

## Green Estate Renewable Energy Feasibility Study

- **Local authority area:** Sheffield City Council
- **Stakeholders:** Green Estate, CO2Sense

### Summary

CO2Sense were commissioned by Green Estate to undertake a feasibility study for the development of an Anaerobic Digestion (AD) facility and a wind turbine installation at their site on Manor Lane, Sheffield.

### Background

- Green Estate, a third sector organisation based in Sheffield, was considering the two renewable energy developments as part of their continued work with the local community and environmental sustainability sector.
- If developed, the projects will produce clean electricity that Green Estate can then distribute throughout their site, selling any excess to the National Grid. Income from electricity sales and the Feed-in-Tariff would be reinvested into local community projects in the Manor Lane area.
- Feasibility studies are an essential part of developing a renewable energy project and provide guidance on the processes and considerations required to enable a project's development.

### Method

- As well as considering the technical aspects of each of the projects, the study also looked at the permitting, planning and the possible financial and community models for each of the installations. For the AD plant, the study also looked into potential food waste feedstock from the surrounding area.
- The study concluded by making recommendations for the viability of both technologies. These recommendations led CO2Sense to suggest that an AD plant was not appropriate for the site. CO2Sense have subsequently helped Green Estate begin negotiations with Sheffield City Council about a new site for an AD plant.

### Result - Key outcomes and impact

- For the wind development feasibility study, the recommendations showed that a small scale turbine may be applicable.



- However, this would need careful consultation with English Heritage regarding the scheduled ancient monument next to the proposed turbine site.
- The scale of the suggested wind turbine is smaller than Green Estate had initially anticipated, and so they have chosen to concentrate their efforts on progressing another site for the AD development in the immediate future.
- In the study, CO2Sense proposed structures to enable Green Estate to progress the development as a community investment project. These included establishing a co-operative and special purpose vehicle, meaning that investment from the community will generate profits to be put back into the area, as well as working with other community organisations.

## Key contact

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