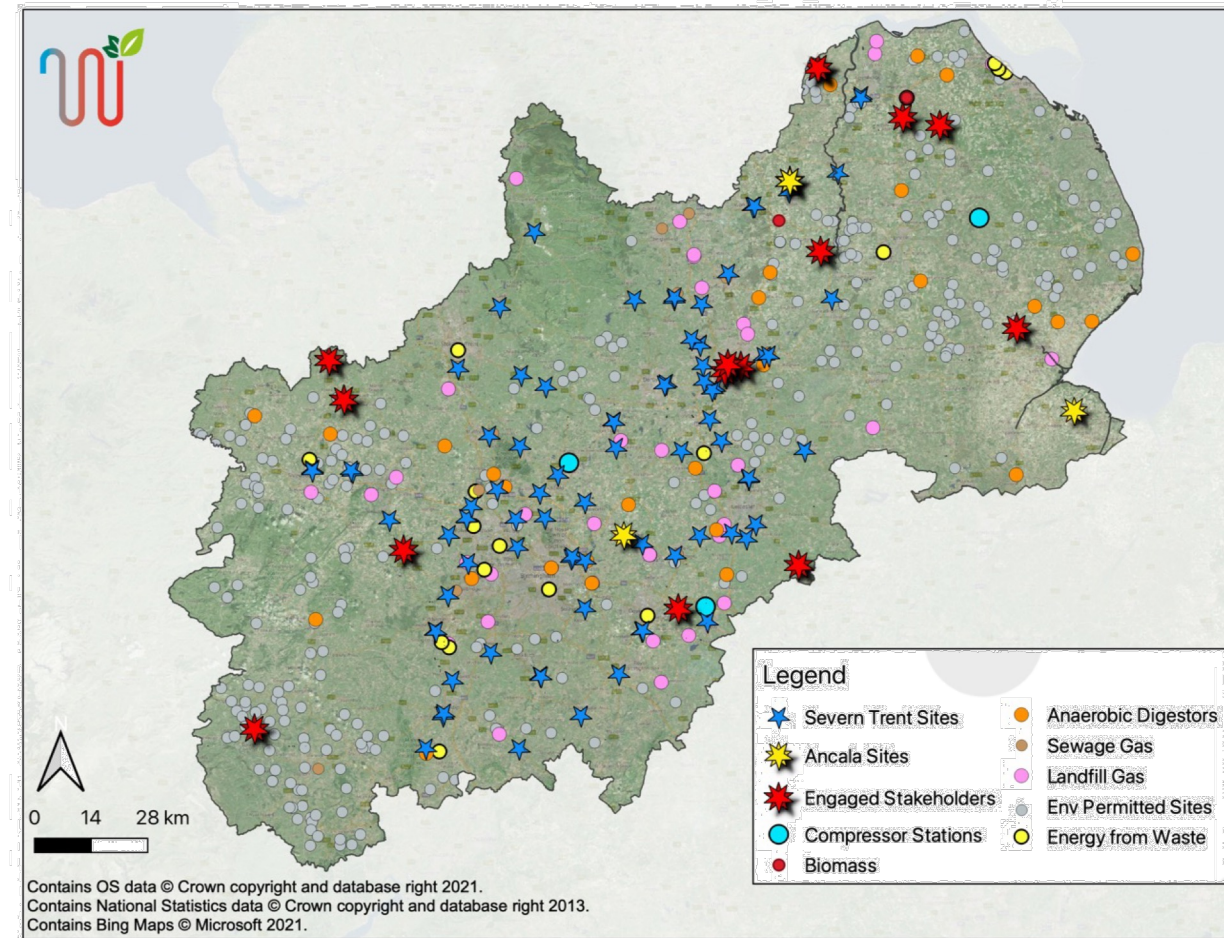
Technical Sector papers are available from the [RASE](#) website



Low Carbon Horticulture

- **WP1 – Mapping** – The project carried out a mapping study to highlight the opportunities for the development of low-carbon horticulture by understanding the potential for working with the agri-food sector to deliver local heat and power. This helped to match producers of food and waste from agriculture / horticulture with heat and power generation facilities and identify potential energy customers.
- **WP2 – Micro-feasibility Studies** – To examine the outputs of the mapping exercise in more detail, three micro-feasibility studies were conducted to demonstrate how a range of opportunities to co-locate heat users and generators could be exploited. This culminated in the development of business case development for three very different approaches.
- **WP3 – Future Project Development** – The final work package looks to develop the main opportunities that WP2 highlighted, with a view to directing the next phase of the project.

All of the reports from the work packages can be downloaded [here](#).



Rural Community Energy Fund

Liaised with over 500 organisations

52 Stage 1 applications supported through to the board.

35 Stage 1, Feasibility Studies funded , Seven stage 2 projects.

20 completed Feasibility studies.

In excess of £1,600,000 awarded.

Cromford Mill

- Cromford Mills is the Northern Gateway to the Derwent Valley Mills UNESCO World Heritage Site.
- Built in 1771 by Sir Richard Arkwright, it is the world's first successful water-powered cotton spinning mill and a cornerstone of the Industrial Revolution
- The Charity received Stage 1 and Stage 2 RCEF revenue funding followed by Capital Funding from Severn Trent and Derbyshire County Council



- The project will involve reinstating a waterwheel and installing a 20kW hydro-turbine to power the buildings.
- The scheme will also see water heat pumps installed and an old turbine in nearby Cromford village restored.
- Energy sold will generate income, which will be managed through a Community Interest Company. The profits will then be used to further other projects in the village.

"It's so important that we can demonstrate that on a historic site, with all the challenges we have of a UNESCO World Heritage, Grade I site, we can use modern technologies but in a sympathetic way."

PRS Enforcement and Compliance

Local authorities in England and Wales could bid for financial support through the Private Rental Sector MEES Compliance and Enforcement Competition which made over £4.7m of funding available. Each local authority could bid for up to £100,000 of revenue funding to help build their capacity and capability to enforce the MEES Regulations in the domestic sector in their region. This financial assistance will help drive upgrades in the worst-performing private rented homes. The competition aimed to:

- Support local authorities with the introduction of a formulated approach for enforcing requirements under The Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015
- Assist local authorities with clear financial needs to build compliance and enforcement capacity and capability
- Reduce fuel poverty and the carbon emissions produced by the housing (and commercial) sector.

Scheme success:

- 59 LAs supported
- Over 190,000 tenants and landlords engaged
- Over 257,500 private rental properties identified
- Almost 7,000 exemption registers reviewed
- Over 29,500 non-compliant properties identified
- In the process of securing a further £1.8m to work with aprox. 26 more LAs



GHG Skills Training

- Skills Training Round 1 - C.£5.7M claimed by Providers
- 18 providers appointed (16 delivered in full/up to deadline)
- External evaluation report available on the MNZH website

<https://www.midlandsnetzerohub.co.uk/wp-content/uploads/2022/06/GHG-Skills-Competition-Evaluation-report-FINAL-003.pdf>



6,938 TRAINING COURSES
COMPLETED



302 ORGANISATIONS SUPPORTED
FOR PAS / MCS ACCREDITATION



92% OVERALL LEARNER
SATISFACTION RATE

- Skills Training Round 2 - £9.2m available with a focus on Heat Pumps, Insulation and Retrofit Co-ordinators and Assessors.

Regional Retrofit Team

The Regional Retrofit team have secured funding for the Midlands to deliver retrofit at Scale:

- **Local Authority Delivery 2 - £60m**
- **Sustainable Warmth Competition (LAD3 & HUG) - £82m**
- **Social Housing Decarbonisation Fund - £15m**



Regional Retrofit Team

Delivering Retrofit at scale

- Regional Support mechanisms implemented to enable Local Authorities to successfully deliver the funding, alongside regular workshops for LAs:
- MNZH procured services to assist with the customer journey and implementation.
 - The Customer Journey Support service supports local authorities within defined areas and informs citizens of the process as well as providing a single point of contact
- Two Dynamic Purchasing Systems (DPS) for Local Authorities to use to procure installers and professional services.
 - A DPS combines a pre qualification process for suppliers, similar in effect to a 'select' or 'approved' list, with elements of electronic tendering, and aims to streamline the procurement process, reducing the workload and making it more efficient for both buyers and suppliers.
- Membership for all LAs working on LAD to Retrofit Centre of Excellence
 - Developed the Midlands Retrofit Toolkit which provides all Local Authorities (LAs) and retrofit professionals across all disciplines with a clear process to help facilitate PAS 2035 compliance.
<https://retrofitacademy.org/midlands-toolkit/>

A collaborative approach to retrofit

- Whilst there have been challenges delivering this scheme, the Midlands Net Zero Hub have clearly identified the benefits of a regional delivery approach including the achievements of the Local Authorities and procured Customer Journey Support teams.
- LA's have found the support through MNZH's procured Customer Journey Support teams invaluable; marketing the schemes to residents, triaging referrals, checking eligibility and supporting residents through the PAS2035 process, resulting in thousands of referrals in the Midlands to date
- There have been many lessons learnt which are shared regional to support local knowledge and capability. Despite LA's finding the timescales a challenge, many LA's have commented that being a part of schemes of this scale (relevant to their demographic and geographic size), has allowed them to lay solid foundations for the next waves of capital investment.

Challenges of Retrofit

- Material Shortages
- Internal Resource
- Skills Gap
- Resource in managing multiple schemes
- Timescales
- Cost increases and challenges
- PAS2035
- Programme Eligibility
- Contractor Rates - Price increases delaying contracts and prices not consistent with benchmarks.
- Implementation of PAS2035 - Newness of PAS process causing multiple issues for supply chain and LAs, creating programme delays and hesitation to put projects through scheme delivery.
- Competing programmes - LAs are delivering a number of retrofit schemes concurrently and some programmes lose out on installs to other schemes
- Programme eligibility - Eligibility criteria is rigid and sometimes not supporting the residents the funding is intending to reach

Public Sector Decarbonisation Scheme Team



**Alejandro
García**

Low Carbon Heat
Project Officer



**Charlotte
Tutton**

Principal Building
Decarbonisation
Project Officer

**Harry
Venning**

PSDS Team Senior
Bid Writer

**Jason
Tyler**

Principal Building
Decarbonisation
Project Officer



**Jorge
Santana**

Low Carbon
Energy Projects
Manager

What we have done...

Training

- Setting the team in place (NCC training)
- Securing recurrent sessions for team with BEIS
- Building a repository within or team folder

Documentation

- Scoring matrix for project triage
- Dissemination material for Local Authorities
- Building Information Form
- OnGen Expert Reports (and trial cases)

Buildings

- 35 buildings committed to be considered as part of the PSDS round in Autumn in 9 LEP areas

Collaboration

- Working with a mix of organisations across the Midlands
- Develop Business cases that support organisations Net Zero ambitions

What do we want to do...

Objective

- Enabling grant financing for technically and economically viable projects in all the regional areas of the MNZH coverage

Support

- Work with Public Sector Organisations to develop +45 business cases to enable decarbonization projects.

Report making

- +100 building portfolio within the Midlands
- +45 organization supported
- +30 Audits for EPC and ESOS

Team building

- Build trust among PSDS team members through divide duties, communication and skills-building.
- Collaboration with other regional Hubs.

**PSDS
TEAM**



Thank You!
Any Questions?



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Nottingham
City Council

Carbon Reduction,
Energy and
Sustainability