

1.0 INTRODUCTION

This application is for the erection of an agricultural workers dwelling at Wilson Park Farm, Pica and should be read in association with the application on deposit for Planning Approval.

2.0 HISTORY OF THE SITE

The siting for the new dwelling is located on the South West edge of the farm yard area and adjacent to existing dwellings.

The proposal is for a 3 Bedroomed detached dwelling and a Planning Application, for full permission under the Town and Country Planning Act has been submitted.

3.0 ENVIRONMENTAL IMPACT OF THE PROPOSAL

The Planning application submitted for consideration shows a new Klargester Alpha Septic Tank treatment unit, the location is some 10 metres from the proposed dwelling and located a minimum of 10m from any known drainage ditches.

The tank is located on a falling area of land to the South East of the proposed dwelling, with good vehicle access for emptying.

The tank capacity required to service the 1 dwelling is as follows:

The proposed dwelling is 3 bedroom and the calculation is based on 6 persons for the property:

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

The Klargester Alpha Septic Tank 3800, will be sufficient for the above useage, with additional capacity.

A trial pit was excavated on the 10th, January, 2023, in the area of the proposed soakaway system to a depth of 2m, which is 1.5m below the bottom of the soakaway. No ground water was encountered in the loose sandy gravel sub strata.

The percolation test was undertaken during the period the 10th - 12th, January, 2023. Weather conditions were dry, however there had been spells of rain over a few days previous.

In line with the requirements for the percolation test, 3 holes were excavated, 300mm square in location as indicated on the plan, on Tuesday, 10th, January last. These were taken down an initial 600mm to the line of the proposed soakaway system and a further 250mm excavated through soil to a sandy gravel 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 soaked away completely from all 3 trial holes.

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

Hole 1, Water drained from hole completely in 500 seconds.

Hole 2, " " " " " " 400 seconds.

Hole 3, " " " " " " 800 seconds.

Take above figures and divide each by the depth of water (300mm) to find the time to drop 1mm.

$$\frac{500}{300} + \frac{400}{300} + \frac{800}{300} = \text{say } 6.$$

The average of the above being $\frac{6}{3} = 2$.

Therefore the area of the soakaway system required is

$A = 6 \times 2 \times 0.25 = 3 \text{ sq.m}$, however due to the very porous sub strata it is proposed to increase this to 6sq.m.

As the soakaway system is in sandy gravel it is intended to construct an additional layer, using clean stone sub base 12mm-20mm laid to a depth of 500mm below invert level of the discharge pipe, to assist with the slow down of effluent discharge to the sub strata.

4.0 THE SYSTEM

It is proposed to install a Klargest Alpha Septic Tank, with 100mm upvc underground drains from 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, with patent Klargest Sampling Chamber at junction of exit pipe from tank and entry to underground soakaway system. Excavate trenches for soakaway 600mm wide and a minimum 500mm depth. Soakaway to be 100mm pvcu perforated pipe laid with perforation uppermost on 150mm gravel bed of 12-20mm grade and surround pipe top to minimum of 50mm in pea gravel. Place geotextile membrane over pipe to stop any ground contamination of the system. Maximum fall to the soakaway system to be 1 in 200. 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 and an information plate on the maintenance procedures located in the dwelling.

5.0 CONCLUSION

Overall the installation of the new Klargester Septic Tank system will provide a high quality of sewage treatment to the development and would ask for a granting of consent to discharge to land in line within the requirements of the Environment Agencies policies and Building Regulations.

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