



24th May 2016

Agenda Item:

**REPORT OF CORPORATE DIRECTOR – PLACE**

**GEDLING DISTRICT REF. NO.: 7/2016/0403NCC**

**PROPOSAL: EXTENSION TO EXISTING ANAEROBIC DIGESTION FACILITY UTILISING ENERGY CROPS IMPORTED FROM OUTSIDE THE STOKE BARDOLPH ESTATE AND INSTALLATION OF A GAS TO GRID CLEAN UP PLANT**

**LOCATION: LAND ADJOINING STOKE BARDOLPH SEWAGE TREATMENT WORKS, STOKE LANE, STOKE BARDOLPH**

**APPLICANT: SEVERN TRENT PLC**

**Purpose of Report**

1. To consider a planning application for an extension to the existing Anaerobic Digestion (AD) facility situated adjacent to Stoke Bardolph Sewage works. The application has been reported to Planning and Licensing Committee due to the increase in processing capacity which at 35,000tpa is 5,000t greater than the level which can be considered under delegated powers. The planning application raises issues concerning compliance with Green Belt Policy, its contribution to renewable energy and its local environmental effects. The recommendation is to grant planning permission.

**The Site and Surroundings**

2. The Stoke Bardolph Sewage Treatment Works occupy an area of approximately 50 hectares of land on the edge of the built up area of Gedling/Carlton on the eastern edge of Nottingham, approximately 6km from the city centre (see Plan 1). The site is located within the Green Belt.
3. The village of Stoke Bardolph is located approximately 500m to the east of the site at the closest point, with the River Trent located beyond. The village of Burton Joyce is located approximately 1.2km to the north of the site.
4. The sewage treatment works are characterised by a large array of tanks, bays, pumping equipment and control buildings, typically of concrete and steel construction. Agricultural land largely surrounds the sewage works to the north, east and south. The A612 Colwick Loop Road and the Nottingham-Lincoln railway line border the site to the west, beyond which is a sports ground and an area of open scrub land on the edge of Carlton.

5. The AD site itself is located to the south-east of the sewage works. The site incorporates a mix of plant and equipment including five silage clamps, three digester tanks and ancillary buildings and structures used in connection with the AD process. The application site boundary has also been drawn to include part of a field immediately to the east of the existing site which is laid to grass and enclosed by boundary hedgerows and trees. The site and surrounding area has a generally flat topography (see Plan 2).
6. Immediately to the front (south) of the AD plant site is a meat rendering plant operated by Sarval. The Sarval site incorporates a number of large buildings and screens views into the application site from Stoke Lane.

### **Planning History**

7. Planning permission was granted in January 2009 for the erection of seven buildings in connection with the wider development of the AD plant. Much of the AD development was constructed as permitted development and did not require the submission of a planning application on the basis that the facility was operated as part of the wider sewage works to provide a renewable energy source to power the plant using crops mainly grown on Severn Trent's Stoke Bardolph Estate.

### **The Anaerobic Digestion Process**

8. The AD Process consists of three stages: primary, secondary and tertiary. The energy crop currently consists mainly of maize silage, wheat (rye) and beet energy crops, primarily sourced from the dedicated arable land owned by STW on the Stoke Bardolph estate but some crops are also sourced from local producers. The mix is approximately 50% maize, 25% beet and 25% rye. These crops are stored on site in silage clamps, located next to the reception hoppers and AD plant.
9. The raw feedstock is fed into reception hoppers which convey the material into the primary digesters. The material is then pumped into the secondary digesters and then into the tertiary digester. Methane is produced and collected at each stage, with the gas being collected in flexible membrane covers installed on the tanks. The gas is then fed into gas engines to use as a fuel to power a generator for the production of electricity and heat.
10. The digestate remaining at the end of the process retains all of the nutrient from the crop. This is applied to land as a soil conditioner/improver.

### **Proposed Development**

11. Planning permission is sought to enlarge the existing AD process site by extending the operating pad to the east and the installation of a biogas upgrading plant to the north of the existing facilities. The works are required to enable the Stoke Bardolph facility to manage increased volumes of crop material and enable gas to be injected back into the grid to make it suitable for domestic use. The alterations would not alter the existing process which would largely remain the same.

12. The enlargement to the facility incorporates the following elements, as shown on Plan 3:
- An additional secondary digester tank – this would be identical to, and sited alongside, the two existing tanks on the site with a diameter of 24m and a height of 9m. It would be constructed from reinforced concrete and features a UV-stabilised polyester membrane roof which alters in height to maintain the correct pressure in the digester.
  - Five additional silage clamps for the storage of energy crop, each measuring 25m wide x 75m long. The silage clamps would be identical to, and sited alongside, the existing silage clamps on site which are constructed utilising three sided concrete walls and a concrete base. They would store the additional dry energy crop material prior to being fed into the AD feed bins.
  - One additional feed bin approximately 9m long x 3m wide with a height from ground level of approximately 5m. The additional feed bin would mirror the existing feed bins on the site.
  - One technical building attached to the new digester tank to house the transfer pumps and heating pipework. It would measure approximately 8m x 7m with a slightly pitched roof measuring 3m to the eaves and 3.6m to the ridge. The technical building would be identical to those attached to the existing digester tanks on the site.
  - A biogas upgrade system would be positioned to the north-west boundary of the AD site north of the existing gas flare. The biogas created as a result of the AD process is typically between 55% Methane and 45% Carbon Dioxide and other impurities. Prior to injection into the National Grid the biogas must therefore undergo an upgrading process, where all contaminants, including carbon dioxide, are removed to raise the content of methane to more than 95%. The plant would be incorporated in a series of containers of mixed heights not exceeding 4.5m high but some columns would be higher, the tallest of which would be 17.9m high.
  - Six LPG tanks which would be used to store the propane gas required for the gas upgrading process. Each tank would be approximately 4.3m long x 1.2m wide and 1.6m high.
  - One conditioning tank which would have a footprint of approximately 18m<sup>2</sup> and would be positioned next to the LPG tanks and would be used for metering the gas flow and accommodate the connection to the grid.
  - A propane store container.
13. The modifications to the existing Stoke Bardolph AD plant would enable the facility to import an additional 35,000 tonnes per annum of agricultural feed crops for processing. The crops would be sourced from the local agricultural producers and would not be grown on Severn Trent's Stoke Bardolph farm holding and therefore its delivery would necessitate additional HGV movements on the public highway. The feed would be transported to the site, Monday-Friday, between 07:00-19:00. Levels of delivery vehicles associated with the additional capacity sought consent within this planning application would fluctuate seasonally as follows:

- 10,000 tonnes of crops purchased from 3<sup>rd</sup> party storage facilities would be delivered between 1<sup>st</sup> January – 31<sup>st</sup> July in 28 tonne load HGVs;
  - 17,000 tonnes of crops from 3<sup>rd</sup> party agricultural fields would be delivered during the harvest season between 1st October-1st December in 28 tonne load HGVs;
  - 8,000 tonnes of digestate end product would be exported from the facility during a 12 month period within 28 tonne load HGVs.
14. Based on the above, the site expansion is anticipated to generate approximately 30 additional two-way heavy vehicle trips over a 12-hour period (07:00-19:00) during the peak season period between 1st October to 1st December, this equates to less than 3 two way movements per hour. Between January and July, the site will generate 7 additional two-way trips over a 12-hour period which equates to approximately 1 vehicle every two hours. During the off-peak season (August-September and December) the site will generate 2 additional two-way heavy goods vehicle trips over a 12-hour period; this equates to 1 vehicle trip every six hours.
  15. During the course of processing the planning application it has become apparent that the breakdown of crops imported into the site does not take account of 8,000 tonnes of crops which imported to the site over the course of the year equating to 285 loads or 1 load per day on average. Also the figures stated in traffic assessment do not include the movements associated with the export of end substrate (8,000 tonnes per year equating to 285 loads a year or 1 load per day on average). Therefore, when combined with the peak harvest times the incidental imports and export of digestate amounts to a maximum of 17 loads per day. Over a 12 hour working day, this averages out at a peak of a little less than 2 loads per hour or 4 vehicle movements.
  16. The operating hours of the site would remain as existing; the facility currently operates internally, 24 hours a day, 365 days per year, however, the receipt of agricultural feed from off-site is restricted to 12 hours (07:00 -19:00), Monday to Friday (5 days), limiting HGV deliveries to and from the site between these hours, 5 days a week.
  17. The works cannot be undertaken as permitted development since the renewable energy produced by the process would be exported to the grid and not used by the sewage works thus meaning that the process is not ancillary to the operation of the sewage works and because the energy crops to feed the AD Plant would be imported to the Stoke Bardolph site rather than grown on the farm holding itself.

## Consultations

18. **Gedling Borough Council:** Have not responded. Any response received will be orally reported.
19. **Stoke Bardolph Parish Council:** Have not responded. Any response received will be orally reported.
20. **NCC (Nature Conservation):** *Raise no objections but suggest planning conditions are imposed to ensure existing hedgerows around the perimeter of*

*the site are retained and enhanced and vegetation should not be cleared during the bird nesting season (March to August).*

21. **NCC (Highways):** *Raise no objections. The Highway Authority express some concerns that the traffic assessment submitted in support of the planning application potentially underestimates the number of HGVs which would be required to deliver the crops to the site. In particular the Highway Authority consider the low bulk of the feed materials means that it would be unlikely that incoming HGVs could carry 28 tonnes of material at a time and therefore the traffic impacts have been assessed by the Highways Authority on the basis of loads averaging 15-20 tonnes in weight. This would push the potential peak trips to around 60 per day, equating to 5 movements per hour or a delivery every 12 minutes. Notwithstanding this higher level of movements the Highway Authority conclude that the application is unlikely to generate any safety concerns and is unlikely to have a severe impact on the operation of the local highway network.*
22. **NCC (Noise Engineer):** *Raise no objections. The planning application is supported by a noise assessment which demonstrates that the combined noise of the plant used in the anaerobic digestion process would result in a low impact, predicting that the operational noise both during the day and night at sensitive receptors would be below 30dB. The proposals are therefore considered unlikely to cause any notable change in noise levels at sensitive receptors.*
23. **Western Power Distribution, National Grid (Gas), Environment Agency, NCC (Flood Risk Management Team), NCC Landscape:** No representations received. Any responses received will be orally reported.

## **Publicity**

24. The application has been publicised by means of site notices and a press notice which confirmed that the application is a departure from the development plan in light of Green Belt policy. Neighbour notification letters have been sent to residents of 1-6 and 6a New Works Cottages, 1-6 Top Row Cottages and 8 Stoke Lane, Stoke Bardolph, in accordance with the County Council's adopted Statement of Community Involvement Review.
25. Two letters of representation have been received from the residents of 3 and 4 Top Row Cottages, Stoke Lane who raise the following observations:
  - The existing sewage plant and adjoining Sarval industrial premises create a lot of noise from their operations, even during the night, resulting in disturbance of sleep. This noise sounds like heavy vehicle movement, bulker tankers, powerful engines and general sounds of activity. An extension of the AD facility could only increase noise.
  - Additionally both the sewage works and Sarval create odours. The AD plant has potential to add to these odours.
  - The development plan includes an allocation of up to 800 houses on the opposite side of Stoke Lane, the residents of which could also potentially suffer odour and nuisance.

- The extension to the development is not in accordance with the development plan.
  - The development would increase traffic which will compromise safety on Stoke Lane which residents note is a country road, quite narrow and well used by cyclists and pedestrians.
26. Councillors Nicki Brookes and John Clarke have been notified of the application.
27. The issues raised are considered in the Observations Section of this report.

### **Observations**

28. The main issues associated with the assessment of this planning application are as follows:
- The renewable energy produced by the development;
  - Planning policy regarding the proposed siting of the development in the Green Belt;
  - Effect on amenity;
  - The ecological implications of the expanded operations;
  - The highways implications of the development; and
  - Flood risk.

### Support for Sustainable Development

29. WCS Policy WCS1 of and Policy A of the Broxtowe Borough, Gedling Borough and Nottingham City, Aligned Core Strategies Part 1 Local Plan (BGNACS) support proposals which reflect sustainable development principles. The policy identifies that there are three dimensions to sustainable development which incorporate environmental, economic and social considerations. These factors are considered below.
30. As a renewable energy scheme it is important to consider the merits of the development in the context of the wider objectives of the development plan and national planning policy which are strongly supportive of renewable energy developments and tacking the effects of climate change. In particular:
- BGNACS Policy 1 states that all development proposals will be expected to mitigate against and adapt to climate change, to comply with national and contribute to local targets on reducing carbon emissions and energy use unless it can be demonstrated that compliance with the policy is not viable or feasible. Part 5 of Policy 1 states that the extension of existing or development of new decentralised renewable and low carbon energy schemes appropriate for the plan area will be promoted and encouraged, including biomass power generation, combined heat and power, and micro generation systems; and,
  - Strategic Objective 4 of the Nottinghamshire and Nottingham Waste Core Strategy (WCS) seeks to encourage the efficient use of natural resources by promoting waste as a resource. This objective is reflected in Policy WCS1 which provides a presumption in favour of sustainable

development and WCS3 which gives priority to AD facilities as a way of ensuring that waste is managed sustainably.

31. Although not part of the development plan, central government's National Planning Policy Framework (NPPF) is a material consideration in the determination of the planning application. The NPPF incorporates a 'golden thread' establishing a presumption in favour of sustainable development. Achieving sustainable development includes the efficient use of natural resources, the minimisation of waste and the mitigation and adoption of climate change impacts including moving to a low carbon economy. It seeks to increase the use and supply of renewable energy, requiring planning authorities to plan positively to promote energy from renewable resources, maximise its production whilst ensuring that adverse impacts are addressed satisfactorily, including cumulative landscape and visual impacts. The NPPF seeks to encourage opportunities where development can draw its energy supply from decentralised renewable energy supply systems and co-locate potential heat customers and suppliers. When determining planning applications the NPPF requires planning authorities to approve renewable energy developments if its impacts are (or can be made) acceptable.
32. The Government's Overarching National Planning Policy Statement of Energy (EN-1) sets out the UK's need to diversify and decarbonise electricity generation by increasing dramatically the amount of renewable generation capacity so as to ensure the commitments under the EU Renewable Energy Directive are met, improve energy security, decrease greenhouse gas emissions and provide economic opportunities. There is an urgent need for new renewable projects to come forward to meet the target of achieving 15% of total energy needs from renewable sources by 2020. The policy statement acknowledges the role that biomass and energy from waste plays in achieving this target, noting that such energy would normally provide 'baseload' power that is not affected by climatic conditions such as wind and solar.
33. The development proposed within the planning application will assist with the provision of additional renewable energy generating capacity and is therefore fully supported by the policies set out within the development plan and national planning policy. The Council is therefore required to take a positive approach towards the provision of renewable energy facilities and encouraged to approve planning applications for such development if the environmental impacts are (or can be made) acceptable. This consideration is critical in the overall balanced assessment of the merits of the planning application.
34. In terms of the wider economic and social considerations associated with the development, WCS Policy WCS8 highlights that the extension of existing facilities is usually more economic and would have less environmental impact than building new ones and makes better use of existing plant, machinery and transport infrastructure. By extending the existing facility, the social implications of the proposal are also reduced as the development would be contained within the confines of the existing operational boundary of sewage treatment works, within a well-established site. As such, the proposed elements which would be introduced would not be incongruous additions to the area.

Planning Policy regarding the proposed siting of the development in the Green Belt.

35. WCS Policies WCS4 and WCS7 set out general site criteria and circumstances where AD facilities would be supported.
36. Policy WCS4 states that in the Green Belt proposals for built waste management facilities would constitute inappropriate development and will be permitted only where need and other material considerations amount to very special circumstances sufficient to outweigh harm to the Green Belt and any other harm identified. Policy WCS7 gives preference to the siting of AD facilities on employment land or previously development land. The policy does identify that the open countryside and the Green Belt may be suitable for smaller facilities, but the size of the Stoke Bardolph scheme is considered a large facility in the context of table 8 of the WCS and therefore does not readily support the siting of the AD facility at Stoke Bardolph unless 'very special circumstances' can be identified.
37. The Gedling Replacement Local Plan policy which controls development within the Green Belt (Policy ENV26) has not been saved. The BGNACS identifies that development in the Green Belt will be controlled using national policy set out within paragraph 79-92 of the NPPF.
38. The Government attaches great importance to Green Belts as outlined in the NPPF. Paragraph 79 identifies that the fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open. Paragraphs 87-89 identify that inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances and substantial weight should be given to this in decisions. Development in the Green Belt should not be approved unless planning applications meet exceptions including the limited infilling or the partial or complete redevelopment of previously developed sites (brownfield land), which by way of having already been developed would not impact greatly on the openness of the Green Belt. Paragraph 91 states that elements of many renewable energy projects will comprise inappropriate development and in those cases developers will need to demonstrate very special circumstances to proceed. It identifies that such very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources.
39. It is therefore acknowledged that the proposed buildings subject to this application represent inappropriate development in the Green Belt. It is considered however, that in the particular circumstances that exist here, there are very special circumstances that mean that the presumption against development in this location is not applicable.
40. The proposed works would introduce a number of elements within the existing AD plant, including new structures and upgrading and replacing existing elements. The proposed additional structures would be located predominantly within the boundary of the existing AD site and would not be distinguishable additions when viewed in the context of the wider operational AD plant and sewage treatment works. The only element to be developed outside the existing site boundary will be the additional silage clamps. However, these are typical of standard agricultural silage clamps and would remove the need for storing crops within existing temporary clamps which the applicant has in the past carried out on the Stoke Bardolph estate.



41. The siting of the development has been guided by the existing operational AD plant and in order to improve the sustainability of the site, it is necessary to upgrade and improve the existing operation in line with improved technology and processes to make the operation more efficient.
42. In this instance, it is considered that the proposals are inappropriate in the Green Belt. However, as the NPPF makes clear, very special circumstances include the wider environmental benefits of a scheme. In this case, the proposed gas upgrade system will enable bio-methane to be injected directly into the gas grid and would benefit the environment by generating approximately 42GWh (electrical equivalent) of renewable energy. As the proposal would therefore enhance the current AD process and would enable the plant to be operated in a more efficient way by generating additional energy from a renewable resource and making best use of existing on-site infrastructure, it is considered that the environmental benefits outweigh any harm to the Green Belt, satisfying the very special circumstances set out in the NPPF.

### Amenity

43. Policy WCS8 of the WCS states that the extension to existing facilities would be acceptable provided that the alterations would not create any unacceptable environmental impacts from additional noise, increased traffic or visual impact. This is mirrored by Policy WCS13 of the WCS and Policy ENV5 of the Gedling Replacement Local Plan (GRLP).
44. The nearest residential receptors to the proposed development are approximately 220m to the south along Stoke Lane. The village of Stoke Bardolph is approximately 500m to the east at its closest. The planning application is supported by a Landscape and Visual Impact Assessment (LVIA) which appraises the potential landscape and visual impacts of the development with particular reference to Public Rights of Way, the surrounding road network, residential properties and recreational receptors. In relation to the landscape the LVIA identifies that the impacts would not exceed slight adverse and in the case of the visual impacts on each receptor, the impact would not exceed negligible adverse and in some cases the impact would be nil given the screening of the site and the fact that the proposed additions would be viewed within the context of the existing sewage treatment works and the adjoining Sarval industrial site which screens the site from the public highway. The report recognises that the biggest impact would be during construction of the development which will be relatively short term and would take approximately six months. It is therefore considered that the proposed development would not have an unacceptable landscape and visual impact and would be in accordance with Policy WCS8 of the WCS.
45. The submission is also supported by a Noise Impact Assessment which has been prepared in accordance with national methodology (BS4142). The assessment identifies the main sources of noise from within the development proposal and calculates the magnitude of noise emissions at the nearest residential properties. The assessment shows that the noise rating level of proposed plant will be below the background noise level during the daytime, but could possibly increase by 1dB during the night time, a level which would be imperceptible and unlikely to give rise to noise complaints.

46. The concerns raised by the local resident regarding night time noise have been investigated. The operators report that whilst the AD process operates on a 24 hour basis, there are no loading, unloading, deliveries or other movements of materials within the site outside the normal operating hours of 07:00 to 19:00. The night-time noise concerns of the local resident therefore are not attributable to the development site. The applicant reports that the adjoining Sarval site operates on a 24 hour basis and this may be the source of the noise. This process is regulated by Gedling Borough Council and therefore the matter has been forwarded to Gedling Borough Council's Environmental Health Department for investigation. The applicant states that they would be happy to accept a planning condition to restrict night-time movements within their operating site so as to provide regulatory control relating to noise emissions.
47. In terms of the potential for odour releases, the AD process itself is undertaken within a sealed system and therefore does not release odours. Odour emissions from the silage clamps are controlled by covering the materials with sheeting and minimising the extent of the open face as far as practical. It is recommended that this is regulated by planning condition. The site inspection identified that odour was being controlled within the site and there was no evidence of significant odour generation from site operations. The applicant states that all Severn Trent sites maintain a diary where any abnormal occurrences are recorded. This diary would record activities on both the sewage works and AD plant and provide for their investigation. It is recommended that the operator continues to maintain this log of odour emissions and investigations and that it be regulated by planning condition. The suggested wording of the planning condition should require the operator to take remedial action upon the written request of the County Council in the event of odour complaints or nuisance.
48. The residents acknowledge that the main source of odour emissions in the area may originate from the adjoining Sarval meat rendering business. Evidence from the site inspection would appear to concur with this view. Since the Sarval site is regulated through Gedling Borough Council's Environmental Health Department these concerns have been forwarded to the Borough Council for investigation.

#### Ecological Effects

49. The planning application is supported by an Ecological Impact Assessment Report which incorporates an Extended Phase 1 Habitat Survey. This identifies a number of habitat types both within and immediately adjacent to the survey area that fall under UK or Local Biodiversity Action Plan Priority Habitat designations including: arable farmland and field margins, hedgerows and streams.
50. Three Local Nature Reserves (LNR), 11 Local Wildlife Sites (LWS) and two ancient woodlands fall within a 2km radius of the survey area. The assessment has concluded that the proposed development is not anticipated to adversely impact these sites.
51. No protected species were identified during the survey. Habitats within the survey area are limited in extent and quality to support notable species. All hedgerows and cereal field margins within the survey area are due to be

retained with only small areas of arable farmland to be lost; therefore any adverse impacts to these priority habitats and potential wildlife species are not anticipated. Site drainage is contained and would discharge to the adjoining sewage treatment works thus ensuring no adverse effects to the nature conservation value of the stream located to the east of the site.

52. It is therefore concluded that the proposed development would not result in any adverse effect on protected species or designated sites.

#### Highway Implications of the Development

53. Policy WCS11 of the WCS and Policy W3.14 of WLP stress the need for proposals to make the best use of existing transport networks and where vehicle movements to be generated can be satisfactorily accommodated by the highway network without causing unacceptable disturbance to local communities. WLP Policy W3.15 encourages controls to be imposed through planning conditions or legal controls to regulate the routeing of delivery vehicles. NPPF paragraph 32 states that development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.
54. The submission is supported by a transport assessment which considers the highway impacts of the expansion of the site and the capacity of the existing traffic network to accommodate these vehicle movements. Unlike the existing use of the site which predominantly utilises crops grown on the Stoke Bardolph Estate transported to the AD site by tractor and trailer, much of which arrives on the farm's network of access tracks thus avoiding the public highway, the crops to feed the expanded facility would be imported to the site from the wider farming community and would be delivered by HGVs utilising the public highway.
55. The transport assessment anticipates that the delivery of these additional crops and the movement of resultant processed materials from the site would generate an additional 34 two way heavy vehicle movements (17 loads) over a 12-hour period (07:00-19:00) during the peak harvest season between 1st October to 1st December (equating to less than 4 two-way traffic movements per hour). Between January and July, the site would generate 11 additional two-way movements over a 12-hour period. During the off-peak season (August-September & December) the increased capacity of the site would generate 6 additional two-way heavy vehicle movements over a 12-hour period.
56. Delivery vehicles would access the site via the A612 and Stoke Lane and would utilise the existing vehicle access and exit points which serve the Stoke Bardolph Sewage Treatment Works via two separate T-junctions. Vehicles would enter the site from the western access located approximately 330m from the A612 signalised crossroad and travel through the sewage treatment works to obtain access to the AD plant site. Exiting vehicles utilise the egress 180m east of the entrance.
57. The transport assessment incorporates a detailed review of the adequacy of the public highway and access points to accommodate the HGV traffic including consideration of road widths, traffic flows, adequacy of junctions and accident records. The report concludes that the proposed development can be

accommodated within the local area without significant detriment to road safety or adverse impact on the operation of the surrounding highway network.

58. The transport assessment has been reviewed by NCC's Highways Authority. The Highways Authority advise, based on experience of previous planning applications for other AD plants and the operational data contained therein, that the amount of trips suggested in the TA may have been somewhat underestimated due to the realistic carrying capacity of delivery vehicles. Whilst acknowledging the maximum legal weight limit on most UK roads is 44 tonnes making it theoretically possible to bring in 28 tonne loads, the relative low bulk density (or mass per m<sup>3</sup>) of the feed materials generally used in AD plants means that size of vehicle required to ship 28 tonnes of material would not prove practical to use on a commercial basis. Hence, a more realistic average load of 15-20 tonnes in weight would be expected. This change increases the importation phase trips from circa 30 trips to day to around 50 (or by 66%). Also, it would appear that the number of trips associated with the exportation phase may have been underestimated and backhauling may not always be possible.
59. Based on the above, the Highway Authority have assessed the traffic impact of the development on the assumption that the peak number of HGV deliveries associated with the development would actually be around 60 on any given day (or 120 movements), around double that suggested in the TA, on the basis that this level provides a more robust assessment of traffic levels to those suggested by the TA. At peak periods equating to two months a year, this would equate to approximately 5 deliveries (or 10 movements) per hour equating to one vehicle every 6 minutes, however for most of the year outside the harvesting season the number of deliveries would be much lower.
60. The TA states that all HGV movements associated with the development would be expected to access the site via Stoke Lane and the A612 hence when considering its impact in traffic terms the primary areas of consideration are the junction of Stoke Lane / A612, and the A612 corridor. The A612 Trent Valley Way is one of the primary distributor roads serving the Eastern side of Nottingham. As such it carries circa 11,250 vehicles per day, hence the additional 60 trips per day resulting from this development only represents a 0.5% increase on the average daily flow along this route. In absolute traffic terms the increase in traffic resulting from the development is considered minimal. Nonetheless, it is acknowledged that the majority of trips associated with the proposed development would be HGV's and therefore a more appropriate measure of impact may be to consider the percentage increase in HGV's when compared to existing levels along the route. Traffic count data held by the County Council shows that of the 11,250 vehicles using the A612 on a daily basis 4.2% are HGV's, this equates to approx. 475 vehicles per day. Hence at peak, the additional 120 movements would increase daily HGV traffic along the A612 by up to 25%, although for much of the year the increase is substantially lower. This level of traffic falls below the threshold of a 30% increase which the Institute of Environment Management and Assessment recommend detailed consideration and mitigation in their published guidelines for the environmental assessment of road traffic and hence the potential impact is considered minimal.
61. The existing operational AD facility at the site processes approximately 54,000 tonnes of material per annum, the majority of which is sourced from within the

existing Stoke Bardolph estate. This is received principally via the internal agricultural haul roads on the estate. During the harvest period some material is also delivered from the estate and nearby farms through Burton Joyce on the public highway. The quantity of material from nearby farms varies from year to year based on the need for specific elements to meet the feedstock requirements of the site and varies according to the quality of the harvest, but amounts to a maximum of 11,000 tonnes per annum. The majority of this is delivered by traditional road going haulage vehicles but some arrives by tractor/trailers. There are no planning restrictions controlling the number, routing or hours of delivery of the existing AD facility, because it was constructed under permitted development rights and therefore the County Council did not have any opportunity to impose these controls.

62. In practice if this proposed extension was developed it would not be possible to differentiate between deliveries associated with the existing operations and the proposed expansion. Thus a planning condition which simply limited vehicle delivery numbers to the levels set out within the transport statement would not be reasonable since it would unreasonably restrict the existing lawful operations of the site. For a planning condition to be enforceable it would have to restrict the total number of deliveries into the site.
63. This matter has been discussed with the developer who has questioned whether it is legally appropriate in planning terms to attach a planning condition which relates to an existing lawful operation. Nevertheless the developer states that they would accept a planning condition to impose an upper limit on the number of agricultural tractor and trailer loads which utilise the main entrance gates from Stoke Lane to not exceed 8 loads per hour on average between 06:30 and 19:00 and a maximum of 100 loads per working day. The applicant states that the HGV movements associated with the existing facility are not known and therefore question how a condition relating to HGV movements can reasonably be imposed.
64. Since the current development does not utilise tractors and trailers for the delivery of crops to serve the expanded capacity it is not considered appropriate to control these vehicles under this current planning application. Furthermore, with no data regarding the existing number of HGV deliveries to the site it is not possible to restrict total HGV numbers servicing the expanded facility. A planning condition relating to a maximum control on vehicle numbers therefore is not suggested. Notwithstanding the above, it is recommended to put a limit on the overall capacity of the site to limit it to 89,000 tonnes per annum, and also a limit on the hours of HGV deliveries to the site to limit them to between 07:00 – 19:00 and thus provide regulatory control over the site operations.
65. Whilst acknowledging that Stoke Lane is a rural road it has existing HGV flows connected with vehicles accessing the existing sewage works as well as the Sarval industrial premises. These delivery vehicles pass residential properties in the vicinity of the A612/Stoke Lane junction. The additional delivery vehicles generated by this development would not result in any significant harmful impacts to residential amenity due to the comparatively low hourly flow of the additional traffic and the proximity of these properties to the A612 which has much higher flows of traffic and has more significant influence on noise in this vicinity. It is therefore considered that the proposed development would not have an adverse impact on the highway network or highway related amenity and so would accord with relevant policies in the WCS and WLP.

### Flood risk

66. The Greater Nottingham Strategic Flood Risk Assessment document identifies that the development site is with Flood Zone 1 and therefore has a low probability of flooding, as such a flood risk is not a constraint to the development.

### Safety

67. The purpose of the planning system is to control land use issues and not to regulate operational safety which is function of the Environmental Permit issued by the Environment Agency. The permit would control the processes, in particular the management of the gas product, to ensure safety and protection of the environment and therefore safeguard the reliable operation of the plant within agreed limits. Planning permission should not therefore be refused on these grounds.
68. Anaerobic Digestion is an established process with a good safety record. It is used extensively within the waste and agricultural industries to manage biodegradable materials. The facility at Stoke Bardolph has operated successfully for a number of years. Gas to grid schemes are becoming increasingly common.

### **Other Options Considered**

69. The report relates to the determination of a planning application. The County Council is under a duty to consider the planning application as submitted. Accordingly no other options have been considered.

### **Statutory and Policy Implications**

70. This report has been compiled after consideration of implications in respect of finance, the public sector equality duty, human resources, crime and disorder, human rights, the safeguarding of children, sustainability and the environment, and those using the service and where such implications are material they are described below. Appropriate consultation has been undertaken and advice sought on these issues as required.
71. Crime and Disorder Implications: The development site would be enclosed by security fencing and incorporated within the wider Stoke Bardolph Sewage Treatment Works Estate.
72. Human Rights Implications: Relevant issues arising out of consideration of the Human Rights Act have been assessed. Rights under Article 8 (Right to Respect for Private and Family Life), Article 1 of the First Protocol (Protection of Property) and Article 6.1 (Right to a Fair Trial) are those to be considered and may be affected due to potential increased noise, odour and traffic which have potential to affect nearby residential properties. However, the development incorporates mitigation to minimise and reduce the magnitude of any impact and any residuals effects need to be balanced against the wider benefits the proposals would provide, particularly in terms of their renewable energy contribution. Members need to consider whether the benefits outweigh the

potential impacts and reference should be made to the Observations section above in this consideration.

73. Implications for Sustainability and the Environment: The planning considerations section of the report identifies the implications the development would have in terms of its sustainability and the environment.
74. There are no implications for service users, financial implications, equality implications, safeguarding of children implications or human resources implications.

## **Conclusion**

75. This proposed extension to the Stoke Bardolph AD plant would provide additional processing capacity and increase the production of renewable energy. As an extension of an existing operational facility the choice of siting is limited by this fact and is considered appropriate in the context of the operational constraints of the existing AD plant and sewage treatment works.
76. The application site is within the Green Belt. The development proposals have been assessed as being 'inappropriate development' in the context of Green Belt policy. However, as the NPPF makes clear, very special circumstances include the wider environmental benefits of a scheme. In this case, the proposed gas upgrade system would enable bio-methane to be injected directly into the gas grid and would benefit the environment by generating approximately 42GWh (electrical equivalent) of renewable energy. As the proposal would therefore enhance the current AD process and would enable the plant to be operated in a more efficient way by generating additional energy from a renewable resource and making best use of existing on-site infrastructure, it is considered that the environmental benefits outweigh any harm to the Green Belt, satisfying the very special circumstances set out in the NPPF.
77. The proposed works would be undertaken against the backdrop of the existing AD plant and sewage works. It would also extensively be screened by the existing Sarval Industrial premises from Stoke Lane to the south and would benefit from screening provided by existing landscaping in the wider area. As a consequence the visual impact would be minor.
78. A series of environment assessments have been carried out in support of the planning application which show that the construction and operation of the development would not have a significant detrimental impact on the environmental conditions of the surrounding area and would be regulated through the suggested planning conditions.

## **Statement of Positive and Proactive Engagement**

79. In determining this application the Waste Planning Authority has worked positively and proactively with the applicant by entering into pre-application discussion; assessing the proposals against relevant Development Plan policies; all material considerations; consultation responses and any valid representations that may have been received. This approach has been in accordance with the requirement set out in the National Planning Policy Framework.

## **RECOMMENDATIONS**

80. It is RECOMMENDED that planning permission be granted subject to the conditions set out in Appendix 1. Members need to consider the issues, including the Human Rights Act issues, set out in the report and resolve accordingly.

**TIM GREGORY**

**Corporate Director – Place**

### **Constitutional Comments [RHC 13/5/2016]**

The subject of the attached report falls within the scope of Planning and Licensing Committee and this is the appropriate body to consider the report

### **Comments of the Service Director - Finance (SES 13/05/16)**

There are no specific financial implications arising directly from this report.

### **Background Papers Available for Inspection**

The application file available for public inspection by virtue of the Local Government (Access to Information) Act 1985.

### **Electoral Division(s) and Member(s) Affected**

Carlton East: Cllr's Nicki Brookes and John Clarke

Report Author/Case Officer

Mike Hankin

0115 9932582

For any enquiries about this report, please contact the report author.

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## RECOMMENDED PLANNING CONDITIONS

### Commencement

1. The development hereby permitted shall be begun within three years from the date of this permission.

*Reason: To comply with the requirements of Section 91 of the Town and Country Planning Act 1990 as amended.*

2. The Waste Planning Authority (WPA) shall be notified in writing of the date of commencement at least 7 days, but not more than 14 days, prior to the commencement of the development.

*Reason: To enable the WPA to monitor compliance with the conditions of the planning permission.*

### Approved Plans

3. The development hereby permitted shall only be carried out in accordance with the following documents except where amendments are made pursuant to the other conditions below:

- a. Planning application forms received by the WPA on 15<sup>th</sup> February 2016.
- b. Supporting written documents/reports consisting of the Planning Supporting Statement, Preliminary Ecological Appraisal, Landscape and Visual Assessment, Noise Assessment and Transport Statement received by the WPA on 15<sup>th</sup> February 2016.
- c. Drawing No. WM11136-003 Site Location Plan received by the WPA on 15<sup>th</sup> February 2016.
- d. Drawing No. WM11136-003 Revision A Revision A: Proposed Site Layout and Elevations received by the WPA on 3<sup>rd</sup> May 2016.
- e. Drawing No. WM1136-004: Land Ownership received by the WPA on 15<sup>th</sup> February 2016.
- f. Drawing No. WM11136-004: Proposed Site Layout received by the WPA on 3<sup>rd</sup> May 2016.
- g. Drawing No. WM11136-005 Revision A: Sections received by the WPA on 3<sup>rd</sup> May 2016.
- h. Drawing No. 001897-AUS-AUP-121-0: Execution Plan Solid Waste dosage system PASCO 100 received by WPA on 15<sup>th</sup> February 2015.
- i. Drawing No. 001897-AUS-AUP-221-0: Execution Plan Solid Waste dosage system PASCO 100 received by WPA on 15<sup>th</sup> February 2015.

- j. Drawing No. 001897-AUS-AUP-321-0: Execution Plan Solid Waste dosage system PASCO 100 received by WPA on 15<sup>th</sup> February 2015.

*Reason: For the avoidance of doubt.*

Contractors' working arrangements during site development.

4. Construction operations within the site shall only be carried out between 07:00 – 19:00 hours Monday to Friday, 07:30-16:00 hours on a Saturday and not at all on Sundays, Bank or Public Holidays. The operator shall ensure that all contractor delivery vehicles access and exit the site from the A612 and Stoke Lane to the west thereby avoiding trafficking through Stoke Bardolph village to the east. Appropriate measures shall be taken to ensure that:
- a. No vehicles are permitted to leave the site in a condition whereby mud, clay or other deleterious materials are carried onto the public highway;
  - b. Disturbance from noise is minimised through the use of appropriate cladding, insulation and sound barriers/bunds/fencing, and the operation of plant and machinery in accordance with manufacturers' recommendations, where appropriate;

All contractors' buildings, plant, equipment, fences, and hard surfaced areas associated with the works compounds shall be removed from the site within one month of the completion of building works.

*Reason: In order to minimise disturbance due to construction operations and in the interest of amenity in accordance with Policy ENV1 of the Gedling Replacement Local Plan.*

Construction Materials

5. Prior to their use on site, details of the materials to be used within the external surfaces of the structures and buildings hereby approved including external colours shall have been submitted to and approved in writing by the WPA. The development shall thereafter be carried out in accordance with the approved details

*Reason: In the interest of visual amenity and to ensure compliance with Policy W3.3 of the Nottinghamshire and Nottingham Waste Local Plan.*

Surfacing and Drainage

6. The development hereby permitted shall not commence until details identifying the means of surfacing and drainage of the site have been submitted to and approved in writing by the WPA. The surfacing and drainage shall thereafter be provided in accordance with the approved details before the development is first brought into use,

*Reason: Details are required to be submitted prior to the commencement of the development to protect ground and surface water from pollution*

*in accordance with Policy W3.6 of the Nottinghamshire and Nottingham Waste Local Plan.*

### Delivery Traffic

7. With the exception of deliveries of crops grown on the Severn Trent Stoke Bardolph Estate, all deliveries shall access and exit the site from Stoke Lane via the existing vehicle access points which currently serve the Stoke Bardolph Sewage Works.

*Reason: To limit vehicle movements in accordance with Policy W3.14 of the Nottinghamshire and Nottingham Waste Local Plan.*

8. Delivery vehicles from the public highway shall only be permitted to access or exit the site between 07:00 to 19:00 Monday to Friday and not at all at weekends or bank/public holidays.

*Reason: To limit vehicle movements in accordance with Policy W3.14 of the Nottinghamshire and Nottingham Waste Local Plan.*

9. The operator shall take all reasonable steps to instruct all delivery vehicle drivers entering and leaving the site to access from the A612 via Stoke Lane to the west thereby avoiding trafficking through Stoke Bardolph village to the east. The steps shall include the issuing of instructions to all drivers and the display of signage at the vehicular exit of the site to advise drivers of the required route, the details of the signage shall be agreed in writing with the WPA prior to the commissioning of the development and shall thereafter be retained throughout its operational life.

*Reason: To ensure that residential properties within Stoke Bardolph village are not adversely affected by vehicular movements associated with the operation of the site in accordance with Policy W3.14 of the Nottinghamshire and Nottingham Waste Local Plan.*

### Capacity of Site

10. The maximum amount of material processed within the AD facility shall not exceed 89,000 tonnes per annum in total. A written record shall be kept by the site operator of the amounts of material accepted at the site which shall be made available to the WPA within 7 days of a written request from the WPA.

*Reason: To ensure impacts arising from the operation of the site do not cause unacceptable disturbance to local communities in accordance with Policy W3.14 of the Nottinghamshire and Nottingham Waste Local Plan.*

### Odour Control

11. Measures shall be employed to ensure that operations associated with the development hereby permitted do not give rise to any malodours. Such measures shall include but not necessarily be limited to the following:

- a. All agricultural feedstocks shall be stored within the designated silage clamps and shall be covered with sheeting.
- b. The working face of the silage clamps shall be kept to a minimum practicable area.
- c. The operator shall maintain a daily log of odour levels within the site. In the event that malodour is detected by the operator, the source of the odour release shall be investigated and immediate action taken to avoid/control the level of odour release from the site.

In the event that these measures prove inadequate, then within one week of a written request from the WPA additional steps or measures shall be submitted for the written approval of the WPA in order to prevent the release of odours from the site. The supplementary odour management measures shall be implemented in accordance with a timetable which shall be agreed in writing by the WPA.

*Reason: To minimise potential nuisance from odour in accordance with Policy W3.7 of the Nottinghamshire and Nottingham Waste Local Plan.*

### Noise Controls

12. Only plant and machinery which is listed within the Noise Assessment Report received by the WPA on 10<sup>th</sup> March 2016 shall be operated from within the site at any time, unless the details of any new plant/machinery are first agreed in writing by the WPA. Any request to operate additional machinery shall incorporate details of the sound power output of the machinery to be operated.

*Reason: To minimise noise impacts arising from the operation of the site, and to protect the amenity of nearby occupiers in accordance with Policy W3.9 of the Nottinghamshire and Nottingham Waste Local Plan.*

13. Loading, unloading and movement of crops associated with the operation of the Anaerobic Digestion Facility (as outlined in red on Drawing No. WM11136-003: Site Location Plan) shall only be undertaken between the hours of 06:30 – 20:00 hours Monday – Saturday and 08:00 – 18:00 on Sundays.

*Reason: To minimise noise impacts arising from the operation of the site, and to protect the amenity of nearby occupiers in accordance with Policy W3.9 of the Nottinghamshire and Nottingham Waste Local Plan.*

14. Measures shall be used to ensure that noise generated within the site is kept to a minimum. Such measures shall include the fitting and use of effective silencers to plant and machinery in accordance with the manufacturers' specifications and the regular servicing of plant and machinery. Silencers shall be fitted to both CHP exhausts prior to first use, to ensure that noise levels do not exceed 57dB(A) when measured at a distance of 7m from the exhaust.

*Reason: To minimise noise impacts arising from the operation of the site, and to protect the amenity of nearby occupiers in accordance with Policy W3.9 of the Nottinghamshire and Nottingham Waste Local Plan.*

15. All reversing warning devices used on mobile plant under the control of the operator shall comprise white noise (broadband) alarms.

*Reason: To minimise noise impacts arising from the operation of the site, and to protect the amenity of nearby occupiers in accordance with Policy W3.9 of the Nottinghamshire and Nottingham Waste Local Plan.*

#### Ecology

16. Site clearance operations that involve the destruction and removal of vegetation on site shall not be undertaken during the months of March to August inclusive, except when approved in writing by the WPA.

*Reason: In order to protect breeding birds.*

17. The existing hedgerows around the perimeter of the site shall be maintained at a minimum height of 2 metres. Where necessary these existing hedgerows shall be reinforced with supplementary planting within the first growing season following the substantial completion of the development using species native to the UK, the details of which having previously been agreed in writing by the WPA.

*Reason: To ensure the maintenance of screening to the site and to protect the appearance and character of the area.*

#### Floodlighting

18. Details of any floodlighting shall be submitted to and approved by the WPA in writing before installation. The equipment shall be installed, operated and maintained in accordance with the approved scheme.

*Reason: To minimise potential glare from floodlighting and to minimise the visual impact of the site during non-daylight hours.*