

From: DAVID EVANS
Sent: 02 April 2023 11:29
To: Gwyn Humphreys
Subject: DYMOCK ARMS

Hi Gwyn

I have discussed your comments with my clients and they are still positive in making this project possible and are going to instruct our consultants covering the habitat issues and the conservation concerns.

We are also looking to discharge the foul waters into a treatment works on site and then connect the discharge into the existing foul connection on site.

The treatment works operates a phosphate reduction system see below

Phosphate Reduction

Phosphate is present wastewater as it is commonly used in cleaning products, particularly washing detergent.

A sewage treatment plant will reduce the concentration of phosphate naturally as it is used by bacteria as a building block in cell replication. This however is an uncontrolled process and will only reduce the concentration by 10-50%.

Bacteria cannot break phosphate down in the same way as nitrogen.

If effluent needs to have a low concentration of phosphate, chemicals must be added to the sewage treatment plant to bind the phosphate and store it as sludge. This reduces the concentration in the effluent and the phosphate is removed from the tank when it is dewatered (emptied).

We use Polyaluminium chloride (PAC) as this is the most effective agent at binding phosphate.

The PAC is automatically added to the system using a timed dosing pump.

Phosphate concentration in sewage effluent can be reduced to around 1.5mg/L. It is not feasible to reduce concentrations lower than this.

It would be helpful if you could let your consultees have site of this to obtain an opinion as to the suitability of this operation and its discharge content.

I have attached a plan showing the proposed drainage layout.

Should this not be acceptable we could look at omitting the rear house and installing a rapid bed filtration system on site, but this is a last resort.

I await your valued input in reaching a positive solution to the retention of the listed asset.

Kind regards

David