Application: Astwick Green Power

Planning Application Reference: WNS/2022/1557/EIA

Description: The construction and operation of an anaerobic digestion facility, ancillary infrastructure, landscape planting and the construction of a new access road and access from the B4031

13th September 2022

Letter In Response to the AD Factsheet

To Whom It May Concern,

I am writing in response to the AD Factsheet which has been circulated in the Evenley and Croughton areas.

1) Purpose of the Plant

Through the development of the Astwick Anaerobic Digestion plant, Acorn are proposing to develop a project which will:

- Generate enough renewable biomethane to heat the equivalent of 8,142 households at a time of rising promoting energy security for the UK in a sustainable manner.
- Lead to an audited reduction in Carbon Emissions of 28,300 tonnes of CO_2 per annum compared to the use of fossil fuel derived energy. This is equivalent to taking 9,265 cars off the road.
- Capture 13,000 tonnes of clean food grade CO_2 for use in local commercial applications such as agriculture, the drinks industry, construction and health care, at a time when the UK Government has been forced to subsidise chemical fertiliser production specifically to maintain supplies of commercial CO_2.
- Work with local farms and agricultural contractors to provide:
    - Economically viable break crops in local crop rotations.
    - New markets for agricultural by-products.
    - Nutrient rich organic plant fertilisers that will improve local soil organic matter content leading improved structure and fertility.

This will be achieved by feeding the plant a range of agricultural feedstocks. The feedstocks are:

- Straw which is a by-product of arable agricultural food production.
- Whole crop silages Maize, Rye and Grass silage which offers farmers valuable break crops to insert within and enhance food growing crop rotations. Our plant will positively impact the health and yields of food production crops in the surrounding area.
- Dairy slurry, farmyard manure and poultry muck from local livestock farming. Current practice sees this material spread directly to land in the surrounding area. Acorn's proposal will allow for energy to be extracted from this material while still returning valuable nutrients to benefit local agricultural land and food production. The digestate which is then spread on land considerably lower in odour than land spreading of untreated manure.

2) Scale of the Plant

There is a general trend in plants becoming larger over time. This is because the initial agricultural AD plants in the UK burnt the gas they produced in engines to generate electricity. This meant a significant portion of the energy present in the gas was transformed to heat which in most cases was lost.

The government has therefore sought, through both the Renewable Heat Incentive and the Green Gas Support Scheme, to ensure the gas is cleaned and used in the most efficient manner possible which is as a direct replacement for the fossil fuel derived Natural Gas we currently consume.

The equipment required to clean the gas and capture the CO_2 produced is not commercially available or viable at the same smaller scale that CHP engines are. This has lead to a direct increase in the size of plants.

The UK is under continued pressure to procure more renewable energy generation and gas supply. This is evidenced by the pressure international events are currently placing on fuel bills.

The UK currently imports 30% of its gas from mainland Europe and approximately 20% is transported via ship form countries such as Qatar and the USA.

The gas produced at Evenley will be injected into a gas pipe and transmission network at Banbury. This injection point on the transmission pipe is only 12km from the site and the pipe provides gas both to Northamptonshire and Oxfordshire.

3) Land Requirement and Food Production

The factsheet states that the land area required for maize production is 7000 acres. Whole Crop Maize has an average yield of 40 tonnes per hectare. That means the project will source the 20,000 tonnes of Maize it requires from 500 hectares or 1,235 acres of maize. This will be grown as a break crop in local crop rotations, with the organic fertiliser produced by the plant being used to improve soil structure and organic matter content, as well as valuable sources of 'readily uptakeable' plant nutrients.

In addition the project will source rye and grass silage. Similarly Whole Crop Rye Silage has an average yield of 40 tonnes per hectare. The 15,000 tonnes of Whole Crop Rye will therefore be produced as a break crop on 375 hectares or 926 acres of arable land. Grass Silage has an average yield of 60 tonnes per hectare. This means that the 12,600 tonnes of Grass Silage will therefore be produced, as a break crop, on 210 hectares or 519 acres of land.

This means the total silage feedstock required for the project can be grown on 1085 hectares or 2,678 acres of land.

This land will not be taken out of food production. All arable crops are grown as part of a crop rotation cycle. The production of feedstock for Anaerobic Digestion offers farmers valuable economically viable break crops that actually help reduce pest, improve soil structure and increase yields form food production.

Maize is known as a 'take-all' break crop. This means that when inserted in the food production crop rotation cycle, it will clean the soil of a harmful fungus based disease, for which there is no chemical treatment, and will enable the following wheat or grain crop to have significantly increased yields.

Grass is also known as a 'take-all' break crop, which again will clean the fungal disease leading to increased wheat yields. In addition grass roots, which will be ploughed back into the field provide a valuable source of soil structure and organic matter.

Whole Crop Rye provides a valuable control mechanism for Black Grass. Black Grass is a weed prevalent in arable fields for which there are no available legal herbicide treatments. Black Grass is highly competitive and a tough plant so it reduces the yield of the primary food crop, while the stem can cause physical damage to combines and the weed seed can cause the rejection of grain loads at point of sale. Whole Crop Rye is harvested in June which is a month before the Black Grass seed becomes mature and viable. This means that the production of Rye helps reduce this wide spread and problematic weed that is causing arable farmers a lot of problems.

4) Vehicle Movements

While the proposal will generate new vehicle movements, much of the movements will displace other agricultural traffic in the area. The peak vehicle movements are linked directly to the agricultural harvest period. The harvest peak is 67 vehicle trips or 134 movements of a vehicle either entering or leaving the site. This assessment has been based on the amount of feedstock required and Acorn Bioenergy will seek to improve the efficiency of the process and reduce this requirement. The site is in an agricultural area and vehicles of this nature will be on the local highway network at that time.

The application is accompanied by a Transport Statement undertaken by an independent and technically qualified specialist. The access design has then also been assessed under an independent third party road safety audit.

Following a thorough examination, the statement is able to conclude:

"It is concluded that any impacts resulting from the proposals would be negligible in terms of road safety, highway operation, and/or network capacity; as such the proposal is considered acceptable in highways and transportation terms."

5) Smell and Generation of Odour

AD is indeed a controlled and contained process. The proposal includes a building for the unloading of animal manures to ensure that this is contained and dry and that it cannot cause nuisance.

An odour management plan will be produced for the site as part of compliance with the Environmental Permitting Regulations for the site. This will include a detailed risk assessment examination on all aspects of the site, its operational practices and any abatement measures. The purpose of this plan will be to ensure that the site does not cause any nuisance to the closest residents to the site; such as those near the Barley Mow Roundabout.

The management plan will then include a series of daily odour checks, as specific locations around the site perimeter and surrounding area, to ensure that it works. These monitoring locations will be agreed with the Environment Agency and records will be kept to ensure that the monitoring is carried out and that should any temporary problems be noted, they are quickly rectified. These records will be audited by the Environment Agency.

The Factsheet quotes a number of media stories related to Anaerobic Digestion. Each story relates to a plant which process some form of highly putrescible food waste, be that domestic household waste, commercial food waste and animal by-products or a mixture of both. The Cannock Chase Plant is a waste management plant located at the Poplars Landfill Site, while the Malaby plant processes local food waste and the BioConstruct Plant at Imperial Park deals with commercial animal by-products and food wastes.

The Acorn development is specifically designed to handle agricultural crops and by-products and **not** any of the materials that have given rise to the complaints quoted. These are therefore not a relevant comparison.

6) Ammonia Screening

The screening process for Ammonia that is part of our Air Quality Impact Assessment is incorrectly listed as being a consideration of odour generation. In fact the impact of ammonia was screened as requiring further work due to the potential impact that ammonia emissions can have on the balance of plant nutrients in a sensitive habitat, due to the fertiliser properties of ammoniacal nitrogen.

The ecological receptors considered in this instance are the three Local Wildlife Sites at Old Astwick Village Moat (approx. 400m to the north), Slade Covert (approx. 750m southeast) and Croughton Spinney (approx. 1.3km northwest).

The initial screening assessment uses very conservative standard figures, which triggered a requirement for more detailed consideration, specifically in relation to the ecological receptors.

A more detailed analysis of the impact of Ammonia Emissions has been submitted with the application. This assessment has included a consideration of impact on all residential receptors in the local area, even though the only requirement for further assessment was the impact on ecological receptors. The Ammonia assessment concludes that the emissions from the plant will have 'Negligible Impact' on all human receptors and will not cause pollution at the ecological receptors.

7) Processing of Food Waste

Acorn Bioenergy is not designing the plants to deal with meat-included domestic or commercial food waste. While the processing of these materials in an AD plant makes a lot of sense, they necessitate a very different design of plant. Plants that process must:

1. Be fully compliant with the Animal By-Products Regulations, which are designed to prevent livestock disease outbreaks, such as Foot & Mouth Disease and govern how all waste containing or contaminated by meat are processed. This requires a significant investment in a physical design that can be compliant with those regulations.
2. Be capable of handling the high levels of packaging and cutlery contamination that is prevalent in food waste, requiring the processing line to be capable of removing, plastics, glass and metals form the food waste.
3. Be designed to work with the high water content of food waste.

Acorn Bioenergy is seeking to work exclusively with feedstocks that are agricultural in nature and origin. Any change to food waste would require substantive capital investment

in a re-design of the plant, and would require a new and separate planning application to be made to the Local Waste Management Authority.

8) How Close is It To Evenley Residents

The factsheet quotes a section of the Design and Access Statement which specifically concerns the consideration of distant views of the site as undertaken in the Landscape and Visual Impact Assessment. That is to say that there are no views of the site beyond 2km.

With regard to consultation, as clearly laid out in the Statement of Community Involvement, 744 local residents were written to regarding the proposal and invited to the public consultation. This includes all properties within 1km of the site. Further offers of follow up meetings have been made to the closest residents and that offer remains open. It remains the intent of Acorn Bioenergy to be a good neighbour.

It is not correct to say that the application does not consider the impact on residents that are closest to the site. Indeed there is specific consideration of impact on a wide range of local residents in consideration of Air Quality, Noise,

9) Pest Control

A full regular pest control programme will be carried out on site. This will be a requirement of our environmental permit and records will be kept to show compliance with that.

10) Minerals and Waste Local Plan

Acorn is proposing to develop a renewable energy facility that will reduce carbon emissions and promote energy security at time where global markets for gas are extremely unstable. The proposal is not a waste management facility.

11) Archaeology

It is standard planning process to submit an Heritage and Archaeology Desk Based Assessment and then discuss what that raises with the council's Archaeological Officer. This process has now begun and they have submitted their initial consultation response.

This report specifically includes the Medieval Village of Astwick which is to the north west of the proposed development. It also includes a full Geo-physical Survey of the site, which is an important first step towards evaluating any archaeological remains within the site itself.

Acorn Bioenergy recognises that further archaeological work will be required and has no desire to or interest in damaging our heritage. Due process will be agreed with the council and will be followed.

I trust the attached will help clarify our position on the wide range of issues contained within the ‘fact sheet’ and will help illustrate our commitment to being at all times a good neighbour to local residents, that will seek to work with local businesses.

Please do not hesitate to contact me if you require further information.

Yours sincerely

Nick McAllister
Business Development Manager