



White Shaw Farm
Heaton
Rushton Spencer
SK11 0SR

G & R Leigh
Buxton

19th May 2023

Re: Drainage Strategy Statement – G & R Leigh, Buxton.

Dear Sirs,

It is proposed to redevelop the existing site with a single storey retail and warehouse building and associated concrete yard and carparking. The site is approximately 2900 m² with an impermeable area of 2900 m².

The current surface to the whole area of the proposed development is compacted hardcore and stone fill material with a gradual slope towards the rear of the development. During the site visit very heavy intermittent rain showers occurred with no significant run-off or ponding observed. Therefore, it assumed that the current surface water for the whole area of the proposed development percolates through the stone surface and in to the natural strata below.

Site excavations revealed the underlying strata to be 200- 300mm of hardcore/stone fill material overlying compact gravel and cobbles down to a depth of 1.5m overlying clayey sand. An excavation was formed 2.5m long x 1.8m deep x 0.9m wide in the proposed location of the soakaway, and was filled with water. The water - level dropped from the top of the excavation to the bottom of the gravel and cobbles instantaneously and then percolated more slowly at the bottom of the excavation, typically the level reduced 100mm every 10 minutes until the excavation was empty. The excavation was filled 3 times consecutively in accordance with BRE 365.

From the percolation tests it is proposed to keep the soakaway within the depth of gravel and cobble strata at a maximum depth of say 1.2m.

The surface water is proposed to be drained by infiltration in to the natural gravel and cobble strata, the carpark will be constructed with permeable surfacing such that the surface water will infiltrate in to a type 3 MOT subbase and subsequently percolate in to the natural gravel and cobble strata.

The roof drainage and concrete yard will be collected in to an underground drainage system and discharged in to soakaways under the concrete yard area.

Surface and ground levels will be profiled such that any temporary ponding and flooding will occur within the car parking and access areas, ie, all levels will fall away from the properties.

Yours sincerely

S. Naylor

Steve Naylor BEng (Hons) CEng MIStructE

Mob. 07793201898

Email. steve@cheshirestructural.co.uk

Web. www.cheshirestructural.co.uk

Photographs of Infiltration testing



Excavated trench



Excavation filled with water – water dropped immediately to the bottom of the gravel and cobble layer.