

Overview

The following information describes the percolation testing performed on the site of the proposed glamping site. Results of which are used to size the subsequent drainage system design details.

Percolation Testing

Percolation testing of the land took place on the 24th & 25th of July 2021. Three test holes were dug with internal pits for water filling. The time to drain for each test hole was recorded and average percolation valve (Vp) of **48** was recorded.

The ground at is therefore well suited to a private drainage system featuring a soakaway.



Figure 1 - Percolation Testing

Soakaway Sizing

The area of the soakaway was determined using the following calculation.

Area = Population x Vp x Factor

- Max Population = 24
- Vp = 48
- Treatment Tank Factor = 0.2

Area = 24 x 48 x 0.2 = **230.4 m²**

The drainage design has been updated to reflect this sizing and 50m distance to the river has been maintained.

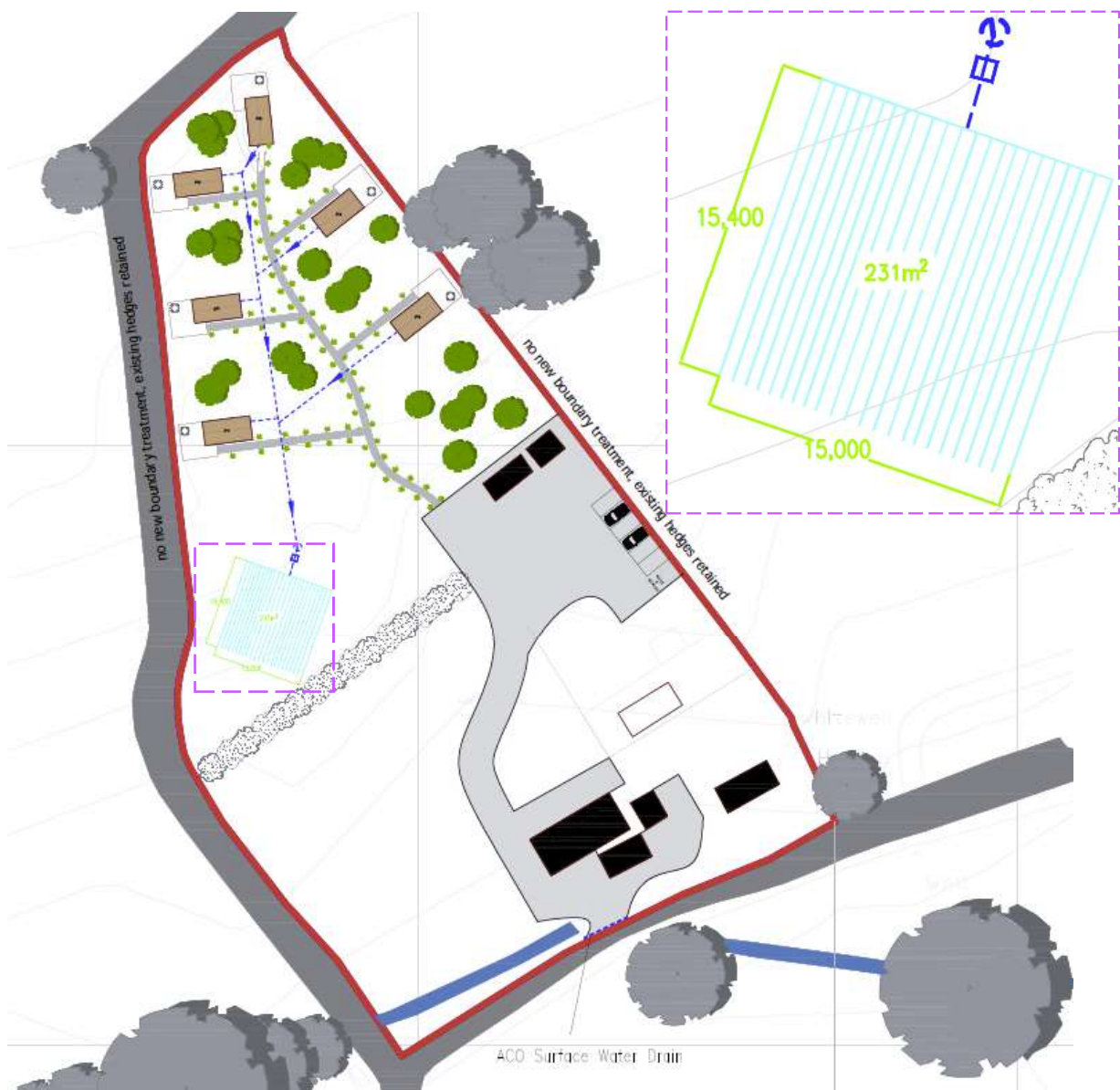


Figure 2 - Soakaway Sizing

Flow & loads

Using the [flows and loads guidance](#) flow per guest is estimated to 80 litres per day (hotel guests).

For a maximum occupancy of 24 guests on site, the daily maximum flow is calculated to be: -

$$80 \times 24 = 1920 \text{ l/d} = \underline{\underline{1.92\text{m}^3 \text{ per day}}}$$

Summary

The drainage system proposed the glamping site at Whitewell will be suitable for both the development and the ecology of the surrounding area.