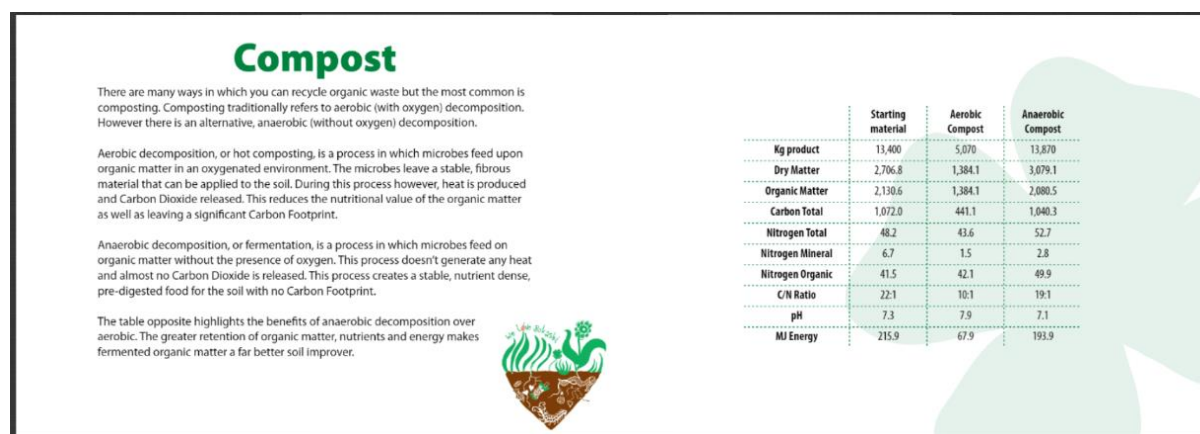


Dear Sir/Madam,

Please see the attached SCAIL results as requested under your reference **447487** and under the planning reference for Hinckley and Bosworth Borough Council of **23/00785/FUL | Construction of manure and slurry stores with associated landscaping and other works | Park House Farm Leicester Lane Desford Leicester Leicestershire LE9 9JJ**.

The application is ran in conjunction with an application for the Slurry Investment Scheme and Grant, referenced in your response.

The SCAIL indicates an exceedance for the Butcherson Bog SSSI, however we do not feel it fully comprises the slurry and manure system proposed as part of the application scheme as it is based on traditional composting (aerobic composition). The manure within the shed will still be covered and both the manure store and slurry store will be using Bokashi, to create anaerobic decomposition rather than aerobic decomposition, reducing the loss of manure for creation of heat and Carbon Dioxide, and in turn locking Nitrogen into the manure, meaning it would be more beneficial for the applicants cropping. Please see the below figure relating to its effect compared. Utilising traditional composting methods 60.2% of the organic material “disappears” whilst in the fermentation process using Bokashi only 3.2%.



In composting, the activity of microbes is significant, and requires nitrogen. As they use nitrogen and convert it from one form to another, some is lost to the air as ammonia or N₂ gas. The amount lost is usually in the range of 25% to 75%, but it can be as high as 90%.

The limited microbe activity in bokashi means that very little nitrogen is used and none is lost to the air. In fact most of it remains tied up in large molecules.

Below is the Air Quality Statement from the Bokashi producers website:

Air Quality Statement:

Green waste placed in a fermenting unit never touches the ground so pathogens can not contaminate the ground in the area where recycling is done. Oxygen is excluded during the approximately 2 weeks waste is in process and waste is broken down into metabolites. Pathogens are eliminated. The soil derived microbes, flora and fungi involved in a Bokashi Cycle Operation are proprietary. They are all derived from native soils.

No chemical additives or toxic materials are included in the bokashi culture mix used to ferment green waste. We've patented the industrial scale commercial process and now have quality control standards in place so growers can rely on a consistent high standard end

product. We want all growers to know that the fermenting process is standardized and that products in the field are reliably useful.

Experience has shown that the weight of material entering the fermenter is virtually identical to the weight of material at the end of the fermenting cycle. Water is conserved. Very little carbon escapes in the form of carbon dioxide.

Unlike composting where oxidation and heat and the escape of many gases into the atmosphere occurs, bokashi fermenting conserves mass and eliminates greenhouse gas production. Compost piles shrink down as oxidation takes place.

Bokashi fermenting units retain their mass as waste is metabolized and no material is lost in this process.

Carboxylic acids are produced as the waste is metabolized. These acids as they form inhibit completely the organisms that would produce methane. They are also involved in forming other important molecules that help plants obtain nutrients and they feed organisms living in the soil. No methane is formed in this process.

We know of no other competing technology that converts green waste to a useful product minimizing so efficiently greenhouse gas production.

Nitrogen is trapped as the ammonium ion and does not escape into the atmosphere as ammonia because carboxylic acids form trapping ammonia as the non-volatile ammonium ion as material is metabolized.

In terms of the SCAIL form submitted, two versions are shown. The proposed slurry store is in addition to the existing slurry stores that are located underneath the current pig sheds, they will still remain in operation. The manure store however will replace the existing temporary field heap system, allowing the manure to be stored higher and to be covered, reducing its effect. Therefore, submitted are the existing scenario of just the temporary field heaps (the existing slurry stores have not been included as this aspect will remain constant post development), and then the second scenario is the proposed with the new slurry store and the new manure store.

Currently in temporary field heaps, the manure stored can cover up to circa 1200m² of area as it is more difficult to stack the manure higher in an open field. If granted consent the manure in the manure store will be able to be stored higher with the footprint of the building being 449.8m² and will be covered, also using the bokashi technique, reducing its impact.

The proposed development shows an exceedance of 1.94%, however the existing scenario shows an exceedance of 1.91%, an increase of only 0.03%, this also does not take into account the manure storage technique detailed above which will significantly reduce the production of ammonia.