

Broad Oak Farm, Rossett

Management System Summary

December 2024

Management System

This Management System Summary has been prepared to support an Environmental Permit application in relation to the discharge of treated effluent from 10.no proposed residential dwellings and 1no. existing dwelling at Broad Oak Farm, Llyndir Lane, Rossett, LL12 0AU.

The sewage treatment plant comprises a Marsh Industries (MI) Nutra-Lite treatment plant with a MI Phos-Lite unit which would reduce phosphate levels to 0.2mg/l. The system treats phosphate using a natural, non-dosing solution. The plant uses Phos-Lite pellets, a natural mineral media which binds with the phosphorus to reduce phosphate levels.

Maintenance

The non-dosing approach minimises the need for frequent maintenance and chemical adjustments.

The system will be maintained by a suitable management company. The level of maintenance will be in strict accordance with the recommendation of the package treatment plant supplier in all instances.

The mineral media will need to be replaced every 5-8 years. Annual inspection of the mineral media will be undertaken and replacement undertaken as required. Once removed, the mineral media is safe for re use in agriculture. Alternatively, it could be disposed of in a suitable waste management facility.

Sludge removal (desludging) and maintenance will be undertaken on a six monthly basis or as required depending on usage. The frequency of sludge build up will be inspected weekly for the first 3 months once all units are occupied. This will then inform the frequency of sludge removal.

Desludging procedure

- Desludging should normally be carried out by a vacuum sludge tanker.
- Licensed tankers are available commercially and the service is also provided by some local authorities.
- The sludge should be disposed of in accordance with local authority instructions or in a manner which will not cause pollution.
- The tank should be deslugged before the onset of winter if conditions do not allow a tanker on site.
- The sludge in the primary chamber (s) should not be removed completely, but approximately 75mm should be kept in the bottom of the tank to re-seed the new sludge, which will be formed when the tank is put into use again. The depth of sludge can be checked using the following technique:
 - Use a pole that can touch the bottom of the tank and wrap the bottom 1.4m with a white rag.
 - Lower the pole to the bottom of the tank and hold for several minutes to allow the sludge layer to penetrate the rag.

- Remove the pole and note the sludge line, which will be darker than the colouration caused by the liquid waste. (Typically a dark sludge line approximately 2/3rd from the bottom of the pole means you should desludge).
- On every alternative desludge, dead humus/scum should be skimmed from the final settlement tank(s). Ensure the tee pieces in all chambers are clear
- Care must be taken not to damage the treatment plant with the hose of the vacuum tanker.

Further information regarding maintenance of the MI Nutra-Lite treatment plant and MI Phos-Lite unit is included within the Marsh Industries Installation/technical manual enclosed.

The treatment plant will be readily accessible from internal site access roads.