

Barlestone Road, Newbold Verdon, Leicestershire
Groundwater Assessment
March 2025
Our Ref: 24832-GEO-0403 Rev B

Introduction

MEC Consulting Group Ltd (MEC) has been commissioned by David Wilson Homes East Midlands (hereafter referred to as 'the Client') to undertake a groundwater assessment for a proposed cemetery at Barlestone Road, Newbold Verdon, Leicestershire (hereafter referred to as 'the Site'). A site location plan is included in **Appendix A**.

Proposals

Outline planning application (all matters reserved except vehicular access) for the erection of up to 240 residential dwellings (Use Class C3), retention of the existing accesses off Barlestone Road and the creation of new accesses off Barlestone Road, land safeguarded for a cemetery and a health centre (Use Classes E(e)), public open space and associated infrastructure.

The proposed cemetery (hereafter referred to as the 'investigation area') is in the north-west of the site as detailed by the Illustrative Master Plan and Parameter Plan in **Appendix A**.

Objectives

The groundwater investigation has been completed according to the general principles of BS5930:2015 'Code of Practice for Site Investigations' and the Environment Agency guidance 'Protecting groundwater from human burials'. The objectives of this investigation are:

- To undertake intrusive investigation works to identify ground conditions; and
- To determine the groundwater levels beneath the site and assess the potential impact on the proposed cemetery.

Existing Relevant Site Information

The following previous report, prepared by MEC, has been referenced in this technical note:

- Phase I Geo-Environmental Desk Study,' report ref: 24832-GEO-0401 Rev C, dated October 2024.

Disclaimer

MEC has completed this technical note for the benefit of the Client and any relevant statutory authority which may require reference in relation to approvals for the proposed development. Other third parties should not use or rely upon the contents of this technical note unless explicit written approval has been gained from MEC.

MEC does not accept responsibility or liability for:

- a) The consequence of this document being used for any purpose or project other than that for which it was commissioned;
- b) The issue of this document to any third party with whom approval for use has not been agreed.

This technical note should be read in its entirety, including all associated drawings and appendices. MEC cannot be held responsible for any misinterpretations arising from the use of extracts of this technical note that are taken out of context.

Selected findings and opinions conveyed within this technical note are based on information obtained from external sources, as detailed within the previous reports, which MEC believes are reliable. All reasonable care and skill have been applied in examining the information obtained, nevertheless MEC cannot and does not guarantee the authenticity or reliability of the information it has relied upon from external sources.

Recommendations made or opinions expressed in the technical note are based on the exploratory hole records. Liability cannot be accepted for conditions not revealed by the exploratory holes, particularly between positions. Whilst every effort is made to ensure accuracy of data supplied, any opinion expressed as to the possible configuration of strata between or below investigation locations is for guidance only and responsibility cannot be accepted as to its accuracy.



The comments on groundwater are based on observations made at the time of the investigation and during the monitoring programme. It should be noted; however, that groundwater levels may vary from those reported due to seasonal or other effects.

Legislative Background

Burial sites can result in the discharge of hazardous substances which may impact on the quality of groundwater. They are therefore covered by the requirements of the Groundwater Daughter Directive 2006/118/EC as implemented by the Environmental Regulations. In accordance with the Environment Agency guidance 'Protecting groundwater from human burials', the conditions that a new cemetery development or new extension to an existing cemetery can operate under, without the need for an environmental permit, are as follows:

- A burial or any activity relating to burials must not cause pollution of surface water or groundwater;
- A burial must not be within 10 metres of any field drain or dry ditch;
- There must be at least 1 metre clearance between the base of a grave and the top of the water table;
- A burial must not be undertaken directly into groundwater;
- A grave must not be dug in intact bedrock;
- A grave must not be dug in an area susceptible to groundwater flooding;
- A burial must not be within 30m of any spring or watercourse;
- A burial must not be in or within 50m of a protected site and must not be in an ancient woodland;
- There must not be more than 2,500 burials per hectare, in proportion to the total area of the new cemetery or extension;
- The new cemetery must not be in a groundwater source protection zone 1;
- The new cemetery must not be within 250m of any well, spring or borehole;
- Burial rate limit, based on the aquifer designation must not be exceeded; and
- The new cemetery must not need ongoing active control measures in place to protect the environment.

In accordance with the Institute of Cemetery & Crematorium Management (ICCM) guidance 'Policy relating to Shallow Depth Graves' the minimum soil cover below ground level for a single burial is 3 feet. On this basis, the highest acceptable groundwater level without a permit for a single grave is calculated as being 2.30m bgl, assuming a standard coffin height of 38cm, and having at least 1m clearance between the base of the grave and top of the water table. For double burial plots, there is a requirement to maintain 6 inches of undisturbed soil between the two coffins and the highest acceptable groundwater level in this scenario would be 2.80m bgl.

The ICCM guidance also states that the grave should be free from water to a depth of at least 4 feet, 3 inches (1.30m) for a single burial and to a "proportionately greater depth" (1.80m) for a double burial. The guidance states that where soils are "not naturally free from water," mitigation measures would be required, comprising either draining the site to the required depth or raising site levels.

Geo-Environmental Setting

To follow is a summary of the geo-environmental setting of the site as detailed within the previous desk study.

Geology

British Geological Survey (BGS) mapping indicates that the site is underlain by superficial glaciofluvial deposits, comprising sand and gravel, which in turn are underlain by bedrock strata of the Edwalton Member comprising mudstone.

Soil infiltration rate testing was completed across the wider site by MEC in November 2023. Three exploratory hole locations (SA05-SA06 and TP03) were advanced in the investigation area and glaciofluvial deposits were recorded at all three locations, predominantly comprising brown and orangish brown, clayey, silty, gravelly sand with a low cobble content and gravels of subangular to subrounded, fine to coarse quartzite, flint, and sandstone. A localised band of brown, silty, sandy clay was recorded in SA05.

Hydrogeology

The Environment Agency (EA) classifies the superficial glaciofluvial deposits as a Secondary A aquifer and the Edwalton Member as a Secondary B aquifer.

The site is not located in a groundwater Source Protection Zone (SPZ) and groundwater abstractions are not recorded within 500m.

The investigation area is recorded to be at a low risk of groundwater flooding. The wider site is generally recorded to be at low risk with an area in the east considered to be at moderate risk.

Hydrology

The nearest surface water feature is a watercourse located 150m to the north.

Active surface water abstractions are not recorded within 500m.

The site is not located within an area considered to be at risk of surface water flooding and is located within Flood Zone 1.

Scope of Investigation

Site Works

A ground investigation was undertaken by MEC on the 18th January 2024 under full time supervision by a suitably qualified engineer. The following scope of works was undertaken:

- Service clearance of exploratory hole locations using radio and electromagnetic detection techniques;
- Six windowless sampler borehole locations (WS01-WS06) to depths of up to 5.00m below ground level (bgl);
- Installation of groundwater monitoring standpipes; and
- Logging of soil arisings to BS 5930:2015.

An Exploratory Hole Location Plan is presented as Drawing No. 24832_04_140_01.2 in **Appendix B** Exploratory hole logs, including the relevant trial pits from the previous soil infiltration rate testing, are provided in **Appendix C**.

Groundwater Monitoring

Groundwater monitoring was undertaken on six occasions between 22nd January and 14th June 2024. The results of the groundwater monitoring are presented in **Appendix C**.

Recorded Ground Conditions

The ground conditions encountered during this investigation comprised topsoil overlying superficial glaciofluvial deposits. Bedrock strata of the Edwalton Member were not encountered within the depths of the investigation.

Topsoil was encountered to an average depth of 0.30m bgl and generally comprised brown, slightly clayey, silty sand with gravels of subangular to subrounded, fine to medium quartzite and flint.

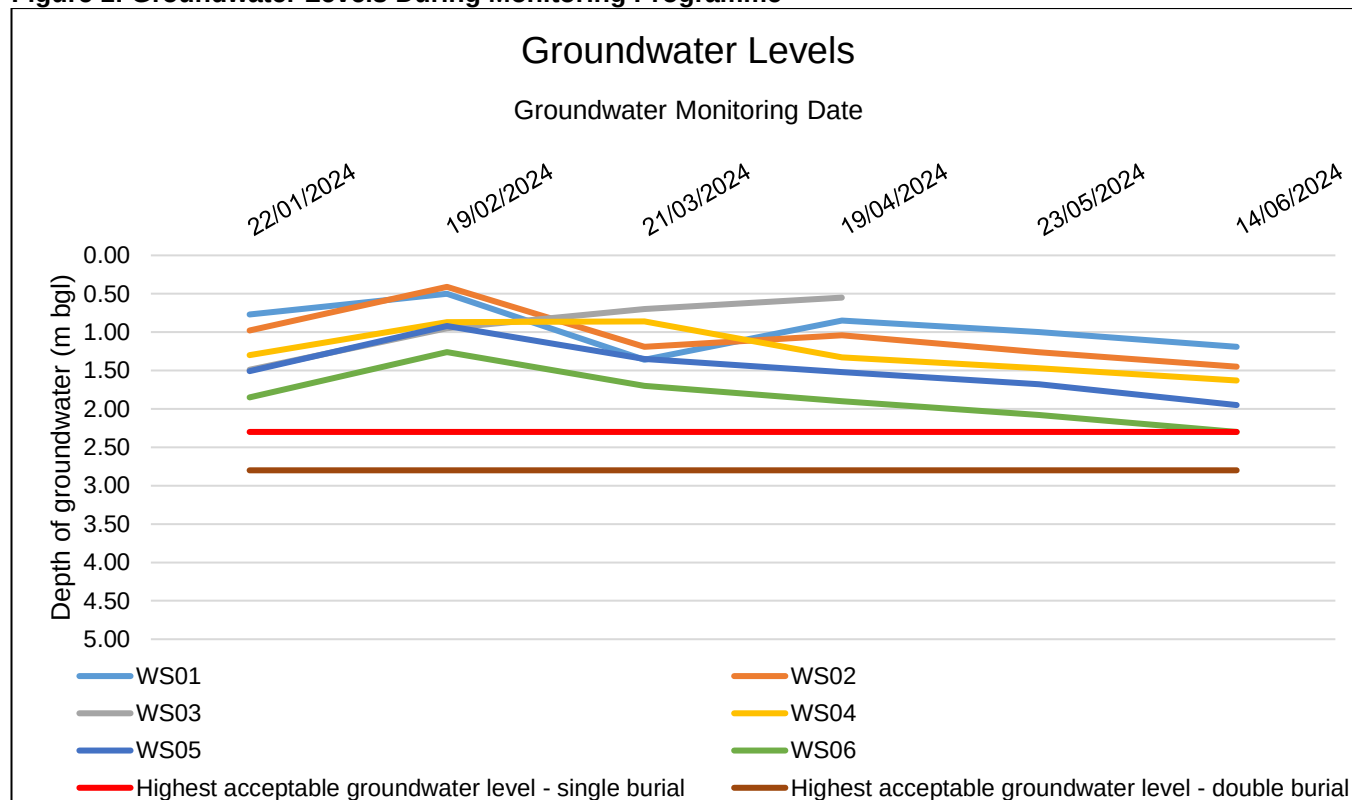
The superficial glaciofluvial deposits were encountered beneath the Topsoil to the maximum depth of the investigation (5.00m bgl) and typically comprised brown and reddish brown, silty, slightly sandy, gravelly clay with localised bands of slightly clayey, slightly silty, gravelly fine to medium sand. The gravels comprised subangular to subrounded, fine to medium quartzite and flint.

Groundwater Observations

Groundwater was encountered within the borehole locations at depths ranging between 2.00m and 2.60m bgl. During the soil infiltration rate testing, groundwater entry was restricted to SA06 and observed as a slight seepage at a depth of 2.20m bgl.

Groundwater levels were monitored on six occasions over an approximate six-month period. The results are presented graphically (Figure 1 below) compared to the highest acceptable groundwater levels for the cemetery scenario, without a permit. It should be noted that WS03 could not be located during the final two monitoring visits and therefore, could not be monitored.

Figure 1: Groundwater Levels During Monitoring Programme



At the time of the first visit on 22nd January 2024, groundwater was recorded in all exploratory hole locations at depths ranging between 0.77m and 1.85m bgl. Water levels had progressively risen to depths of between 0.41m and 1.26m bgl by 19th February 2024. From March to June 2024, groundwater levels generally fell to depths of between 1.19m and 2.30m bgl, although levels within WS03 continued to rise to the shallowest depth of 0.55m bgl on 19th April 2024. During four of the monitoring visits, the installed wells were purged of groundwater and the rate of recovery of water levels monitored. Observations are summarised in Table 1 below.

Table 1: Summary of Groundwater Levels

	Original Water Level (m bgl)	Purged Groundwater Depth (m bgl)	Recovered Water Levels (m bgl)	Time Elapsed (minutes)
Monitoring Visit undertaken on 22 nd January 2024				
WS01	0.77	2.18	0.77	63
WS02	0.98	1.02	0.98	54
WS03	1.49	1.65	1.49	45
WS04	1.30	1.60	1.30	36
WS05	1.51	1.60	1.51	28
WS06	1.85	2.97	1.85	22
Monitoring Visit undertaken on 19 th February 2024				
WS01	0.50	2.40	0.55	40
WS02	0.41	2.90	0.40	40
WS03	0.95	2.00	0.90	40
WS04	0.87	3.10	0.87	40
WS05	0.92	2.80	1.34	40
WS06	1.26	Groundwater was not purged.		



Monitoring Visit undertaken on 19 th April 2024				
WS01	0.85	1.71	0.85	49
WS02	1.04	1.06	1.04	45
WS03	0.55	1.66	1.53	103
WS04	1.33	1.46	1.53	41
WS05	1.52	1.57	1.52	34
WS06	1.90	1.95	1.90	31
Monitoring Visit undertaken on 14 th June 2024				
WS01	1.19	3.03	1.19	35
WS02	1.45	1.45	1.45	0
WS03	Unable to locate.			
WS04	1.63	1.75	1.63	5
WS05	1.95	1.95	1.95	0
WS06	2.30	3.54	2.30	5

The results of the purging exercise indicate that groundwater levels generally recovered close to the original water level within an hour suggesting they are representative of a prevailing groundwater table within the glaciofluvial deposits.

Conclusions and Recommendations

Based on the groundwater monitoring observations and the presence of a rechargeable and consistent groundwater body within the glaciofluvial deposits, the investigation area does not currently meet the requirements of the ICCM or Environment Agency for establishment of a cemetery without the need for an environmental permit.

Based on the ICCM guidance, it is likely that raising site levels would be the most appropriate option to deal with the high groundwater levels, as draining the site would require pumping to lower water levels and discharging to nearby watercourses. This would likely be uneconomical and potentially unacceptable to the Environment Agency.

Table 2 presents the degree to which site levels would need to be raised to ensure adequate clearance of the highest groundwater levels for the various burial options. The levels have been based on the highest groundwater readings from WS02 (0.41m) and WS06 (1.26m). For the options requiring the environmental permit, the level clearance has been calculated to allow an additional 100mm buffer above the highest groundwater readings to ensure burials are not excavated directly into the groundwater.

Table 2: Summary of Groundwater Levels

Scenario	Required Groundwater Clearance (m)	Level Raising Required (m)
Double Burial without Permit	2.80	1.54 - 2.39
Single Burial without Permit	2.30	1.04 - 1.89
Double Burial with Permit	1.80	0.54 – 1.39
Single Burial with Permit	1.30	0.04 – 0.89

The adopted scenario will be dictated by the cost and site restrictions of raising the levels. On the basis of the above, it is considered that the single burial option with an environmental permit will be the most appropriate for the proposed cemetery.

For the options requiring an environmental permit, a groundwater risk assessment would be required to assess the potential leaching of pollutants associated with the decay process. The Environment Agency guidance 'Cemeteries and burials: groundwater risk assessments' indicates that an establishment of the baseline groundwater quality would be required via the testing as per the extract below:



Figure 2: Extract from Environment Agency Guidance

Minimum frequency	Suite of determinands
Quarterly	water level, pH, temperature, electrical conductivity, dissolved oxygen, ammonium, total oxidised nitrogen (nitrate and nitrite), chlorine
6 monthly	sulphate, total organic carbon, biological oxygen demand, chemical oxygen demand, alkalinity, sodium, potassium, calcium, magnesium, iron, manganese, cadmium, chromium, copper, nickel, lead, zinc, phosphorus, formaldehyde (if allowed at the burial location), mercury

Once the baseline groundwater quality has been established, pollutant flux calculations and potentially detailed modelling would be required to determine the likely pollutant release from the cemetery and the impact on the underlying groundwater quality.

Based on the above, it is therefore considered that the site will likely be suitable for the proposed cemetery, following appropriate raising of site levels to ensure sufficient clearance of the highest groundwater levels and potential completion of an environmental permit.

REGISTRATION OF AMENDMENTS

Date	Rev	Comment	Prepared By	Checked By	Approved By
October 2024	-	First issue	Daniel Webb BSc (Hons) FGS Geo-Environmental Engineer	Christopher Wall MSc BSc (Hons) AMIEEnvSc RSoBRA Associate Geo-Environmental	David Torrance BSc (Hons) FGS CGeol Associate Director Geo-Environmental
October 2024	A	Amended based on client comments	Alexander Bennett BSc (Hons), MCIHT, MTPS Managing Director		
March 2025	B	Amended based on client comments	Christopher Wall MSc BSc (Hons) AMIEEnvSc RSoBRA Associate Geo-Environmental	David Torrance BSc (Hons) FGS CGeol Associate Director Geo-Environmental	Alexander Bennett BSc (Hons), MCIHT, MTPS Managing Director

Appendices

- A. Site Location Plan
Indicative Masterplan
Parameters Plan
- B. Exploratory Hole Location Plan
- C. Exploratory Hole Logs
- D. Groundwater Monitoring Data

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APPENDICES



APPENDIX A



SITE LOCATION PLAN

Project: Barlestone Road, Newbold Verdon

File Ref: 24832

O.S. Grid Ref: 444791, 304283

Postcode: LE9 9NE





- KEY**
- SITE BOUNDARY
 - INDICATIVE PUBLIC OPEN SPACE
 - RETAINED EXISTING VEGETATION
 - INDICATIVE PROPOSED TREES AND PLANTING
 - INDICATIVE BUILT FORM
 - CORRECTED VIEWPOINT 5 (DRAFT REGULATION 16 NEIGHBOURHOOD PLAN)
 - INDICATIVE SWALES
 - EXISTING BYWAY OPEN TO ALL TRAFFIC
 - UNCLASSIFIED ADOPTED ROAD
 - EXISTING FOOTPATH
 - POTENTIAL PEDESTRIAN CYCLE CONNECTION
 - RETAINED VEHICULAR ACCESS ROUTE TO EQUESTRIAN CENTRE/ PROPOSED ACCESS TO CEMETERY
 - PROPOSED PEDESTRIAN ACCESS POINT
 - RETAINED PROW ACCESS POINTS
 - PRIMARY VEHICULAR ACCESS POINT
 - EXISTING BARLESTONE ROAD CROSSING POINTS
 - NEW BARLESTONE ROAD CROSSING POINTS
 - INDICATIVE FOUL PUMPING STATION
 - AGRICULTURAL ACCESS
 - PRIVATE DRIVE ACCESS TO (EXISTING) WILLOWBROOK COTTAGE
 - DRAINAGE OUTFALL

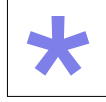
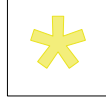
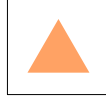
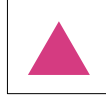
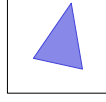
BARLESTONE ROAD, NEWBOLD VERDON – INDICATIVE MASTERPLAN

Issue:

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KEY

-  SITE BOUNDARY
-  PROPOSED OPEN SPACE
including sustainable urban drainage basins
-  PROPOSED DEVELOPMENT PARCELS
including roads/ footpaths/ infrastructure
-  LOCATION OF PROPOSED LAND
SET ASIDE FOR CEMETERY
-  SAFEGUARDED COMMUNITY
FACILITY LAND
-  INDICATIVE AREA REQUIRED FOR
INTERNAL ACCESS ROADS
not within the residential land use
-  INDICATIVE AREA REQUIRED FOR
PROPOSED ACCESS ROADS
not within the residential land use
-  PRIMARY VEHICULAR
ACCESS POINT
-  LOCATION OF INDICATIVE
PROPOSED BASINS
-  LOCATION OF EXISTING WATER
FEATURE
-  AGRICULTURAL ACCESS
-  PRIVATE DRIVE ACCESS TO (EXISTING)
WILLOWBROOK COTTAGE
-  PROPOSED INDICATIVE AREA OF PLAY
-  PROPOSED ACCESS TO CEMETERY
-  PROPOSED PEDESTRIAN/ CYCLE
ACCESS
-  RETAINED PROW ACCESS POINTS
-  DRAINAGE OUTFALL

*All features and areas shown to a tolerance of 10m

BARLESTONE ROAD, NEWBOLD VERDON – PARAMETER PLAN

PEGASUS
GROUP

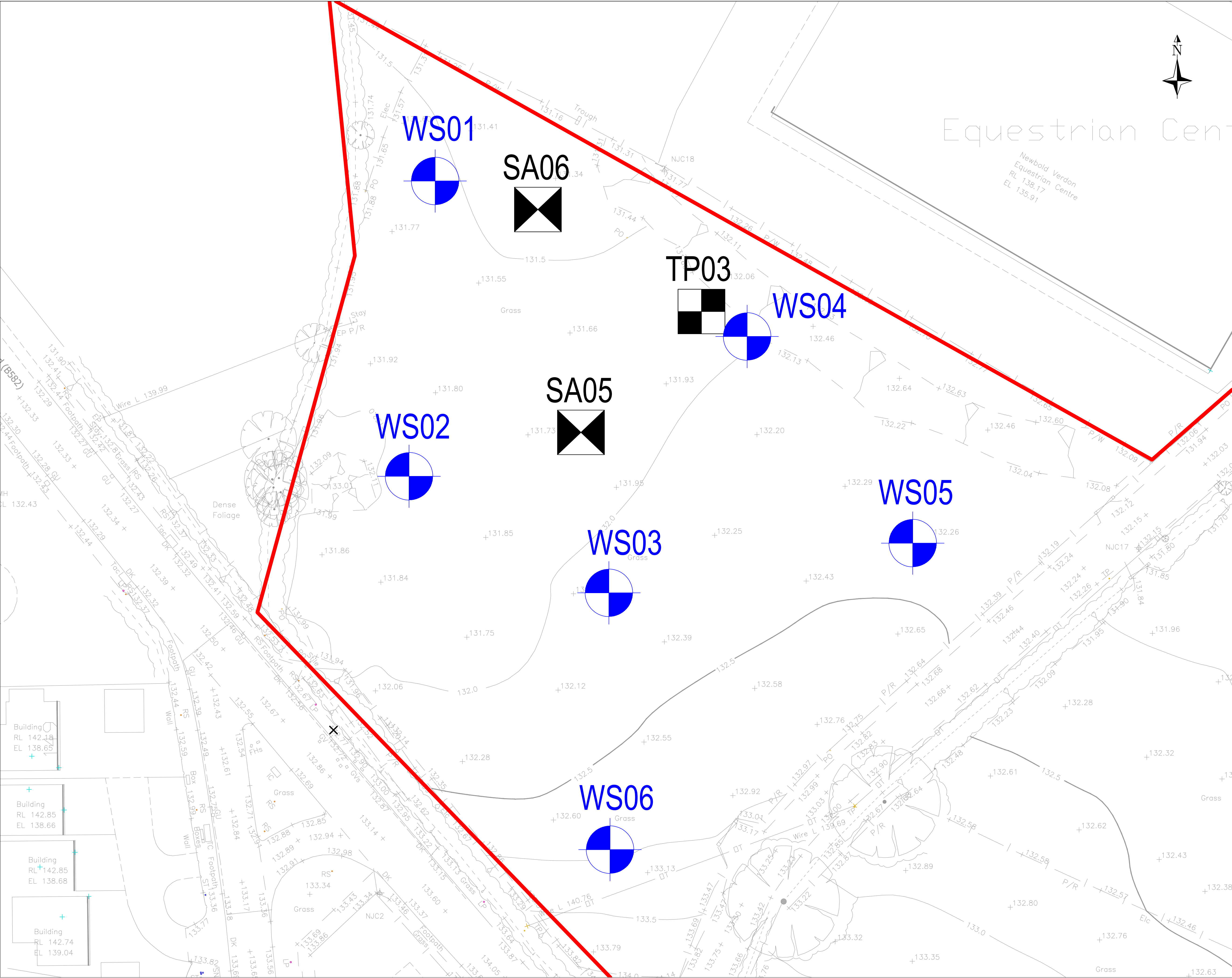


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APPENDICES



APPENDIX B



GENERAL NOTES

- DO NOT SCALE THIS DRAWING.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS, ARCHITECTS AND SPECIALIST DESIGN DRAWINGS AND DETAILS.
- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- THIS DRAWING IS FOR STRATEGY PURPOSES ONLY AND IS NOT TO BE USED FOR CONSTRUCTION PURPOSES.

KEY

- TRIAL PIT LOCATION (2023 INVESTIGATION)
- SOIL INFILTRATION TEST LOCATION (2023 INVESTIGATION)
- WINDOW SAMPLE LOCATION (2024 INVESTIGATION)
- APPROXIMATE SITE BOUNDARY

A	TO INCLUDE 2024 INVESTIGATION	DW	CW	DT	11.01.24
-	FIRST ISSUE	DW	CW	DT	31.10.23
REV	AMENDMENTS	DRN	CHK	APP	DATE

PROJECT:

**BARLESTONE ROAD
NEWBOLD VERDON
LEICESTERSHIRE**

DRAWING TITLE:

**EXPLORATORY HOLE
LOCATION PLAN**

CLIENT:

**DAVID WILSON HOMES
EAST MIDLANDS**

DRAWING NUMBER:

24832_04_140_01.2

REVISION: A	SHEET SIZE: A1	SCALE: 1:250m
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STATUS:

FOR INFORMATION / APPROVAL

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APPENDICES



APPENDIX C



Project: Barlestone Road, Newbold Verdon	Project No. 24832	Start Date: 18/01/2024	End Date: 18/01/2024	Plant Used: Tracked window sampling rig
Location: Leicestershire, LE9 9NE	Logged By:	Easting and Northing Co-ordinates: 444517.59 304475.06		Elevation (m AOD): 131.80
Client: David Wilson Homes East Midlands	Approved By: DT			

Strata Description	Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
				Type	Depth			
Brown, slightly clayey, silty, slightly gravelly, sand TOPSOIL. Gravel comprises sub-angular to sub-rounded, fine to medium quartzite and flint.	0.30	131.50						
Brown, silty, slightly sandy, gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium quartzite and flint. GLACIOFLUVIAL DEPOSITS								
<i>Becoming very sandy from 0.50m bgl.</i>	0.70	131.10						
Reddish brown, silty, slightly sandy, gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium sandstone, quartzite and flint. GLACIOFLUVIAL DEPOSITS								
Reddish brown, slightly clayey, silty, fine to medium SAND. GLACIOFLUVIAL DEPOSITS	2.10	129.70					2.00 ▼	
Reddish brown, silty, slightly sandy, gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium sandstone, quartzite and flint. GLACIOFLUVIAL DEPOSITS	2.80	129.00						
Reddish brown, silty, very sandy, slightly gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium quartzite and flint. GLACIOFLUVIAL DEPOSITS	3.00	128.80						
Borehole terminated at 5.00m	5.00	126.80						

Remarks: Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator. Descriptions based on visual inspection by a Geo-environmental engineer. Groundwater was encountered at 2.00m bgl. Visual or olfactory evidence of contamination was not observed. Co-ordinates and elevations estimated from the topographical survey.	Key: B - Bulk Sample D - Disturbed Sample U - Undisturbed Sample C - Core Sample ES - Environmental Sample W - Water Sample PID - PID Reading N60 - Corrected SPT N Value Ublow - No. of blows for U Sample
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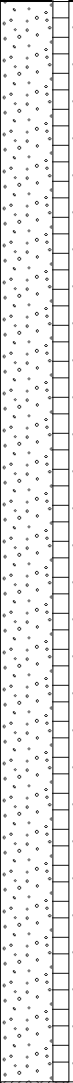


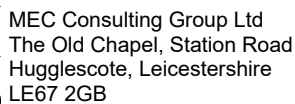
Project: Barlestone Road, Newbold Verdon	Project No. 24832	Start Date: 18/01/2024	End Date: 18/01/2024	Plant Used: Tracked window sampling rig
Location: Leicestershire, LE9 9NE	Logged By:	Easting and Northing Co-ordinates: 444513.89 304433.18		Elevation (m AOD): 131.85
Client: David Wilson Homes East Midlands	Approved By: DT			

Strata Description	Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
				Type	Depth			
Brown, slightly clayey, silty, slightly gravelly, sand TOPSOIL. Gravel comprises sub-angular to sub-rounded, fine to medium quartzite and flint.	0.30	131.55						
Brown, slightly clayey, slightly silty, gravelly, fine to medium SAND. Gravel comprises angular to sub-rounded, fine to medium quartzite and flint. GLACIOFLUVIAL DEPOSITS								
Reddish brown, silty, slightly sandy, gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium sandstone, quartzite and flint. GLACIOFLUVIAL DEPOSITS	0.70	131.15					2.50 ▼	
<i>Slightly gravelly between 1.00m and 2.00m bgl.</i>								
<i>Sandy between 1.50m and 2.00m bgl.</i>								
<i>Soft to firm from 2.50m bgl.</i>								
Reddish brown, silty, sandy, gravelly CLAY. Gravel comprises angular to sub-rounded, fine to medium quartzite and flint. GLACIOFLUVIAL DEPOSITS	3.00	128.85						
Borehole terminated at 5.00m	5.00	126.85						



Project: Barlestone Road, Newbold Verdon	Project No. 24832	Start Date: 18/01/2024	End Date: 18/01/2024	Plant Used: Tracked window sampling rig
Location: Leicestershire, LE9 9NE	Logged By:	Easting and Northing Co-ordinates: 444542.23 304416.65		Elevation (m AOD): 132.05
Client: David Wilson Homes East Midlands	Approved By: DT			

Strata Description	Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
				Type	Depth			
Brown, slightly clayey, silty, slightly gravelly, sand TOPSOIL. Gravel comprises aub-angular to sub-rounded, fine to medium quartzite and flint.	0.30	131.75						
Brown, gravelly, fine to medium SAND. Gravel comprises angular to sub-rounded, fine to medium quartzite and flint. GLACIOFLUVIAL DEPOSITS								
Reddish brown, silty, slightly sandy, gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium sandstone, quartzite and flint. GLACIOFLUVIAL DEPOSITS	0.55	131.50					2.60 ▼	



WS04

Sheet 1 of 1

Plant Used:
Tracked window
sampling rig

Elevation (m AOD):

131.95

Strata Description	Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
				Type	Depth			
Brown, slightly clayey, silty, slightly gravelly, sand TOPSOIL. Gravel comprises sub-angular to sub-rounded, fine to medium quartzite and flint.	0.30	131.65	[Pattern]					
Brown, slightly clayey, slightly silty, slightly gravelly, fine to medium SAND. Gravel comprises sub-angular to sub-rounded, fine to medium quartzite and flint. GLACIOFLUVIAL DEPOSITS	0.65	131.30	[Pattern]					
Reddish brown, silty, gravelly CLAY. Gravel comprises angular to sub-rounded, fine to coarse quartzite, flint and sandstone. GLACIOFLUVIAL DEPOSITS	2.00	129.95	[Pattern]				2.10 ▼	
Reddish brown, silty, sandy, gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium quartzite and flint. GLACIOFLUVIAL DEPOSITS	4.80	127.15	[Pattern]					
Reddish brown, slightly silty, slightly gravelly, fine to medium SAND. Gravel comprises sub-angular, fine to medium quartzite. GLACIOFLUVIAL DEPOSITS	5.00	126.95	[Pattern]					
Borehole terminated at 5.00m								

Exploratory hole location scanned with Cable Avoidance Tool and Signal Generator.
Descriptions based on visual inspection by a Geo-environmental engineer.
Groundwater was encountered at 2.10m bgl.
Visual or olfactory evidence of contamination was not observed.
Co-ordinates and elevations estimated from the topographical survey.

B - Bulk Sample
D - Disturbed Sample
U - Undisturbed Sample
C - Core Sample
ES - Environmental Sample
W - Water Sample
PID - PID Reading
N60 - Corrected SPT N Value
Ublow - No. of blows for U Sample



MEC Consulting Group
MEC Consulting Group Ltd
The Old Chapel, Station Road
Hugglescote, Leicestershire
LE67 2GB

Exploratory Hole ID: **WS06**
Sheet 1 of 1

Project: Barlestone Road, Newbold Verdon	Project No. 24832	Start Date: 18/01/2024	End Date: 18/01/2024	Plant Used: Tracked window sampling rig
Location: Leicestershire, LE9 9NE	Logged By:	Easting and Northing Co-ordinates: 444542.39 304380.22		Elevation (m AOD): 133.00
Client: David Wilson Homes East Midlands	Approved By: DT			

Strata Description	Depth (m)	Level (m AOD)	Legend	Samples		Tests	Groundwater (m)	Backfill
				Type	Depth			
Brown, slightly clayey, silty, slightly gravelly, sand TOPSOIL. Gravel comprises aub-angular to sub-rounded, fine to medium quartzite and flint.	0.25	132.75						
Brown, slightly clayey, slightly silty, gravelly SAND. Gravel comprises sub-angular to sub-rounded, fine to medium quartzite and flint.	0.45	132.55						
GLACIOFLUVIAL DEPOSITS								
Reddish brown, silty, gravelly CLAY. Gravel comprises sub-angular to sub-rounded, fine to medium sandstone, flint and quartzite.								
GLACIOFLUVIAL DEPOSITS								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
								
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APPENDICES



APPENDIX D

Depth to Groundwater Summary						
Exploratory Hole	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5	Visit 6
	22/01/2024	19/02/2024	21/03/2024	19/04/2024	23/05/2024	14/06/2024
WS01	0.77	0.50	1.36	0.85	1.00	1.19
WS02	0.98	0.41	1.19	1.04	1.26	1.45
WS03	1.49	0.95	0.70	0.55	NR	NR
WS04	1.30	0.87	0.86	1.33	1.47	1.63
WS05	1.51	0.92	1.35	1.52	1.68	1.95
WS06	1.85	1.26	1.70	1.90	2.08	2.30



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