

Bingham Yates Limited

Consulting Engineers 38 Victoria Place Carlisle Cumbria CA1 1EX



Your ref.

Our ref. B9907/CJW/MLC

Date 16 October 2018

Martin Cuthell Limited
Whitestones
Portinscale
Keswick
CA12 5RW

Dear Sirs

FORMER CASTLE CINEMA SITE, EGREMONT

We confirm the investigation at the above site, relating to the attempted completion of BRE Digest 365 percolation tests, on Wednesday 26 and Thursday 27 September 2018, and we are pleased to advise you as follows.

OBSERVATIONS

We attach a marked up part copy of your drawing 1426/02C, indicating the 5No excavation positions which were completed to initial depths of 1.5m/2.5m deep below existing ground level on the afternoon of Wednesday 26 September 2018. A return visit was made early the following morning to observe the situation, in each instance.

The ground conditions typically appeared to comprise of near surface vegetation, on crushed rock fill material (to slightly varying depths), on slightly stoney firm dark brown clay material commencing at approx. 750mm below the ground surface.

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The excavations and observations were as follows:

Trial Hole 1 (2.5m deep – P1 & P2)

Remained dry over the period.

Trial Hole 2 (2.5m deep – P3 & P4)

Slight water ingress (max 100mm deep) immediately following excavation, and remained as same until the following day.

Trial Hole 3 (1.5m deep – P5 to P9)

Dry excavation initially, then filled with water up to 750mm below existing ground level after 60 minutes, and remained in the base of the excavation at 1200mm below existing ground level the following morning. After 3 hours this largely disappeared.

Trial Hole 4 (1.5m deep – P10 to P13)

Initial water inflow into excavation up to 600mm below existing ground level, and remained at this level the following morning.

Trial Hole 5 (1.5m deep – P14 & P15)

Initial slight seepage into excavation, but rose to 600mm below existing ground level in 60 minutes. This level remained in the excavation the following morning.

CONCLUSIONS & RECOMMENDATIONS

We consider that the completed excavations, and water levels which were observed, reflect the following, which is considered to be reasonably representative of the existing situation.

The water levels which were encountered are likely to be perched water within the near surface/fill material, which cannot efficiently drain away due to the presence of the underlying impermeable clay based material.

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Even if some of the excavations (notably TH1/TH3) illustrated a degree of self draining/dry material, we do not consider that this is likely to be sufficiently wide-ranging and guaranteed to be satisfactory, especially if a relatively large soakaway would be needed to efficiently accommodate the require design 1:100 year situation (including 40% additions) for the Cumbria locality.

Therefore in this instance, we recommend that a more sensible proposition is to pursue an attenuation 'equivalent greenfield' outflow from impermeable areas connected into the culverted watercourse at the North East side of the site with associated short term on site storage.

If there are any queries, do not hesitate to contact us.

Yours faithfully

J. J. WALTERS
for
BINGHAM YATES LIMITED

PARIS COPY
1426/02C

~~Bingham & Coates Limited~~

BOOKWELL ROAD

