

# DESIGN AND ACCESS STATEMENT

## Proposed Anaerobic Digestion Facility

at

Rothwell Lodge Farm  
Kettering Road  
Rothwell.

for

**Fernbrook**

prepared by



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## 1. PROJECT DESCRIPTION

- 1.01 This application relates to the proposed construction of a purpose built Anaerobic Digestion Plant, the components of which involve a dedicated handling building incorporating external paved areas for vehicles along with a series of process tanks. The project also proposes substantial landscaping works (described in detail elsewhere) to provide screening to the development as well as bio diversity enhancements to the area.
- 1.02 Anaerobic Digestion ( AD ) is a biological process whereby animal and plant matter is broken down by bacteria in the absence of oxygen. It is a process that has been used successfully for many years in sewage works for the treatment of sewage waste. The process produces methane and an inert biofertiliser which can be used as a soil conditioner in liquid, sludge or solid form. AD occurs naturally within most landfill operations where organic waste is deposited - the methane gas has to be piped off and either released directly into the atmosphere or flared off. In this instance the methane is used to power generators, which in turn produce electricity which is subsequently relayed back onto the local High Voltage network. Waste used as part of the AD process would use farm manure as well as food waste which in other circumstances would be taken to land fill.
- 1.03 Running at peak capacity the plant could provide sufficient power to generate electricity to supply approximately 2000 homes.
- 1.04 There are key criteria any possible site for AD must achieve in order to even be considered suitable for development. These include:-
- a/ The site needs to be directly linked to a major network in order to be able to cater for HGV movements to the site delivering food waste etc
  - b/ The site needs to have access to a local High Voltage supply network in order that electricity generated can be fed back onto the grid.
  - c/ The site should ideally be linked within a working farm in order to be most sustainable. In this instance not only is farm manure used in the AD process but the inert biofertiliser produced can be fed directly back onto the farmland resulting in reduced transportation costs.
  - d/ The site should be sufficiently large to contain the requirements of the AD process but should also be sufficiently large to enable suitable landscaping to be incorporated to act as screening and add biodiversity value.
- 1.05 This site not only meets all of the key criteria indicated above but is located in close proximity to Rothwell which will see major growth in both housing and employment in the forthcoming years.

## **2. DESIGN**

### **SITE CONTEXT**

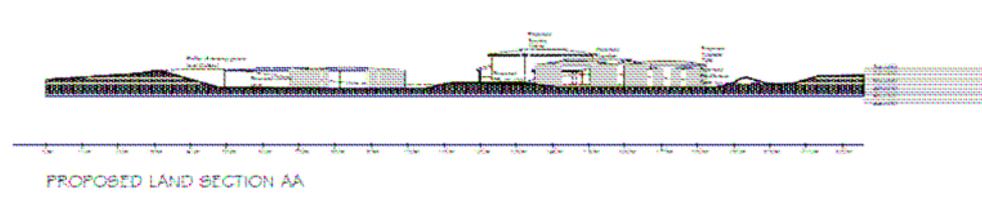
- 2.01 The site forms part of a working farm known as Rothwell Lodge Farm. It is located directly off Junction 5 of the A14 trunk road. The dedicated access road loops round to the farmyard access and the site is located immediately west of the site entrance. The land (currently used for grazing) sits considerably lower than the A14 itself (a difference in levels exists in the order of 2.5m) and continues to fall to a natural dip before rising again to the southern boundary of the proposed development site.
- 2.02 The proposed development site is in close proximity to the existing farm dwelling and agricultural buildings. The proposed building would therefore be perceived as part of the farm complex.
- 2.03 An existing sub-station and the local electric HV network pass just beyond the site boundary.

### **3. EXTENT OF BUILDING COVERAGE**

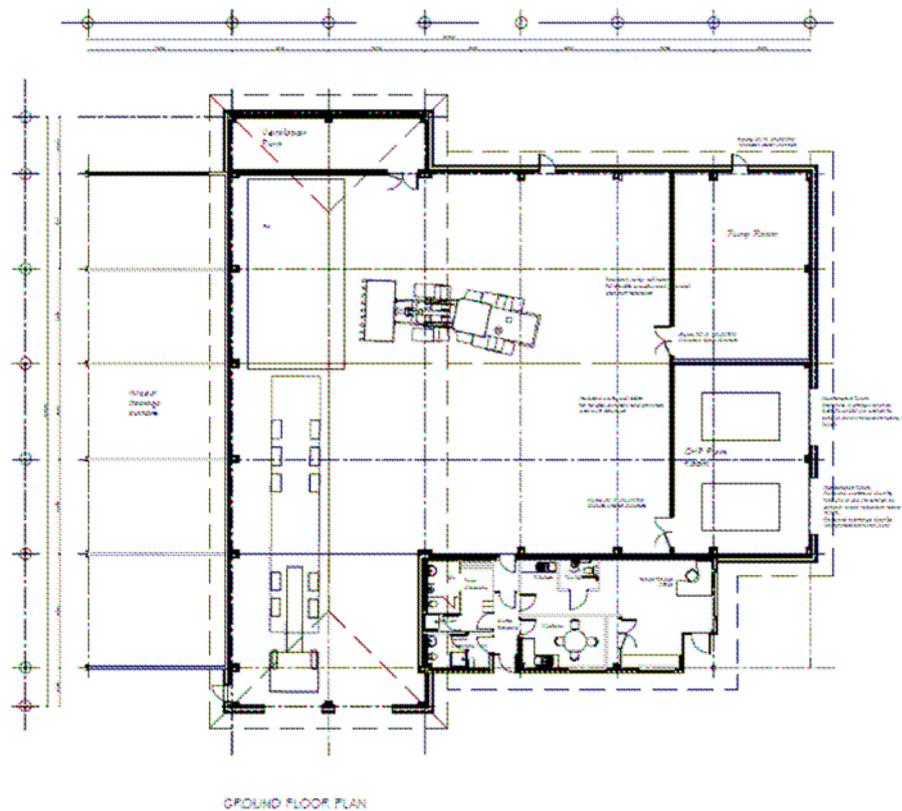
- 3.01 Permission is sought to for a single storey building whose footprint area is 868m<sup>2</sup>.
- 3.02 The site area equates to 2.28 hectares.
- 3.03 Permission is also sought to locate the following tanks within the site confines
- a/ 2 No digester tanks each 22.5m diameter x 6.28m high
  - b/ 2 No pre-storage tanks each 6.98m diameter x 5.03m high
  - c/ 1 No feedstock buffer tank – 5.43m diameter x 3.78m high
  - d/ 2 No bigestate storage tanks each 31.83m diameter x 5m high

#### 4. RESPONSE TO SITE / BUILDING DESIGN STRATEGY AND BUILDING FORM

- 4.01 The design seeks to form a link with the existing farm buildings in order that it is not seen as an isolated built form in the open countryside. It also seeks to minimise its perceived bulk by adapting the existing land features and locating the building and proposed tanks farms within the natural dip of the site.
- 4.02 It is proposed to form a cutting into the site in order to minimise the impact of the site. This is demonstrated on drawing FB/BR/09/005 A and 006 A (extract shown below)

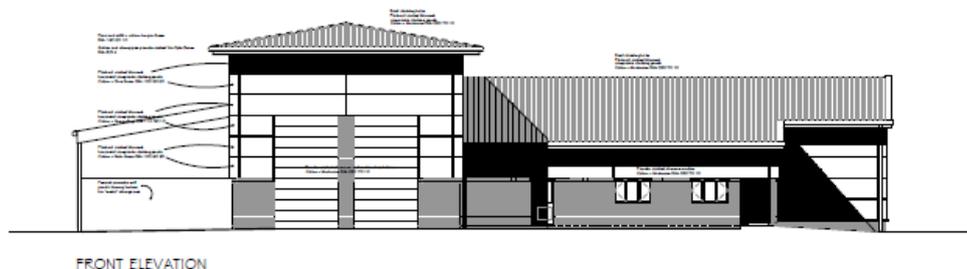


- 4.03 The main digester and storage tanks are located towards the rear of the building. These tanks store the delivered and sorted food waste material and farmyard manure. The AD process occurs within this area. The processed material is pumped from the digester tanks into the Bigestate storage tanks located in the centre of the site.
- A concrete access road circulates the perimeter of the tank areas to enable maintenance and fertiliser to be collected as necessary.
- It is to be noted how the height of the tanks is integrated into the landscape as a result of the reduction in site levels.
- 4.04 The building is designed as a response to the function of the process carried out within the building. It requires:-
- a/ A delivery area whereby a HGV can reverse into the building and tip its waste in an hermetically sealed environment so as to avoid the potential of odour pollution in the local environment. In order for a HGV vehicle to be able to tip a minimum internal height of 8m is required.
  - b/ General processing area / pump area and CHP plant. This area of the building does not impose the same height restrictions as the delivery area and therefore in an attempt to minimise the impact of the building within its surroundings has been designed as a separate interconnecting wing to the delivery area.
  - c/ Office and Welfare facilities. A small office area is required to facilitate the administration of the operation. Welfare facilities also need to be provided for the staff. This wing forms an extension of the processing area roofline.
- In order to further reduce the visual impact of the built form the roof of the highest wing is treated as a hip.



4.05 The building is 31m wide at its maximum reducing to 20m x 30m long. A further covered area linked to the building is also proposed of dimensions 26m x 7.5m. The loading area wing of the building is 8.5m high (measured internally to eaves) rising to 9.5m (measured internally to ridge). The remaining building is 4.5m to eaves with a ridge height of 6.9m.

4.06 Materials to the building are selected with a view to reducing heat loss and also providing effective acoustic and odour control to the internal environment. The majority of the wall façade and roof is intended to be constructed from plastisol coated composite cladding panels, coloured to blend in with the natural landscape. Door openings are provided for access and maintenance purposes with insulated sectional overhead doors (acoustically rated to the CHP room)



## ACCESS

## 5 PHILOSOPHY STATEMENT

- 5.01 Fernbrook is committed to a policy of equality, inclusion and accessibility achievable through good design. The basic right for access to and use of buildings for all is recognised as the most fundamental basis upon which the design should be established. The design process offers an opportunity to maximise individuals' abilities to enjoy a safe and, wherever possible, independent participation. It is recognised that all individuals have a range of abilities which vary greatly and some of which may be impaired requiring consideration upon the Designer's part to ensure that as wide a range of abilities as possible are accommodated. The design process is unique for each development as the distinctive requirements for a Client/End User will be specific to that project. For this reason we view the Client/End User as a part of the Design Team to ensure that the 'inclusive design for all' philosophy is adopted from the inception stage.
- 5.02 We endeavour to work to the latest legislation and good practice guidance available at the time, also taking into account advice and comments received as a result of consultations with Access Consultants and Local Groups. It is the aim of the developers to adopt the guidance from these sources so far as is reasonably practical for the type and nature of the building, the restrictions of the site and the intended occupiers.

## **6 DESIGN BASIS**

- 6.01 The design requirements for the works are to provide the minimum required standards set out within Building Regulations Approved Document Part M 2004, and BS8300, that will afford reasonable access to all areas of the proposed new offices and sorting area.
- 6.02 It is acknowledged that the proposed development presents issues relating to accessibility and inclusion which will need to be addressed if the obligations imposed by the Disability Discrimination Act 1995 (DDA) as employers (Part II), service providers (Part III) are to be met.
- 6.03 Through successful management of the completed site/building and continual review of its access policy, the Client/End User can ensure that any potential sources of discrimination are addressed in both the physical attributes of the buildings it uses and in the management practices and procedures it adopts.

## **7 CONSULTATION AND SOURCES OF GUIDANCE**

- 7.01 Consultations will include the Building Control Approved Inspector with regard to the implementation of Approved Document to Part M of the Building Regulations (2004) and BS8300:2001. These are used as the main sources of reference, although not all of it is relevant to the proposed work.

Main design references used included: -

- \* The Approved Document: Part M (2004).
- \* BS 8300:2001.
- \* The Sign Design Guide (The Sign Design Society).
- \* Planning and Access for Disabled People – A Good Practice Guide (ODPM).

## **8. KEY ACCESS ISSUES OF THE DESIGN**

### **8.01 Approach and Car Parking: -**

The existing development is accessible from J5 of A14. The access road into the site entrance slopes at a steep gradient towards the concrete paved farm entrance. However due to the site's location there is no possibility of pedestrian access to the site and the steep gradient is therefore not considered an issue.

On entering the farm and proposed site the paving is predominantly level. The car parking area has a nominal fall for drainage purposes. A single wheelchair-disabled car parking space is provided for staff and visitors within the car park adjacent to the building entrance with drop kerb level pavement adjacent the spaces.

### **8.02 Pedestrian routes and external level change:-**

All approaches are concrete slabbed or Concrete paved and do not exceed a gradient of 1:20 with footways having cross-falls not exceeding 1:60. External lighting will be provided around the buildings and approaches with illumination to 50-100 lux.

### **8.03 Entrances.**

The design of the building is intended to make the entrances clearly identifiable.

Signage will also be used to highlight entrance doors.

All doors and frames will be finished with colours to contrast with their masonry wall surrounds.

The entrance is sheltered under the projected roof.

Entrance matting is recessed flush with the floor and is of an aluminium-ribbed type not to impede movement of wheelchairs or create trip hazards.

### **8.04 Horizontal circulation (including doors and corridors).**

Corridors and passageways are designed to be minimum 1,200mm clear width with level floors.

Colour contrast of at least 20 points Light Reflectance Value (LRV) is provided between walls and floors, walls and ceiling.

Colour contrast of at least 20 points (LRV) is provided between door/door frames and surrounding walls, door face and leading edge to non self-closing doors and between Ironmongery and doors of minimum 20 points (LRV).

Doors generally open into rooms.

Doors on access routes are held open with magnetic devices linked to the fire alarm system to self-close automatically upon activation.

Doors to accommodation/rooms and toilet entrance lobbies are fitted with low power (30N) self-closing devices.

All doors are designed to provide minimum clear opening widths, measured to the face of any protruding ironmongery, to comply with Building Regulations AD part M table 2.

Doors on access routes are fitted with vision panels towards the leading edge to provide minimum zone of vision between 500mm and 1,500mm from floor level.

Ironmongery door handles are selected to meet the requirements of BS8300 to be operable with one hand using a closed fist.

#### **8.05 Sanitary accommodation.**

A wheelchair accessible toilet is provided within the office space for staff and/or visitors.

The colour scheme will be selected to ensure colour contrast of min 20 points LRV between floor and walls, walls and ceiling, cubicle doors and walls, sanitary ware and walls.

#### **8.06 Information, signage and way finding.**

Signage is to be used throughout the facilities to provide information regarding directions for the locations of the following facilities: -

Emergency escape routes.

Signs are to be bold with high colour contrast between the lettering and between the sign and background. Text is to be in a clear type font utilising upper and lower case lettering. The size of lettering is to be selected to suit appropriate viewing distances in accordance with British Standards and The Sign Design Guide and Good Signs (Improving signs for people with a learning disability) Report to the Disabled Rights Commission.

Where possible the use of pictorial diagrams to illustrate facilities available will be employed, for example: male, female and disabled symbols for toilet facilities.

The Running man symbol will be used on escape signage in accordance with BS54499 Part 1 and Directive 92/58 EEC

### **9. CONCLUSION.**

9.01 The design and construction of the proposed AD plant will achieve inclusive access for people of all abilities for employees and visitors.

## **Appendix A    Bibliography**

ODPM (2003), 'Planning and Access for Disabled People: A good Practice Guide', Authors: Drivers Jonas, Publisher: ODPM

ODPM (2004), The Building Regulations (2000), Part M, Access to and use of Buildings, 2004 Edition, and the Approved Document to Part M (2004), Pub: TSO (The Stationery Office)

BS8300:2001, Design of Buildings and their approaches to meet the needs of disabled people, Code of Practice, BSI, 2001

Colour and Contrast – a design guide for the use of colour and contrast to improve the built environment for visual impaired people, (2001), JMU Access Partnership, The University of Reading and ICI Paints, Pub: ICI Paints, Slough, Berkshire. (CD Format)

The Disability Discrimination Act 1995 (DDA), The Stationery Office

The Town and Country Planning Act 1999, (TPCA), The Stationery Office

Disability Rights Commission, Access Statements – Achieving an inclusive environment by ensuring continuity throughout the planning, design and management of buildings and spaces

Good Signs, Improving signs for people with a learning disability, report to the Disabled Rights Commission.

The Guild of Architectural Ironmongers technical reports

ROTHWELL LODGE,  
Rothwell,  
Northants

# Planning Statement

ON BEHALF OF FERNBROOK BIO Ltd.



PROPOSED ANAEROBIC DIGESTION PLANT  
AT ROTHWELL LODGE, ROTHWELL,  
NORTHANTS

My Ref: AJM / A083885

**PLANNING STATEMENT**

**IN SUPPORT OF**

**A PROPOSED ANAEROBIC DIGESTION PLANT**

**AT**

**ROTHWELL LODGE, ROTHWELL, NORTHANTS**

**ON BEHALF OF**

**FERNBROOK BIO LTD.**

**APRIL 2009**

## **1.0 INTRODUCTION**

- 1.1 This statement has been prepared in support of a planning application for a Biomass Anaerobic Digestion Plant to be located on land just to the west of Rothwell Lodge Farm near Rothwell, Northants. The site is currently in use as grazing land and is located on the south side of the A14 road which is dual-carriaged. The farm benefits from its own discrete access from the A14 by way of a small clover leaf junction arrangement with a small underpass running beneath the A14. The site is located in a dip in the land which falls away from the A14 and then rises up fairly sharply to a ridge towards the south. The site benefits from fairly good existing vegetation along its boundary with the A14 – there is an extensive belt of shrubs and trees within the southern cloverleaf and along the back of the highway verge. However, it is more open along its other boundaries.
- 1.2 Rothwell Lodge farm is located about 1 Km south of the town of Rothwell and 2 Km north east of the village of Loddington.
- 1.3 The proposal has been subject to informal stakeholder consultation before the formal submission of the application. The applicant’s representatives met the national property manager of Mc Donalds, the owners of the restaurant on the opposite side of the A14, on 1<sup>st</sup> April 2009 to explain the proposal. Esso, the owners of the petrol filling station in the same location, were also contacted but declined to meet on the basis of being relatively neutral towards the proposal. Finally, an informal meeting was held with Rothwell Town Council on 30<sup>th</sup> April 2009 – this was on a without prejudice basis but provided the opportunity for the proposal to be explained and points raised by the councillors clarified by the applicant. The two dwellings at Rothwell Lodge Cottages are currently vacant.
- 1.4 This statement is set out in the following way:
- 1.0 Introduction
  - 2.0 Description of the Proposal
  - 3.0 Planning History

- 4.0 Planning Policy
- 5.0 Planning Analysis
- 6.0 Conclusions

## **2.0 DESCRIPTION OF THE PROPOSAL**

### **Background.**

- 2.1 Anaerobic Digestion ( AD ) is a biological process whereby animal and plant matter is broken down by bacteria in the absence of oxygen. It is a process that has been used successfully for many years in sewage works for the treatment of sewage waste. The process produces methane and an inert biofertiliser which can be used as a soil conditioner in liquid, sludge or solid form. AD occurs naturally within most landfill operations where organic waste is deposited - the methane gas has to be piped off and either released directly into the atmosphere or flared off.
  
- 2.2 AD is being developed extensively in Western Europe as a means of processing animal and plant waste which otherwise has to be deposited to landfill. Germany and Sweden have well developed AD sectors with much of the technology and equipment being produced there.
  
- 2.3 Commercial AD plants take all forms of animal and plant waste and processes them in large digester vessels. The AD process generates methane which is piped off and stored on site. The methane is used to power engines which can then generate electricity. The size of plant proposed at Rothwell Lodge Farm which is seeking to process a maximum of 30,000 tonnes per annum will produce enough electricity to power slightly under 2,000 homes per year and produce carbon savings of just over 2,700 tonnes of CO<sub>2</sub> per year through the production of clean, renewable electricity. The end product of the AD process is an inert biofertilizer which in the Rothwell Lodge Farm case is to be used by the farmer on whose farm the plant is to be located to fertilize his land. Traditional fertilisers are becoming increasingly expensive and it is expected that in time AD biofertiliser will become increasingly attractive as a sustainable alternative. In the UK the AD industry is also in its early stages and it is anticipated that the organic value of the AD fertiliser to farmers will increase as the technology improves.

2.4 Virtually all forms of animal and plant waste can be processed by AD plants. These include :

- Animal waste and slurries from intensive cattle, pig and chicken farms. The Rothwell Lodge Farm plant will take manure from the farmer's existing cattle herd.
- All waste from abattoirs except for special categories which require incineration
- Rejected, spoiled, damaged and rotten vegetables from distribution and processing centres
- All waste from the food processing industry
- Wastes from supermarket depots
- All food wastes from the supermarkets themselves such as out of date food items
- Municipal and solid waste ( MSW ) from local authority collections. Many local authorities are pursuing a number of different strategies to recycle food waste from their MSW with a view to processing them through AD plants. These strategies vary in how they approach waste collection and separation.
- Energy crops such as maize grown specifically for AD plants.

2.5 All of this waste is currently disposed to landfill by HGV's travelling on the existing road network including the arterial trunk roads within the region. In landfill, this organic waste degrades of its own accord and generates most of the serious problems associated with landfill operations in terms of odour, vermin, pollution from leachate and dispersal of methane into the atmosphere. Methane is 23 times more harmful as a green house gas compared to CO<sub>2</sub>.

2.6 The government is committed to a long term strategy of shifting waste disposal away from disposal to landfill towards waste treatment and recycling. The effects of this are being felt throughout the waste industry and within all sectors of the

food production industry from farmer to retailer to householder. AD is developing rapidly as a technology and offers the following benefits :

- Diversion of unpleasant organic waste which causes the most environmental problems away from landfill
- Creation of a continuous supply of renewable electricity
- Capture of a harmful greenhouse gas ( methane ) which would otherwise be released into the atmosphere
- Creation of a cheap and beneficial supply of biofertiliser

**Development proposed.**

- 2.7 The existing access off the A14 is to be improved to provide standard acceleration and deceleration lanes off and onto the A14 and the radius of the existing cloverleaf is to be widened to allow for the increase in traffic likely to result from the proposal. A new access is to be created on to the site incorporating the existing access into the farm yard. Vehicle movement within the site has been segregated to keep lorries delivering waste and collecting digestate separate to ensure the plant can comply with current licensing requirements and also to keep staff and visitor's cars separate from operational traffic.
- 2.8 A waste reception and handling building is to be sited towards the front of the site. This is 31.5m by 30m in dimensions with a taller element ( 9.7m high to ridge and 8.6m high to eaves ) to accommodate HGV's tipping within the building and a lower element ( 7.1m to ridge and 5.3m high to eaves ) to provide space for waste handling, processing and a small suite of ancillary offices and staff facilities. As well as being efficient, this also assists in breaking up the bulk of the building and the building's overall appearance is quite attractive for a utilitarian building of this nature.
- 2.9 Within the operational area of the site, there will be a range of digester vessels and tanks within which the food waste is processed and stored. Two will be located immediately to the north west of the waste reception building – these will

be 2,946 cubic meters in volume, 22.5m in diameter and 6.28m high. Two much smaller pre-storage tanks will also be located in this area with a volume of 192 cubic metres, 6.98m in diameter and 5.03m high. Close to the building will be a de-sulphurizer 2m x 2m x 5m high.

- 2.10 Further to the south of the main building will be two large digestate storage tanks each 4,000 cubic meters in volume, 31.8m in diameter and 5m high.
- 2.11 It can be seen that the digester vessels are lower than the height of the building mainly because of their fairly broad diameter compared to similar vessels under construction elsewhere on recently approved anaerobic digestion plants in Northamptonshire. Their height is further reduced by their location within a sunken, impervious bunded area approximately 1m deep. The digestate storage tanks would be approximately 0.75 to 1.5m lower than the existing ground level.

**Proposed process.**

- 2.12 Waste material is transported to the site in three basic forms - liquid ( slurries, food manufacturing washings ), semi-fluid ( abattoir gut content etc ) and partly solid with some fluid ( local authority food waste and packaged supermarket waste ). The waste material is brought into the reception building and dumped from the HGV's carrying it. Liquid waste is pumped directly into the pre-storage tanks.
- 2.13 Abattoir waste and separated food waste from local authorities is delivered into the ground level hopper with chopper - from here it is augured immediately through a macerator and pumped into another pre-storage tank.
- 2.14 Packaged supermarket waste is fed into a turbo-separator which extracts the contents which is also fed into the ground level hopper with the other semi-fluid material. Waste packaging is collected in bins or bags for removal.

- 2.15 The digesters are fed normally ten times a day. Therefore 30,000 tonnes per year equals 82 tonnes per day which equals 8.2 tonnes per feed. A minimum of 4 days pre-storage is required therefore 350 tonnes of pre storage is necessary. The process therefore would require two tanks of 192 cubic metres each, dimensions 6.98 metres diameter, height 5.03 metres and another smaller tank of 87 cubic metres, dimensions 5.43 metres diameter, height 3.78 metres as back up or for one - off loads of non-standard materials.
- 2.16 These tanks are equipped with stirrers. The homogenized material is pumped up to ten times daily into digesters via a pasteurizing unit consisting of a heat exchanger and cooling tank of 10,000 litres capacity. Old material in the digesters is sucked out ten times daily and is pumped underground to the digestate tanks for storage. These tanks also have stirrers to inhibit settlement of fibrous material. Pumping to and from all the tanks goes through a central pump station which is situated in the reception building.
- 2.17 In the waste reception building there will be :
- ground level hopper sufficient for single loads of up to twenty tonnes.
  - Turbo-separator, dimensions 6m x 3m.
  - Pump station in separate room, 5m x 4m.
  - Engine room for 2 x 536 KW engines, 6m x 6m.
  - Pasteurization equipment, 8m x 4m.
  - Office and control room, 4m x 3m.
- 2.18 The building will be kept under negative pressure with air extracted through a bio-filter ( 2.2m x 2.2m x 1.7m ). Displaced air from the pre-storage tanks is also piped into this filter. With food waste going through the plant there is also the need to install a de-sulphurizing unit. This would be located on the gas line between the digesters and engines, dimension 2m x 2m x 5m height and would be positioned outside near the digesters.

2.19 Digestate from the process will be pressed to extract the solid material which will then be dried and stored under the lean-to structure located on the south western elevation of the building. When enough of this solid digestate has accumulated it will be removed from site by HGV for use as a composting material. The remaining liquid digestate will be stored in the tanks shown, removed from site by tanker and used as a soil conditioner on local farm land.

### **3.0 PLANNING HISTORY**

#### *Rothwell Lodge Farm, Rothwell, Kettering*

- KET/2007/0354      Full: Dwelling with extended driveway  
Approved 15/06/2007
- KE/03/0649        Conversion of traditional buildings to a single residential unit with  
home office  
Approved with conditions 01/10/2003
- KE/02/0520/AG    Erection of agricultural building  
Permitted Development 19/07/2002
- KE/97/0394/AG    Extension to potato store  
Permitted Development 25/07/1997
- KE/94/0578        Change of use: siting of mobile catering  
facility & farm Shop  
Refused 08/11/1994
- KE/94/0240        Machinery & grain store  
Approved 08/06/1994

#### *Rothwell Lodge Cottages, Rothwell, Kettering*

- KE/02/0672        Continued outline permission for farm shop with ancillary  
horticultural sales. Demolition of existing dwellings  
Approved with Conditions 10/10/2002

*Rothwell Lodge Paddock*

KE/01/0845/TC      15m Monopole, equipment cabinet, 6 antennas, 2 dishes

Approved 20/12/2001

#### **4.0 PLANNING POLICY**

4.1 The site lies within Kettering Borough, which is the statutory development plan making authority. However, as the proposal is a waste matter, the relevant determining authority is Northamptonshire County Council and the following National, Regional and Local policies are relevant to the consideration of the proposal:

- Planning Policy Statement 10 : Planning for Sustainable Waste Management
- Planning Policy Statement 22 : Renewable Energy
- The adopted East Midlands Regional Spatial Strategy March 2009
- The adopted Northamptonshire County Structure Plan 1996 - 2016
- The adopted Northamptonshire Waste Local Plan 2006
- The adopted Kettering Local Plan 1995

#### **4.2 National Planning Policy**

##### **4.3 Planning Policy Statement 10: Planning for Sustainable Waste Management**

This document outlines the Government's policy towards waste management. Paragraph 1 emphasises the overall policy objective of minimising waste production and using it as a resource. Paragraph 3 stresses the objectives of localising waste management and securing the recovery of waste without harming human health.

4.4 Paragraph 22 states that when waste management proposals are in line with an up to date development plan, there is no requirement to demonstrate that there is a need for the proposal. Paragraph 24 states that unallocated sites should be considered favourably when they are consistent with the criteria outlined in paragraph 21. These are:

- The extent the proposal supports the policies in the PPS

- The physical and environmental constraints on the development including the existing and proposed land uses
- The cumulative effect of previous waste disposal facilities
- The capacity of the transport infrastructure
- Within this priority should be given to Previously Developed Land and redundant agricultural and forestry buildings and their curtilages

4.5 In paragraph 29, local planning authorities are advised to consider the local environmental impacts of proposals. Paragraph 30 stresses that well run facilities should pose little threat to human health. Paragraph 32 outlines the scope of planning conditions.

4.6 Annex C of the PPS explains the waste hierarchy:

- Reduction
  - Re-Use
  - Recycling & Composting
  - Energy Recovery
  - Disposal
- The most efficient environmental solution is often to reduce the generation of waste - ***reduction***;
  - products and materials can sometimes be used again, for the same or a different purpose - ***reuse***;
  - resources can often be recovered from waste - ***recycling and composting***;
  - value can also be recovered by generating energy from waste - ***energy recovery***

- only if none of the above offer an appropriate solution should waste be disposed of.

4.7 This emphasises the importance of recycling and composting, and energy recovery with waste disposal only being an option when none of the other options are appropriate. Annex E of the PPS outlines the locational criteria which should be used to test the suitability of sites. These are:

#### Annex E

##### Locational Criteria

- a. Protection of water resources;
- b. Land instability;
- c. Visual intrusion.
- d. Nature conservation.
- e. Historic environment and built heritage
- f. Traffic and access
- g. Air emissions, including dust
- h. Odours
- i. Vermin and birds
- j. Noise and vibration
- k. Litter
- l. Potential land use conflict

#### **4.8 Planning for Sustainable Waste Management: Companion Guide to Planning Policy Statement 10.**

4.9 Paragraph 8.1 of this guide clarifies that normally proposals for anaerobic digestion are County Matters.

4.10 Paragraph 8.4 refers to unallocated sites. This emphasises the importance of not missing good opportunities where sites come forward outside of the plan led approach. Where proposals are consistent with the policies of Planning Policy Statement 10: Planning for Sustainable Waste Management and the Waste Planning Authority's Core Strategy, the proposal should be considered favourably. Applicants should be able to demonstrate how their proposal encourages movement of waste up the waste hierarchy but otherwise there is no need for them to demonstrate need.

4.11 Paragraph 8.6 considers the concept of BPEO (Best Preferred Environmental Option). This clarifies that Planning Policy Statement 10: Planning for Sustainable Waste Management does not require this and that there is no policy requirement for this to be placed on an applicant. Rather the proposal needs to be consistent with the policies of Planning Policy Statement 10: Planning for Sustainable Waste Management.

4.12 Paragraph 8.7 emphasises the importance of good design and layout.

#### **4.13 Planning Policy Statement 22: Renewable Energy**

4.14 Planning Policy Statement 22: Renewable Energy deals with renewable energy and contains a number of 'key principles'. Amongst these are the following:

- (i) Renewable energy developments should be capable of being accommodated throughout England in locations where the technology is viable and environmental, economic, and social impacts can be addressed satisfactorily.
- (ii) Regional spatial strategies and local development documents should contain policies designed to promote and encourage, rather than restrict, the development of renewable energy resources. ....
- (iv) The wider environmental and economic benefits of all proposals for renewable energy projects, whatever their scale, are material

considerations that should be given significant weight in determining whether proposals should be granted planning permission.

- (vi) Small-scale projects can provide a limited but valuable contribution to overall outputs of renewable energy and to meeting energy needs both locally and nationally. Planning authorities should not therefore reject planning applications simply because the level of output is small.
- (vii) ..... Developers of renewable energy projects should engage in active consultation and discussion with local communities at an early stage in the planning process, and before any planning application is formally submitted.
- (viii) Development proposals should demonstrate any environmental, economic and social benefits as well as how any environmental and social impacts have been minimised through careful consideration of location, scale, design and other measures.”

4.15 With regard to local considerations paragraph 15 states:

“Local landscape and local nature conservation designations should not be used in themselves to refuse planning permission for renewable energy developments. Planning applications for renewable energy developments in such areas should be assessed against criteria based policies set out in local development documents, including any criteria that are specific to the type of area concerned.

4.16 However in the case of the application site no landscape designations exist.

4.17 Paragraph 22 stresses the need to ensure renewable energy developments are located so as to minimise increases in ambient noise levels.

4.18 With regard to biomass projects paragraph 24 advises planning authorities to ensure traffic generation is minimised by locating generation plants,

“in as close a proximity as possible to the sources of fuel that have been identified.”

4.19 However the statement goes on to recognise that other factors may be equally as important in determining applications for proposals e.g. connection to the Grid and the potential to use waste heat.

4.20 Paragraph 25 stresses that developers should themselves deal with any impacts on aircraft, radar, power lines, roads etc. before making applications.

**4.21 Companion Guide to Planning Policy Statement 22 : Renewable Energy**

4.22 Published with Planning Policy Statement 22 : Renewable Energy the guide gives additional information on renewable energy proposals. Para 5.4 stresses that,

“local planning authorities should recognise that the landscape and visual effects will only be one consideration to be taken into account in assessing planning applications, and that these must be considered alongside the wider environmental, economic and social benefits that arise from renewable energy projects.”

4.23 The Guide advises that applications should demonstrate that any renewable energy project should,

- meet development plan policies;

- does not conflict with any relevant area designation (such as landscape);
- addresses issues of visual impact;
- address environmental, social and economic benefits specific to the proposal.

4.24 In determining applications authorities are expected to:

- assess conformity with planning policies;
- assess impact on planning policy designations;
- the extent of positive and negative impacts and their mitigation;
- contribution towards meeting regional renewable targets.

4.25 Authorities are also expected to answer the following questions when considering applications.

- Does the proposal satisfy the relevant criteria-based policies in RSS and detailed policies in the LDD?  
(Regional Spatial Strategy and Local Development Documents)
- How significant is any non-compliance? Could this be dealt with by condition or by requiring measures in a planning obligation (Section 106 Agreement) which mitigate adverse impact?
- Have application-specific matters such as landscape and cumulative visual impact been properly addressed?

- Could measures be taken to mitigate impacts during construction and after the plant is in operation?
- Can a condition be applied to cover restoration of the site should operations cease? (feasibility will need to be taken into account).

4.26 Paragraph 5.13 emphasises that although broad areas for renewable energy generation are expected to be designated in regional planning strategies,

“the identification of broad areas does not imply that projects coming forward in areas outside them should automatically be considered for refusal. In all areas the compliance with criteria-based policies is the key determinant.”

4.27 The PPS gives guidance on how to assess the landscape impact of development including their cumulative impact.

### **Planning Policy Statement 1 : Delivering Sustainable Development**

4.28 This Planning Policy Statement outlines the government’s objectives in delivering sustainable development. Paragraph 3 includes the widely used definition of sustainable development which is :

*“ Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”*

4.29 Paragraph 13 outlines the government’s key principle which at sub paragraph ii) included the development of renewable energy resources. Paragraph 20 requires development plans to take account of environmental issues including the use of renewable energy and paragraph 22 requires development plan policies to encourage, rather than restrict, the development of renewable energy.

**Planning Policy Statement : Planning and Climate Change. Supplement to Planning Policy Statement 1**

- 4.30 In the glossary to this document, renewable energy is defined as including energy from biomass and energy crops. Paragraph 9 requires all local planning authorities to prepare and manage the delivery of spatial strategies which make a full contribution to delivering ( amongst others ) the Government’s energy policies. Paragraph 13 requires Regional Spatial Strategies to set regional targets for renewable energy generation and revise these upwards where appropriate in the light of delivery.
- 4.31 In preparing their Core Strategy and Local Development Documents, local planning authorities are required in paragraph 19 to :

*“...provide a framework that promotes and encourages renewable and low carbon energy generation. Policies should be designed to promote and not restrict renewable and low-carbon energy and supporting infrastructure.”*

- 4.32 In paragraph 20, local planning authorities are required to :
- Not require applicants for energy development to demonstrate the overall need for renewable energy nor question the energy justification
  - Not preclude the supply of any type of renewable energy other than in the most exceptional circumstances with particular regard to landscape and townscape
  - Take care not to stifle innovation including rejecting proposals solely because they are outside areas identified for energy generation
- 4.33 Paragraphs 21 and 22 encourage local planning authorities to consider using Local Development Orders to secure renewable energy supply systems.

- 4.34 Paragraph 40 of the Supplement states that an applicant proposing development that contributes to the key Planning Objectives ( in this case the production of renewable energy ) should expect expeditious and sympathetic handling of the planning application. Paragraph 44 goes so far as to advise that local planning authorities should consider refusing proposals which prejudice existing renewable energy supplies.

### **Planning Policy Statement 7 : Sustainable Development in Rural Areas**

- 4.35 The policies in this Statement apply to all rural areas. Paragraph 5 encourages local planning authorities to support a wide range of economic activity in rural areas. Paragraph 16 advises that in determining planning applications, local planning authorities should provide for the sensitive exploitation of renewable energy sources in accordance with Planning Policy Statement 22 : Renewable Energy.

### **Regional Planning Guidance**

#### **The Adopted East Midlands Regional Plan March 2009 (RSS)**

- 4.36 This document provides regional planning policy for the East Midlands Region within which local authorities can prepare their planning documents. There are a number of policies directly relevant to the proposal.

#### **Policy 24: Rural diversification.**

Local Authorities, EMDA and Sub-Regional Strategic Partnerships should work together to promote the continued diversification and further development of the rural economy, where this is consistent with a sustainable pattern of development and the environmentally sound management of the countryside. Local Development Documents should

develop the policy according to local circumstance but particular consideration should be given to :

- Economically lagging rural areas identified by the Government's Rural Strategy, including the Districts of East Lindsey, West Lindsey, South Holland, Bolsover, High Peak, and the more rural parts of the Derbyshire Dales, Bassetlaw and Newark and Sherwood; and
- Those areas that fall within Rural Action Areas identified by SSP's.

4.37 Paragraph 3.3.59 states that the East Midlands is expected to generate about 22.2 million tonnes of controlled waste. While waste reduction is considered a priority, waste planning authorities are also encouraged to reflect the need for additional waste management facilities. A wide range of facilities are referred to including anaerobic digestion ( paragraph 3.3.62 ). Within the region as a whole waste management capacity will need to more than double by 2020 and Figure 4 on page illustrates that Northamptonshire County is likely to suffer from both treatment and disposal capacity gaps at 2020. Figure 5 on page 84 provides details of the capacity shortfall likely for MSW within the region and each county. Retention and enlargement of existing facilities and the provision of new ones are therefore encouraged.

4.38 Northamptonshire County falls within the southern sub-area and will experience the greatest growth within the region. A centralised pattern of waste management facilities based around the existing urban centres is therefore proposed.

4.39 Policy 38 of the Regional Spatial Strategy sets out targets for the provision of waste management capacity with reference to time specific targets referred to in Appendix 4. In the southern sub area, the policy encourages a centralised pattern

of large facilities based around the expanding urban centres. Waste facilities are encouraged to be sited to avoid pollution or disturbance to designated waste conservation sites. Increased traffic levels on roads near to sensitive sites should be avoided.

4.40 The RSS also has policies relevant to renewable energy production. Para 3.3.84 of the RSS states that renewable energy production in the region currently stands at 2% of energy production while the targets included in the RSS stand at 20% for 2020. Indicative renewable energy targets for the region are included at Appendix 5. Current capacity for anaerobic digestion stands at 1MW ( 2006 ) with a target of 5 MW for 2010 and 8 MW for 2020. Para 3.3.85 clarifies that these targets are indicative only and should not be regarded as maximum figures which can not be exceeded.

4.41 Para 3.3.85 also clarifies that there needs to be a complete change in current planning practice to achieve these targets and that local planning authorities need to accept far more energy generation schemes. The southern sub-area is considered to possess significant opportunities for new biomass developments.

4.42 Policy 40 outlines regional priorities for low carbon energy generation and requires local planning authorities to promote a distributed energy network using low carbon and renewable resources, to achieve the targets in Appendix 5. Where environmental, economic and social impacts can be addressed satisfactorily, such proposals should be supported. In establishing criteria for new facilities required for forms of renewable energy other than on-shore wind, Development Plans and future Local Development Frameworks should give particular consideration to:

- The proximity to the renewable energy resource;
- The relationship with the existing natural and built environment;

- The availability of existing surplus industrial land in close proximity to the transport network; and
- The benefits of scale grid and non grid connection micro generation.

### **Northamptonshire County Structure Plan 1996 - 2016**

4.43 This Structure Plan has now been superceded by the adopted Regional Spatial Strategy for the region. However, the following policies were of relevance to the proposal although none have been saved :

#### **Policy EN1: Renewable energy**

In view of the general environmental benefits associated with the harnessing of renewable energy sources, provision will be made for the development of renewable energy schemes, provided that it can be shown that such development would not harm interests of acknowledged importance. When assessing proposals for renewable energy schemes, and in recognition that certain renewable energy resources can only be harnessed where the resource occurs, particular regard will be had to the following issues:

- The immediate and wider impacts of the proposed development on the environment and local amenity;
- The measures that will be taken, both in and after construction, to minimise the impact of the development on the environment and local amenity; and
- The local and wider benefits that the proposal will bring.”

4.44 The objectives of the structure plan in terms of waste were to increase the recycling and recovery of waste, whilst reducing the reliance of

landfill. Policy W1 set out the main waste strategy hierarchy for the structure plan, which stated that:

**Policy W1: Waste management strategy**

The strategy for the management of waste in the period 1996-2016 will be in accordance with the following hierarchy:

- Reduction
- Re-use
- Recycling, composting and energy recovery from waste
- Disposal

When applying the hierarchy, regard will be had to the proximity principle, regional self-sufficiency, the waste planning policies and proposals of neighbouring areas and the Best Practicable Environmental Option.

4.45 Policy W3 also contained criteria for assessing waste management facilities.

**Policy W3: Criteria for assessing waste management facilities.**

Proposals for waste management facilities will be considered in the context of the current national waste strategy, having regard to the following criteria:

- The best practicable environmental option;
- The waste hierarchy
- Regional self- sufficiency;
- Local and regional requirements for the management and disposal of waste;
- The waste planning policies and proposals of neighbouring areas;
- The proximity principle;
- Proximity to other development;

- The impact on the environment, human health, natural resources, local amenity and traffic; and
- Where appropriate the suitability of the restoration and aftercare proposals and the potential after-use of the site."

### **Northamptonshire Waste Local Plan 2006**

4.46 The current waste plan for Northamptonshire covers the period from 2003 – 2016. There are 34 key sites within the County that are currently identified as waste sites of various uses from disposal, to the recycling and treatment of all types of waste. Paragraph 3.32 states that:

“... there will be a requirement to increase waste treatment in Northamptonshire by minimum of 625,000 tonnes a year by the end of 2007. 128,000 tonnes of waste will need to be recycled and composted to meet the targets for municipal waste. This requirement is likely to rise to 857,000 tonnes per annum at the end of the Plan period, of which a minimum of 222,000 tonnes will need to be recycled and composted.”

4.47 This is based on the assumption that there is zero growth in waste production within the County during this period – if this is not achieved even higher targets would need to be achieved. The following policies are relevant:

4.48 Policy 1 deals with the principles for waste development. It states:

#### **Policy 1: Principles of waste management**

Permission will be granted for waste development which is consistent with:-

- a clearly established need for the development to serve local and regional requirements for the management and disposal of waste;
- reduction in reliance on landfilling;

- the minimisation of, and balance in, the movement of waste across waste planning authority boundaries, except where the development involves specialised provision and is consistent with regional self-sufficiency;
- minimising the transportation of waste from its source;
- the Best Practicable Environmental Option for the waste stream;
- the integration of waste management facilities;
- the minimisation of harm to the environment, human health, natural resources, local amenity and highway safety;

4.49 Policy 2 continues with the location of waste development:

**Policy 2: Location of waste development facilities**

Development of waste management facilities in Northamptonshire will be permitted in the following locations:

- those sites identified in the Plan and shown on the Proposals Map as existing Main Sites;
- sites that may come forward for the development of local waste facilities in accordance with Policy 4;
- sites within existing housing, industrial or commercial developments, or incorporated into proposals for new housing, industrial or commercial developments, to serve those developments as neighbourhood facilities;

(except that new landfill and landraise sites, and extensions to existing landfill or landraise sites, will be permitted only in the limited circumstances set out in Policy 22)

and provided that the proposed development accords with the other policies of the Plan.

**Policy 4 Development of Local Waste Facilities**

Proposals for waste development to provide local facilities (those dealing with 50,000 tonnes or less per annum of non-hazardous waste) will be

permitted if it can be demonstrated they will contribute to a sustainable waste management system for Northamptonshire.

Such development should comply with one or more of the following:

- be located on existing or designated industrial land;
- be on derelict, despoiled or brownfield land or building;
- contribute to agricultural diversification or to rural regeneration;
- be a former or existing mineral working or waste management facility
- be on a site linked to rail or water transport;
- be a part of and specifically serve one of the identified Strategic Development Areas at Daventry, Rothwell/Desborough, Towcester and Wellingborough East (or any other urban extension of over 1,000 dwellings)

Any proposal will require to demonstrate that it is part of the Best Practicable Environmental Option and identify the catchment area the development is proposed to serve.

4.50 Paragraph 5.5 considers traffic and access arrangements for any new waste development. It states that sites should be closely connected to the highway network and that proposals should not cause problems to the surrounding community in terms of lorry movements. This is reinforced under policy 8 which states:

**Policy 8: Traffic and access**

Proposals for waste development will only be permitted where site access and the local highway network can safely accommodate traffic associated with the development.

Where it is considered a proposal will generate traffic that has an impact on the local and/or strategic highway network a transport assessment will be required. The assessment should identify any mitigation works to be funded by the

developer and/or operator. The cumulative impact of other permitted, proposed or allocated development sites should be considered in the assessment.

If highway improvements are required but these would cause significant adverse impact on the environment or on local amenity, the proposal should not be permitted.

Proposals should minimise the transportation of waste associated with the proposal by road and maximise the opportunities offered by rail, water and, where appropriate, pipeline.

### **Policy 7: Design**

Proposals for waste development will need to be of a design that has regard to the visual appearance of the development in the context of the defining characteristics of the local area. Proposals should:

- complement the existing topography and vegetation;
- use materials and colouring appropriate to the location;
- incorporate landscape proposals as an integral part of the overall development of the site;
- use high quality, innovative designs where appropriate;
- maximise the conservation of energy;
- give consideration to the use of recycled materials where suitable.

### **Policy 9: Local landscape character**

Proposals for waste development should respect, and where appropriate, enhance local landscape character (particularly where there are any landscape characteristics of special interest).

**Policy 13: Water resources and flooding**

Proposals for waste development will only be permitted where it can be demonstrated that:

- there will be no reduction in the capacity of the flood plain;
- there will be no increased risk of flooding as a result of increased surface water run-off;
- there will be no impediment to the flow of surface or groundwater resulting in flooding either near the development or elsewhere;;
- there will be no contamination to surface watercourses or groundwater resources.

Proposals should incorporate a sustainable drainage system, unless the nature of the waste management process makes it inappropriate."

**Policy 14: Rights of way**

Proposals for waste development affecting public rights of way will only be permitted if those rights of way can be safeguarded, either by segregation from the development or by diversion around it, on a temporary or a permanent basis as necessary.

**Policy 15: Local amenity**

Proposals for waste development will not be permitted if it creates an adverse impact on local residential amenity that cannot be ameliorated either individually or cumulatively. Where relevant proposals should mitigate, attenuate and control any noise, vibration, air quality, odours, vermin, birds, litter, visual intrusion and light spillage associated with the planned development.

For proposals outside of identified industrial estate hours of operation will be restricted where this is necessary to protect residential amenity.

**Policy 18: Composting**

Proposals for composting development, either in the open air or within buildings, will be encouraged where they:

- i) represent a community composting scheme;
- ii) form part of a scheme for farm diversification;
- iii) represent composting on a commercial scale;

provided in each case that the site location is consistent with the BPEO for the waste stream and with the high proximity principle; and that the development would not have an adverse impact on the amenity of neighbouring residential property or workplaces.

4.51 As the proposal is an AD plant, policy 19 encourages such development and states:

**Policy 19: Anaerobic digestion**

Proposals for Anaerobic digestion facilities will be encouraged where they:

- (i) form an integral part of waste management facilities such as sewage treatment and materials recovery and/or
- (ii) form part of a district heating scheme;

provided in each case that the site location is consistent with the BPEO for the waste stream and with the proximity principle; and that the development would

not have an adverse impact on the amenity of neighbouring residential property or workplaces.

- 4.52 Paragraphs 6.27 and 6.28 encourage the location of such facilities on brownfield sites which are close to the sources of waste they are using so as to minimize transport. Such uses should make the best practical use of the products for energy recovery or as soil improvers, be close to the waste arisings and be close to their potential markets.

**Northamptonshire Minerals & Waste Core Strategy Proposed Submission  
September 2008.**

- 4.53 These document forms the central document of the emerging Northamptonshire Minerals and Waste Development Framework and is currently at public examination. The document identifies the capacity gap which will need to be bridged if the County is to meet its waste management targets – Policy CS1 proposes increasing waste management capacity for recycling and composting ( including MSW and C&I ) of 822,000 tonnes pa to 2016 and 970,000 tonnes pa to 2026. Policy CS2 outlines the spatial strategy for Northants and focuses facilities within the central urban spine which includes Rothwell and Desborough.
- 4.54 Other documents within the Local Development Framework include a Minerals and Waste Site Allocations Document which is at pre submission stage and a Control and Management of Development Document which is at Preferred Approach stage as at September 2008. Until these documents become further advanced the Waste Local Plan remains the relevant development plan.

**4.55 Local Planning Policy  
Kettering Local Plan 1995**

- 4.56 This plan has now expired but there is now only one saved policies of relevance. Policy 7 seeks to protect the open countryside from development unless allowed for elsewhere in the Plan.

### **Adopted North Northamptonshire Core Strategy June 2008**

4.57 This plan effectively replaces the Kettering Local Plan and has become the statutory development plan document for East Northants, Corby, Kettering and Wellingborough Districts along with other documents that form the Local Development Framework. The plan contains a specific chapter on addressing climate change and paragraph 4.14 states that:

“There is a national requirement to reduce carbon emissions by 60% from their levels in 2003 by 2050 and for 20% of electricity generation to be obtained from renewable sources by 2020.”

4.58 The Core Strategy sets a very ambitious target of providing 30% of the demand for energy on new large development sites to be provided on site from renewable or low carbon sources, although the Joint Planning Unit now accepts that stand alone energy projects will also be required to achieve this. Paragraph 4.14 goes on to say that:

“In recent reviews of renewable energy potential, the Southern Sub Area (which includes North Northamptonshire) of the East Midlands Region has been found to offer the best opportunity for new carbon neutral development.”

4.59 This is in line with new and emerging Government and Regional policy, which also advocates new sites for renewable energy developments. Whilst there is currently no specific policy in the Core Strategy, with regard to the location of renewable energy sites that include biomass plants, paragraph 4.14 continues to state that:

“...decentralised biomass fuel plants will, in principle, be considered favourably in North Northamptonshire.”

**Northamptonshire County Council Mineral and Waste Development and Implementation Principles Supplementary Planning Document. March 2007.**

4.60 Northamptonshire County Council have implemented this SPD as the design and physical appearance of mineral and waste developments can greatly influence their impact on the surrounding environment. This can then influence public perceptions and acceptance of these types of development.

**Principles**

4.61 All proposals for minerals or waste development must prepare and submit a Design Statement and Restoration Scheme with the planning application. This can be part of the Design and Access Statement, and must be approved before the commencement of the development.

4.62 It will be assessed in accordance with the Principles for the Design of Minerals and Waste Development and the Principles for Restoration, After-Care and After-Use (both summarised below) and other relevant government guidance.

4.63 **Principles for the Design of Minerals and Waste Development**

- **High Quality Design**

- In context with and complementary to surrounding landscape.

- **Holistic Design**

- Consistent architectural treatment of all components of the built form.

- This includes all buildings, building components, storage areas, structures, boundary treatments and service infrastructure.

- **Local Distinctiveness**

- Support local distinctiveness and character

- **Environmental Protection and Enhancement**

- All design aspects should avoid/mitigate adverse impacts on the surrounding environment and human health, whilst maximising beneficial outcomes.

- **Sustainable Development**

- Incorporate sustainable development practices – prudent use of natural resources, waste minimisation and energy efficiency.

- **Strategic Site Layout**

- Seek to reduce impact on both the immediate surrounds and the broader landscape through site layout.

- **High Quality Landscaping and Boundary Treatments**

- Landscaping and boundary treatments that are in context with and complementary to surrounding landscape character.

- These should then be maintained to a high standard, and positively contribute towards amenity, biodiversity and nature conservation.

- **Effective Buffers**

- Provision of adequate and effective buffers to reduce impacts on sensitive receptors or areas.

- Buffers should be in context with and complementary to surrounding landscape.

- They should also seek to positively contribute towards amenity, biodiversity, nature conservation, habitat enhancement and catchment conservation.

- **Lighting**

- Minimise light pollution, including sky glow, glare and light spill.

- **Site Access**

- Site entry and public accesses are well maintained and act to reduce the visual impact of the site.

- Public rights of way should be maintained where possible

- Access to major transport networks should seek to reduce the wider impacts on sensitive receptors.

- **Sustainable Transport**

-Incorporate sustainable or alternative transport options where possible.

- **Integrated Development**

-Maximise opportunities to locate complementary operations and activities together.

- **Public Safety**

-Seek to 'plan out crime' through design, layout and landscaping.

-Create a safe and secure environment, and make crime more difficult to commit.

4.64 The Supplementary Planning Document requires a detailed written Design Statement (including layout and design plans) demonstrating the practical implementation of the Principles for the Design of Minerals and Waste Development. Issues to do with restoration are less relevant to this proposal as the intention is to create a permanent facility which will recycle waste in the long term as an ongoing process which is different from landfill or similar operations which are by their nature temporary.

## **5.0 PLANNING ANALYSIS**

5.1 The main issues for consideration in relation to the proposed anaerobic digestion facility are considered below:

- a) The principle of the proposal in planning policy terms
- b) Design
- c) Traffic and Access
- d) Landscape / Visual Impact
- e) Natural / Historic Environment (including archaeology)
- f) Impact on Agricultural Land
- g) Water Resources and Ground Conditions
- h) Rights of Way
- i) Effects on Local Amenity including noise, odour and dust

### **a) The principle of the proposal.**

5.2 The proposal has strong policy support from National Planning Guidance in the form of PPS: 10 Planning for Sustainable Waste Management, PPS 22: Renewable Energy, Planning Policy Statement 1 : Delivering Sustainable Development, the Climate Supplement and Policies 38 and 41 of the Adopted East Midlands Regional Spatial Strategy 2009, all of which seek to encourage waste recycling and the production of energy by renewable means. The proposal involves the generation of electricity but without using fossil fuels. The proposal will allow significant volumes of animal and plant waste to be reused and recycled rather than being disposed to landfill. By-products will be bio-fertilizer and methane which will be used within the buildings to power engines to generate electricity. The current version of the Northants Minerals and Waste Development Framework identifies the capacity gap which exists within the County through to the period 2026 – the proposal will clearly make a significant contribution

towards meeting this gap by re-using and recycling waste material in a sustainable manner.

- 5.3 This development also has the direct support of central Government Policy, which is seeking to expand the base of the country's energy production. The Energy Review published by the Government restated the position that the national need to provide renewable energy is a significant material consideration, which must be taken account of by Local Planning Authorities.
- 5.4 As stated previously, one of the main points of PPS 10 and especially its companion guide is that where proposals are consistent with the policies of this planning policy statement and the Waste Planning Authority's Core Strategy, the proposal should be considered favourably. There is also an emphasis upon the importance of not missing good opportunities where potential waste management sites come forward outside of the plan led approach. Although the scale of energy production is relatively modest (around 1 MW), PPS 22: Renewable Energy specifically states that such small scale projects should not be discounted. In any case, this level of energy production makes a significant contribution to some of the renewable energy capacity targets contained in the adopted Regional Spatial Strategy (RSS8) for the East Midlands.
- 5.5 Secondly, the proposal also complies with the policies contained within the Northamptonshire Waste Local Plan, which was adopted in March 2006 and are mentioned in section four of this statement. This document is important as the proposal will be primarily tested against this plan, as this is the adopted waste plan for the County to 2016. Specifically, the principle of this development complies with the criteria laid down in Policy 4, which deals with the development of new local waste facility plants on non-allocated, existing sites that are not identified in the current waste local plan. The digestion plant would deal

with a maximum of 30,000 tonnes of waste per year, which is well within the maximum figure for this policy.

5.6 The proposal complies with one of the criteria of Policy 4 in that it contributes to agricultural diversification and rural regeneration. The size of the farmer's cattle herd is restricted artificially by the limited amount of manure or slurry he is able to spread on his land due to nitrogen enrichment restrictions imposed by the Environment Agency. The anaerobic digestion plant is to receive all his existing manure which means the farmer's stocking levels will not be restricted and in return bio-fertiliser is to be used as fertiliser on the land holding. Theoretically, the site also complies with a second criterion in that it is strictly brownfield land, having formed part of a quarry in the early 1900's. It has to be accepted however that it does not comply with the definition of Previously Developed Land contained in Planning Policy Statement 3 : Housing as the site has been restored and returned to farm land. The brownfield heritage of the site is however plainly evidence in the ground conditions report submitted with the application.

5.7 Rothwell Lodge Farm is located within the central part of the main urban spine of Northants which is formed by Corby in the north, Desborough, Rothwell, Kettering, Wellingborough and Rushden in the south with the A14 trunk road forming the area's main east/west road link. North Northants is one of the main Growth Areas in the Milton Keynes and South Midlands Sub Regional Strategy and is targeted for an additional 52,100 dwellings from 2001 – 2021 in the adopted North Northants JPU Core Strategy 2008. More specifically, the nearby towns of Corby, Kettering, Desborough and Rothwell will all be subject to significant urban extensions to provide additional housing as follows :

Corby	15,510 dwellings
Kettering	7,500
Desborough	1,940
Rothwell	1,320

5.8 Within Northants there is an existing capacity gap in that the majority of organic waste is being disposed of to landfill and there is a lack of suitable recycling facilities such as AD. Within the Northants County Minerals and Waste Core Strategy, which is currently at submission stage to the Secretary of State and public examination, waste arisings are projected to increase as follows :

2005/6	2,914,000 tonnes per annum
2015/16	3,438,000
2025/26	3,972,000

5.9 To cope with this increase in waste arisings, the Core Strategy envisages waste recycling capacity for municipal, commercial and industrial waste in the County increasing by 408,000 tonnes per annum year on year up to 2026. The AD plant proposed will be able to assist with the organic element of this.

**b) Design**

5.10 As can be seen from the plans, the design of the plant and buildings required have been designed in accordance with Policy 7 of the Waste Local Plan. An overriding theme of this policy is to ensure that all developments relate well within the context of the local landscape and that they do not appear to be visually out of character with the surrounding area.

5.11 The existing topography of the site has been exploited as much as possible, in particular the ridge which rises away to the south west. The waste reception building has been located towards the northern end of the site enclosed by the local landform to ensure that it is screened effectively in long views from the south west by the ridge and from the north east by the embankment of the A14. To accommodate the digester vessels, it has been necessary to cut into the existing contours of the ridge but this allows the vessels to be sunk further into the ground and the site to be contained by a landscaped bund with gently sloping

external faces. This assists in screening the plant and building from view while not significantly altering the land form. For example, the existing ridge height of 53m is largely retained along the south west boundary.

- 5.12 Space is retained within the site to provide structural landscaping around its western, southern and eastern boundaries and the existing dense vegetation within the existing cloverleaf beside the A14 is to be retained. Within the site itself, space is provided for landscaping in the form of upright avenue trees to screen the main HGV manoeuvring area which will provide relief to an otherwise large but necessary expanse of hard surfaced area.
- 5.13 Within its wider context, the building will be viewed as forming part of the existing complex of farm buildings at Rothwell Lodge Farm – the building has been deliberately sited at the front of the site to achieve this. From wider views within the surrounding landscape, the anaerobic digestion building and plant will be seen as part of the grouping of buildings formed by Rothwell Lodge and the McDonalds’s restaurant and Esso service station. It will not be viewed as an isolated development within the open countryside.
- 5.14 The massing of the proposed waste handling building has been significantly reduced by the significant variation in its ridge heights. The part of it which needs to accommodate HGV’s is taller while the rest of the building is much lower. This allows a significant difference in ridge heights and roof design to be introduced which creates a pleasantly design for what would otherwise be a rather plain, utilitarian building. The choice of modern cladding materials proposed allows flexibility in the texture and colours for the building which will allow it to assimilate into its surroundings.

### **c)Traffic and Access**

- 5.15 In common with the vast majority of waste management sites, waste taken to the site will have to be road borne. The main consideration of Policy 8 of the Waste

Local Plan, is to only allow developments where site access and the local highway network can safely accommodate traffic associated with the development. The site already has an established access on to the A14 which serves the existing farm and as such already caters for HGV's associated with the farming enterprise. The A14 is a busy trunk road and carries large volumes of traffic particularly at peak times in the morning and afternoon.

5.16 Feedstock is normally transported to an AD plant by bulk sided tipper HGV's with covers – they do not generate additional vehicle movements within the general highway network as these vehicles are already delivering the waste to landfill sites. Effectively the proposal will involve the diversion of existing movements rather than the generation of new movements within the wider highway network..

5.17 Typically, AD feedstock is delivered in 10 to 20 tonne HGV's which have rigid sides, can be sealed and tipped. At times larger vehicle up to 32 tonnes can be used but the average falls within this band. Smaller HGV's are usually used for skip transportation and as they can not be sealed so easily are generally not suitable for handling the waste involved. HGV movements per day can be calculated by applying a conservative average weight per load of 10 tonnes per load. This reflects the desire of the operators to operate efficiently while acknowledging that some lorries will carry partial loads as some waste ( such as at supermarkets ) has to be removed daily due to health and odour issues when it becomes available. This assumption has been used in calculating the HGV movements likely on two AD plants recently approved in Northants at Westwood south of Rushden and at Chelveston airfield and has been previously accepted by Northants County Council Highways as being robust in terms of a worst case scenario.

5.18 Likely HGV movements per day for the Rothwell Lodge proposal can be calculated as follows :

<i>Proposed annual tonnage</i>	<i>30,000 tonnes</i>
<i>Assumed average tonnage per load</i>	<i>10 tonnes</i>
<i>HGV's per year to service</i>	<i>3,000</i>
<i>Working year</i> <i>(assumes 2 weeks off for Bank Holidays )</i>	<i>50 weeks</i>
<i>HGV deliveries per week</i>	<i>60 HGV's</i>
<i>Working week</i>	<i>5.5 days ( Mon – Fri, half day Sat )</i>
<i>HGV's per day</i>	<i>11</i>
<i>HGV movements per day</i>	<i>22</i>
<i>HGV movements per hour</i> <i>( working day 8.00am – 6.00pm )</i>	<i>2.2 per hour</i>

5.19 The predicted HGV movements considered above should be considered as an absolute maximum for the site and will not be exceeded. In reality, the developer wishes to initially achieve a throughput of 18,000 tonnes per year which is adequate to make the project viable and then consider his position. The current proposal is in reality a medium sized AD plant and this is the target size the developer is seeking to achieve. The proposal will have no significant impact on the capacity of the A14 to carry traffic within the national highway network. The additional 22 HGV movements per day is insignificant compared to the daily vehicle numbers carried by this section of the A14. Daily traffic flows along this stretch of the A14 were measured at 69,973 vehicles of which 14,303 were

HGV's. The additional 22 HGV movements proposed would result in an increase of 0.15% HGV's on to the highway network which is negligible.

- 5.20 AD plants do not generate large numbers of vehicle movements at peak periods. The process itself is a very gradual one with the feedstock taking several weeks to process through. The operator also has to be careful of the feedstock used and the rate at which it is introduced as the mix of material has to be correct to sustain the anaerobic process itself. If this biological process switches off it can take several weeks to restart during which time the plant is out of commission. The feedstock has to be delivered at intervals throughout the day to ensure that it can be handled immediately once it is received within the waste handling building. The material is generally unpleasant in nature and can not be left for long periods of time as may be the case with inert construction waste for example. If too many HGV's arrive at the plant all at once, this would create significant operational problems for both the site operators and drivers. In recent applications to Northamptonshire County Council, their highways department have accepted that HGV trips will be spread out through the day and certainly there is no reason that we are aware of within the industry why they should concentrate in the peak morning or evening periods. The proposal will not therefore impact adversely on the A14 by generating additional HGV movements which are likely to be concentrated during the peak morning and afternoon periods.
- 5.21 The existing underpass under the A14 is too low to accommodate HGV's of the size normally required to service anaerobic digestion plants and so HGV access to and from the site will only be possible from the existing access on the southern side of the A14. The existing cloverleaf is to be improved increasing its diameter from 9m to 20m, the existing deceleration lane is to be extended to 110m in length and the acceleration lane is to be extended to 130m in length.
- 5.22 Within the site adequate space is provided within the waste reception yard to allow HGV's to turn, reverse into the building and tip their loads coming out of

the site in forward gear. Separate circulation systems are provided for “clean” and “dirty” loads to ensure compliance with Environment Agency licensing requirements. Vehicles leaving the site wishing to travel east will be able to use the Rothwell junction a short distance along the A14 to the east to do so while vehicles visiting the site from the west will be able to use the A14 / A43 junction which again is only a short distance away along the A14 to the east.

#### **d) Landscape / Visual Impact**

- 5.23 Policies 9 & 10 of the Waste Local Plan require all developments to respect and enhance local landscape character and avoid any visual detriment to it. A detailed landscape assessment prepared by The Landscape Partnership is submitted with the application. This shows that the site with the development is capable of being assimilated comfortably into the surrounding landscape mainly due to existing topography. The proposal will have the most significant impacts at a very limited number of close range views from Rothwell Lodge Cottages and the access roads. Other views are less significant – for example, the view from FP UH3 will experience only a moderate deterioration in the short term which will improve to a slight deterioration in the long term when the landscape scheme becomes established. Many other medium and long range views create very little impact and a number of these will experience positive effects as the additional planting proposed becomes established.

#### **e) Natural / Historic Environment (including archaeology)**

- 5.24 The application site lies outside of any local landscape designation areas and is also entirely free of historic conservation constraints – there are no listed buildings, Conservation Areas or Scheduled Ancient Monuments within or close to the site. There are also no Sites of Special Scientific Interest, National or Local Nature Reserves or County Wildlife Sites within or close to the site. An ecological appraisal report prepared by the Landscape Partnership is also submitted with the application. This confirms the limited ecological value of the site and the neutral impact of the development on the ecology of the surrounding

area. The report concludes that the proposal will result in a neutral to minor beneficial impact in relation to ecology on the basis that the landscape proposals are implemented. In particular, the retention of the open area of land at the southern end of the site as rough, tussocky grassland will create a valuable biodiversity enhancement.

- 5.25 A desk based archaeological report prepared by Albion Archaeology is submitted with this application which shows that the site is unlikely to have ever contained any archaeology of any interest. Any remains which may have existed will have been destroyed by the quarrying which occurred in the early 1900's – Figure 6 on page 22 illustrates the extent of the quarry and associated tramway on the 1926 OS base. It is submitted that this proposal and the location it is situated in, accords with policy 11 of the Waste Local Plan, in terms of natural and historic environment local designations.

#### **f) Impact on Agricultural Land**

- 5.26 The proposal will result in the loss of a small area of farm land which is required for the development to proceed. This is restricted to the small field parcel within which the development is to be sited. This field is a rather awkward shape and is less than ideal for efficient farm use. In relation to the holding within which it will be located on, the anaerobic digestion plant will have a beneficial effect on the agricultural land within which it is located. Processing the existing cattle herd's manure through the anaerobic digestion plant will allow the farmer to increase his stocking levels should he wish to – these are currently restricted by the nitrogen levels of the manure he can spread on the land. The farm and other farm holdings in the vicinity will also benefit from the ready and constant supply of bio-fertiliser produced by the plant. This generally has lower nitrogen levels than raw farm manure or slurry which means more can be applied to the land increasing its beneficial effect. Such bio-fertiliser is currently regarded by farmers as a worthwhile commodity but its value is likely to increase in time as traditional sources of fertiliser become more expensive.

**g) Water Resources and ground conditions.**

- 5.27 A Flood Risk Assessment prepared by JPP Consulting has been submitted with the application. This confirms that the site falls within Flood Zone 1 and is a less vulnerable category of development. The surface water drainage system proposed for the development has been designed to accommodate a 20% increase in storm intensities due to global warming. The site's current flood zoning is not likely to be affected by climate change. Surface water drainage is to be provided on site by way of infiltration systems and percolation tests have been carried out confirming these will operate satisfactorily. The proposal will therefore generate no increased risk of flooding downstream.
- 5.28 The surface water run-off for the car park at the front of the site will consist of permeable paving draining into soakaways which will also accommodate the clean rainwater runoff from the building's roof. The operational hardstandings and service roads will be impermeable and will drain into gullies connected to the soakaway trenches. Oil separators will be installed to intercept any limited hydrocarbon contamination which may occur from vehicles using the site.
- 5.29 The bunded area has been designed to accommodate 110% of the volume of the largest digester vessel located within it and will be impermeable, lined with a suitable membrane, to contain any pollutants in the case of the catastrophic failure of one of the vessels. Details are included in section 5.3.4 of the Flood Risk Assessment of the control mechanisms which will be in place to dispose of clean surface water which will collect within the bund or to contain any contaminated liquids in the case of leakage from the vessels.
- 5.30 The surface water drainage system for the development has been designed to cater for a 1 in 100 year storm event plus 20% to allow for global warming. If a storm event occurs worse than this then the site will flood and the Flood Risk

Assessment outlines the likely overland flows in section 5.4. These are likely to be across fields and to a watercourse in a generally south east location.

- 5.31 No foul drainage is required for the site as the building's foul drainage and waste water from the wheel wash will be recycled in the anaerobic digestion plant.
- 5.32 In relation to ground conditions and the potential for contamination, the site was previously subject to opencast quarrying for iron rich deposits of Northampton Sands in the early 1900's. It was subsequently restored and returned to farm land. Trial investigations reveal made ground to a depth of 3.1m which will require specialist foundations in the construction of the site. The ground investigation report prepared by Soiltechnics concludes that the site presents a low risk of chemical contaminants but that additional monitoring would be required to assess the risk potentially posed by landfill gases.
- 5.33 In relation to pollution control, the report prepared by JPP Consulting submitted with the application concludes that the site is reasonably sensitive in that it has permeable surface soils over a minor aquifer. Robust pollution control is therefore required. The site is not within a source protection zone but is within 500m of Thorpe Malsor reservoir. The various pollution control measures proposed are outlined in section 4 of the report and are as outlined in the Flood Risk Assessment.

#### **h) Rights of Way**

- 5.34 There are no rights of way crossing the site. As the site will take access directly from the A14 the proposal will have no impacts on rights of way. The closest rights of way to the site are FP UH1 to the north on the opposite side of the A14 and FP UH3 which terminates within Rothwell Lodge Farm and runs away from the site to the south west. A detailed assessment of views from these footpaths is described in the Landscape and Visual Appraisal submitted with the application.

**i) Effects on Local Amenity**

5.35 Policy 15 of the Waste Local Plan stipulates that developments should not create an adverse impact upon local residential amenity, which includes noise, odours and effects on air quality. Reports have been submitted with the application prepared by STATS which address these aspects of the proposal.

5.36 Potential sources of noise associated with the AD plant are the gas engines themselves, the plant and machinery within the building, cleaning, loading and unloading of HGV's, and HGV's visiting and leaving the site. The site will be receiving feedstock during the day weekdays with half day working on Saturday. HGV deliveries will not occur at night but the anaerobic digestion process itself and the gas engines will still be operating. The site itself already suffers from very high levels of background noise from traffic travelling along the A14. The noise impact assessment has identified that while the plant would be operational during the day, background road traffic noise was at its lowest 8.00 – 9.00 am with a level of 60.9 dBA. During the night, while the plant would not be receiving feedstock, the lowest background noise level was 34.3 dBA 3.00 – 4.00 am.

5.37 The closest receptor to the plant would be Rothwell Lodge Farmhouse and table 4.2 on page 15 of the report identifies the different noise sources associated with the operation and the likely noise each will generate. These are adjusted for the circumstances of the site and Table 4.5 identifies the highest likely day and night time noise levels. These are :

Day time	39.9 dB
Night time	13.0 dB

5.38 These are both well below the lowest recorded existing background noise levels and so noise associated with the plant is unlikely to generate complaints from the

occupier of the Farmhouse. In layman's terms, noise generated by the plant will be less than that generated by road traffic on the A14 both during the day and at night.

5.39 The raw biomass material of itself has the potential create odour problems if not properly processed. Potential sources of odours from the development could result from the gas engines, the AD storage tanks, the waste handling building and the biofilter. These are addressed in detail in the dust and odour impact assessment submitted with the application prepared by STATS. The AD processing and storage tanks will be fully sealed and so odours will not be capable of escaping from them. The proposed waste handling building will receive biomass materials which of themselves are smelly. However, the building is to operate under negative atmospheric pressure to ensure that odours do not escape from it. A bio filter is to be provided within the proposal to treat air discharged from the building and plant to ensure odours are properly treated. Although modern AD plants are capable of operating within built up areas ( the DEFRA funded plant at Ludlow is located within an industrial estate close to surrounding residential properties ), the rural location of this site close to a working farm means that odours would disperse naturally in the air in any case although the proposal is to build in odour mitigation within the plant design.

5.40 An existing anaerobic digestion plant at Milton Ernest in Bedfordshire was assessed for odour levels. No odour could be detected attributable to the anaerobic digestion plant while odours attributable to manure, pigs and a rapeseed crop were. The closest survey location was a mere 50m from the anaerobic digestion plant. By contrast, Rothwell Lodge Farmhouse is about 80m to the north east from the main operational part of the site and the McDonalds restaurant on the opposite side of the A14 about 200m away to the north west. Neither locations can realistically expect to suffer odour problems from the proposal.

## **6.0 CONCLUSIONS**

- 6.1 The proposal will contribute significantly towards meeting the increasing waste management needs of the County while also generating significant amounts of renewable energy for local and national consumption. A wide range of organic wastes can be processed including MSW avoiding the need for landfill. The proposal makes a modest but significant contribution towards the recycling capacity gap which exists within the County and will recycle up to 30,000 tonnes per year, create a generating capacity of 1 MW and generate up to 6,480 MWh of electricity in the process, enough to provide electricity for just under 2,000 homes without consuming any scarce fossil fuels.
- 6.2 The proposed anaerobic digestion plant located on the site has been designed to ensure it has minimal environmental impact upon the area in terms of landscape, historic features, ecology, archaeology, noise, dust, odour and ground water quality, but is situated in an area where major centres of population will generate substantial levels of plant and animal waste that has the potential to be recycled.
- 6.3 As stated previously in this statement, the site benefits from good transport links with direct access onto the national highway network ( the A14 ) which forms part of the main transport spine of the region. The site is close to a number of towns which will be subject to extensive growth in the future, notably Rothwell, Desborough, Kettering and Corby. Traffic to and from the site will have no adverse impacts on local communities. The siting and layout of the digestion plant has been designed to minimise its impact upon the surrounding area.
- 6.4 The site is located within a large scale landscape with rolling landform and the proposal will have no adverse impact on the landscape quality of the area as the proposals use the existing landscape framework of landform and hedgerows. There are no archaeological or ecological constraints to the development

proceeding. The site for the anaerobic digestion plant is too far away from Conservation Areas, Listed buildings or Scheduled Ancient Monuments in near by villages or towns to adversely affect their settings. The proposal can proceed without adversely affecting local water resources which are to be protected within the design of the scheme which includes impermeable bunding and pollution control measures. Sustainable surface water drainage systems are proposed for the development.

- 6.5 There are no rights of way running through the site and users of the two closest will have limited views of the development site. Any noise, odour or dust generated by the use will be contained within the main waste handling building and will not adversely affect properties closest to the site. Mitigation measures, including noise insulation, negative atmospheric pressure within the building and extracted air treatment within a bio filter, are to be included within the design of the scheme.
- 6.6 The proposal is also in accordance with planning policies that encourage the development of renewable sources of energy, which are contained in National, Regional and Local development policy documents. The proposal will generate a modest amount of renewable electricity which can be exported to the National Grid through the grid connection which is close at hand.
- 6.7 The Council is therefore respectfully requested to grant planning permission for the development as submitted.

Rothwell Lodge,

Rothwell

*p.p.s.*

Phillips Planning Services Ltd.  
Town Planning & Development Consultants

