

Renewable Energy Study

Climate Change Improvement and Scrutiny Committee
23 May 2022

Drivers for the Renewable Energy Study

- **Global context**
 - Climate Change - now the greatest challenge facing our society
- **UK context**
 - UK legal commitment to bring all greenhouse gas emissions to net zero by 2050 with a minimum 78% reduction by 2035 compared to 1990 levels.
 - Government Net Zero Strategy seeks to deliver a decarbonised power system by 2035.
- **Derbyshire context**
 - The expansion of renewable energy is a priority action in the DCC Climate Change Strategy 2021-2025
 - Vision Derbyshire workstream on Climate Change and Planning Policy. LPA officers identified the need for evidence to support plan making and planning policy with a number of local plans currently in a review process.
 - A raft of speculative large scale solar planning applications in Derbyshire with little or nothing in current Local Plans to guide such significant developments

Aims of the study

- Provide local planning authorities with an understanding of the overall energy requirement, and how this development might be planned for and managed through the planning system.
- Provision of robust evidence to underpin the development of effective renewable energy and climate change Local Plans policies in line with the National Planning Policy Framework paragraphs 155 and 158(b).
- To ensure the right typology of renewable energy is delivered in the right location, given the degree of landscape sensitivity in Derby and Derbyshire and the Peak District National Park, using landscape character types as a spatial framework.

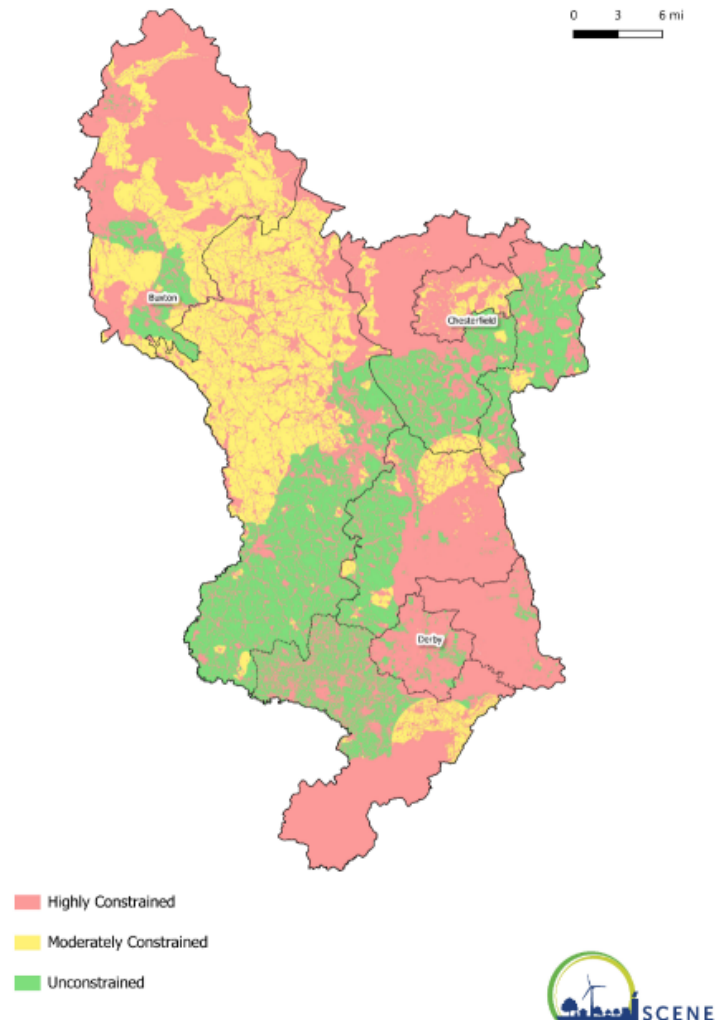
Funding

Successful grant applications totalling £50,000 were made to the Midlands Energy Hub, the D2 Energy Board and Business Rate Funding.

Commissioning of Study

- Late 2022 - Derbyshire County Council's officers initiated an open tender process for a renewable energy study
- Collaborative brief.
- Study commissioned for renewable energy study on behalf of all the Derby, Derbyshire and the Peak District National Park local authorities.
- 4 tenders received assessed by representatives from the Climate Change and Planning Sub-Group
- December 2021 - Cabinet Member Meeting for Infrastructure and Environment approved contract award to Scene Connect.
- The consultants commenced work on renewable energy study in early January 2022.

Constraints mapping example



Each renewable energy typology has been mapped against scale and associated known constraints. To be provided as GIS layers.

Form of study

The study considers:

- current domestic and non domestic demand (heat and electricity)
- future energy demand scenarios.
- Renewable energy opportunities in Derbyshire based on:
 - Typology of renewable
 - Landscape constraints (landscape sensitivity and designations)
 - Physical constraints (i.e. grid, headroom at substations) - critical for the integration of larger scales of energy generation development
 - Scale
 - Planning regulations
- Viability of development
- Suggested policy recommendations

Energy developments typologies considered:

Energy developments considered within this assessment cover demand, generation, storage, and supply. In particular, the renewables considered include:

•Electricity Generation:

- Wind turbines
- Solar photovoltaics (PV), including ground-mounted and roof-mounted installations
- Hydroelectric power

•Heat Generation:

- Solar Thermal
- Heat pumps, including ground, water, and air-source variants
- Energy from waste (EfW), including solid waste and biogas
- Bioenergy, including biomass and anaerobic digestion

•Energy storage

•Energy networks:

- Electricity networks
- Heat networks

•Low Carbon Mobility:

- Electric vehicles
- Electric charging network

Learning

- Draft final renewable energy study report due at the end of May.
- Presentations by Scene on the renewable energy study methodology to the Midlands Net Zero Hub area authorities (across 9 Midland LEP areas) to provide information on best practice and how to replicate the study.
- Derbyshire climate change and planning event for planning officers and members with responsibility for planning/climate change.