

# Green Estate

## Green Estate Renewable Energy Feasibility Study



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.

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.

## Renewable Energy

- Delivered feasibility studies into two proposed developments – an Anaerobic Digestion facility and a wind turbine project
- Made recommendations for the size, site and scale of both projects
- Provided further technical support to progress both projects

“ The feasibility study from CO2Sense has been invaluable, and given us the detailed technical expertise and knowledge that our projects need. The recommendations have been in-depth and thorough, and covered every aspect of the project. We can now continue with the information we need to development these aspects of our business and so help to improve our local area.”

Sue France - CHIEF EXECUTIVE - GREENESTATE

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.

Victoria Maynard, Consultant at CO2Sense, said, "We are pleased to have been able to carry out the feasibility study for Green Estate and look forward to offering them further support in development of future projects.."

"By undertaking this feasibility study we hope to encourage other groups to come to us for advice in this area. We are keen to work with projects that aim to produce clean electricity, as well as generating long term income to support other projects in the 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.

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.



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Victoria Maynard – CONSULTANT – CO2SENSE

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.

Sue France, Chief Executive of Green Estate, said, "The feasibility study from CO2Sense has been invaluable, and given us the detailed technical expertise and knowledge that our projects need. The recommendations have been in-depth and thorough, and covered every aspect of the project. We can now continue with the information we need to develop these aspects of our business and help to improve our local area."

**CO2Sense was established by Yorkshire Forward to help businesses in the region to prosper in the low carbon economy. We provide expertise and funding to help environmental companies to grow. We work with partners to help all organisations to fund and develop initiatives that reduce their carbon emissions.**