

## Lydcott Nursery Sewage treatment plant – Percolation Test Results

Test to establish the suitability of the site for a drainage field.

### Method

2 trial holes were dug on the potential drainage field site, see fig. 1-2.

A working area roughly 1m<sup>2</sup> was excavated to a depth of 500mm in trial hole 1 and 800mm in trial hole 2. At the bottom of those holes a 300mm square excavation was made. Trial hole 1 is shown in fig. 3-5, trial hole 2 in fig. 6-8.

All excavations were made on 7/10/22, trial holes (just the 300mm squared part) were filled with water and allowed to drain overnight.

A 300mm long stick with 25% (75mm) and 75% (225mm) marks was placed into each hole.

To perform the test, the next day trial holes were first filled to at least 300mm (fig. 9). Once the water level reached the first marker (75%, fig. 10), a stop watch was started. When the water level reached the second marker (25%, fig. 11), the stop watch was stopped and results recorded.

This was repeated 3 times for both trial holes. All tests were done on 8/10/22.

Test results in seconds per mm	
Trail hole 1, test 1	21
Trail hole 1, test 2	27
Trail hole 1, test 3	36
Trail hole 2, test 1	38
Trail hole 2, test 2	34
Trail hole 3, test 3	42

**Average result: 33mm per second**

### Weather conditions for test:

8/10/22, sunny with some cloud cover, no precipitation, low wind levels, 14-16C. Not abnormal for an October day in Devon.

### Trial hole depth information:

The drainage field site is on a slight slope, therefore to maintain a drop of no more than 1:200, the invert level (950mm as it exits the sewage treatment plant) must get closer to the surface near the bottom of the drainage field.

Trial hole 1 is located near the bottom of the drainage field and has an invert level of 500mm.

Trial hole 2 is located near the top of the drainage field and has an invert level of 800mm.



**Fig 1.** Trail hole 1, ruler showing invert of 500mm, 300mm hole just in front of this.



**Fig 2.** Trail hole 2, ruler showing invert of 800mm, 300mm hole just in front of this.



**Fig 3.** Trial hole 1, showing 300mm width.



**Fig 4.** Trial hole 1, showing 300mm length.



**Fig 5.** Trial hole 1, showing 300mm depth.



**Fig 6.** Trial hole 2, showing 300mm width.



**Fig 7.** Trial hole 2, showing 300mm length.



**Fig 8.** Trial hole 2, showing 300mm depth.



**Fig 9.** Trial hole 1 filled with water to just over 300mm



**Fig 10.** Trial hole 1 water reached first marker (75%), stop watch started.



**Fig 11.** Trial hole 1 water reached first marker (25%), stop watch stopped.