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Your Ref: 2022/1108
Date: 25 August 2022

My Ref: 9/7/22/1108
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Dear Tim

Construction of an Anaerobic Digestion facility (part retrospective), comprising: 1 no. digester tank and 1 no. secondary digester/digestate storage tank, silage clamps, liquid and dry feed system; digestate separation, handling and pasteurization, biogas upgrading and mains gas-grid connection; carbon capture, CHP, agricultural building; office buildings, weighbridge, 2 no. covered digestate storage lagoons, and associated plant, vehicular accesses, roads and landscaping (including earth bunds). Revised application following withdrawn planning application 2021/2788. Deal Farm Kenninghall Road Bressingham Norfolk IP22 2HG

Thank you for consulting the Highway Authority with regard to the above application.

Having considered the information submitted, I can confirm that the Highway Authority have significant concerns with regard to the proposals.

For information, the proposals have been considered by our Development Team and the comments below incorporate those raised by the Team. By way of further clarification, Development Team is made up of officers from all service areas within the Highway Authority who assess and give advice on major or complex planning applications. The team includes a safety audit representative.

As you will be aware from our responses, in relation to the previous application at this site (2021/2788), as Highway Authority we have raised significant safety concerns. The concerns were outlined in detail in my responses dated 2nd March & 5th May 2022.

In summary, the concerns were borne out of the sites remote location (from the strategic road network); the fact that all routes to / from the site are typically single track rural roads with limited opportunities for 2 vehicles to pass; the increased catchment for the feedstock and digestate; and the significant increase in feedstock (and therefore traffic) associated with the proposals. It was our view that such a facility would be better located with direct access onto the major road network.

Planning History

It is accepted that the site is located in a highly agricultural area, and that the movement of crops in large vehicles - tractor/trailer combinations, tankers, or other HGV – is 'normal' and to be expected by other road users.

Likewise, it must be acknowledged that planning permission was granted at this site, by your Authority, in 2015 for the construction of an AD plant. During this time, whilst acknowledging the shortcomings of the surrounding rural highway network, as Highway Authority we did not feel that we could substantiate a formal objection to the proposals.

This stance was based on the fact (i) the applicant already had permission for an AD plant on a nearby site, "The Oaks", which would be revoked should permissions be granted by using a S106 agreement. (ii) the feedstock would be limited to 22,360 tonnes per annum. (iii) the feedstock would be farm based products, with 60% coming from the applicant's own farm & 40% from nearby farms within 5 km. and (iv) pipelines were to be provided to pump the liquid digestate (output material) to the surrounding fields. The applicant outlined that by providing the pipelines this would reduce the number of vehicles required to remove the digestate by 85%.

Whilst acknowledging there would be an increase in traffic on the adjacent roads, it was also recognised a suitably sized AD facility would have clear synergies with the existing agricultural uses in the area and that many of the traffic movements were already on the surrounding network (associated with animal waste and feed crops) and accordingly would continue regardless of whether an AD plant were permitted. An AD plant as described has clear synergy with the rural agricultural location.

Subsequent to the above, a retrospective application was received in January 2022 (2021/2788), which sought to increase the volume of material processed to 46,750 tonnes per annum. The LHA raised safety concerns and this application was subsequently withdrawn.

Current Proposals

In an attempt to make the withdrawn proposals acceptable, the current application looks to 1) reduce the maximum annual feedstock (close to the previously permitted (2015) level, 2) has suggested that feedstock and digestate output will be from the immediate local (5km) catchment and 3) has concluded that the proposals would lead to a decrease in vehicle movements on the surrounding network.

1) Throughput of feedstock - it is now proposed that the annual feedstock would be limited to 23,950 tonnes per annum. It should however be noted that there are two digester tanks already in place on site, which according to the previous application (2021/2788) could process 46,750 tonnes per annum.

Given that presence of both tanks on site this places this lower figure in doubt, as the lower throughput would be approximately half of the available site capacity. Is the applicant suggesting that 1 tank would not be operational at all or are they going to remove the tank? Given the commercial nature of the operation and the capital outlay this seems unlikely.

Due to the previously outlined concerns, as Highway Authority, we would need to be confident that there is a reasonable expectation that these levels will not be exceeded; how this would be managed; and how you would be able to enforce this.

We therefore have significant concern that the throughput would be exceeded given the obvious available capacity on the site which would lead to further traffic to / from the site.

2) Catchment Area – The applicant has also suggested that the site will i) use energy crops grown within a 5 km radius of the AD plant, ii) that (as per the previous application) the waste feedstock will come from immediate farms and iii) the local farms would accept the digestate.

Whilst in the D&A statement, they outline that they have 335 hectares of arable land (owned by the Farm); 101 hectares of arable land (3rd party land – farmed and cropped) and undertake Straw Contracting (harvesting, baling and onward sale) – own straw (800 tonnes per annum); straw harvested and sold/swapped for muck (3,720 tonnes per annum) - the D&A fails to address the following points:-

- Are they suggesting that all of these crops will now be diverted to the AD plant?
- If this is the case is there a legal agreement in place to secure this arrangement and if so what mechanism exists to ensure it remains in place for the lifetime of the plant?
- Presumably some of this feedstock will still be required for the existing farm operations, particularly as they are already importing straw and swapping for muck?
- Are they suggesting that all other operations will cease?
- What other farms will provide feedstock?

Again, whilst they have provided a plan of the Landowners landholding, and suggested that they would divert activities to feed the AD plant, they have still not confirmed what other activities they would continue to operate or which other local farmers would also be involved.

Previously they had suggested that there was a 20 year agreement between the land owner & the AD plant owner, but there was no confirmation provided with regard to what they have committed to and what other farming activities would continue.

With regard to this application, they have again failed to provide the evidence, through a mechanism such as a S106 or similar legal agreement, to guarantee that this would be the case (and for how long). I note that they have suggest that this (the suggested radius) could be conditioned, however I would cast doubt that that this would pass the tests of the NPPF and would be problematic for your Authority to enforce.

Given there is no mechanism to ensure the feedstock would be 'local' and there is uncertainty with regard to how much would be provided by the landowner or what other activity they will continue, significant concern remains.

Without these assurances, there is the possibility that all feedstock would be sourced (and digestate transported) further afield than the 5 km catchment. In this scenario, all traffic would be 'new' and in addition to the existing traffic on the network, as the landowners permitted operations (and associated traffic) could continue on the network.

3) Traffic Generation - Notwithstanding the points raised above. Even if the AD plant could be limited to the suggested throughput and serving the local catchment as outlined there are still outstanding concerns with regard to the submitted assessment.

Within the latest TS, the applicant has attempted to provide an overview of current traffic movements associated with Deal Farm and a comparison of the traffic associated with the AD plant. The aim of which is to demonstrate that, if permitted, the AD plant would result in a reduction in traffic movements on the network.

However, as per the previous assessments, this is lacking in a number of areas of information and relies upon a number of assumptions (such as a significant saving in double handling, backhauling and a significant proportion of the input / output material coming from the local landholding).

(1) Input material

The applicant has suggested that the required 23,950 tonnes of feedstock will mainly be from the landowners local landholding and be in two forms - non-waste (56%) / farm waste (44%).

Non waste - it is outlined that 3,500 tonnes of maize silage, 5,000 tonnes of grass silage and 6,450 tonnes of straw would be required.

Whilst the available landholding of the landowner (based upon the submitted historic yields per hectare) would be sufficient to provide the required quantities of maize & silage, as previously outlined there is no legal agreement to secure this.

Clearly however, the 6,450 tonnes of straw could not be produced within the available 436 ha (based upon 8T per hectare for straw as suggested).

It is noted that, at present typically 800 T per annum is produced by the landowner with a further 3,720 tonnes imported per annum - a figure which would further increase by nearly 2,000 tonnes per annum to serve the AD plant. 800T represents just 12.5% of the straw required for the AD plant.

Despite the above increase in tonnage, the applicant is suggesting that there would be a decrease in traffic movements associated with straw as it would no longer be imported then subsequently exported from site but merely retained for use in the AD plant. It is not clear how this has been calculated and this seems highly questionable.

For example, where is the straw (which is currently being imported) being exported to? Whilst not outlined within the TS, it is understood that the majority of the existing straw is exported from the site to another AD plant. Is it guaranteed that this operation and contact will cease? Or could this continue in addition to the new facility? Is any of the straw being exported to the landowners pig, chicken, duck & cattle farms then surely this would still be required and could not be diverted to the AD plant as suggested?

Waste - It is outlined that 9,000 tonnes of farm waste would be imported '*based upon local availability*' typically consisting of 500 tonnes of chicken manure, 5,500 tonnes of pig manure and 3,000 tonnes of cattle / duck manure.

The applicants themselves outline that, at present, the landowners farms generate in the region of 6,000 tonnes of waste (and imports 600 tonnes) so even if this could all be diverted a further 3,000 tonnes would need to be imported from elsewhere. It is suggested that this would be sourced from local farms, however again no detail has been provided. The additional waste material alone would increase traffic movements to / from the site by 130 - 170 in & out movements per annum depending upon payload.

Despite the above increase in waste importation, the applicant is again suggesting that there would be a decrease in traffic movements associated with animal waste due to a reduction in double handling of pig manure. Despite my previous requests, there is very little evidence however to verify this claim (it would be reasonable to assume that it would be in the applicants benefit to spread directly to the field) or to even confirm if such 'existing' movements are actually on the highway network at present.

(2) Output material

The Transport Statement (TS) indicates that at present the applicant requires 176 tonnes of artificial nitrogen fertiliser and 30 tonnes of artificial potassium fertiliser for use on the local field which generates 42 movements per annum.

Whereas the AD plant is expected to generate approximately 23,950 tonnes of digestate (split 50/50 between solid & liquid form) per annum.

Solid Digestate

It is suggested that only 40% of the solid digestate will be transported via the highway networks as an independent trip (267 in / out movements), with the remaining 60% either spread directly on the local fields via internal roads or back hauled from site. **NB:** no breakdown has been given. However it should be noted previously that it was suggested that over half of the digestate would be backhauled.

As previously outlined, the Highway Authority accepts some of the solid digestate could be backhauled in the empty trailers as suggested, however from visiting these sites elsewhere in Norfolk it's abundantly clear the digestate is sent to different sources from that of delivery stock and the digestate goes back out on separate vehicles at different times.

Any backhauling would be limited and outgoing movements would take place throughout the year at a steady rate, usually by fast track tractor and trailer combinations, which increase the number of vehicle movements over and above the figures quoted.

I would strongly question that such a high % of digestate is capable of being backhauled from the site and would suggest that a significantly higher proportion than 40% would leave the site as independent trips.

Unless backhauling can be guaranteed, the assessment should be made based upon the worst case scenario which would be all trips on the highway network being considered as 'new'.

Liquid Digestate

It is suggested that the 11,975 tonnes of liquid digestate, which will all be pumped from the site to lagoons or pumped directly onto fields by umbilical will only result in 94 movements per annum.

Very limited information however has been submitted in support of this claim to demonstrate that this is realistic.

Based upon the submitted tanker payload this would suggest that approximately 17% (2,000 tonnes) of liquid digestate is anticipated to be tankered from one of the off take points.

The fact that lagoons are still proposed, with off-take points, would suggest that in fact considerable more digestate would now be produced than is required locally and therefore it is likely that new independent tanker traffic would be generated to transport the digestate to other, further afield locations.

In terms of overall traffic generation, whilst the latest TS does contain a breakdown of vehicle movements (existing & proposed), no evidence has been provided to verify these. As per my previous responses, I strongly suspect that those associated with the AD plant would be higher for the reasons outlined.

Highway Mitigation

A series of photos (and associated road widths) have been submitted along routes to / from the site which, although would not be considered a comprehensive assessment of the routes, do demonstrate the inadequacies of the routes (i.e. the roads are not wide enough for two vehicles to pass).

Whilst the applicant has suggested that they would consider signage and passing places, which they would agree by condition, again no firm details have been provided with regard to the level of improvements they would be willing to provide or whether such improvements can be achieved. A condition as suggested would not be acceptable as, as with any mitigation, you would need to understand the scale of the mitigation proposed and if it was proportionate.

Along with the likely traffic on each route, we would need to understand what mitigation is proposed, if it could be provided within land under the applicants control / highway, if the passing places are inter-visible. It is not acceptable to suggest that these haven't been developed as highway boundary verification requests can take 12 weeks to process and therefore they will do this after gaining permission, particularly as we were first consulted with regard to application number 2021/2788, in January 2022.

Highway Concerns

Even if the applicant could guarantee that feedstock would come from a 5 km radius, which is in doubt given the lack of legal agreements in place, this can only increase and intensify HGV / agricultural movements on a focused part of the rural network.

The application suggests that there is demand from 'local' farms to feed the facility and use all of the output material produced. I strongly suspect that this is not the case and in fact the facility will become more industrial in nature generating significant and new traffic to the area, serving wider catchments. Such a facility would be better suited to be located on the major road network.

All routes to / from the site are via the single track rural road network, many of which are designated as quiet lanes. Though 2 cars may pass each other, if driven with care, over many of these routes, the carriageway is not wide enough for a vehicle larger than a car to pass any other vehicle except at the existing informal 'passing places'. For the main part these have been formed over time by overrunning and consequent erosion of the banks and grass verge.

The site itself is currently accessed via a purpose built access onto Common Road, which was considered the most appropriate point to access the previously approved proposals. This does not justify its use by further traffic, as the routes immediately to the north & south of the site are narrow.

In addition, the off-take points are themselves located on the same single track rural network. Whilst the applicant has suggest that just 94 movements in & out would be generated from these points, I strongly suspect that this would be more, given the level of digestate suggested. Therefore a concentration of further HGV activity is likely to occur on parts of the network which, by virtue of their widths, are not suitable.

It is of course acknowledged that in this highly agricultural area, some movement of crops in large vehicles - tractor/trailer combinations, tankers, or other HGV – is 'normal' and to be expected by other road users. Nevertheless, the traffic movements generated by this proposal would be problematic for the following reasons:-

- They would be very frequent and concentrated on this particular stretch of road over a concentrated time period each year.
- During that time the movements would continue at high frequency over a very long working day, extending from early morning until late evening, and into periods of dusk and darkness.
- The existing mix of traffic on the road includes domestic cars, agricultural vehicles, tankers and other HGVs and conflict would occur with the applicant's traffic.
- In relation to the narrow sections of the routes - the only option would be to reverse the length of the previous stretch to gain refuge in an informal passing place / access : a manoeuvre which would be difficult for some drivers and for the drivers of some large vehicles, including tractor-trailers, and particularly in conditions of poor light, dusk and darkness. The consequences of a mistake could be especially severe.

You will note from the concerns raised locally that there is already concern with regard to the highway network to cater for current permitted traffic movements. This proposal would markedly intensify and exacerbate the difficulties currently experienced by the current situation, and likely lead to considerable verge erosion, the undertaking of dangerous

manoeuvres and increase the conflict between HVGs and others users of the highway, including vulnerable users.

Summary

As previously outlined, ultimately to robustly assess the proposals you as LPA, and us as LHA, need to be clear what traffic is currently associated with the landowner, how much additional traffic will be on the local network, at which points / roads they use, what other existing activities from the landowner will continue, and that the local highway network is suitable to cater for this.

The assessment is based upon the assumption that throughput of feedstock would be limited to around 50% of capacity, the land owner would be the primary provider of feedstock (both waste & non-waste) and also recipient of the digestate (solid / liquid). However, in the absence of a legal agreement, there is no guarantee that this will be the case.

We would need to have confidence that the capacity would be limited and that the feedstock and digestate output will be from the immediate local catchment, as suggested, and that this arrangement can be secured in perpetuity. If it cannot be guaranteed that this will be the case then clearly the concerns we have previously outlined, at length, in our two responses in relation to application 2021/2788 remain.

Furthermore, even if this were the case, there are a number of reductions that have been applied which cast the applicants own traffic figures in doubt. For example, a significant 'saving' is applied for the lack of double handling should the AD facility be approved particularly in relation moving of crops / muck from stores to the final destination. However it is not clear how this has been calculated. As this relates to over 1,000 in & out movements per annum it is essential that this is understood. Likewise, they have not confirmed which of the 'existing' movements they have outlined would continue.

Given that the applicants whole TS relies upon the assertion that the proposals will not increase traffic on the local road network, and will in fact decrease traffic, clearly these factors need to be considered and understood now.

Highway Authority recommendation

Given the above, the Highway Authority recommends without hesitation that this application be refused for the following reasons -

SHCR 07

The highway network serving the site is considered to be inadequate to serve the development proposed, by reason of its poor alignment / restricted width / lack of passing provision / substandard construction / restricted forward visibility. The proposal, if permitted, would be likely to give rise to conditions detrimental to highway safety. Contrary to Development Plan Policies.

SHCR 31

The application is not supported by sufficient transport information to demonstrate that the proposed development will not be prejudicial to the satisfactory functioning of the highway / highway safety. Contrary to Development Plan Policies.

Yours sincerely

Jon Hanner

Principal Engineer - Developer Services
for Executive Director for Community and Environmental Services

Please be aware it is the applicants responsibility to clarify the boundary with the public highway. Private structures such as fences or walls will not be permitted on highway land. The highway boundary may not match the applicants title plan. Please contact the highway research team at highway.boundaries@norfolk.gov.uk for further details.