

Division: Kidlington and Yarnton
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## **PLANNING & REGULATION COMMITTEE – 7 MARCH 2011**

### **CONSTRUCTION AND USE OF A DIGESTATE SLURRY LAGOON**

**Report by the Deputy Director for Environment & Economy (Growth & Infrastructure)**

**Location:** Worton Farms, Yarnton

**Applicant:** Agrivert Ltd.

**Application No:** 10/01852/CM

**District Council Area:** Cherwell

#### **Introduction**

1. This application from Agrivert Limited proposes to construct a slurry lagoon to store the digestate produced from the Anaerobic Digestion (AD) plant at Worton Farm near Yarnton. The AD facility has been receiving waste since September 2010 and it is now fully operational. The plant is generating the digestate product which can be used as fertiliser in agricultural fields. Outlets for material are in the process of being secured but there is in any event a need to secure a lagoon to capture the quantities of digestate produced as a result of the AD process. The applicant has already commenced work on the construction of the lagoon although it is not yet being used for slurry storage.

#### **Location**

2. The application site is located 500 metres (0.3 miles) north of the A40, approximately 3 kilometres (1.9 miles) west of Oxford, 1 kilometre (0.6 miles) east of Cassington and 600 metres (0.4 miles) south west of Yarnton.

#### **The Site and its Setting (See plan 1)**

3. The application site is located in the Oxford Green Belt and comprises an area of former quarry land which is to the north of the AD plant. The proposed site is 1.44 hectares in size.

4. The site is located just over 100 metres south of the mainline railway from Oxford to Banbury. The existing facility forms part of a larger waste management complex which includes construction and demolition waste recycling, skip waste recycling (M&M Skip Hire Company). Much of the surrounding area to the south has been worked for sand and gravel and now comprises lakes. There is a sand and gravel processing plant abutting the site to the south-east (also subject of proposal to this Committee). The waste management complex is accessed by a metalled haul road which provides a left on left off access onto the A40.
5. The nearest dwellings are Rectory Cottages on the eastern side of Worton village, approximately 400 metres to the west of the site and Yarnton Manor House, approximately 400 metres to the north east.
6. Pixey and Yarnton Meads and Cassington Meadows lie 550 metres south of the application site. These sites are designated as Special Areas of Conservation.
7. Yarnton Footpath No. 5 passes immediately to the north of the site.

### **Details of the Development**

8. The applicant is seeking permanent planning permission. The site for the slurry lagoon is located on land that was previously used for the extraction of sand and gravel by Hanson Aggregates Ltd. That permission requires the land to be restored by the end of 2012.
9. The slurry lagoon has already been substantially built. Construction involved the excavation of silty sand materials to a depth of 0.45m below existing ground levels which has produced approximately 4,000m<sup>3</sup> of material. This excavated material has been stored in bunds around the lagoon. A further 1500m<sup>3</sup> of material has been imported to complete construction of the lagoon banks.
10. The slurry lagoon measures approximately 170m in length and 60m in width at its widest edge and stands 4 metres above ground. 2.4 metre high security fencing is proposed around the perimeter of the lagoon. There would be an access gate alongside the inlet and outlet pipes.
11. It is proposed that digestate be pumped from the existing AD facility some 200m to the south-east of the lagoon site via a sealed pipe. During the spreading season the digestate would be collected in tankers and taken to neighbouring farms to be spread as a fertiliser. The lagoon would be lined with a 2.5mm high-density polyethylene (HDPE) liner which would prevent leakage into the ground.

12. The slurry lagoon has an approximate total volume of 26,800m<sup>3</sup> with an anticipated digestate capacity of 22,000m<sup>3</sup>.
13. The applicant originally intended to take the digestate slurry out of the AD plant site to nearby farm lagoons from which it would be spread over farm land at intervals. However, Agrivert have failed to secure the necessary lagoons from the local farmers.
14. Agrivert have since acquired farmland of their own just to the north of the Yarnton/Cassington Road which has off road access from the lagoon site and their intention now is that this land should take a substantial proportion of the slurry which would be transported direct from the lagoon.

#### Traffic and Access

15. A third of the digestate produced by the AD plant would be taken directly from the lagoon to fields north of the Yarnton Road via an existing farm track. The remaining two-thirds of the material would be transported from the lagoon to neighbouring farms via the existing haul road. The proposal would not lead to any increases in HGV traffic. The applicant states that the vehicles would not pass through Yarnton Village.
16. Access to the digestate is expected to take place at irregular intervals and therefore no working hours are proposed. Agricultural access would take place during the early mornings or late evenings during the spreading season.

#### Assessment of Environmental Impacts

17. The applicant has identified the main potential environmental impacts as visual, odour, noise, dust and has proposed mitigation measures for each impact.
18. Odour
  - The application explains that the product to be stored in the lagoon is material that would first be digested for some 70 days and then stored in sealed containers for a further 60 days as part of the digestion process. During this period it is consistently heated and then agitated and macerated. The purpose of this process is to ensure that digestate breaks down volatile fatty acids and all of the gas potential is released from the digestate before it is taken to the lagoon. The applicant asserts that because of this extended process the digestate at the end of the process would be largely inert and low in odour.
  - Prior to being pumped to the lagoon the digestate would be held in a storage tank where it cools. The cooling of the digestate reduces the

propensity for any remaining odours to become airborne and thus emit odour.

- Prior to the product being sent to the lagoon the digestate would be periodically tested to ensure it meets the requirements of PAS110 (a publicly available standard that regulates the output specification for digestate). Part of the PAS110 criteria is to ensure that the product has a low respiration potential and is therefore classified as a stabilised and, by definition, low odour product.
- The design of the lagoon would mean that the reservoir would sit a minimum of 750mm below the top of the bund. This design is intended to reduce wind strip and odour emissions from the reservoir.
- The applicant states that he would ensure that the digestate always received the maximum digestion time in the AD plant.

19. Noise and dust

- The applicant states that the potential for noise and dust impacts relating to this development were negligible.
- There are already mitigation measures which have been in use for the other site operations, such as the M&M site and AD plant site, near to the lagoon site. The same measures would be applied to this component of the facility.

20. Landscape and Visual Impact

- The applicant has undertaken a landscape appraisal.
- The landscape appraisal argues that the site is well screened from the wider landscape and that the proposal would give rise to very little and localised visual impact. The appraisal indicates that the only views of the site would be from Yarnton Footpath No. 5 which borders the site to the north. The appraisal recommends planting of a hedgerow with occasional tree planting along the western, northern and eastern boundaries of the lagoon. These recommendations have been included with the proposal.

21. Flood Risk Assessment

- A flood risk assessment (FRA) has been undertaken because part of the lagoon boundary is in Zone 2 of the designated flood plain.
- The FRA recommends that the lagoon should be made capable of accommodating 0.4 metres of rainfall storage. In addition, to compensate for the minor reduction in flood plain storage, a swale feature has been incorporated into the design adjacent to the southern

boundary of the lagoon. The assessment concludes that the development would not adversely impact on flooding.

## **Consultation Responses and Representations**

### **Cassington Parish Council**

22. No response has been received.

### **Yarnton Parish Council**

23. Raise no objection to the proposal. They consider that should any noxious smells be reported, this should lead to cessation of pumping of slurry into the lagoon and a further meeting with the Council and applicant would be required to decide how to rectify the problem.

### **Cherwell District Council**

24. The District Council have raised an objection on the grounds that the development constitutes inappropriate development in the Green Belt affecting its openness and therefore contrary to PPG2, South East Plan policy CO4 and Cherwell Local Plan policy GB1. They also raise concern about odour generation; impact on the adjacent water bodies given their wildlife value and suggest planting to mitigate any loss of habitat. They identify that there may be protected species on site, so precautions should be taken to ensure that they are not harmed.
25. They say that consideration will need to be given to whether the very special circumstances outlined in the application outweigh the harm to the Green Belt.

### **Natural England**

26. No objection to the proposal subject to conditions to ensure that – a) the lagoon will not seep into the ground and contaminate groundwater and b) the lagoon will not flood.
27. The site is in close proximity to a local wildlife site. Recommend that the county ecologist and/or local Wildlife Trust be contacted.

### **Environment Agency**

28. No objection subject to a condition requiring submission of a surface water drainage scheme for the site.

### **Oxford Green Belt Network**

29. Object on the following grounds:

- The proposal would reduce the openness of the Green Belt and therefore seems inappropriate in the Green Belt.
- Restoration of this land to agriculture is required to be carried out according to the scheme agreed as a part of the sand and gravel extraction permission.
- There is potential for environmental problems from this development such as flooding and pollution.
- It is unnecessary to create this large lagoon just to store digestate for a few fields.

### **CPRE**

30. Object on the following grounds:

- The proposal would reduce the openness of the Green Belt and is contrary to planning policy.
- Restoration of this land to agriculture is required to be carried out according to the agreed scheme as a part of the sand and gravel extraction permission.
- There is potential for environmental problems from this development.
- Do not feel that the applicant has made a cogent case for 'very special circumstances' to justify this proposal in the Green Belt.

### **Transport Development Control**

31. No objection to the proposal.

### **County Ecologist**

32. No objection to this from a biodiversity or landscape point of view, provided that conditions are attached to improve the appearance of the site in the interests of visual amenity.

### **Third Party Representations** (copies of the letters are available in the Members' Resource Centre)

33. We have received two letters of objection.

34. Ten local residents have signed a letter objecting to this planning application for the following reasons:

- Risk of noxious odours escaping from the slurry lagoon

- The proposed lagoon was not part of the original planning proposal for the AD plant and waste liquid should be stored away from Worton Farm.
- Residents received little support from the County Council to control the odour when the green waste composting at Worton Farm was operating.

The residents would like the County Council to impose the following conditions if any planning permission is resolved to be granted:

- The lagoon is constructed as an enclosed vessel in order that there is no risk of any odour escaping to the atmosphere.
- A clause be included to address any change of ownership or use.
- That the lagoon only be used for its intended purpose and no liquids be discharged into the lagoon.

35. A second letter (with 3 signatories) raised objection to this application for the following reasons:

- Risk of environmental factors such as noxious odours and flooding and the resultant impact on the local amenity.
- The proposal will reduce the openness of the Green Belt as Hanson had agreed to return this land to agriculture following extraction of gravel by the end of 2012.
- Understand that Oxfordshire County Council is a client of the applicant and request that this conflict of interest is managed and recognised when the planning request is considered.

Suggest the County Council consider the following conditions if any planning permission is resolved to be granted:

- To ensure the slurry lagoon is constructed as in-vessel in the same manner as Agrivert's current food waste receiving building facilities at Worton Farm.
- That a temporary permission be granted or provisional planning permission to fully install the slurry lagoon as requested. This temporary planning would be for a one-year period by which time a full evaluation of the lagoon process would be tested and evaluated under all seasonal weather conditions.
- Should no adverse objections be received during this period, then full permanent planning permission could be granted.
- Wish to be included in any evaluation process for measurement of odour.
- The environmental impact of spreading the digestate on the fields north of Yarnton Road needs to be included in the evaluation process.

36. A letter has also been received from the local MP reiterating comments made by local residents.

**Relevant Planning Policies – (See policy annex attached to this Agenda)**

37. Development should be decided in accordance with the Development Plan unless material considerations indicate otherwise.

The Development Plan for this area comprises the South East Plan, saved policies of the Oxfordshire Structure Plan, Oxfordshire Mineral and Waste Local Plan (OMWLP) and adopted Cherwell Local Plan 1996 & Non-Statutory Cherwell Local Plan 2011.

Planning Policy Guidance 2: Green Belts and Planning Policy Statement 10: Sustainable Waste Management are also relevant.

38. Whilst the South East Plan (SEP) forms part of the Development Plan the Government has made it clear that it intends to abolish regional strategies. This intention has been upheld as being a material consideration in determining planning applications.
39. All relevant policies are listed in the policy Annex. Key policies are those dealing with Green Belt, open countryside, environment and amenity and landscape and visual impacts.

**Comments of the Deputy Director (Growth & Infrastructure)**

40. The principle matters that should be considered in deciding this development are:
- Whether there are very special circumstances that justify allowing this development in the Oxford Green Belt,
  - Whether or not any odour from the lagoon can be limited to levels that are acceptable for people living nearby

There are other matters raised by the proposal and by objectors which include the visual impacts, lorry and tanker movements/impacts, ecology, possibility of flooding. These are also addressed below.

**Green Belt**

41. The lagoon structure constitutes inappropriate development in the Green Belt (PPG2, SEP policy CO4). It should not be allowed unless the applicant can demonstrate very special circumstances that justify allowing it contrary



to normal policy. This point is raised by a number of objectors and consultees.

42. In response the applicant explains:

- that the slurry cannot be spread continuously and particularly through the winter so needs storage capacity;
- that the most sustainable locations for the slurry lagoon are either at the AD plant or at the spreading locations. This minimises traffic movements and energy consumption;
- the applicant has considered transporting slurry from the AD plant to redundant on-farm lagoons, where spreading on agricultural land would then take place locally; but local farmers have not been persuaded to accept the material and therefore this option is not now available;
- the applicant's search for alternative sites has not presented any viable alternatives for a slurry lagoon site outside the Green Belt.

43. In my view the applicant has put forward a strong case to demonstrate there are very special circumstances to allow this proposal in the Green Belt.

### **Odour**

44. It is most important that local residents do not suffer unreasonably from unpleasant smells which might emanate from the slurry whilst it is stored in the lagoon.
45. The applicant has explained that the technology of the AD plant they operate provides a most rigorous process which lasts substantially longer than other applications of the AD technology. The plant is designed to fully degrade the food waste so that it is both a most suitable material to spread on farmland and be less likely to generate unacceptable smell at any substantive distance.
46. Local people are understandably concerned that the development will generate unacceptable odour. Some have suggested that a cover over the lagoon and/or a temporary consent could address their concern regarding odour. Some have argued that the impact of the spreading of the slurry should also be assessed. The EHO has commented that there may be odour generation from the lagoon.
47. The applicant has indicated that he is prepared to implement additional odour mitigation measures if they prove to be required. Such measures

could include the installation of a temporary cover and/or temporary cessation of works (i.e. stop pumping to the lagoon) until the odour problem has been resolved.

48. The lagoon is located some 400 metres from the nearest properties in Worton and Yarnton. The long digestion and process period should reduce the propensity for the slurry to smell unacceptably. Conditions can also be imposed to require that if odour did reach unacceptable levels, pumping to the lagoon be stopped until measures such as provision of a floating cover be implemented. Some spreading on local fields has taken place and a County Council officer was present. The indications are that whilst the slurry could be smelt at the point of spreading, the smell was not apparent from a few metres distant.
49. I do not think it is necessary to require a permanent cover which would in itself be an intrusive structure. I am satisfied that the technology is sound and that we can properly control through conditions any smell that may arise. I do not think it necessary to restrict the lagoon to a temporary period.

#### **Other Amenity and Environmental Issues**

50. *Impact on Landscape:* In the context of the other permanent uses at this complex (i.e. M&M site and AD plant) and taken with the extra landscaping proposed, the lagoon should not harm the local landscape.
51. *Noise and Dust:* The digestate would be piped to the lagoon. Tractors removing the material would use internal haul roads and then take the material either to the local farm or out onto the A40. Noise and dust should not be different to any other agricultural activity.
52. *Traffic Generation:* The proposed site has a direct access via a metalled haul route from the A40 and off road access to the nearby farm to which 30% of the slurry will be spread. Transport Development Control raise no objection to the application.
53. *Contribution to public access:* There are some public footpaths within this area and policy CY4 of OMWLP seeks to strengthen the network and requires the provision of a pedestrian/cycle route between Eynsham, Cassington and Yarnton. The applicant has agreed to provide an amount of £17,746 by way of a unilateral agreement to support public access initiatives. This is consistent with policy and can provide access benefits for local people.
54. *Ecology:* Respondents have identified the importance of protecting Pixey and Yarnton Meads, and Cassington Meadows and nearby water bodies generally. The District Council has questioned whether there might be

protected species on site. They have indicated that there should be planting to mitigate any local ecological loss.

55. The Meads and Meadows are some 500 metres away beyond the adjacent gravel extraction area to the south of the A40. The Environment Agency recommend conditions to protect against the possibility of seepage or overspill into groundwater and these can be imposed. I do not believe therefore that this development would harm these scientific/ecological areas.
56. Agrivert have already created the lagoon and disturbance to the land has been caused. In its current state (empty of water), protected species (e.g. great crested newts) are unlikely to be present in the lagoon. The nearest records for great crested newts are 4 km away at Water Eaton. If Agrivert have committed an offence under the Habitats Regulations prior to applying for planning permission, then this would be a criminal offence and a police matter. We can add an informative to avoid any doubt as to the responsibilities of the operator in this regard.
57. Tree and hedge planting is proposed and this can contribute to wildlife interest. The restored lakes for the former gravel pits are beginning to develop ecological interest. There is no reason why this lagoon should jeopardise that development.

### **Other Matters**

58. *Commencement of development without planning permission:* Concern has been raised that the development has been started in advance of any planning permission being given. It is poor practice for any developer to start a development without first getting consent. Our disquiet has been made clear to the developer in this case.
59. *Independence of the planning authority:* Some people have pointed to the fact that the Council is both the planning authority and a customer of this company. The proposal (like all) must be decided in accordance with the Development Plan unless material considerations indicate otherwise. It is the responsibility of County Planning officers and the Planning & Regulation Committee to act independently in this respect and determine the application on its planning merits.
60. *Clause controlling change of ownership:* This control has been suggested but planning permissions run with the land and cannot be restricted to individual companies. I understand that Agrivert have had some discussions with Yarnton Parish Council during the planning application process. I suggest dialogue should be encouraged to continue and recommend an informative to promote continued liaison.

## **Conclusions**

61. The proposal is contrary to green belt policy and should only be allowed if there are very special circumstances justifying it in this Green Belt location.
62. The lagoon is adjacent to the AD which is the source of the digestate; a substantial amount of the slurry can be spread on land close by and there are no other closer sites available.
63. The potential odour from the lagoon is limited and I am satisfied that the possibility of unacceptable smell can be controlled through the conditions proposed.
64. The visual impact and other impacts of the proposal are limited or can be managed again through conditions. I believe therefore that there are very special circumstances which justify overriding green belt policy and that permission should be granted.

## **RECOMMENDATIONS**

65. It is **RECOMMENDED** subject to a legal agreement to secure a contribution of £17,746 to the public access/pedestrian/cycle routes that planning permission be granted for the development proposed in Application 10/01852/CM subject to conditions to be determined by the Deputy Director for environment & Economy (Growth & Infrastructure) but to include the matters set out below.

### **Conditions to include:**

1. **Compliance condition.**
2. **Commencement date.**
3. **Site used for digestate slurry from the AD plant only.**
4. **Floodlighting details, only intruder lighting out of hours.**
5. **Development to be carried out in accordance with submitted planting scheme.**
6. **Bund and fencing to be erected in accordance with agreed plan**
7. **Effective silencers.**
8. **Site signage on A40 to be kept to a minimum.**
9. **Sweeping on and adjacent to the site.**
10. **Odour Control scheme to be submitted and agreed (to include temporary cessation of pumping if required).**
11. **Sustainable surface water drainage scheme to be submitted.**

PN5

**EIA Informative: for flood risk and water courses, environmental permit, contamination and hydrology.**

MARTIN TUGWELL

Deputy Director for Environment & Economy (Growth & Infrastructure)

February 2011