1.0   INTRODUCTION

The land to which this application relates is in the ownership of the applicants and located at Wilson Park Farm, Pica, Workington

2.0 HISTORY OF THE SITE

The land is currently a grassed are to the property.

3.0 ENVIRONMENTAL IMPACT OF THE PROPOSAL

The application submitted for consideration is for the provision of a surface water discharge system in connection with the erection of a detached dwelling, with a pitched roof area on plan of 140sqm and a pitch of 35deg.

Total area of roof therefore is 140sqm.

Rainfall taken from table 1 to Part H of the Building Regulations gives a coefficient of 0.019 l/s/m2.

Rainfall for this calculation would be 140 x 0.019 = 2.66 say 3.

The system is to discharge directly into soakaways.

4.0 GROUND TESTING

A trial pit was excavated on the 10th, January,2023, in the area of the proposed soakaway pits to a depth of 2m, which is 1.4m below the bottom of the proposed soakaway system and was in a gravely substrata, but there was no ground water experienced in the pit.

The percolation tests was undertaken during the period the 10th – 12th, January,2023. Weather conditions were dry and there had been no 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 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 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 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 = 3 \times 0.25 = $ minimum of 0.75sqm sqm say 1sq.m.

Therefore the construct 2 No soakaway pits to have a surface area of 1 x 1m x 1.0m deep.

5.0 THE SYSTEM

It is proposed to install 100mm Pvcu underground drains from dwelling, laid to 1:60 fall, on granular bed and surround. 450mm diam pvcu access chambers, with patent cast iron covers, discharging to soakaway minimum 5m from dwelling.

6.0 CONCLUSION

Overall the installation of the system will provide for the adequate dispersal of rainwater from the new development and in accordance with the requirements of Part H of the Building Regulations.

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