BIOGEN
WESTWOOD

Planning statement in support of an application to vary planning conditions

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Biogen Westwood

Planning application to amend condition controls to existing food waste digestion operations

Planning statement

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INTRODUCTION TO BIOGEN

Biogen is a local company that processes food waste to produce renewable energy and a valuable biofertiliser, using the anaerobic digestion process. The company pioneered the development of this process at a commercial scale and maintains a leading research and development role in the anaerobic digestion sector.

Biogen employs 73 people in the UK, including 33 at its Milton Ernest headquarters close to the Bedfordshire-Northamptonshire border, and nine people at the Westwood anaerobic digestion centre, to the south-east of Rushden in East Northamptonshire district.

In its pursuit of high environmental standards, Biogen actively supported the establishment of the BSI PAS 110 standard for high quality anaerobic digestate, and has since secured PAS110 certification for its Westwood operation. The company is also ISO9001, ISO14001 and ISO18001 certified.

OVERVIEW OF THE WESTWOOD OPERATION

Existing operations at Biogen’s Westwood AD plant are explained in the next section of this planning statement. In summary, the plant accepts up to 49,000 tonnes per year (t/yr) of food waste, sourced principally from private sources such as supermarkets and food processing companies. Following depackaging and pre-treatment including pasteurisation, the waste is subject to a carefully monitored process of anaerobic digestion.

Anaerobic digestion (AD) is the biological treatment of biodegradable organic wastes such as food waste in the absence of oxygen. The process allows microbial activity to break down the waste in a sealed and controlled environment. The two principal products of AD are a nutrient rich digestate that can be used as a bio-fertiliser and soil improver, and ‘biogas’, which is rich in methane and can be used to generate electricity and heat. During the digestion process, most of the pathogens and odours associated with organic wastes are neutralised. AD is thus regarded as a notably benign recycling process.

Methane is a greenhouse gas over twenty times more potent than carbon dioxide. Its capture and use are thus highly desirable as a means of responding to the threat of climate change. The methane captured from the AD process at Westwood supports 2.5MW of renewable electricity generation capacity – equivalent to the power demand from c. 4,500 homes. The liquid digestate produced is a high quality organic bio-fertiliser that is applied on farmland local to the Westwood site, replacing chemical fertilisers sourced remotely. The Westwood operation is thus highly sustainable.

PURPOSE OF THIS STATEMENT

The Westwood operation is currently the subject of a planning condition limiting the waste throughput to 49,000 t/yr. Biogen wishes to increase the throughput of the Westwood plant to 65,000 t/yr. Having achieved further efficiencies in the AD process, this increase in throughput would be accommodated without any physical change to the development as already consented:
instead, it would be achieved by process and technology changes developed by Biogen through its operation of the existing plant.

To assist the effective use of the additional biofertiliser that the higher food waste throughput would generate, revised controls on the distances over which the biofertiliser can be exported for use on farmland are also proposed.

The Westwood plant also operates subject to a planning condition requiring all waste materials processed on the site to have originated from within a 30 mile (48.25 km) radius of the site. Biogen has encountered difficulty in fulfilling this condition for reasons explained in the next section of this planning statement.

This planning statement supports an application by Biogen to vary the relevant planning conditions to enable the desired increase in food waste throughput from 49,000 t/yr to 65,000 t/yr, whilst modifying the restrictive planning conditions on the source of food waste and the use of biofertiliser. The statement is organised as follows.

- Section 2 describes the current operation at Westwood, including the volume and sources of waste, arrangements for biofertiliser spreading, recent operational refinements and the environmental performance of the plant.

- Section 3 explains Biogen’s proposals for the future operation of the Westwood plant, taking into account considerations including the evolution of the AD sector and the need for Biogen to make a competitive market response. The proposed revisions to the relevant planning conditions is explained.

- The extent to which Biogen’s proposals conform with development plan policy is considered in section 4.

- Section 5 examines material considerations including national waste and planning policy.

- The conclusions of this planning statement are presented in section 6.

It is hoped that this planning statement presents the comprehensive information that Northamptonshire County Council (NCC) requires to arrive at an early and positive determination of Biogen’s application. However, Biogen would be pleased to supply additional data should this be required.
Two Westwood: existing operations

WASTE VOLUMES

NCC granted planning permission for the Westwood plant in 2008 (planning permission reference 08/00002/WAS). Planning condition 2 of this permission allowed the plant to process up to 41,000 t/yr of food waste and 4,000 t/yr of energy crops, with the processed digestate spread on the site’s host agricultural unit.

In October 2011 NCC approved a variation of this planning condition, so that ‘the development hereby permitted shall not exceed a total annual throughput of 49,000 tonnes per annum and digestate application shall be limited to a 5 mile radius from the site’ (planning permission reference 11/00078/WAS). At the same time, NC approved a variation of planning condition 5 to allow the plant to operate on public and bank holidays (planning permission reference 011/00073/WAS). The plant is now operating at this revised capacity.

ORIGIN OF THE FOOD WASTE CURRENTLY PROCESSED

Planning condition 25 of planning permission ref. 11/00078/WAS states that ‘all waste materials to be processed on the site shall originate from locations within a radius of 30 miles of the application site, unless expressly approved in writing by the Waste Planning Authority’. The reason stated for this condition cites relevant development plan policy that seeks a sustainable waste management system for Northamptonshire in which the movement of waste is minimised.

Biogen has struggled to comply with condition 25. The practical problem arises from the fact that many of the food waste supply contracts upon which Biogen and its competitors depend generate waste from a variety of locations, not all of which lie within a given catchment. The Westwood plant receives food waste from the following organisations, every one of which supplies waste originating partly within NCC’s 48.25 km radius catchment, and partly from outside:

- ASDA
- Bakkavor
- Bernard Matthews
- Spirit Group
- Cooperative
- Paperround
- Sita

In addition, the Westwood plant receives waste from waste handlers Envirowaste and New Earth, which is also sourced partly within and partly from outside the 48.25 km catchment.

As can be inferred from the fact that many of the companies in this list are household names, these are significant contracts for which Biogen has to compete keenly. Securing such contracts is essential for Biogen’s business. Should Biogen attempt to stipulate which proportions of these clients’ waste streams should be sent to Westwood, it is unlikely that any of these contracts would be secured, with profound adverse consequences for the Westwood operation and the people who work there.
Principally because the major food waste suppliers in the catchment also expect their waste contractor to accept waste from their other locations, Biogen has thus been unable to comply fully with planning condition 25. In 2012 the Westwood plant processed a total of 49,011 tonnes of food waste, of which 17,582 tonnes (35.87% of the 2012 total) originated from outside the catchment. Biogen is seeking to reduce this proportion within the constraints imposed by its established commercial contracts. For 2013 it is predicted that 14,573 tonnes (29.8% of the annual total of 49,000 tonnes) will have originated from outside the defined catchment.

**TRANSPORT MOVEMENTS**

The existing 49,000 t/yr Westwood operation typically generates approximately 13 HGV visits (26 HGV movements) per day, rising to a maximum 20 HGV visits (40 HGV movements) on an occasional basis – perhaps once a month. The plant also generates car traffic associated with its nine employees, and occasional light vehicle movements by external maintenance staff. Biofertiliser spreading takes place on local farmland and generates limited additional traffic on the public highway. Such traffic would arise in any event from the application of chemical fertilisers, the delivery of which to farms would generate additional long distance lorry movements.

No complaints have been received concerning these traffic movements. Access to the Westwood plant is directly from the A6, and the contribution of Biogen’s traffic to the overall total on this route is insignificant. Furthermore, because waste comes to the plant from all directions, the effects on roads in the wider area is all the more dispersed.

**BIOFERTILISER SPREADING**

Biogen was founded by Bedfordia Farms Limited, a farming and agribusiness company based at Milton Ernest in Bedfordshire, with a view to finding more sustainable alternatives to chemical fertilisers. The Westwood AD site is located on an arable farm operated by Bedfordia, and under the terms of the 2008 planning permission, the biofertiliser was to used on the host farm. Under the terms of the 2011 revised planning permission, digestate application can take place within a five mile (8 km) radius of the plant. Biogen is complying with this condition.

**ENVIRONMENTAL PERFORMANCE AND OPERATIONAL REFINEMENTS**

The waste reception building at the Westwood plant features comprehensive odour containment and the AD process can only operate in sealed, air-tight, conditions. Whereas the plant itself has thus operated unobtrusively, some concerns were expressed locally during the first years of the plant’s operation about the odour arising from the biofertiliser once it was spread on the fields.

Complaints about the application of farm slurry or chemical sprays and fertilisers from householders adjacent to the fields are a feature of rural life. In the current context it is noteworthy that the AD process substantially reduces odour and pathogens, and the residual odour arising from the treated digestate is at a much lower level and subjectively less offensive than slurry. Nonetheless, in response to complaints received, Biogen has made the following refinements to its biofertiliser application methods.
i). Management practices have been tightened to ensure that biofertiliser is only spread under favourable weather conditions.

ii). Biogen has invested in equipment that injects the biofertiliser under the soil in the summer application rather than dribbling the product onto the soil surface, as must happen during the spring application. This means that, in areas close to odour-sensitive receptors including the fields around Avenue Road in Rushden, fertiliser application now occurs only once a year, during the summer when the biofertiliser can be injected to land rather than surface-spread.

iii). Biogen has established a Digestate Quality Task Force to look into ways of improving the digestate both in terms of odour and quality. This research has included a number of small-scale trials of new equipment and different additives. As a result of this research, Biogen identified a process additive that improves the biology of the AD process and therefore provides a better final product with lower potential for odour.

iv). Biogen understands the importance of good communication with local residents. Historically, the company sent letters to residents to inform them of forthcoming spreading operations and providing background information about the process. Working in conjunction with local residents and parish councils, Biogen has now developed a new e-mail notification system to notify interested parties before spreading commences in their area.

Table 1 below shows the numbers of complaints received concerning the Westwood operation. As a result of measures such as those identified above, a steady reduction in the numbers of complaints received is being achieved. The table gives grounds for confidence that the increased throughput of tonnage now sought would not adversely affect third parties as a consequence of increased biofertiliser production.

<table>
<thead>
<tr>
<th>Year</th>
<th>Plant complaints</th>
<th>Spreading complaints</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>7</td>
<td>31</td>
<td>38</td>
</tr>
<tr>
<td>2012</td>
<td>7</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>2013 (to 6 Sept)</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

Biogen’s wider commitment to high operational standards is evident in the fact that the company and its plant at Westwood operate in accordance with the following quality systems.

- ISO9001 quality management system
- ISO14001 environmental management system
- OHSAS 18001 health and safety management system
- PAS110: 2010 Specification for whole digestate, separated liquor and separated fibre derived from the anaerobic digestion of source-segregated biodegradable materials

PAS110 governs the definition of digestate derived from the anaerobic digestion of source-segregated biodegradable materials. The specification ensures all digested materials are of
consistent quality and fit for purpose. If a biogas plant meets the standard, its digestate will be regarded as having been fully recovered and to have ceased to be waste, and it can be labelled and sold as biofertiliser.

PAS 110 aims to remove the major barrier to the development of AD and its markets for digestion process outputs by creating an industry specification against which producers can verify that the treated digestate is of consistent quality, fit for purpose and classified as a product. Biogen contributed to the establishment of the standard. PAS110 covers all anaerobic digestion (AD) systems that accept source-segregated biowastes and specifies:

- controls on input materials and the management system for the process of anaerobic digestion and associated technologies;
- the minimum quality of whole digestate, separated fibre and separated liquor;
- the information that is required to be supplied to the digestate recipient.

All of these management systems would apply to the 65,000 t/yr operation now proposed at Westwood, the reasoning for which will now be described.
Three Future operational requirements

INTRODUCTION

Biogen’s planning submission aims to secure the following operational changes.

i). An increase in the food waste throughput of the Westwood plant from 49,000 t/yr to 65,000 t/yr, without the need for any physical extension of the plant. This increase in throughput requires an amendment to condition 2 of planning permission ref. 11/00078/WAS.

ii). A relaxation of the requirement that digestate application shall be limited to an 8 km radius from the Westwood site. This likewise requires an amendment to condition 2 of planning permission ref. 11/00078/WAS.

iii). A relaxation of the 48.25 km radius catchment for the origin of food waste. This requires an amendment to condition 25 of planning permission ref. 11/00078/WAS.

This section of the planning statement explains the operational rationale for these changes, focusing on changes in the markets for the sourcing of food waste and the supply of biofertiliser to farmers.

EVOLUTION OF FOOD WASTE MARKETS

When the Westwood AD plant secured planning permission in 2008, there were only three other food waste AD plants operating in the UK, two of which – at Twinwoods in Bedfordshire and Ludlow in Shropshire – were operated by Biogen. Since then, the industry has matured. An increasing number of local authorities have commissioned separate food waste collections, increasing substantially the volume of waste to be processed. As table 2 shows, there are now 30 food waste AD plants operating in Great Britain, with additional projects coming forward. Other projects are at the planning stage. The market is thus maturing well and, at the same time, becoming more competitive.

Table 2: commercial food waste AD plants operational in Great Britain, 2013

<table>
<thead>
<tr>
<th>AD Plant</th>
<th>t/yr</th>
<th>Location</th>
<th>AD Plant</th>
<th>t/yr</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adnams Bio energy</td>
<td>12500</td>
<td>Southwold Suffolk</td>
<td>Insource Energy</td>
<td>18000</td>
<td>Newport, W. Wales</td>
</tr>
<tr>
<td>Agrivert, Benson</td>
<td>45000</td>
<td>Oxfordshire</td>
<td>Langage Farm</td>
<td>20000</td>
<td>Plymouth, Devon</td>
</tr>
<tr>
<td>Agrivert, Benson</td>
<td>45000</td>
<td>Oxfordshire</td>
<td>Local Generation</td>
<td>30000</td>
<td>March, Cambridgeshire</td>
</tr>
<tr>
<td>Andigestion</td>
<td>80000</td>
<td>Holworth, Devon</td>
<td>Lower Reule</td>
<td>30000</td>
<td>Gnosall, Staffordshire</td>
</tr>
<tr>
<td>Andigestion</td>
<td>6000</td>
<td>Waterbeach, Cambridgeshire</td>
<td>Malaby biogas</td>
<td>20000</td>
<td>Warminster, Wiltshire</td>
</tr>
<tr>
<td>Biffa, Cannock</td>
<td>100000</td>
<td>Cannock, Staffordshire</td>
<td>Northwick estates</td>
<td>45000</td>
<td>Gloucestershire</td>
</tr>
<tr>
<td>Biogen Twinwoods</td>
<td>30000</td>
<td>Bedfordshire</td>
<td>PDM</td>
<td>45000</td>
<td>Doncaster, Sth Yorks</td>
</tr>
<tr>
<td>Biogen Westwood</td>
<td>49000</td>
<td>Rushden, Northamptonshire</td>
<td>Scottish Water - Deedykes</td>
<td>30000</td>
<td>Cumbernauld, Scotland</td>
</tr>
<tr>
<td>Carnington Bio-energy</td>
<td>70000</td>
<td>Somerset</td>
<td>Shanks, Energen</td>
<td>60000</td>
<td>Scotland</td>
</tr>
<tr>
<td>Eco sustainable solutions</td>
<td>15000</td>
<td>Dorset</td>
<td>Staples vegetables</td>
<td>46000</td>
<td>Boston, Lincolnshire</td>
</tr>
<tr>
<td>Fairfield Bioenergy</td>
<td>25000</td>
<td>Stockport, Manchester</td>
<td>Swancote Energy</td>
<td>21000</td>
<td>Bridgnorth, Shropshire</td>
</tr>
<tr>
<td>Fernbrook Bio</td>
<td>30000</td>
<td>Rothwell, Northamptonshire</td>
<td>TEG</td>
<td>16000</td>
<td>Perth, Scotland</td>
</tr>
<tr>
<td>Geneco</td>
<td>30000</td>
<td>Bristol</td>
<td>Zebec biogas</td>
<td>75000</td>
<td>Banmark, Scotland</td>
</tr>
<tr>
<td>Harper Adams Energy</td>
<td>10000</td>
<td>Newport, Shropshire</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Of the 30 AD plants shown in table 2, Biogen understands that only two – its own Westwood plant and the Fernbrook Bio facility at Rothwell, also in Northamptonshire - are subject to catchment area restrictions. None of Biogen’s other AD plants is subject to such restrictions.

Food waste producers now have a wide choice of AD operators from whom to secure the most favourable commercial terms. For example, Biogen is aware of two local authority food waste contracts in Northamptonshire being awarded to operators outside the county. The catchment area restriction placed upon Westwood enables competitors to adopt a predatory approach towards those food waste producers within the Westwood catchment who also generate food waste from outside the area, such as Biogen’s customers listed in section two of this planning statement. Some food waste suppliers have a preference for straightforward single contracts in which the waste is sent to a single AD plant.

TECHNOLOGICAL AND EFFICIENCY IMPROVEMENTS IN THE OPERATION OF THE WESTWOOD DIGESTERS

Since the Westwood AD plant opened in 2009, Biogen’s technology team has continued to seek refinements in the operational efficiency of the plant, through measures including enhanced biological performance and operational improvements to the front-end handling equipment. As a consequence, the plant is able to operate at higher organic loading rates, giving higher biogas yields per tonne with a higher renewable energy output. The overall outcome of these efforts is that Westwood can now operate at higher level of waste throughput without any increase in the physical capacity of the plant, being able to handle up to 65,000 t/yr of food waste. Biogen wants to put this technological capability and additional capacity to good use.

ENHANCEMENTS IN THE PRODUCTION AND USE OF BIOFERTILISER

When the Westwood farm based anaerobic digestion project was originally conceived, it was intended that all of the bio-fertiliser produced by the plant would be used on land farmed by Biogen’s sister company, Bedfordia Farms Limited. In January 2012 a variation to Condition 2 of the original planning permission was granted to allow the digestate to be spread on other local farmland within 8 km of the plant. This enabled Biogen to spread digestate produced in excess of Bedfordia Farms’ requirements on other land and to meet demand from other farmers for bio-fertiliser in place of their usual use of fossil fuel derived fertilisers.

For the following reasons, Biogen is now seeking to remove the restriction that digestate can only be spread within 8 km of the Westwood plant.

i). Improved productivity - the Westwood plant is producing more bio-fertiliser through a combination of increased input of food waste feedstock (now 49,000 tonnes per annum) and better-than-anticipated levels of nutrients in the feedstock (see below). The current plant digestate production has increased to 40,000 tonnes per annum. The increased volume of feedstock for which consent is sought (to 65,000 t/yr) should produce approximately 52,000 t/yr of biofertiliser. It is anticipated this biofertiliser will be applied to the land as follows:

- c. 30,000 t/yr to Bedfordia Farms;
- c. 10,000 t/yr to adjoining land owners;
- c. 12,000 t/yr to other local landowners or elsewhere.
Biofertiliser supply would, as is currently the case, use the existing distribution pipeline, which Biogen would extend where feasible to facilitate distribution to neighbouring farmers. Where this cannot be achieved the biofertiliser would be transported by agricultural vehicles.

ii).  *High nutrient content* - the biofertiliser now produced at Westwood contains a higher nutrient content than originally achieved, particularly nitrogen. The surrounding local farmland is within a designated nitrate vulnerable zone, which means the amount of organic nitrogen fertiliser applied per hectare is limited by Defra to a maximum of 250kg/ha/year. This necessitates access to additional farmland for the distribution of the biofertiliser. This is a distinct benefit to the local farming community as it substantially helps in reducing their growing costs and reduces demand for inorganic conventional fertilisers.

iii).  *Cropping changes* - the choice of crops grown on a farm is driven by market forces and physical considerations including weather and soil type. Certain crops such as peas and beans do not require nitrogen fertiliser, because they encourage the production of nitrogen fixing bacteria and therefore indirectly ‘produce’ their own nitrogen. The weather is also unpredictable, and if there are particularly wet conditions in the drilling period where land is unable to be cropped in the autumn, then spring crops will tend to dominate with a lower requirement for nitrogen. If cropping changes reduce the volume of biofertiliser that can be applied to certain crops, then flexibility is required to enable spreading on additional land.

iv).  *Market demand* - due to the success of the use of biofertiliser on land farmed by Bedfordia Farms Limited, Biogen is now being approached by local farmers beyond the 8 km restriction for supplies of biofertiliser. This trend reflects a significant change in the view taken by farmers of organic forms of fertiliser, influenced by a combination of factors. Organic fertilisers represent good value for money; agronomically these fertilisers work extremely well as a source of nutrients; they are much better understood as there is comprehensive scientific information available on how they work; they produce high yields, and they are renewable so represent a environmentally responsible way of sourcing fertiliser. A separate example of an organics market which has expanded rapidly in the last few years is the Safe Sewage Sludge matrix, where demand is now significantly exceeding supply. Evidence from elsewhere in Europe indicates that the market for digestate will follow a similar path.

As at present, the bio-fertiliser would be applied twice a year during the spring (February to April) and summer (July to September) spreading periods. Market forces will dictate the distance over which the biofertiliser is spread: the further it is transported, the higher the cost, which becomes self regulating. The majority of the digestate would be spread close to Westwood via the existing spreading main, with the remainder collected by agricultural contractors. The access route to the biofertiliser collection point is already used by Bedfordia Farms Limited for its farming operations.

**RESULTING PLANNING REQUIREMENTS**

For all these reasons, Biogen wishes to maintain the competitiveness of its Westwood operation by:

- ensuring the Westwood plant can compete for food waste contracts on a level playing-field with competitors by varying the rigid waste catchment constraint that applies currently;

- taking advantage of the process refinements and associated operational efficiencies that will enable a 65,000 t/yr throughput to be achieved without a physical extension of the plant;
• ensuring that a suitable area of farmland is available for the increased quantity of biofertiliser that will be produced, whilst also meeting growing demand for the biofertiliser product.

In the light of these requirements, the following amendments to planning conditions are proposed, with deleted text struck through and new text added in bold underlined text.

**Proposed amendments to planning conditions**

**Planning condition 2: scope of planning permission**

The development hereby permitted shall not exceed a total annual throughput of **49,65,000** tonnes per annum and digestate application shall be limited to a 5 mile radius from the site.

**REASON:** To specify the scope of the permission, commencement date of waste operations and in the interests of clarity.

**Planning condition 25: proximity principle**

All waste materials to be processed on the site shall originate from locations within a radius of 30 miles of the application site **the geographical catchment shown on plan ref. BIO.2013.1**, unless expressly approved in writing by the Waste Planning Authority. **No waste processed at the Westwood site shall originate from Greater London after 31 December 2015, unless otherwise agreed in writing with the Waste Planning Authority.**

**REASON:** To ensure that the development will contribute to a sustainable waste management system for Northamptonshire and minimise the transportation of waste from its source and the movement of waste across waste boundaries having regard to Policy CS1 of the Northamptonshire MWDF Core Strategy (MAY 2010) and Policy CMD1 of the Northamptonshire MWDF Control and Management of Development DPD (June 2011).

**ENVIRONMENTAL EFFECTS OF THE PROPOSED CHANGES**

On 7 February 2013 Biogen requested an opinion under Regulation 5 of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011 on whether this increase in throughput would require environmental impact assessment (EIA). By letter of 21 February 2013, NCC confirmed that EIA was unnecessary, advising that:

‘... In this instance, the development is an existing established facility and the proposed increased capacity does not require any additional built development to that already permitted. There will only be a minor increase in HGV movements of an average 8 per day. The development is not anticipated to result in any material increase in emissions to the environment and the cumulative impact, with the existing permitted capacity, is not considered to be likely to give rise to any significant environmental impacts. There are no nationally and locally designated sites or buildings of importance close to the site. Accordingly, it is considered that there are no criteria that justify the requirement for an EIA and as such an Environmental Statement (ES) would not be
required to accompany an application for the proposal’.

As noted in NCC’s letter, the principal external change resulting from the proposed increase in food waste throughput is would be an increase in HGV movements, with an additional four HGV loads (eight vehicle movements) arriving on a typical working day. It was noted in section two (above) that the existing 49,000 t/yr Westwood operation typically generates approximately 13 HGV visits (26 HGV movements) per day, rising to a maximum 20 HGV visits (40 HGV movements) on an occasional basis – perhaps once a month. With the additional traffic flows generated by an increase in waste throughput to 65,000 t/yr, the total number of HGV visits would increase to 17 HGV visits (34 HGV movements) per day, rising to a maximum 26 HGV visits (52 HGV movements) on the same occasional basis.

With waste catchment constraints modified, some of these movements might be travelling over longer distances to reach the Westwood site, but with the site served by an access leading directly from the A6, and with the waste coming from various directions, the effects on the local road network would fall well below any threshold of significance.

It is estimated that the movement of an additional 12,000 t/yr of biofertiliser might involve approximately 12 HGV equivalent loads (24 vehicle movements) per day during those times of the year when the biofertiliser is being applied to the land. However, the proposed relaxation of the existing 8 km restriction for biofertiliser application is intended only to provide commercial and logistical flexibility should it be required, and commercial factors will dictate that it will remain in the best interests of Biogen to distribute as much biofertiliser as close as possible to the source of production at Westwood. It is also relevant that, in the absence of this increased supply of locally-sourced biofertiliser, farmers will use chemical or organic fertilisers imported often over much greater distances, and the local movements of farm vehicles during the spreading seasons would follow a similar pattern and volume whether or not Biogen’s product or an imported fertiliser was employed.

BENEFITS

Before considering Biogen’s application from a planning policy perspective, it is relevant to outline the anticipated benefits of amending the planning conditions, so that these benefits can be weighed in the balance should any residual conflict with development plan policy be identified.

i). **Sustainability** – the proposed operation is inherently sustainable. It recycles a previously difficult-to-treat waste into beneficial products in the form of biogas - a renewable energy source – and a nutrient-rich biofertiliser. The biofertiliser replaces chemical fertilisers that will often be imported over considerable distances, thus reducing transport movements.

ii). **Renewable energy** - the existing plant produces sufficient biogas to sustain c. 2.5 megawatts of electricity generation capacity – equivalent to the electricity demand from c. 4,500 homes. The additional biogas arising from the additional volume of food waste would raise on-site electricity generation capacity to c. 3MW of electricity generation capacity, equivalent to the electricity demand from c. 5,400 homes, using the existing on-site electricity generators. Increased use of domestic sources of renewable energy reduces dependence on fossil fuels such as natural gas that are increasingly imported, thus assisting the national balance of payments. The substitution of fossil fuels by renewable energy sources also reduces emissions of greenhouse gases.
iii). **Greenhouse gas emissions reductions** - for every tonne of food waste processed through AD, 905 kg of CO₂ equivalent are saved compared with disposal to landfill. On this basis, the proposed 16,000 t/yr increase in food waste throughput would reduce CO₂ emissions by 14,480 t/yr. With respect to CO₂ emissions associated with food waste transport, small local deliveries can be delivered in to the plant directly, and feedstock from further afield can be bulked at a transfer station and delivered in larger bulk deliveries, thus reducing overall traffic movements. A fully-laden HGV produces around 1,000 g of CO₂ per kilometre travelled. Processing food waste through AD gives a carbon benefit of 905kg/t of food waste treated compared to going to landfill. This means that a 25t HGV could theoretically travel c. 7,000 miles to the AD plant and back before treatment by AD became the inferior option. Clearly there would need to be allowance for carbon emissions in vehicle wear and tear, but the calculation illustrates how treating food waste through AD anywhere in the UK is the best option for reducing CO₂ emissions.

iv). **Economic benefits** – the proposed operational changes would enable Biogen, a local company, to perform in a highly competitive market sector, and would provide Northamptonshire’s farmers with a benign and cost-effective source of biofertiliser. This would help to retain wealth in the county’s economy and, if the biofertiliser replaces chemical equivalents imported from overseas, would once more assist the national balance of payments. Although not a major employer, the proposed operational enhancements would also reinforce the security of the nine existing jobs at Westwood and create 1-2 additional full-time posts.

For all these reasons, Biogen considers that the proposed operational enhancements would cause no significant harm to the environment or local amenity, whilst delivering tangible benefits both locally and beyond. The next section examines how far the proposed revision of planning conditions aligns with development plan policy.
Four ◆ Development plan policy

THE DEVELOPMENT PLAN

For current purposes the development plan comprises the Northamptonshire Minerals and Waste Development Framework (NMWDF), which includes the following component parts:

- NMWDF Core Strategy – adopted in May 2010
- NMWDF Locations for Waste Development – adopted in March 2011
- NMWDF Control and Management of Development – adopted in June 2011

NCC is currently undertaking a partial review of the NMWDF. As a part of this review the individual elements of the NMWDF are being combined into one document to form the Northamptonshire Minerals and Waste Local Plan (NMWLP), with the plan period extended to 2031. This section of Biogen’s planning statement thus considers the following documents:

- Northamptonshire Minerals and Waste local Plan – consultation draft, December 2012

The provisions of these documents will be considered in turn. In so doing it is relevant to bear in mind that Biogen’s Westwood facility is not a proposed development but one that already exists, and which would undergo no physical change as a result of the current application. It is also important to acknowledge that, as an operation that converts food waste into a renewable energy source and a renewable biofertiliser at a high level of efficiency, in an enclosed process and without significant by-products, AD is high in the waste hierarchy and has excellent sustainability credentials.

NMWDF CORE STRATEGY – ADOPTED IN MAY 2010

On this basis it is unsurprising that the operation at Westwood that Biogen is proposing is consistent with the vision and objectives of the adopted NMWDF Core Strategy, notably:

- The NMWDF Vision (after para. 5.2) - which is for the Northamptonshire of 2026 to have a network of well designed urban-focused waste management facilities with, inter alia, the efficient use of mineral and waste resources optimised and with communities taking more responsibility for the waste they generate.

- Objective 1: Developing sustainable communities – with ‘a modern network of sustainable waste management facilities which contributes towards achieving regional self-sufficiency and meets community, business and industry needs’.

- Objective 2: Sustainable minerals and waste development in Northamptonshire – ‘Promot(ing) a step change in high quality design-led sustainable development by maximising materials resource efficiency, minimising waste, optimising the use of existing infrastructure and highway networks and previously developed land, and promoting the sustainable transport of materials’.
Objective 10: Conserving and enhancing Northamptonshire’s built and natural environment – to which, as acknowledged in the EIA screening opinion letter cited above, the Westwood plant causes no compromise;

Objective 12: Safe and healthy communities – which the beneficial recycling of food waste on a secluded site helps to sustain.

Para. 4.13 - which acknowledges that ‘waste management is a key part of the Environmental Technologies job sector, along with renewable energy, and this job sector is one that Northamptonshire’s economic agencies consider should be supported to grow in the county, particularly in North Northamptonshire’. As noted, Biogen is a knowledge leader in the food waste AD sector and has won a series of awards for innovation.

Para. 6.8 -which includes anaerobic digestion in a list of the ‘types of facilities could be used in combination to support the development of a sustainable waste management network and provide the required capacity . . .’.

Policy CS1: Northamptonshire’s waste management capacity – which sets ambitious capacity targets for the development of a sustainable waste management network to support growth within Northamptonshire during the plan period, with a significant role identified for biological treatment. The policy also states that ‘. . . this provision will come from a mix of extensions to existing sites, intensification or re-development of existing sites and new sites, providing they all meet the spatial strategy for waste management and are assessed as meeting environmental, amenity and other requirements . . .’.

Policy CS3: Strategy for waste disposal - which identifies a need for non-inert waste capacity of 657,000 and 709,000 tonnes per annum for 2016 and 2026 respectively.

Policy CS14: Addressing the impact of proposed minerals and waste development – which identifies environmental assets that should be protected.

Para. 4.1 describes the regional context for minerals and waste development in Northamptonshire in the following terms:

‘Northamptonshire is a county at the heart of England, but has no particular alignment to any region. It is formally part of the East Midlands region, which includes Leicestershire and Nottinghamshire, yet Birmingham in the West Midlands is the nearest major regional city to the county. Northamptonshire is adjacent to the South East region but there is also a strong affinity with the East of England region, not least through the county being within that area’s broadcasting region. Although east-west road links are good the key transport communication links, and therefore other links, are with the world city of London. Taken together the closeness of the relationships with the east, south-east and London make Northamptonshire effectively a part of the wider south-east functional area’.

These strong connections with adjacent areas align closely with Biogen’s experience of operating as a specialist waste recycler in Northamptonshire. As noted in section two of this planning statement, many of Biogen’s leading customers generate food waste both within the county and further afield. To seek artificially to limit such a waste operation to a radial catchment is to overlook the nature of the market in which waste companies in emerging sectors are obliged to operate. Biogen requests sympathetic consideration of this reality in the current context.
Paras. 4.15-4.16 of the NMWDF Core Strategy provide guidance on catchment areas for waste management:

4.15. Being within the East Midlands region rather than the East or South-East regions, there is no requirement for Northamptonshire to take a proportion of London’s waste, as counties in those regions are required to do. This is because London is seen to have considerable difficulties in being self-sufficient in its ability to deal with the waste it generates.

4.16. As a consequence, Northamptonshire should be able to better plan for sustainable waste management and disposal in the county as it does not need to specifically provide for another area’s waste generation. For reasons of sustainability, the movement of waste within the county and across its borders should ideally be kept to a minimum. But inevitably there will be some cross-border flows for reasons of geographical convenience, which may be broadly balanced, or because some waste management facilities can have a highly specialised role that means they have larger catchment areas. The Core Strategy recognises that waste management is becoming more specialised and is also a higher value industry than previously. It is not appropriate to oppose facilities serving wider catchments when other industries and commercial enterprises are not so constrained. However, in the wider interests of sustainability, it is not envisaged that Northamptonshire should take on a role as a key sub-national location for waste management facilities.

Biogen’s current proposals cause no offence to these principles. The Westwood plant is bound to generate cross-border flows of food waste because it is located on the county boundary with Bedfordshire. Food waste recycling is an emergent specialised sector of the waste industry, and it would be unreasonable to prevent the Westwood plant from serving wider catchments when most of its competitors are not so constrained. Equally, the current proposals would in no sense make Northamptonshire a sub-national hub for food waste recycling. As table 2 (above) shows, similar plants are being developed throughout Britain. As the industry matures, commercial logic will dictate that it is better not to transport food waste over long distances for treatment if at all avoidable.

Para. 6.11 et seq describe the spatial strategy for waste management in Northamptonshire. Policy CS2: Spatial strategy for waste management and Box CS3 on page 26 of the Core Strategy identify the locational hierarchy, catchment areas and functional role of waste management and disposal facilities in the county. According to the accompanying Plan CS3 on page 27 of the Core Strategy, the Westwood site lies c. 1 km outside of the main ‘central spine’, which comprises ‘areas of focus for waste development, particularly integrated and advance treatment facilities’.

This central spine is at the top of the locational waste hierarchy defined in Box CS3. Waste facilities are encouraged in the central spine because of its proximity to urban areas from which a majority of waste arises. However, in the case of the Westwood plant a more significant locational consideration was the local availability of suitable farmland for the use of the biofertiliser, in order to avoid having to transport the treated digestate over long distances. Through its close association with local farms, the Westwood plant thus complies with the final provision of Core Strategy policy CS2, that ‘facilities in rural areas should, where possible, be associated with existing rural employment uses’.

Core Strategic Box CS3 sets out a hierarchy of catchment areas for waste facilities, comprising national, regional, sub-regional, local and neighbourhood levels. The definition of these catchments is set out in the NMWDF Control and Management of Development DPD, considered later in this
section. Core Strategy para. 6.20 advises that ‘The development in Northamptonshire of facilities with a national or regional catchment area are only considered appropriate where these would be of a specialised nature, with a genuine specialist catchment area for the waste to be managed’. Biogen would contend that the anaerobic digestion of food waste, which only began in the UK on a commercial scale less than a decade ago, constitutes a specialist waste for which a regional catchment is appropriate, particularly at this stage of the industry’s development.

Acknowledgement is also sought for the wider benefits of food waste digestion. The separation of non-inert materials from the waste stream renders the beneficial processing of inert wastes more straightforward at all catchment levels.

Core Strategic Box CS3 proceeds to categorise waste management facilities by their functional role using the following categories - advanced treatment, preliminary treatment, disposal and wastewater treatment. Anaerobic digestion is categorised as ‘preliminary treatment’. ‘Preliminary’ means something coming before a more important action or event, especially introducing or preparing for it. The Westwood operation does much more than this. It takes food waste and deals with it completely, converting the waste into environmentally valuable products in the form of renewable biogas and biofertiliser. The Westwood plant even finds end uses for these two products in the form of on-site electricity generation and the nutrient enrichment for local farmland. No other sector of the waste industry offers such a comprehensive solution. It is partly for this reason that AD is viewed so favourably in national waste policy, as explained in the next section of this planning statement.

Core Strategy policy CS9: Encouraging sustainable transport movements states that ‘minerals and waste related development should seek to minimise transport movements and maximise the use of sustainable or alternative transport modes’. Food waste is currently sent to the Westwood plant by approximately 50 customers and from a higher number of dispersed locations, and it is not possible to locate an AD plant in a place that would obviate the need for the transport of food waste by road. Instead, Biogen’s approach is to locate its AD plants close to the farmland on which the biofertiliser will be applied. This enables much of the biofertiliser to be piped directly to the fields, an inherently sustainable approach that minimises transport movements in accordance with policy CS9.

For the various reasons given and with due consideration for the specialised nature of the Westwood plant, it is concluded that the current proposals comply with all relevant policies of the NMWDF Core Strategy 2010.

NMWDF LOCATIONS FOR WASTE DEVELOPMENT DPD - ADOPTED IN MARCH 2011

This document identifies locations for waste development in Northamptonshire. Because the current application seeks to vary planning conditions applying to an existing waste operation, the document is less relevant in the current context than other parts of the NMWDF. However, para. 3.4 of the DPD reaffirms that the Westwood site is an appropriate location for AD:

‘This DPD sets out the allocation of specific sites for waste management facilities, and the identification of specific locations where waste management uses would be acceptable in principle . . .

. . . Sites for waste management use in rural areas - specific sites within rural areas where those waste management uses most appropriately located in these areas (particularly composting and anaerobic digestion) would be acceptable’.
NMWDF CONTROL AND MANAGEMENT OF DEVELOPMENT DPD – ADOPTED IN JUNE 2011

The NMWDF Control and Management of Development DPD covers general issues relating to granting permission and then controlling the development afterwards. Amongst other things, the document provides further substantiation of the categorisation of waste facilities set out in Box CS3 of the Core Strategy (see above). AD is thus classified again as ‘preliminary treatment’.

Paras. 3.6-3.14 of the Control and Management of Development DPD provide guidance on the catchment area for waste facilities. Para. 3.6 reaffirms Northamptonshire’s close relationship with surrounding regions, and explains that this could lead the county to becoming a ‘waste hub’. Para. 3.6 continues - ‘Despite the waste management industry becoming more technology based and also a higher value industry than previously, it is not considered appropriate given sustainability issues for Northamptonshire to take on a role as a key sub-national location for waste management facilities’.

In response, ‘it is considered necessary to reinforce this through practical implementation measures such as the application of specific catchment areas for individual facilities. This approach recognises that cross-boundary movements are likely to occur but should be consistent with enabling waste to be managed as close to its source as possible, and kept to a minimum where possible . . .’ (para. 3.7)

Para. 3.8 acknowledges that ‘. . . some waste management facilities can have a highly specialised role that means they have a larger catchment area extending beyond the county. Such specialisms need to be addressed so that they are not unnecessarily constrained’. Nonetheless, ‘Proposals for waste development will need to specify the intended catchment area. This will assist the Waste Planning Authority (WPA) in determining the extent to which a proposal supports the development of sustainable communities which take responsibility for the waste they produce’ (para. 3.9). To this end broad catchment areas have been identified. Catchment areas include the national, regional, sub-regional, local, and neighbourhood catchments identified in Core Strategy Box CS3 (see above).

Para. 3.11 sets out the information that applicants must provide:

‘Proposals must identify the relevant catchment area(s) and demonstrate how this is linked to the waste to be managed on the site; this should be clearly shown on an indicative map to accompany the planning application . . .’

Para. 3.12 then provides the following criteria against which waste catchment areas are to be defined:

- **National** – Waste to be managed on site originates from within England or an equivalent geographical area within Great Britain. The facility is of a specialised nature specifically relating to the waste to be managed or the nature of the processes involved; on the basis of its specialised role the facility is one of very few of its type nationally (or identified area). Waste to be managed does not include untreated / unsorted MSW, C&D, or green waste. The facility supports the waste hierarchy and is not for the disposal of waste, unless disposal forms the last available option.

- **Regional** – Waste to be managed on site originates from within the East Midlands or an equivalent geographical area. The facility is of a specialised nature specifically relating to the waste to be managed or the nature of the processes involved; on the basis of its specialised role the facility is one of only one or two within the region (or identified area). Waste to be managed does not include untreated / unsorted MSW, C&D, or green waste. The facility
supports the waste hierarchy and is not for the disposal of waste, unless disposal forms the last available option.

- **Sub-regional** – Waste to be managed on site originates from within Northamptonshire or an equivalent geographical area. May include a wide variety of waste types including MSW, C&D, and green waste. The facility supports the waste hierarchy and is not for the disposal of waste, unless this is the last available option.

- **Local** – Waste to be managed on site originates from within up to two adjacent local planning authority areas or an equivalent geographical area. The facility is intended to serve either an urban area and its immediate rural hinterland, or be located in a rural area for the purpose of dealing with agricultural and / or similar wastes produced locally. The facility should be for preliminary treatment, however in certain circumstances may be for advanced treatment. The facility supports the waste hierarchy and is not for the disposal of waste.

- **Neighbourhood** – Waste to be managed on site originates from within an urban extension, a commercial or industrial area, or one or more rural settlements in close proximity to one another. The facility supports the waste hierarchy and is not for the disposal of waste.

Both as it currently operates and as proposed, the Westwood AD plant approximates most closely to the regional model, in that it is a facility is of a specialised nature and one of only a small number in the region. The food waste that Westwood manages does not include untreated or unsorted MSW, construction or demolition waste, or green waste. The facility performs very strongly in terms the waste hierarchy and is not for the disposal of waste, providing instead the highest levels of energy and materials recovery.

The further component of the DPD’s definition of a regional waste facility is that ‘waste to be managed on site originates from within the East Midlands or an equivalent geographical area’. Biogen’s planning application is accompanied by a commercially sensitive and confidential table showing the origin of the food waste that the Westwood plant currently handles. The proposed post-2015 catchment shown in plan BIO.2013.1 that accompanies this application and, which is referred to in the proposed revision of planning condition 25, equates to a geographical area equivalent in extent to the East Midlands region.

That said, Biogen is concerned that, for a specialised operation such as a food waste digestion plant - and in contrast to the more mainstream waste handling operations such as a materials recovery facility for municipal solid waste, for which the waste catchment would be much easier to define - the five-tier hierarchy of waste catchments does not provide a reliable basis for determining whether a project should be granted planning permission or not. As indicated in section two of this planning statement, the Westwood plant is a merchant scheme serving a constantly-changing list of customers. At the moment, Westwood is not reliant upon municipal contracts that deliver food waste from clearly defined local authority areas that enable judgements to be made about whether the waste is indigenous or imported. Instead, some of Biogen’s larger customers are producing some food waste inside the existing 48.25 km catchment, but also have a requirement for food waste arising from outside Biogen’s catchment to be processed.

Biogen is developing a network of farm-based food waste digestion centres to cater for the emerging market. It operates a plant at Twinwoods in Bedfordshire, and is building another plant near Baldock in Hertfordshire. Other projects are in development. As these and rival operators’ food waste digestion plants come on stream, commercial logic and convenience will dictate that food waste will gravitate towards the nearest local AD centre. In other words, the proximity
principle will apply without prompting from planning policy. That said, some larger merchant customers will always want to deal with one food waste digestion company rather than several both for contractual simplicity and to ensure that its requirements are understood, with the implication that some waste will always pass the front gate of one AD plant to get to another.

Biogen is appreciative of the County Council’s concern ‘to determine where waste that is being treated within the County is coming from, and subsequently if there is sufficient waste management and disposal capacity within the County’, and ‘to seek to avoid waste travelling unsustainable distances’ (Control and Management of Development DPD, para. 3.13). However, in considering how the current proposals fit within the waste catchment hierarchy described in paragraph 3.12, it is requested that the County Council gives sympathetic consideration to the practical points set out in this section. Subject to this, it is concluded that Biogen’s proposals for Westwood comply with all relevant provisions of DPD policy CMD1: Development criteria for waste management facilities (non-inert and hazardous), in that they:

i). promote the development of a sustainable waste network and facilitates delivery of Northamptonshire’s waste management capacity requirements;

ii). clearly establish a need for the facility identifying the intended functional role, intended catchment area for the waste to be managed, market base for any outputs, and the requirement for a specialist facility;

iii). are in general conformity with the principles of sustainability (particularly regarding the intended catchment area);

iv). facilitates the efficient collection and recovery of waste materials;

v). provide advanced treatment, in a location close to complementary farming activities;

vi). maximise the re-use of energy, heat, and residues;

vii). maximise the use of previously developed land – Westwood being a developed site.

For the various reasons given and again with due consideration for the specialised nature of the Westwood plant, it is concluded that the current proposals comply with all relevant policies of the NMWDF Control and Management of Development DPD 2011.
i). Plan ref. BIO.2013.1 and the explanatory text on page 22 of this report specify the intended catchment area (with regard to Table SPD3) and explain how this is linked to the waste to be managed on the site;

ii). The supporting narrative in this section of the planning statement seeks to demonstrate compliance with relevant NMWDF criteria and policies;

iii). the proposed facility, site boundary and catchment area for the Westwood plant are shown on plans provided with Biogen’s planning application;

iv). relevant operational linkages, both to food waste producers and the farmland on which the biofertiliser would be applied, have been explained.

Para. 3.8 also recommends the submission of map(s) of the catchment areas are to be of an appropriate size, scale and detail (e.g. main transport networks, urban settlement, etc) to allow NCC to determine the areas within, and boundary of, the catchment area. Submitted plan BIO.2013.1 responds to this requirement. Relevant requirements of the SPD have thus been met.

DEVELOPMENT PLAN PARTIAL REVIEW:
NORTHAMPTONSHIRE MINERALS AND WASTE LOCAL PLAN – FINAL DRAFT PLAN, SEPTEMBER 2013, and NMWLP LOCAL ASSESSMENT OF WASTE MANAGEMENT NEEDS – JULY 2012

NCC is currently in the process of reviewing the NMWDF documents and integrating them into a local plan. A final draft of the Northamptonshire Minerals and Waste Local Plan (NMWLP) has been published for consultation prior to the plan being submitted for independent examination. The local plan has various supporting documents including a Local assessment of waste management needs. Much of the adopted NMWDF policy considered earlier in the section has been carried over in the partial review. This section focuses on draft revisions to policy.

Para. 2.6 of the draft Local Plan summarises the waste management targets set out in European national and county policy, including the following:

**Landfill Directive**
- Reduce the proportion of biodegradable municipal waste sent to landfill to 50% of 1995 by 2013 and 35% by 2020.

**Waste Strategy for England**
- Reduce the amount of household waste not re-used, recycled or composted from over 22.2 Mt in 2000 by 35% in 2015 with an aspiration to reduce it to 12.2 Mt in 2020 (a reduction of 45%).
- Increased recycling and composting of household waste to at least 45% by 2015 and 50% by 2020.
- Increased recovery of municipal waste of 67% by 2015 and 75% by 2020.

**Northamptonshire Joint Municipal Waste Management Strategy**
- Household waste recycling (including composting) rate of 48% by 2012/3, 52% by 2015/6 and 56% by 2019/20.

Anaerobic digestion contributes to the fulfilment of each of these targets.
Local plan para. 2.13 reaffirms Northamptonshire’s ‘strong affinity’ with the South East and East of England regions, a relationship that, as noted above, accords with Biogen’s experience as a waste operator. Catchment areas for waste are addressed in paras. 2.35-2.38. Para. 2.35 makes clear the County Council’s concern not to receive waste from London. Whilst Biogen’s current proposals seek a loosening of the current 48.25 km catchment restriction, the company acknowledges the County Council’s objection to the receipt of waste from Greater London unless agreed in writing with NCC. A start-date of 31 December 2015 is requested for the imposition of this constraint, giving time for Biogen to build and commission its Baldock plant in Hertfordshire, closer to London.

Para. 2.36 of the draft local plan acknowledges the practical circumstances that have led Biogen to seek an amendment to the planning condition concerning waste catchments.

Northamptonshire is a net importer of waste, by applying a catchment area approach we recognise that although cross boundary movements do occur the preference is to keep these to a minimum or achieve a mass balance; this is primarily for reasons of sustainability. There will inevitably be some cross-border flows for reasons of geographical convenience, which may be broadly balanced. This may occur due to some waste management facilities (both within and outside the County) requiring a wider catchment area as a result of operational requirements and treatment processes or the specific waste stream.

Chapter Five of the draft local plan sets out the strategy, principles and locations for waste related development in the county, based on the Local Assessment of Waste Industry Needs (July 2013). Neither document addresses food waste explicitly, including it instead in data on non-inert and biological waste, with AD identified as one of the processes that would be employed to process such materials. In these terms, the draft local plan (para. 5.30 and table 7) and the Local Assessment of Waste Industry Needs identify sufficient permitted capacity to handle Northamptonshire’s indigenous non-inert and biological waste throughout the plan period. Draft local plan policy 11 identifies a requirement for 0.17 million t/yr of composting and AD capacity in 2021 and 0.19 million t/yr in 2031. For comparison, Table 5 on pp 42-3 of the draft local plan states that Northamptonshire’s current permitted waste management and disposal capacity amounts to 6.27 million t/yr for all types of waste, including permitted AD capacity sufficient to process 0.23 million t/yr of digestible waste of all types.

The draft local plan acknowledges that waste will continue to flow into and out of the county. Thus, para. 5.21 states that:

Data captured through operator returns indicates that of the total arisings (MSW, C&I, CD&E and hazardous wastes) for Northamptonshire around 80% was treated or disposed of within the county with the remainder exported to surrounding authorities. Note that some of the waste exported was ‘not codeable’ i.e. its destination was not traced, hence a portion of this may have been retained within Northamptonshire (this portion is gradually being reduced as reporting measures improve). This data also indicated that Northamptonshire is a net importer of waste – importing twice as much as it exports.

The outflow of waste from Northamptonshire will include a substantial volume of food waste, given that East Northamptonshire’s waste is treated currently by Wykes in Bedfordshire, and South Northamptonshire’s food waste by Agrivert in Oxfordshire. Draft local plan para. 5.24 further acknowledges the need to temper principles with pragmatism:
Waste management, in terms of planning for facilities, is increasingly becoming similar to that for general industrial facilities, in that proposals come forward as a consequence of site finding and progression through the development control process by industry stakeholders in response to market drivers; largely outside of the plan-making process. Given the dynamic environment that the waste management industry operates in it is considered that attempting to identify all of the sites (including scale and facility type) required throughout the plan period would be unwise as this would be overly prescriptive and inflexible. This may prevent good sites identified outside the plan-making process from being implemented and may prove to stifle innovation and uptake of emerging technologies.

Biogen requests that NCC has regard to such considerations in determining the current planning application. Furthermore, as footnote 10 on page 44 of the local plan acknowledges, ‘permitted capacity may be significantly different from the operational capacity due to permissions not being implemented, market constraints, etc’.

In terms of compliance with other relevant policies of the draft local plan, the following policies are unchanged from the NMWDF and the corresponding analysis set out earlier in this section thus applies:

- Policy 12 (Policy CS2): Spatial strategy for waste management
- Policy 13 (Policy CMD1): Development criteria for waste management facilities (non-inert and hazardous)
- Policy 22 (Policy CS14): Addressing the impact of proposed minerals and waste development (redrafted but with the same policy intention)
- Policy 23 (Policy CS9): Encouraging sustainable transport

It is concluded that Biogen’s proposals are consistent with the draft local plan.
Five ◆ Material considerations: national waste policy

**INTRODUCTION**

National waste and waste planning policy are familiar to the Waste Planning Authority, and will not be cited in detail. The purpose of this section is to highlight those elements of national policy most relevant to Biogen’s current proposal to vary planning conditions applying to the Westwood plant.

**WASTE STRATEGY FOR ENGLAND 2007**

Central to the Waste Strategy for England 2007 is the waste hierarchy – an approach which decreases the environmental impact of waste and maximises beneficial uses. The main elements of the strategy are to:

- provide incentives to reduce, re-use, recycle waste and recover energy from waste;
- reform regulation to drive the reduction of waste and diversion from landfill in order to meet and exceed the Landfill Directive targets;
- target action on materials, products and sectors with the greatest scope for improving environmental and economic outcomes;
- stimulate investment in collection, recycling and recovery infrastructure, and markets for recovered materials that will maximise the value of materials and energy recovered;
- improve national, regional and local governance, with a clearer performance and institutional framework to deliver better coordinated action and services on the ground.

The recovery of energy from waste is recognised an essential component of a well-balanced energy policy. Anaerobic digestion is identified specifically as a preferred technology to this end. Chapter 5 (para. 24) states that:

> ‘The Government wishes to encourage local authorities and businesses to consider using anaerobic digestion. Such use would complement current work on measures to promote anaerobic digestion in farming, where it has benefits for manure and slurry management. And in suitable circumstances, spare capacity may be available in on-farm anaerobic digestion plant to manage bio-waste from the locality, as is common practice in Denmark. Our recent research has suggested that anaerobic digestion has significant environmental benefits over other options for food waste (and may be particularly cost effective for food waste if separately collected). Although anaerobic digestion is currently a commonly used technology in some other European countries this is not the case in England.’

Annex B to the strategy is entitled The delivery landscape and decision-making framework. Biogen’s project is consistent with the principles set out in this annex. For example, para. 22 sets out the following objectives underling waste management decisions (cited below in italic text).
i). to reduce the environmental impact of waste generally by moving waste management up the waste hierarchy.

The proposed plant would accept waste that would otherwise go to landfill and recycle it to produce an agricultural biofertiliser for use on local farmland, with energy recovered during the digestion process.

ii). to manage waste in ways that protect human health and the environment and in particular:

- without risk to water, air, soil, plants and animals.

Environmental protection and monitoring measures in place at Westwood would apply to the higher waste throughput.

- without causing a nuisance through noise and odours.

By enclosing processes that give rise to noise and maintaining a comprehensive odour control system for the treatment works, Biogen’s proposals respond to these considerations.

- without adversely affecting the countryside and places of special interest.

The current proposals involve no new physical development.

- disposing of waste at the nearest appropriate installation, by means of the most appropriate methods and technologies.

This is an important reason why the anaerobic digestion plant requires a farm location – to facilitate application of biofertiliser to farmland.

It is concluded that Biogen’s proposals are consistent with Waste Strategy for England 2007, being an appropriate deployment of a preferred technology.

**UPDATED NATIONAL WASTE POLICY: WASTE MANAGEMENT PLAN FOR ENGLAND - CONSULTATION DRAFT, JULY 2013**

The revised Waste Framework Directive 2008 (Directive 2008/98/EC) requires Member States to produce one or more waste management plans.

On page 11 the draft document affirms the valuable role of AD in the context of the waste hierarchy:

*The Government supports anaerobic digestion because of its value in dealing with organic waste and avoiding, by more efficient capture and treatment, the greenhouse gas emissions associated with its disposal to landfill. AD also recovers energy and produces valuable biofertilisers. The Government is committed to increasing the energy from waste produced through AD and has produced, working with industry, a Strategy and Action Plan to tackle the barriers to AD15.*

Page 18 refers specifically to the priority that the government gives to the anaerobic digestion of food waste specifically:
Separate collection of biowaste
The Government has a range of measures to encourage the separate collection of biowaste in England. However, the decision to offer a separate collection is for local councils, taking into account local circumstances including logistics, characteristics of the area, and providing the services local people want. Almost all local authorities collect garden waste and about 50% collect food waste either on its own or with garden waste.

The Government has identified anaerobic digestion as the best technology currently available for treating food waste. Anaerobic digestion is incentivised through renewable energy subsidies and the Government has adopted an Anaerobic Digestion Strategy and Action Plan to overcome barriers to the uptake of the technology:


Other actions include work by the Waste and Resources Action Programme to demonstrate the benefits of food waste collections to business. A voluntary agreement with the Hospitality and Food Services Sector includes targets on waste prevention and on sending unavoidable food waste to anaerobic digestion or composting.

The publication of the Anaerobic Digestion Strategy and Action Plan highlights the priority that the current government gives to this technology specifically. Page 25 of the Strategy and Action Plan cites Biogen’s Westwood plant as a case study.

PPS10: PLANNING FOR SUSTAINABLE WASTE MANAGEMENT – REVISED 2011

The overall objective of government policy on waste, as expressed in PPS10, is to protect human health and the environment by producing less waste and using it as a resource wherever possible. The hierarchical approach to waste management is reinforced as a means of achieving more sustainable waste management and of breaking the link between economic growth and the environmental impact of waste. PPS10 recognises that this will entail a step-change in the way waste is handled and will require significant new investment in waste facilities.

Key planning objectives identified at paragraph 3 of PPS10 include:

- driving waste management up the waste hierarchy, and addressing waste as a resource;
- implementing the national waste strategy and supporting targets consistent with EU obligations;
- securing the recovery or disposal of waste without endangering human health and without harming the environment.

The proposed amendments to planning conditions support these objectives and other policies set out in PPS10 by providing a sustainable waste management facility that moves waste up the waste hierarchy from disposal to recycling and energy recovery, contributes to meeting national and European targets, and recovers energy and fertiliser from waste. The physical and environmental constraints, environmental effects and capacity of transport infrastructure are addressed in the Environmental Report that accompanies the current planning application. There is no conflict between the current proposals and the locational criteria for waste industry development identified in Annex E of PPS10.
This draft revised policy takes into account the revised EU Waste Framework Directive (2008/98/EC) and policies coming forward under the forthcoming National Waste Management Plan for England.

Para. 4 (second bullet) advises waste planning authorities to ‘plan for the disposal of waste and the recovery of mixed municipal waste in one of the nearest appropriate installations (the proximity principle) but recognise that new facilities will need to serve catchment areas large enough to justify the investment in appropriately scaled facilities’. This advice is highly relevant to Biogen’s concern to achieve a workable catchment for the Westwood plant.

Draft para. 6 of the draft policy identifies matters that waste planning authorities should take into account when determining planning applications. It states that WPAs should:

i). only take into account the quantitative or market need for new or enhanced waste management facilities where proposals are not consistent with an up-to-date local plan;

ii). refuse planning permission for waste disposal facilities not in line with the local plan unless the applicants can demonstrate that the facility will not undermine the local waste planning strategy through prejudicing movement up the waste hierarchy;

On the basis of the assessment in the preceding section of this planning statement, Biogen considers that its proposals are consistent with the adopted NMWDF and the draft NMWLP. However, in the event that NCC arrives at a different policy determination, it is evident that the current proposals would not undermine the local waste planning strategy through prejudicing movement up the waste hierarchy.

iii). consider the likely impact on the local environment and on amenity against the criteria set out in Appendix B and the locational implications of any advice on health from the relevant health bodies. Modern, appropriately located, well-run and well-regulated, waste management facilities operated in line with current pollution control techniques and standards should pose little risk to human health;

The current proposals would not compromise public health or the locational considerations set out in Appendix B of the draft policy.

iv). ensure that waste management facilities in themselves are well-designed, so that they contribute positively to the character and quality of the area in which they are located;

The Westwood AD plant was sited and designed to fit within its surroundings. Again, no physical development would be required as a result of the current proposals.

v). concern themselves with implementing the planning strategy in the local plan and not with the control of processes which are a matter for the pollution control authorities.

This is not a relevant consideration in the current context.

It is concluded that Biogen’s proposals are consistent with the government’s emerging planning guidance.
Biogen’s Westwood food waste digestion plant is a mature operation in which a range of beneficial technological and process refinements have been achieved. These refinements have resulted in enhanced environmental performance and operational efficiencies that enable waste throughput, biofertiliser production and renewable energy generation to be increased without any physical expansion of the plant.

In order to take advantage of these efficiencies, adjustments are required to planning conditions that control the origin and volume of the food waste and the distance over which the biofertiliser can be transported for use in agriculture. This Planning Statement has sought to demonstrate that the local environmental effects of these operational changes would be insignificant, and that the enlarged operation would comply with relevant development plan policy. Appropriate safeguards would remain in place to allow the county and local authorities and the Environmental Agency to regulate the operation appropriately in the public interest.

For these reasons and in view of the fact that the modified operation of the Westwood plant would constitute a highly sustainable operation, consistent with a range of national waste policy objectives, it is requested that Northamptonshire County Council and consultee organisations consider this application favourably.