

Our Ref: 0001/0001
Your Ref: Hibaldstow
Date: 14th July 2025

Whitaker Land Agency
3 Lapstone Close
Nettleton
Market Rasen
LN7 6BT

Dear Will



Humberside Materials Laboratory LTD
Atherton Way, Brigg
North Lincs DN20 8AR
Tel & fax 01652 652753
Email:
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Land at Hibaldstow

Further to your instruction Humberside Materials Laboratory (HML) were engaged to undertake percolation testing as per BRE 365 digest recommendations at a site off Redbourne Road, Hibaldstow. One Trial Pit was tested on the 14th July 2025. The test location was selected by you and sited at the proposed soakaway location; a marked location plan is included below.



Trial pit (Soakaway testing)

The trial pit was excavated by a tracked excavator utilising a 600mm width bucket. Encountered strata was logged on site as the trial pits advanced. The whole site had been subject to a topsoil strip prior to the test. Encountered strata is summarised within table 1 below. Photographs are enclosed.

Table 1: Summary of revealed ground conditions	
Strata descriptions	Exploratory hole
	TP1
	Depth to base of stratum (m bgl)
Orange/Brown slightly Sandy CLAY with some coarse to fine Gravels	0-0.2
Buff silty sand with cobble to fine Limestone gravels	0.2-1.22
Notes: TP1 - no water seepage or ingresses noted	

Soakaway testing

Soakaway testing was completed as per guidance within BRE Digest 365.

Soakaway trial pit 1 (TP1) was excavated to 1.22m below ground level (bgl) with a width of 0.60m and a length of 1.10m. Water was added to the pit with its depth monitored against time elapsed, this pit included three consecutive fills. Calculations show infiltration rates ranging from $6.02 \times 10^{-04} \text{m/s}$ to $2.83 \times 10^{-04} \text{m/s}$ with an effective test depth from 0.69m to 1.22m bgl. Individual test report is enclosed.

Summary

The encountered strata of Buff silty sand with cobble to fine Limestone gravels appears suitable for use as part of a soakaway design, this can be by a completed drainage engineer. Three water fills were achieved with drainage surpassing each pits 75% empty line giving infiltration rates ranging from $6.02 \times 10^{-04} \text{m/s}$ to $2.83 \times 10^{-04} \text{m/s}$. For soakaway calculation purposes the most conservative infiltration rate (from 3rd determination) of $2.83 \times 10^{-04} \text{m/s}$ could be utilised.

If you require any further information, please contact the laboratory.

Yours Sincerely

. Driver *Director*

Enclosed: *Photographs*
Soakaway test reports



Trial Pit TP1 – After excavations



Trial pit TP1 – Excavated spoil

HUMBERSIDE MATERIALS LABORATORY LTD

Atherton Way, Brigg
North Lincolnshire DN20 8AR
Tel & Fax 01652 652753

DETERMINATION OF SOIL INFILTRATION RATE

Sample Ref TP1 Hibaldstow

Client Whitaker Land Agency

Site Hibaldstow

Location TP1

Date tested 14/07/2025

Determined by M. Driver (HML)

Soil type Buff Silty sand with cobble to fine Limestone gravels

Calculation of Soil Infiltration Rate :- BRE Digest No. 365

Calculation Data			
Soakaway pit No	TP1		
Anticipated invert level	Unknown		
Pit Dimensions (l x w x d) (m)	1.10	0.60	1.22
Effective Depth (75% - 25%)	Determination 1	0.265	m
	Determination 2	0.265	m
	Determination 3	0.265	m
Effective volume (75% - 25%)	Determination 1	0.175	m ³
	Determination 2	0.175	m ³
	Determination 3	0.175	m ³
Effective Surface Area (75% - 25%)	Determination 1	1.561	m ²
	Determination 2	1.561	m ²
	Determination 3	1.561	m ²
Time for soakaway (75%-25% effective depth)	Determination 1	186	Sec.
	Determination 2	348	Sec.
	Determination 3	396	Sec.
Soil Infiltration Rate (m/s)	Determination 1	6.02E-04	m/s
	Determination 2	3.22E-04	m/s
	Determination 3	2.83E-04	m/s

Comments

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Date tested 14/07/2025

Date reported 14/07/2025

Signed - M.Driver / D. Driver / C. Driver
Director