1 Leonard Place
Westerham Road
Keston
Kent BR2 6HQ
T: +44 1689 889 980
info.kent@idom.com
idom.com

Vistry South East - Caterham
Linden House
Guards Avenue
Caterham
Surrey
CR3 5XL

Dan Chapman
By e-mail only: Dan.Chapman@vistry.co.uk

3 April 2025

Subject: Wickhurst Green – Winter (2024/25) Groundwater Monitoring Data
Our ref: L-21949av-2.4.2-25-174-NTD

Dear Mr Chapman,

Idom Merebrook (IDOM) has been commissioned by Vistry South East to undertake groundwater level monitoring during winter 2024/2025. This letter provides the data following the completion of the groundwater monitoring programme.

Site Setting

The site is located south of Broadbridge Way at National Grid Reference 514850, 130948. The site has historically been undeveloped fields. Part of the site was previously used as a site compound during the Wickhurst Green residential development.

The published geological map indicated no superficial deposits. The underlying bedrock is the Weald Clay Formation (mudstone).

A watercourse is located running through the centre of site orientated north to south before following the northern boundary of the site and being culverted.

IDOM Investigation

An intrusive investigation was carried out by IDOM on 18 October 2024. The investigation included the drilling of eight shallow windowless sample probe holes (MWS101 to MWS108) from 1.6 to 4 m bgl. Four (MWS101, MWS102, MWS104 & MWS108) of the windowless sampler boreholes were installed to enable environmental monitoring.

The encountered ground conditions encountered by IDOM are summarised in the table below.

Table 1: Summary of Sub-surface Ground Conditions

Strata	Depth to Top of Range (m bgl)	Thickness Range (m)
Topsoil	0.0	0.35 – 0.4
Made Ground	0.0	0.3 – 0.8

Strata	Depth to Top of Range (m bgl)	Thickness Range (m)
Alluvium	0.8	1.4
Weald Clay Formation	0.3 – 0.8	2.4 > depth not proven

Topsoil was encountered in most locations (except MWS103 and MWS108), generally comprising soft brown gravelly sandy clay.

Made ground, only encountered in MWS103 and MWS108, comprised soft to stiff gravelly sandy clay. Gravels comprised inclusions of flint, brick, concrete and clinker.

Alluvium was encountered in one location (MWS103) located southwest of the site comprising stiff bluish grey slightly sandy clay with partially decomposed plant material. A moderate organic odour was recorded from the alluvium layer.

The Weald Clay Formation was encountered in all borehole locations. The upper section of the Weald Clay Formation typically comprised firm to very stiff orangish brown and fissured clay with occasional gypsum crystals. The lower sections of the Weald Clay formation comprised extremely weak orangish brown, bluish grey and red mudstone, encountered in each location at depths between 0.7 m and 2.2 m bgl.

No visual or olfactory evidence of contamination was recorded, and perched water/groundwater was not encountered during the investigation.

The installation details for the IDOM wells are summarised below.

Table 2: IDOM monitoring wells

Location Ref	Depth To Top of Response Zone (m bgl)	Depth To Base Of Response Zone (m bgl)	Strata
MWS101	1.0	2.0	Weald Clay Formation
MWS102	1.0	2.0	
MWS104	1.0	2.0	
MWS108	1.0	2.7	

IDOM Monitoring Programme

Divers (water level loggers) were installed on 24 November 2024 within three (MWS101, MWS104 & MWS108) of the four monitoring wells installed by IDOM and later. A diver was not installed in MWS102 as this was consistently dry during the initial manual dips. The divers were set to record water level, pressure and temperature at 5-minute intervals. IDOM also attended site regularly to manually dip the wells (between 29 October 2024 and 17 March 2025.

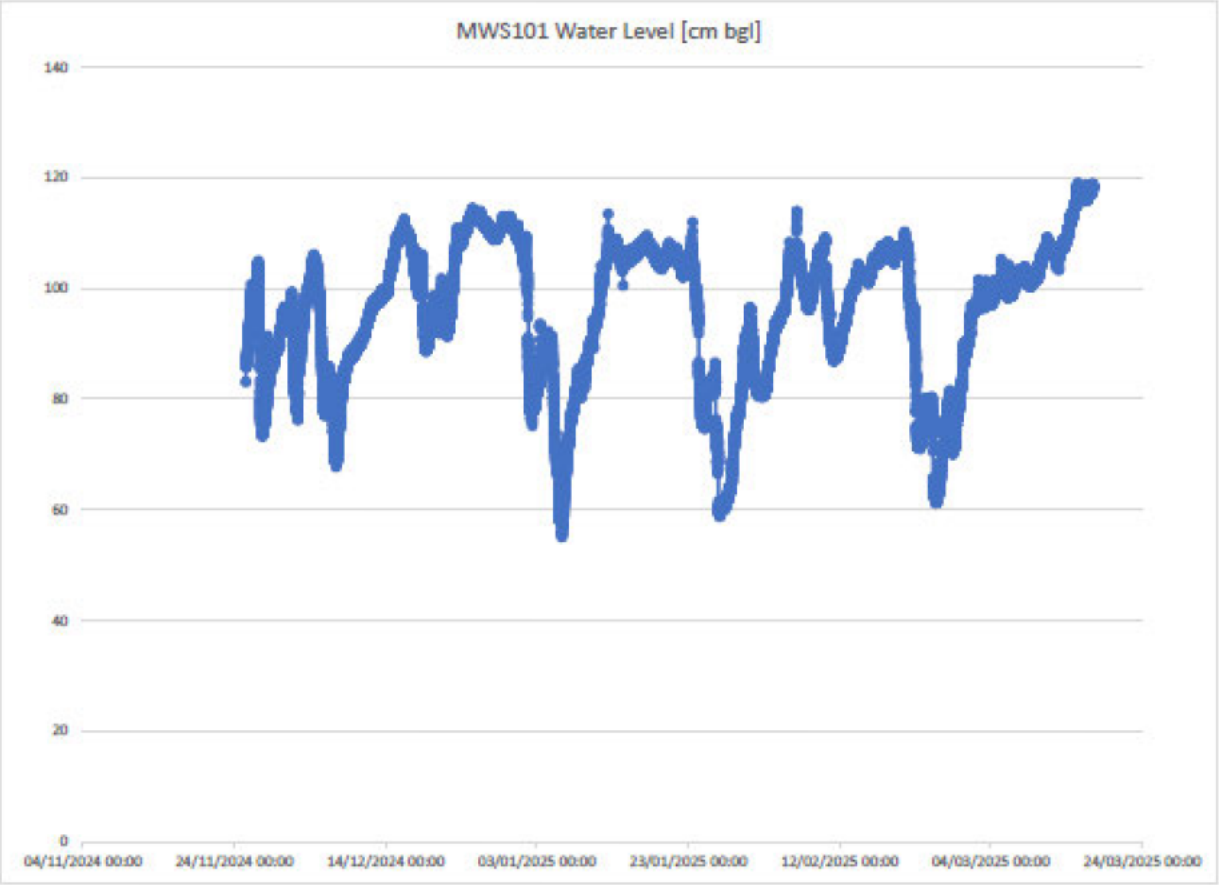
Results

The graphs below show the water level data recorded between and 25 November 2024 and 17 March 2025. Manual dip data is also summarised in the table below.

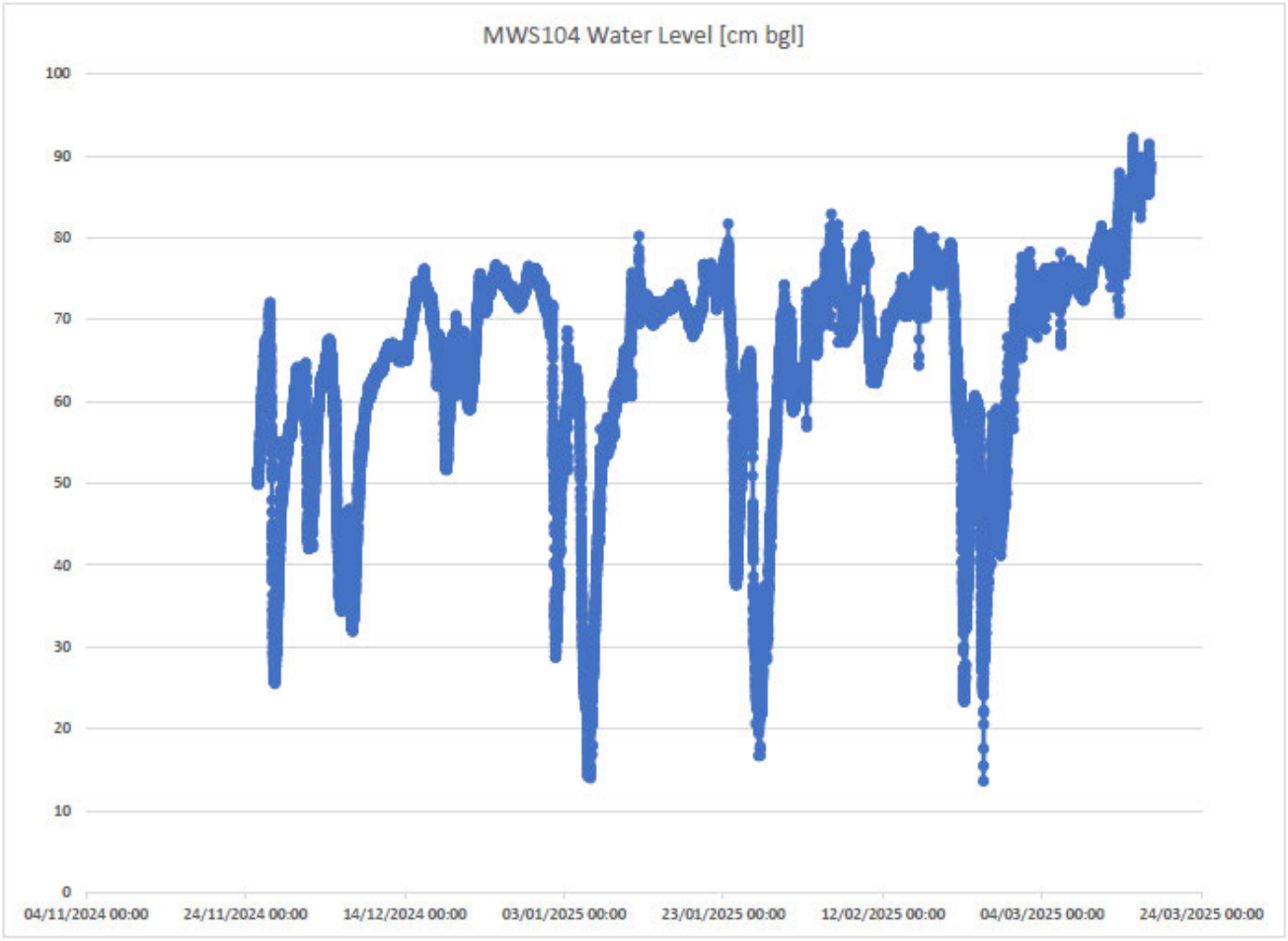
Table 3: Summary of manual dip data (between 29 October to 2024 and 17 March 2025)

Well	Groundwater level (m bgl)
MWS101	0.67 to 1.48
MWS102	1.3 to Dry
MWS104	0.46 to 1.66
MWS108	0.88 to 1.70

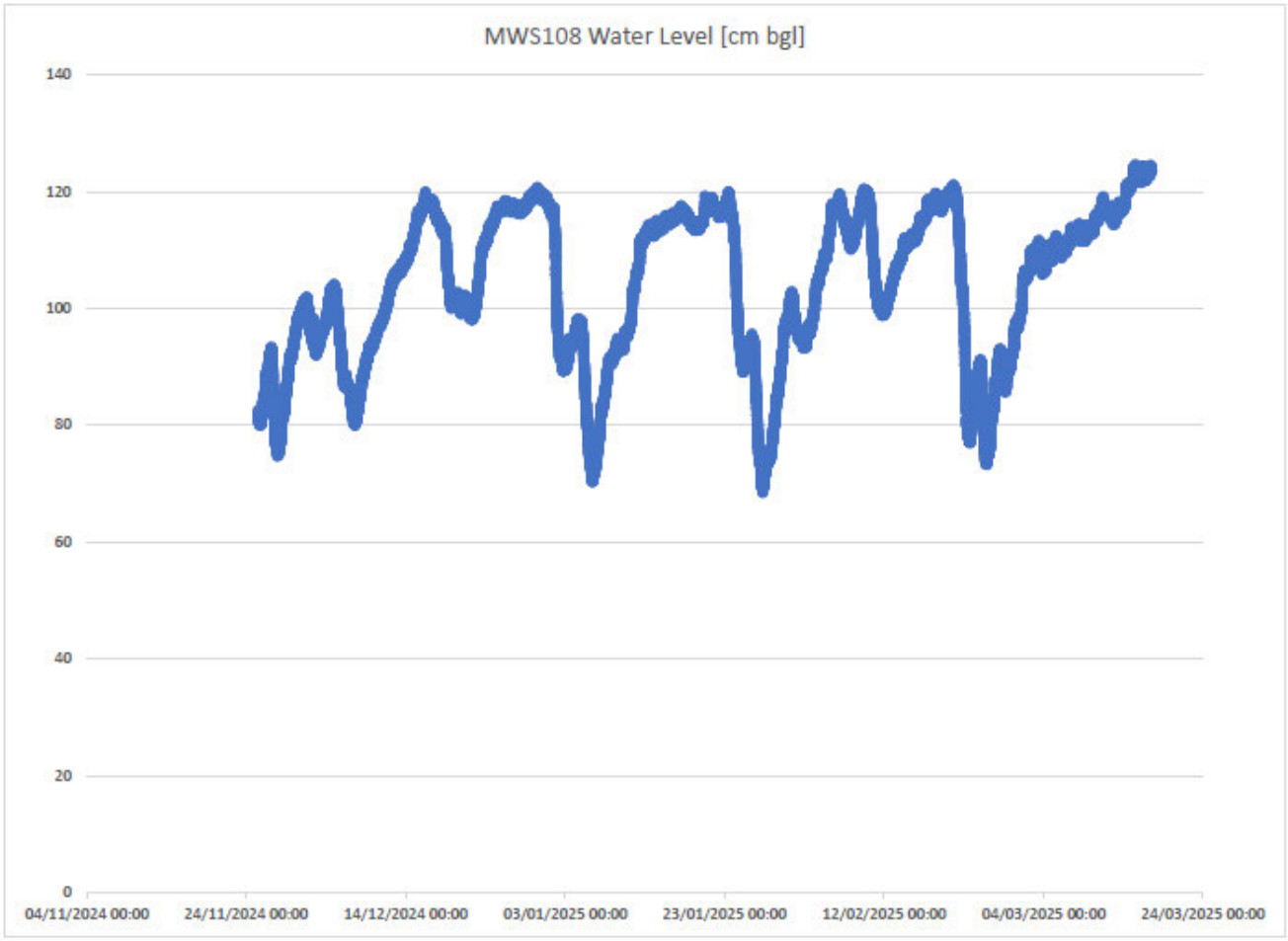
MWS101



MWS104


MWS104 Water Level [cm bgl]
100
90
80
70
60
50
40
30
20
10
0
04/11/2024 00:00
24/11/2024 00:00
14/12/2024 00:00
03/01/2025 00:00
23/01/2025 00:00
12/02/2025 00:00
04/03/2025 00:00
24/03/2025 00:00

MWS108



Conclusions

In general, there was a good corelation between the manual dip data and the diver data. Some differences can be due to the water level in the well dropping below the level of the installed diver. Also, surface water can enter that well once the bung is removed.

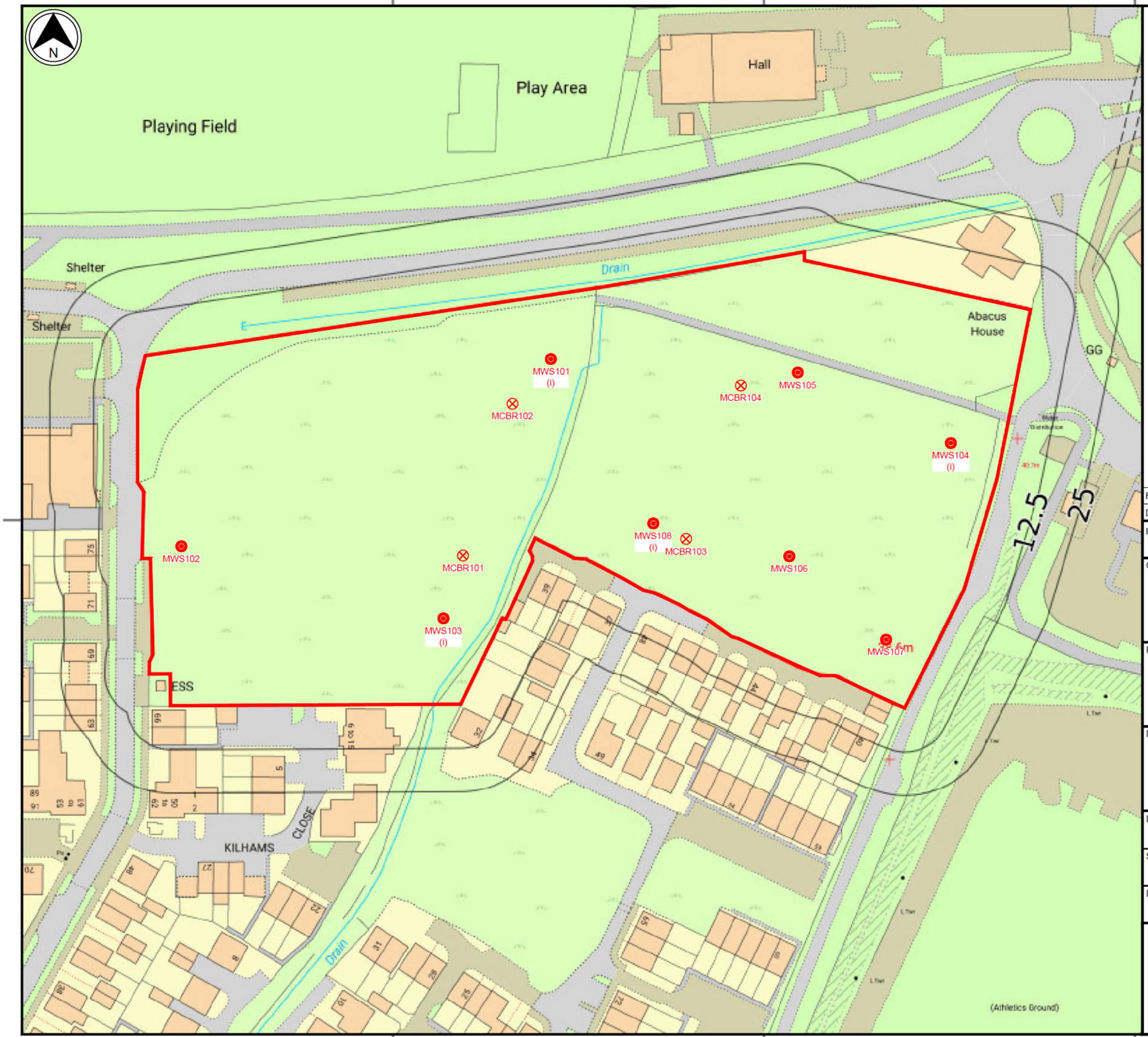
Groundwater at the site has been found to be relatively shallow. It was noted none of the wells installed with divers flooded or appeared adversely effected by surface water runoff during the monitoring programme.

With regards to the implications for foundations, the predominant geology is mudstone and the shallow water is unlikely to significantly reduce the bearing capacities. The greatest issue is likely to be dewatering. The groundwater appears to be influenced predominantly by rainfall and therefore excavations may become wet during and after periods of sustained or heavy rainfall. The mudstone is fissured and therefore the water would make the sides of excavations liable to collapse and shoring should be considered.

[redacted]ease do not hesitate to contact us.

Please find the following enclosed:

I Site Location Plan (21949av-304-001)
II Logs (MWS101, MWS102, MWS104 & MWS108)



LEGEND

- Site boundary
- MWSref — Merebrook window sample with location reference
- MCBRref — California bearing ratio test with location reference
- (i) — Install

DESCRIPTION	DATE	DWN	CHD	APP'D	REV
First Issue	12/11/2024	FO	MB	MB	-

ISSUE PURPOSE: PRELIMINARY

CLIENT: Vistry Central Home Counties

PROJECT: Wickhurst Green
Horsham

DWG TITLE: Undertaken Site Investigation Locations Plan

DWG NO.: 21949av-304-001

SCALE	DATE	FRAME DIMS (mm)
N.T.S	November 2024	(A3) 420 x 297

DRAWN	CHECKED	APPROVED
FO	MB	MB

IDOM
Registered Office: Cromford Mills, Mill Lane, Matlock, Derbyshire, DE4 3RQ
Website: www.merebrook.co.uk t: +44(0)1773 829 988 e: info.derbyshire@idom.com

Windowless Sample Log

Project Name: Wickhurst Green	Client: Vistry	Date: 18/10/2024
Location: Horsham	Contractor: 3D Drilling	
Project No. : 21949av	Crew Name:	Drilling Equipment: Terrier Rig Dynamic Sampler

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
MWS101	WLS		MB	1:50	Sheet 1 of 1

Well	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth (m)	Type	Results				
	0.20	ES		0.35			[TOPSOIL] - Grass over soft brown slightly gravelly slightly sandy CLAY with occasional rootlets. Gravels are subangular to subrounded fine to medium flint. Sand is fine to coarse.
	0.40	ES					
	0.70	D		0.80			Stiff orangish brown CLAY with rare gypsum crystals. [WEALD CLAY FORMATION]
	1.00	SPT	N=44 (4,5/9,16,13,6)				Extremeley weak orangish brown mottled red MUDSTONE. [WEALD CLAY FORMATION]
	1.20	D					
	2.00	SPT	N=50 (25 for 95mm/50 for 80mm)	2.00			End of Borehole at 2.00m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Refusal at 2.0 m bgl. No groundwater encountered

Windowless Sample Log

Project Name: Wickhurst Green	Client: Vistry	Date: 18/10/2024
Location: Horsham	Contractor: 3D Drilling	
Project No. : 21949av	Crew Name:	Drilling Equipment: Terrier Rig Dynamic Sampler

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
MWS102	WLS		MB	1:50	Sheet 1 of 1

Well	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth (m)	Type	Results				
	0.20	ES		0.35			[TOPSOIL] - Grass over soft brown slightly gravelly slightly sandy CLAY with occasional rootlets. Gravels are subangular to subrounded fine to medium flint. Sand is fine to coarse.
	0.40	ES					
	0.80	D		0.70			Stiff orangish brown CLAY with rare gypsum crystals. [WEALD CLAY FORMATION]
	1.00	SPT	N=31 (5,6/6,7,8,10)				Extremeley weak orangish brown mottled red MUDSTONE. [WEALD CLAY FORMATION]
	2.00	D		2.00			End of Borehole at 2.00m
	2.00	SPT	N=50 (7,12/50 for 190mm)				

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Refusal at 2.0 m bgl. No groundwater encountered

Windowless Sample Log

Project Name: Wickhurst Green	Client: Vistry	Date: 18/10/2024
Location: Horsham	Contractor: 3D Drilling	
Project No. : 21949av	Crew Name:	Drilling Equipment: Terrier Rig Dynamic Sampler

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
MWS104	WLS		MB	1:50	Sheet 1 of 1

Well	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth (m)	Type	Results				
	0.20	ES		0.40			[TOPSOIL] - Grass over soft brown slightly gravelly slightly sandy CLAY with occasional rootlets. Gravels are subangular to subrounded fine to medium flint. Sand is fine to coarse.
	0.50	D					Stiff orangish brown CLAY with rare gypsum crystals. [WEALD CLAY FORMATION]
	1.00	SPT	N=13 (2,3/3,3,3,4)	0.90			Extremely weak orangish brown mottled red MUDSTONE. [WEALD CLAY FORMATION]
	1.80	D					
	2.00	SPT	N=50 (5,6/50 for 170mm)	2.00			End of Borehole at 2.00m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Refusal at 2.0 m bgl. No groundwater encountered

Windowless Sample Log

Project Name: Wickhurst Green	Client: Vistry	Date: 18/10/2024
Location: Horsham	Contractor: 3D Drilling	
Project No. : 21949av	Crew Name:	Drilling Equipment: Terrier Rig Dynamic Sampler

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
MWS108	WLS		MB	1:50	Sheet 1 of 1

Well	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth (m)	Type	Results				
	0.20	ES		0.30			MADE GROUND comprising grass over soft brown slightly gravelly slightly sandy CLAY with occasional rootlets. Gravels are subangular to subrounded fine to medium flint, brick and clinker. Sand is fine to coarse.
	0.50	D					Stiff orangish brown mottled light yellow fissured CLAY. Fissures are closely spaced, randomly orientated, planar, smooth. [WEALD CLAY FORMATION]
	1.00	SPT	N=13 (2,2/3,3,3,4)				
	1.50	D		1.50			Extremely weak red MUDSTONE. [WEALD CLAY FORMATION]
	1.70	SPT	N=29 (10,10/7,6,8,8)	2.00			Very stiff orangish brown mottled red fissured CLAY with occasional claystone nodules. Fissures are closley spaced, randomly orientated, planar smooth. [WEALD CLAY FORMATION]
	2.50	D		2.40			Extremely weak grey MUDSTONE. [WEALD CLAY FORMATION]
	2.70	SPT	N=50 (25 for 95mm/50 for 90mm)	2.70			End of Borehole at 2.70m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Refusal at 2.7 m bgl. No groundwater encountered