

From: [Ailsa Teasdale](#)
To: [Planning](#)
Subject: FW: NYM2017/0633/FL Slurry Lagoon at High Farm, Foss Hill, Ugglebarnby
Date: 18 January 2018 13:33:06
Attachments: [Slurry lagoon High Farm Ugglebarnby comments 15.01.18.docx](#)

From: Elspeth Ingleby
Sent: 15 January 2018 17:46
To: Ailsa Teasdale
Cc: Rona Charles
Subject: RE: NYM2017/0633/FL Slurry Lagoon at High Farm, Foss Hill, Ugglebarnby

Dear Ailsa,

Apologies for the delay in my response to this application. Due to the complexity of the impacts of this application, I have produced the attached document to explain how conclusions were reached. In short, the proposals will result in reduced ecological impact to the present circumstances and therefore we have no objection, subject to a couple of conditions to ensure that best practice is followed regarding application and storage to minimise air pollution. Whilst a smaller store/ taking the existing old store out of use to reduce maximum capacity to what is required plus a small buffer would reduce impact on air quality (due to a reduced surface area of slurry at any one time), the existing plans will still be a net improvement on current conditions.

If you have any questions or require me to add more detail in any way then please let me know.

Best wishes,

Elspeth

Internal ecological comments regarding NYM/2017/0633/FL - High Farm, Ugglebarnby, proposal for new slurry storage lagoon

Existing provision for slurry storage

Current storage is a weeping wall store holding 880m³. The store is crust forming which helps to limit aerial nitrate emissions. Once at capacity slurry from feeding areas is then collected in the silage pit, which is not designed for storing slurry. Liquid portion of waste is collected in three settlement tanks which is spread via a sprinkler system automatically when at capacity.

The current volume of slurry and dilutions produced by the farm over the winter when animals are enclosed (5 month period but allowing for 6 months of rainwater/washings capture) is 3301m³ leading to a storage deficit of 2421m³.

Impact of current regime on surrounding ecology

The current regime leads to slurry being applied to fields both through the sprinkler system, as well as the solid spreading (tanker with splash plate) throughout the winter period which likely will include applications made during inappropriate conditions (frozen ground, saturated ground, before rainfall) as well as being of less value to the farm as slurry has less impact on crop growth when applied when plants are not actively growing.

The current regime is poor for both water quality, through increased run off due to ill-timed applications, and air quality, as sprinkler systems and use of splash plate encourage aeration of nitrate rich substances leading to increased volatility and an increased release in ammonia to the surrounding environment.

Proposed provision for slurry storage

In addition to continuing to use existing weeping wall store (880m³), a new lagoon containing up to 3384m³ is proposed increasing the total capacity of the system to 4264m³. The new lagoon will take all effluent overflowing from the existing store, as well as slurry washed directly from the external yards removing the need for any collection within the silage pit or settlement tanks.

Given the same number of animals kept in conditions as at present, and using the same assumptions regarding rainwater collection and washings, the capacity of the new system will exceed that required by 963m³.

Impact of proposed regime on surrounding ecology

Water quality

The provision of the new system will adequately address the needs of the farm to ensure slurry can be stored for the entire winter if necessary and therefore will not need to be spread at inappropriate times of year. Improved timing of application will lead to improvement in the surrounding water quality when compared to present. We note that the original report from Promar International included a recommendation to add guttering to the cattle shed which would separate clean water from dirty and thus reduce the amount of rainfall that enters the slurry system. We would

recommend that this low cost measure is carried out if possible to reduce the amount of dirty water produced.

Air quality

It has been stated in the proposals that the new lagoon will be crust forming, with a potential option to provide a floating cover which would have the additional benefit of reducing the amount of rainwater entering the system at this point. In addition to new storage, it has been stated that the applicant wishes to adopt a new method of spreading slurry using a trailing shoe or trailing hose system, replacing the sprinkler and splash plate currently in use. This method of application minimises the potential for aerial pollution in the form of ammonia from the slurry during application.

The SCAIL models provided show that the impact of the new slurry lagoon itself on surrounding air pollution is likely to be relatively minor as a proportion of critical load. The site is also due to be screened with trees, which once grown to a fair height will help to minimise movement of ammonia and thus will help to further reduce potential impacts on nearby designated sites. Although adding to an unknown background level (which is already above critical loads on most surrounding designated sites) we would judge that the collective benefit of improved timing of application within the growing season (at maximum uptake by plants of nitrates) and improved method of application using a trailing shoe/hose have the potential to outweigh the pollution caused by additional surface area of stored slurry within the new tank and thus could be of net benefit to air pollution.

It is noted that the proposed tank together with the existing weeping wall tank is of greater capacity than the farm currently requires. Whilst a certain degree of extra capacity is of course useful to ensure against winters of particularly heavy rainfall, it seems from the presented figures that it would be possible for adequate storage to be achieved by solely using the new tank (not using the weeping wall tank at all) or by reducing the size of the proposed development. Either option would slightly reduce the surface area of stored slurry and hence would further reduce potential ammonia release.

Conclusions

On balance we conclude that the construction of the new tank would be of net benefit to the surrounding ecology if the additional measures proposed are put in place.

When considering the HRA regulations, we would concur with Natural England's assessment that the results of the SCAIL assessment demonstrate that process contributions for ammonia, nitrogen deposition and acid deposition are <20% of the appropriate critical load or level at the North York Moors SAC and SPA. Natural England has checked for other recent and proposed developments that could act in-combination with this proposal; there are no other developments that are likely to cause in-combination impacts according to information available.

If the application is approved, conditions should be applied to ensure that;

- Slurry is only spread on the farm using direct injection through a trailing hose
- If the new slurry store is not fitted with a floating cover, then chopped straw is periodically spread on the lagoon to promote formation of a crust.

We would also strongly recommend that guttering is installed on the cattle shed to separate rainwater falling on the roof from dirty water collected within the slurry system.

If through assessment of the application it was concluded that a smaller store would be more appropriate, or that the old tank should be disused, then this would further reduce the ecological impact of the proposal provided the total capacity of storage is sufficient to store all slurry and washings collected over a minimum of 5 months.