

Land at Barwise Row, Arelcdon, Frizington

ENVIRONMENTAL ASSESSMENT AND SEWAGE TREATMENT INSTALLATION
DETAILS

1.0 INTRODUCTION

Hillside, High Laws is a converted barn adjoining East O Brow Top and has shared a septic tank with the adjoining dwelling, which is in the same ownership.

The proposal is to provide a separate Sewage Treatment Unit for each dwelling.

The assessment has been undertaken taking full and detailed consideration of DETR Circular 03/99: Planning Requirement in respect of the Use of Non-Mains Sewerage incorporating Septic Tanks in New Development and specifically in accordance with Paragraph 6: a-k.

2.0 ENVIRONMENTAL IMPACT OF THE PROPOSAL

The application submitted for consideration shows a Klargestar Bio Disc BA, the location is some 9 metres from the existing dwelling and located a minimum of 10m from any known drainage ditches.

The tank is located on an area of land to the north east of the dwelling unit, with good vehicle access for emptying.

The tank capacity required to service the dwelling is as follows as determined by the British Water, Code of Practice, Flows and Loads 4:

The dwelling has 3 bedrooms and the calculation is based on 6 persons for the property:

$$\text{Therefore } 6 \times 150 \text{ ltrs} = 900 \text{ ltrs}$$

The tank capacity required therefore is $2000+900$ ltrs = 2900ltrs.

The Klargestar BA Bio Disc is designed to operate for up to a 4 bedroomed dwelling and therefore acceptable in this instance.

A trial pit was excavated on the 10th, June, 2019, in the area of the proposed soakaway system to a depth of 2m, which is 1.4m below the bottom of any soakaway system and was in a clay subsoil which was making ground water in the pit.

The percolation tests were undertaken during the period the 10th- 11th, June, 2019. Weather conditions were dry and there had been some rain over a few days previous.

In line with the requirements for the percolation test, 3 holes were excavated, 300mm square in the area in which the soakaway is to be located, on Monday, 10th, June, last. These were taken down an initial 600mm to the line of the proposed soakaway system and a further 250mm to the substrata.

The holes were cleaned out and a marker inserted at the 300mm level. The excavation was not making any ground water and water was added into the trial holes to the 300mm depth and left overnight.

The site was revisited in late morning on the following day and the water had partially soaked away from each of the trial holes.

The 3 holes were again topped up to the 300mm markers and the following results were observed:

Hole 1, Water partially drained from the hole in 3600 seconds.

Hole 2, " " " " " " " 3480 seconds.

Hole 3, " " " " " " " 3600 seconds.

However due to the very poor sub strata it was concluded that the ground was unsuitable for a soakaway system.

3.0 THE SYSTEM

It is proposed to install a Klargester BA Bio Disc, with a revised 100mm PVCu underground drains from the dwelling, laid to fall as per the plan, on granular bed and surround. 450mm diam pvcu access chambers, with patent cast iron covers, as indicated and incorporate a patent Klargester Sampling Chamber at junction of exit pipe from tank and entry to the existing surface water drain from the dwelling to the existing culverted drain in the highway. In line with the manufacturers recommendations the tank should be desludged every 12 months to enable the system to work effectively and information plate fixed in dwelling, informing owners of the requirements of the system.

4.0 CONCLUSION

Overall the installation of the new Klargester BA Bio Disc will provide a high quality of sewage treatment to the dwelling, designed in line with the current requirements of the Building Regulations and DETR Circular 03/99: Paragraph 6:a-k.

This installation does not require any consent from Environment Agency as the discharge is below 2cu.m/day.

Ken Thompson
Coniston Consultants Ltd
8 / 8 / 2019