

**A collaboration to achieve Net Zero**

**Memorandum of Understanding**

**Derbyshire's Mineral Products Industry**

**and**

**Derbyshire County Council**

18 April 2023

1) **The Parties**

*Derbyshire County Council*



And

***The Minerals Industry, specifically:***

- CRH Group
- Longcliffe Calcium Carbonates
- Lhoist Group
- Breedon Group
- CEMEX
- Aggregate Industries
- Derbyshire Aggregates
- Lomas Distribution
- EPC Groupe
- Institute of Quarrying
- Mineral Products Qualification Council
- Mineral Products Association

**IQ** The Institute  
of Quarrying



## 2) Purpose

This memorandum of understanding establishes the strategic intent of the Mineral Products Industry and Derbyshire County Council to work collaboratively to:

- 1) Make a significant contribution to ensuring that Derbyshire has Net Zero carbon emissions by 2050 i.e. a reduction of 2.9 million tonnes per annum.
- 2) Accelerate near-term action to reduce carbon emissions by 2030 through renewable energy generation and supply; efficient industrial processes, technology, and logistics; carbon capture, usage, and storage; and securing private / public sector investment in net zero infrastructure e.g. via the UK Infrastructure Bank.
- 3) Create social, economic, and environmental benefit for Derbyshire, and the UK, through an exemplar transition to Net Zero that has public support and international interest.
- 4) Enable the Mineral Product Industry to make long-term major investment in their assets and infrastructure in Derbyshire.
- 5) Promote how the landscape of Derbyshire is protected and enhanced through sustainable quarrying practices.

The Mineral Products Industry is working as a Derbyshire collective in conjunction with the Institute of Quarrying in this venture. Creating the necessary conditions for their future multi-million £ investment in Derbyshire's low carbon economic growth is their common purpose.

Derbyshire County Council understands the necessity for a cost competitive, low carbon, and resilient energy system to sustain the Mineral Product Industry and the wide-ranging benefits it provides, whilst making a significant impact in meeting its 2050 Net Zero target.

This is a unique collaboration between a primary industry of the UK and a local authority.

## 3) Background

Derbyshire has a proud tradition of supplying raw materials for improving people's quality of life throughout the United Kingdom and further afield. The county is one of the richest in terms of its range and variety of mineral resources which include limestone, sandstone, sand and gravel, coal, clay and vein minerals. These are used in building construction, road making and maintenance and in a wide range of manufacturing processes.

Derbyshire is one of the UK's largest producers of minerals, providing significant employment making a substantial contribution to the economy. It provides 85% of the UK's industrial limestone, some 3 million tonnes, as well as over 10 million tonnes of aggregates and other mineral products. There are over 2,000 people directly and indirectly employed in the industry across the county. The annual GVA is approximately £140m with a cumulative value to 2040 of £2.5bn, representing higher productivity than the manufacturing sector. The annual turnover of

the operators in the minerals sector is equivalent to 75% of that generated from the local visitor economy.

Derbyshire is also rich in the quality of its landscape, which is established on the same geology that makes the county important for mineral working. Modern mineral working can have a significant impact on the local landscape resulting in the loss of features such as hedgerows, trees and stone walls, the loss of agricultural land and disruption to wildlife, water resources and archaeology, and disturbance to local communities.

However, a balance is struck between protecting the county's rich environment and local communities and allowing the winning and working of minerals that are needed to maintain the continued improvement in people's everyday lives and living standards.

As well, wider global environmental impacts are a consequence of minerals extraction and processing, specifically CO2 emissions and their contribution to climate change. Owing to the scale of the minerals industry in Derbyshire, the combined annual scope 1 and 2 carbon dioxide emissions are around 2.9 million tonnes. For all stakeholders, near and far, it is necessary to tackle these emissions to deliver a Net Zero Derbyshire. Such an ambition requires significant investment which in turn is dependent upon conditions which reduce the risk of that investment and hence this Memorandum of Understanding.

An industry / government collaboration of this geographic scale and ambition is internationally significant and seeks to provide a guiding light to other regions across the UK and the world.

#### **4) Statement of Common Ground**

Delivering the ambition of this Memorandum of Understanding is contingent on the cooperation of the undersigned who are aligned on the need to sustain a vibrant minerals sector in Derbyshire, continuously reducing its negative impacts and maximising its up-side benefits to society.

The signatories are all independent entities, some of which have statutory duties and place-shaping purposes, and others a strong commercial perspective. This document does not imply any diversion from the core purpose of those organisations, nor does it represent a formal joint venture in any sense.

All participants will respect each other's role and purpose and work to find mutually beneficial activities which deliver the Net Zero outcome desired.

#### **5) Mineral Products Industry Actions:**

The minerals industry is committed to a sustainable future with many producers aligning to zero carbon at or ahead of the UK Government target:

<b>Company</b>	<b>Carbon Target</b>
Aggregate Industries	Aggregate Industries is committed to achieving Net Zero emissions before 2050.
Breedon	Our 2030 target is to achieve a 30% reduction in gross carbon intensity per tonne of cementitious product.
CEMEX	To become a net-zero CO <sub>2</sub> company by 2050.
Lhoist	To reduce specific fuel carbon emissions from fuel consumption by 50% by 2030 compared to 2018.
Tarmac	Cut CO <sub>2</sub> by 45% per tonne of product by 2030 (from 1990).

As an illustration, Derbyshire's Mineral Products Industry has a track record of investing to mitigate its climate impacts. Examples include:

At Longcliffe Calcium Carbonates:

- Purchase and operation of two 2.3MW wind turbines
- HGV fleet updated with newer efficient vehicles
- Low-loss transformers installed
- Production lines updated lowering emissions per tonne of product
- Waste heat recovery implemented
- Procurement standards changes to prioritise low energy equipment
- Detailed monitoring of all plant and equipment with reduction targets in place

At Lhoist:

- Use of Parallel Flow Regenerative Kilns – the most efficient available
- Installation of a 2 MW gas fired CHP for electricity needs with associated heat recovery
- Invested over £10m in 2013 to install a kiln preheater reducing CO<sub>2</sub> emissions by 30-40%
- Alternative fuel use towards 40% of the energy input with trials of biomass and waste fuels to further reduce the CO<sub>2</sub> emissions
- Investment in camera technology and emissions analysis to improve the efficiency of fuel burning.

## 6) Derbyshire County Council Actions

There is clear evidence to show that climate change is happening. The UK is already affected by rising temperatures. The most recent decade (2008-2017) has been on average 0.8 °C warmer than the 1961-1990 average. All ten of the warmest years in the UK have occurred since 1990 with the nine warmest occurring since 2002.

Derbyshire is no stranger to the effects of climate change. Extreme weather events are becoming more frequent with harsh winters and extreme rainfall causing severe flooding in recent years which has led to much destruction and tragically even death.

Clearly action is needed on an unprecedented scale and local authorities have a crucial role to play. That's why the Council is keen to establish new strategic partnerships to lead a once-in-a-generation opportunity to reduce carbon emissions generated in Derbyshire to help meet ambitious national targets needed to address this global crisis.

Alongside targets for reducing the Council's own carbon footprint to net zero by 2032 or sooner, the Council's aim is to help drive down carbon emissions generated across the whole of Derbyshire as quickly as possible by delivering the priorities of its Climate Change Strategy: Achieving Net Zero 2021-2025 ([Climate change strategy \(derbyshire.gov.uk\)](https://www.derbyshire.gov.uk/Climate-change-strategy)) that relate to:

- Council estate and operations
- Low carbon economy
- Decarbonising the domestic sector
- Transport and travel
- Waste

The Council also acknowledges the important stewardship role it has in protecting and enhancing Derbyshire's landscapes and habitats from the impacts of climate change and biodiversity loss, and to appropriately use the county's valuable ecosystem services to the benefit of all of society.

Recent examples of the Council's strategic and policy intent that reflect these issues are as follows.

#### 1) *The Derbyshire Spatial Renewable Energy Study*

A primary reference point for the Council is the Derbyshire Spatial Renewable Energy Study (November 2022) - [Renewable energy study - Derbyshire County Council](#)

This document has been prepared through Vision Derbyshire to enable the county's place shaping and local planning functions to consistently promote and apply the priority of decarbonisation. It provides information on the county's current energy demand, generation, and supply system. The type, scale, and location of renewable energy generation solutions to secure the Derbyshire Net Zero target by 2050 is also shown. The Study also makes policy recommendations, as highlighted below:

- Reduction in energy demand through the appropriate design of new buildings and the retrofitting of existing public buildings and housing.
- Local generation of electricity as a key component of economic and wellbeing strategies.
- Establishing new, effective, and viable heating projects that support business and households.
- Shaping low carbon transport through low carbon mobility strategies, action plans, direct investment in public transport practices and vehicle fleets.

#### 2) *A Strategic Framework for Council action to deliver Net Zero energy in Derbyshire*

A Strategic Framework for Council action to deliver Net Zero energy is Derbyshire has been endorsed by the Council's Cabinet and Corporate Management Team (8<sup>th</sup> February 2023).

Given the complex nature of the globally significant social, economic, and environmental issues driving the Net Zero agenda, and the wide range of energy related projects the Council could champion, it is essential that the Council defines where it best focuses its attention in the near, medium, and longer term. Hence, the intention is that the Strategic Framework is used to direct and prioritise Council resources to promptly progress relevant net zero energy projects. Furthermore, the Framework has been prepared as a platform from which the Council's engagement in the Net Zero, Energy and Environment theme of the East Midlands Devolution Deal can be progressed.

The Framework identifies six Policy Objectives for the Council's prioritisation. These are shown below alongside their suggested Priority Workstream titles, which are recommended as the Framework's key activities in the near-term i.e. up to April 2025.

This Memorandum of Understanding directly relates to the delivery of these Policies.

<b>Policy Objective A</b>	<b>Priority Workstream A</b>
Making better use of existing, and creating new, energy grid capacity in Derbyshire.	Joint working with Derbyshire's Distribution Network Operators, the Midlands Net Zero Hub, and the Mineral Products Industry

<b>Policy Objective B</b>	<b>Priority Workstream B</b>
Enabling behaviour change by the county's residents and businesses, so they make positive and prompt Net Zero energy generation and consumption decisions.	Supporting owner occupier householders to retrofit through advice and by stimulating the home energy efficiency skills, employment, design, installation, and maintenance market e.g. through the Council's Green Entrepreneurs Fund.

<b>Policy Objective C</b>	<b>Priority Workstream C</b>
Supporting the progress of sustainable transport solutions for communities and businesses through the delivery of the Derbyshire Local Transport Plan.	Working with Midlands Connect to enable the installation of electric vehicle (EV) charging points for public use, extending the local cycle network, and supporting the transition of freight transport to net zero solutions.

<b>Policy Objective D</b>	<b>Priority Workstream D</b>
Appropriately using the Council's property portfolio to generate and store energy.	Renewable energy generation on the Council's estate.

<b>Policy Objective E</b>	<b>Priority Workstream E</b>
Collaborating with Derbyshire's industrial and agricultural sectors to support their transition to Net Zero and in so doing enhancing Derbyshire's economic prosperity.	Re-establish formal engagement with Derbyshire's rural and farming networks, and to identify options for joint working and the Mineral Products Industry.

<b>Policy Objective F</b>	<b>Priority Workstream F</b>
Facilitating a modern and smarter Digital Derbyshire energy system, that brings confidence from consumers, suppliers, and regulators in Derbyshire's Net Zero energy transition credentials and transactions.	Working with expert advisors (e.g. Midlands Net Zero Hub) to identify and promote smart energy developments within Derbyshire as part of the UK Gigabit Programme .

### 3) *Nature Recovery*

Subject to Government confirmation, the Council will be the "responsible authority" for preparing a Local Nature Recovery Strategy (LNRS) for Derbyshire during 2023/24 in accordance with the Environment Act 2021. The LNRS will be designed to deliver a step-change in collaborative action that restores and creates habitats across the county's valuable landscapes and urban neighbourhoods. The Council's Natural Capital Strategy for Derbyshire (February 2023) is an important precursor to the LNRS and provides the necessary evidence base to target appropriate nature recovery projects and investment.

Furthermore, the Council approved a Nature Recovery Motion on 2 February 2022 - [Agenda item - Motion proposed by Councillor W Major - Derbyshire County Council](#). In this the Council acknowledged that:

- Nature provides us with vital support systems, allowing life on our planet to continue.
- The climate crisis is intimately linked to the damage to nature which is happening around the world; that nutrient cycles, such as the carbon, nitrogen, phosphate and water cycles are all regulated by nature and are linked together.
- That we have responsibilities across the county of Derbyshire which have an impact on nature and that we will make decisions that protect and enhance it wherever possible.



- The requirement to take action is urgent, as climate change is rapidly disrupting natural cycles and habitats in Derbyshire. Steps to address the climate crisis must be in tandem with action to help ecosystems recover and become more resilient.

This Memorandum of Understanding directly relates to the delivery of the Council's Nature Recovery priorities.

## 7) Proposed activity for 2023/24

- Engage with other key public and private sector stakeholders to invite their involvement and contribution to deliver the purposes of this Memorandum of Understanding. This includes the Peak District National Park Authority, other Derbyshire local authorities, and the Distribution Network Operator (National Grid Electricity Distribution).
- Establishing baseline data concerning but not limited to energy consumption and needs, resultant CO<sub>2</sub>, GVA, employment, tax paid and biodiversity. This will enable the energy generation and CO<sub>2</sub> sequestration requirements to be quantified, objectives set, and allow the undersigned parties to track the outcomes of this MoU.
- To determine the best energy solution for the undersigned, an evaluation of appropriate sustainable energy technology mixes including but not limited to wind, solar, hydrogen, pumped storage and geothermal. This will take into account capex and opex costs, land-take, reliability, technical readiness, investment quality, landscape impacts and other policy considerations as typically required by planning law.
- Review CO<sub>2</sub> sequestration solutions and determine the most appropriate approach. This will take into account capex and opex costs, land-take, reliability, technical readiness, investment quality, landscape impacts and other policy considerations as typically required by planning law. Physical, chemical and biological solutions will be assessed, with the latter supporting biodiversity net gain.
- To quantify industrial transport needs in and out of the region in view of developing a sustainable transport plan taking into account costs, practicality, local and tourism impacts.
- The creation of a local energy action plan in collaboration with the Midlands Net Zero Hub facilitating investment into the required generator and sequestration assets to sustain the industry and its transport requirements. The plan will contain the business case for investment into the appropriate infrastructure. Collectively, the undersigned will work together to secure the necessary investment from credible and appropriate sources.
- To lobby the national Government concerning financial support, planning policy, improving energy grid infrastructure quality and delivering direct investment into the projects. Working together to ensure that the Derbyshire Net Zero plan has a significant profile and is seen internationally as the vanguard of local authority / industry collaboration.
- To develop a nationally significant innovation and skills centre, feeding the Mineral Products Industry and its supply chain in the county and beyond, with next generation thinking and appropriately qualified people.

- i) Recruit further industrial users of the energy and sequestration infrastructure to assist with economies of scale.
- j) Collaboration in the preparation of a Local Nature Recovery Strategy for Derbyshire that provides new direction, expertise, land, and investment in the creation, restoration and management of natural ecosystems.

8) **Benefits to be realised:**

The benefits of delivering against this MoU include:

- Sustaining the social, economic, and environmental benefits that the Mineral Products Industry provides to Derbyshire whilst transforming this primary industrial sector to Net Zero CO<sub>2</sub> emissions – which would be an internationally significant achievement.
- World-class operational standards from the minerals sector including contributions to skills development, biodiversity, and social value.
- A positive working relationship between industry and authorities serving as a template for other regions across the country and beyond.

9) **Commitments**

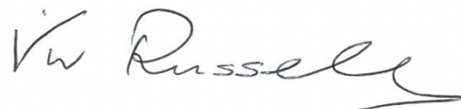
Industry: To commit to Derbyshire for the long term, ensuring skills creation, jobs and related taxes, social and biodiversity benefits.

Authorities: Commit to the industry, ensuring it is safeguarded and supported within the limits of statutory duties and available public finances.

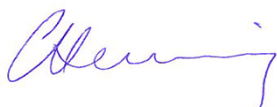
10) **Signatures and date**



Councillor Carolyn Renwick  
Cabinet Member – Infrastructure and  
Environment  
Derbyshire County Council



Viv Russell  
President  
The Institute of Quarrying



Chris Henning



James Thorne  
Chief Executive

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Derbyshire County Council

The Institute of Quarrying