

## Site Investigation Report

**WHC reference:** 8218

### **Job information**

**Client:** BVS Subsidence Ltd

**Client reference:** H021132576

**Visit date:** 7<sup>th</sup> October – 8<sup>th</sup> October 2024

**Report date:** 1<sup>st</sup> November 2024

## Job Summary



Address: 93 Main Street, Little Downham, Ely, Cambridgeshire, DB6 2SX

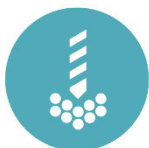
### Services Utilised:



Trial Hole  
Actioned: Yes  
Number: 2



Drainage repairs  
Actioned: No



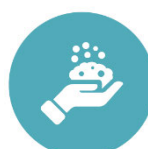
Borehole  
Actioned: No  
Number: 0



Root samples taken  
Actioned: Yes



Dynamic or Mackintosh probe  
Actioned: No  
Number: 0



Soil samples taken  
Actioned: Yes



CCTV survey  
Actioned: No



Contact us  
Read below

## Plans

### Site Plan:



### Key

	Datum Point		Combined Drains		Foul Pipe
	Dynamic Probe		Foul Drains		Storm Pipe
	Trial Pit		Storm Drains		Foul Gulley
	Borehole		Unsurveyed Drains		Storm Gulley
	Trial pit/BH		Property Boundary		Area of Damage

## Job Information

### Job Overview:

#### Brief

William Hunt Consulting were commissioned by BVS Subsidence Ltd to undertake a site investigation within the area of concern, located at the rear right-hand elevation of the property. Site Investigation to consist of 2No. Trial Pit together with Laboratory Testing.

### Findings:

#### Trial Pit Records

Trial Pit Details can be found in Appendix A, where in trial pit 1, a 750mm thick concrete footing was founded at a depth of 1.30m below ground level, with a 280mm projection. Trial Pit 1 found Tarmac to a depth of 0.08m below ground level, followed by Made Ground MOT to a depth of 0.38m BGL. Made Ground consisting of topsoil and clay was then recorded to a depth of 0.68m BGL, followed by Sand to 1.28m BGL. Below this, firm very dry silty Clay was encountered to a depth of 1.38m BGL, underlain by firm to stiff very dry grey Clay with chalk fragments to 2.25m below ground level, becoming stiff at 1.85m, at which point the trial pit was terminated due to refusal. Trial Pit did not encounter groundwater, with roots present at 0.88m, 1.25m, 1.30m, 1.40m, 1.70m and 2.20m.

In trial pit 2, a root barrier was encountered to a depth of 1.73m below ground level. Trial Pit 2 found Tarmac to a depth of 0.08m below ground level, followed by Made Ground MOT to a depth of 0.30m BGL. Made Ground consisting of topsoil and clay was then recorded to a depth of 0.60m BGL, underlain by sand to 1.20m BGL. Below this, firm to stiff very dry grey Clay with fragments of chalk was encountered to a depth of 1.80m BGL, at which point the trial pit was terminated.

#### Root Identification

Root Identification Results can be found in Appendix B, where in trial pit 1, multiple Cupressaceae roots were identified at depths of 0.88m, 1.25m and 1.40m with root diameters of 4mm, 3mm and 3mm, respectively.

Trial Pit 1 also identified multiple Populus roots at depths of 1.25m, 1.30m, 1.40m, 1.70m and 2.20m with root diameters of 2mm, 23mm, 1.50m, <1mm and 2mm. Starch absent in all roots encountered, with all roots in a state of decay.

#### Soil Sample Testing

Laboratory Testing Results can be found in Appendix C.



## Photographs

Images:

**Photo 1 – Trial Pit 1**



**Photo 2 – Trial Pit 1**



**Photo 3 – Trial Pit 1**



**Photo 4 – Trial Pit 1**





Photo 5 – Trial Pit 1



Photo 6 – Trial Pit 1



Photo 7 – Trial Pit 2



Photo 8 – Trial Pit 2





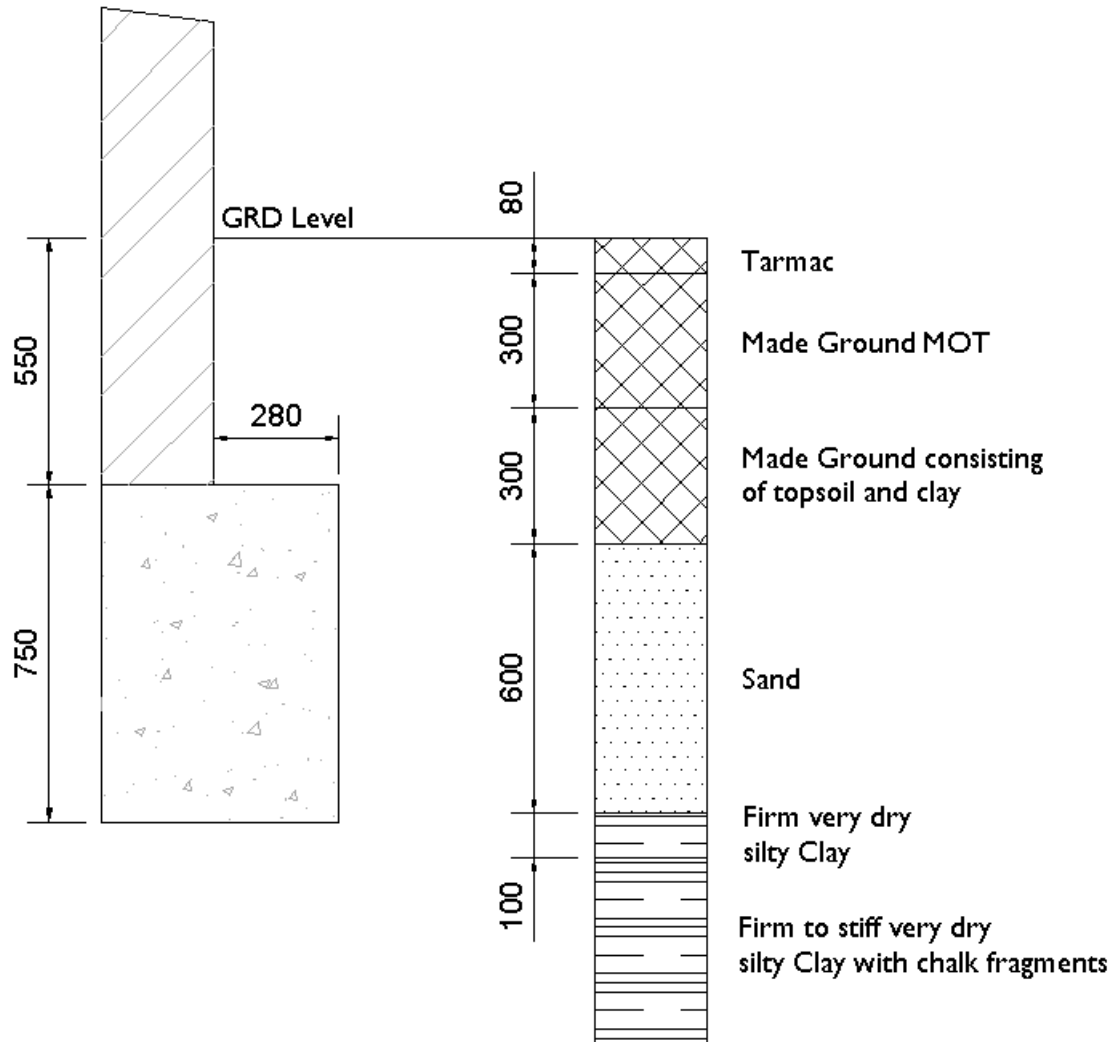
**Photo 9 – Trial Pit 2**



## Appendices

### Appendix A – Trial Pit Details

#### Trial Pit I








# Borehole Log



Project Name: 93 Main Street		Client: BVS Subsidence Ltd		Date: 07/10/2024 - 08/10/2024	
Location: 93 Main Street, Little Downham, Ely, Cambridgeshire, DB6 2SX		Contractor: WHC		Drilling Equipment: 1.6Tonne Excavator	
Project No. : 8218		Crew Name:			
Borehole Number TP1		Hole Type TP		Logged By ABW	
Scale 1:13		Page Number Sheet 1 of 1			

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description
		Depth (m)	Type	Results			
		1.30	D		0.08	Tarmac.	
					0.38	Made Ground MOT.	
					0.68	Made Ground consisting of topsoil and clay. <u>Top of footing at 0.55m.</u>	
					1.28	Sand.	
					1.38	Firm very dry silty Clay. <u>Bottom of footing at 1.30m.</u>	
		2.25	D		1.38	Firm to stiff very dry grey Clay with chalk fragments.  <u>Becoming stiff at 1.85m.</u>	
					2.25	End of Borehole at 2.250m.	

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  
Trial Pit was terminated at 2.25m below ground level due to refusal. Trial pit did not encounter groundwater, with roots present at 0.88m, 1.25m, 1.30m, 1.40m, 1.70m and 2.20m.



		<h1 style="text-align: center;">Borehole Log</h1>									
Project Name: 93 Main Street				Client: BVS Subsidence Ltd				Date: 07/10/2024 - 08/10/2024			
Location: 93 Main Street, Little Downham, Ely, Cambridgeshire, DB6 2SX				Contractor: WHC				Drilling Equipment: 1.6Tonne Excavator			
Project No. : 8218				Crew Name:							
Borehole Number TP2		Hole Type TP				Logged By ABW		Scale 1:10		Page Number Sheet 1 of 1	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description				
		Depth (m)	Type	Results							
					0.08	[Pattern]	Tarmac.				
							Made Ground MOT.				
					0.30	[Pattern]	Made Ground consisting of topsoil and clay.				
					0.60	[Pattern]	Sand.				
1.20	[Pattern]	Firm to stiff very dry grey Clay with chalk fragments.									
1.80	[Pattern]	Root Barrier present to a depth of 1.73m.									
		End of Borehole at 1.800m									
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
<b>Remarks</b> Trial Pit was terminated at 1.80m below ground level. Trial Pit did not encounter groundwater, with root barrier present to a depth of 1.73m.											



# ROOT IDENTIFICATION

## 93 Main Street

Client Reference: WHC016(8218)  
 Report Date: 30 October 2024  
 Our Ref: R59126

Sub Sample	Species Identified		Root Diameter	Starch
<b>TP1:</b>				
0.88m	Cupressaceae spp.		4 mm	Absent
1.25m	Cupressaceae spp.	1	3 mm	Absent
1.25m	<i>Populus</i> spp. *	2	2 mm	Absent
1.3m	<i>Populus</i> spp. *	3	23 mm	Absent
1.4m	Cupressaceae spp.	4	3 mm	Absent
1.4m	<i>Populus</i> spp. *		1.5 mm	Absent
1.7m	<i>Populus</i> spp. *	5	<1 mm	Absent
2.2m	<i>Populus</i> spp. *	6	2 mm	Absent

### Comments:

- 1 - Plus 1 other also identified as Cupressaceae spp.
- 2 - Plus 1 other also identified as *Populus* spp.
- 3 - Plus 1 other also identified as *Populus* spp.
- 4 - Plus 1 other also identified as Cupressaceae spp.
- 5 - Plus 1 other also identified as *Populus* spp.
- 6 - Plus 1 other also identified as *Populus* spp.

Cupressaceae spp. include Lawson cypress, western red cedar, Monterey cypress, Leyland cypress and junipers.  
*Populus* spp. are poplars and aspens.

All roots in a state of decay.

\* EPSL research has developed a unique ability to differentiate Willows from Poplars. No other laboratory in the UK can currently provide this service. We now offer this benefit at no extra cost.

# Laboratory Summary Results

Our Ref: W/HC016

Location : 93 Main Street, Little Downham, Ely, Cambridgeshire, CB6 2SX (8218)

Client: William Hunt Consulting

Address: The Barn, Oxburgh, Fosse Way, Rugby, CV23 9JF

Date of Report : 29/10/2024

TP/BH No	Sample Ref		Type	Water Content (%) [2]	Soil Fraction >0.425mm (%) [2]	Liquid Limit (%) [3]	Plastic Limit (%) [4]	Plasticity Index (%) [5]	Liquidity Index* [5]	Modified Plasticity Index* (%) [6]	Soil Class* [7]	Filter Paper Contact Time (d)	Soil Sample Suction (kPa) [8]	Roots Present or No Roots Observed* [9]	In situ Shear Vane Strength* (kPa) [10]	Organic Matter O.M. (%) [11]	pH Value [12]	Sulphate Content (g / l)			Class* [15]
	Depth (m)																	SO <sub>3</sub> [13]	SO <sub>4</sub> [14]		
TP1	0.5 - 1.3		D	22.7	<5	53	20	33	0.08	33	CH										
	1.3- 2.25		D	23.2	<5	44	21	23	0.09	23	CI										

## Test Methods / Notes

- [1] BS EN ISO 17892-1:2014 + A1:2022
- [2] Not recorded if <5%, otherwise measured as agreed with client
- [3] BS EN ISO 17892-12:2018 + A2:2022 Clause 53 - 1 Pf Test - Core 60g/50'
- [4] BS EN ISO 17892-12:2018 + A2:2022 Clause 55
- [5] BS EN ISO 17892-12:2018 + A2:2022 Clause 6.3
- [6] BS EN ISO 17892-12:2018 + A2:2022 Clause 6.3
- [7] BS EN ISO 17892-12:2018 + A2:2022 Clause 6.3
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- [100] BS EN ISO 17892-12:2018 + A2:2022 Clause 6.3

Test results reported relate only to the items tested. This report shall not be reproduced except in full without approval of the laboratory.

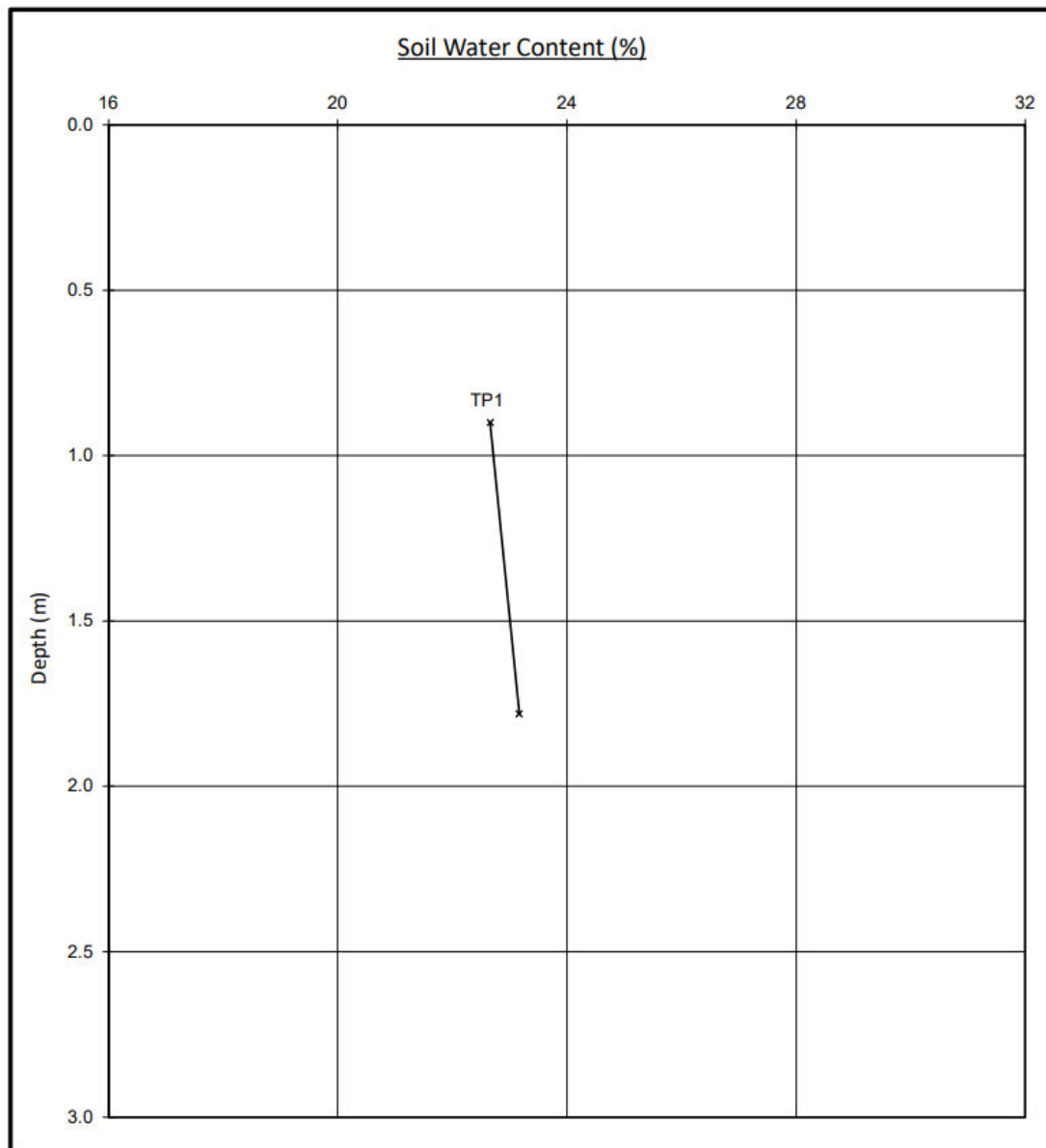


Version: SumRep (Issue 1, Rev 0 & Issued 17.11.23)  
28443



# Water Content Profiles

Our Ref : WHC016  
Location : 93 Main Street, Little Downham, Ely, Cambridgeshire, CB6 2SX (8218)  
Work carried out for: William Hunt Consulting  
The Barn, Oxburgh, Fosse Way, Rugby, CV23 9JF



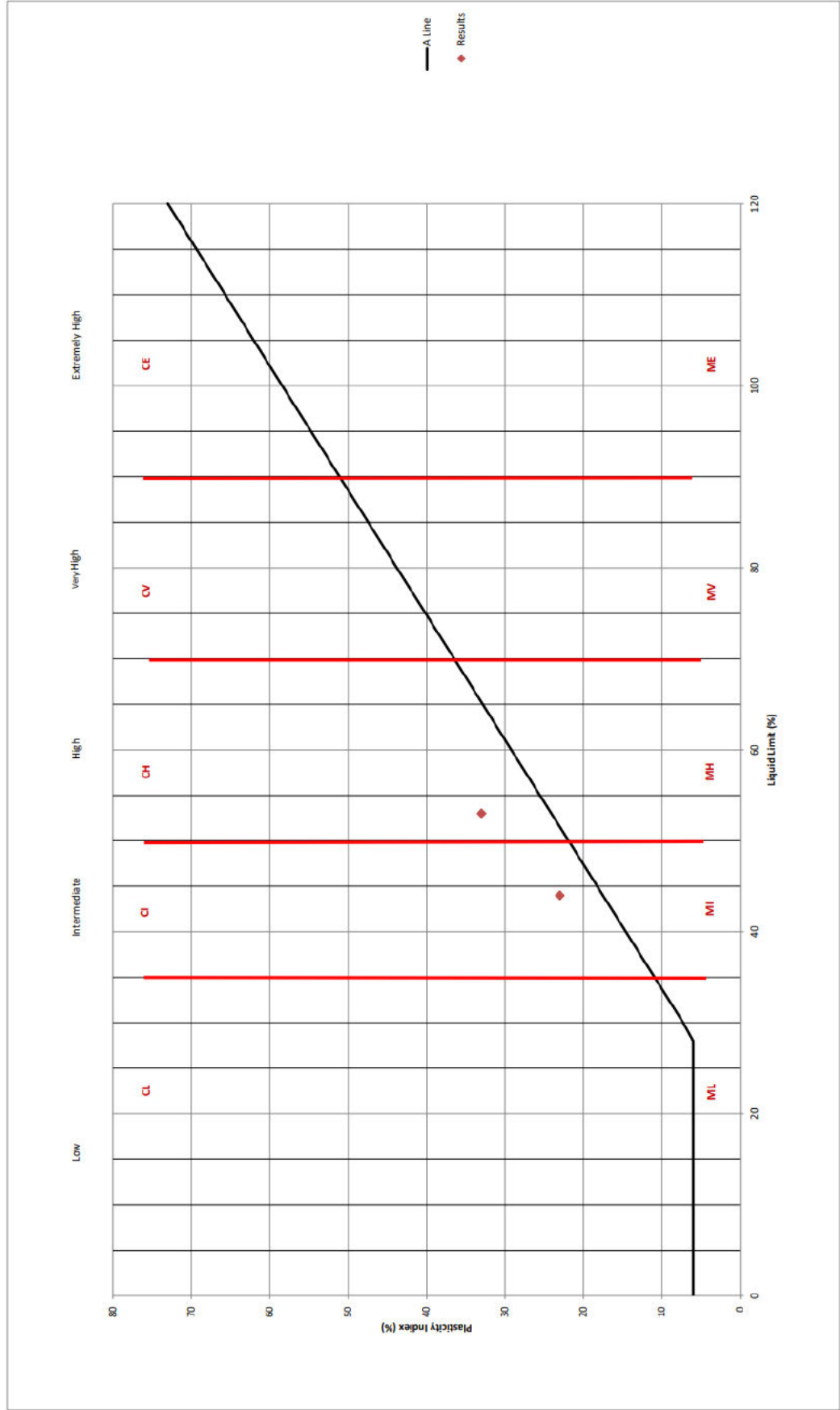
## Notes

1. If plotted, 0.4 LL and PL+2 ( after Driscoll, 1983 ) should only be applied to London Clay ( and similarly overconsolidated clay) at shallow depths.

## Plasticity Chart

Our Ref : WHC016  
Location : 93 Main Street, Little Downham, Ely, Cambridgeshire, CB6 2SX (8218)  
Work carried out for: William Hunt Consulting  
The Barn, Oxburgh, Fosse Way, Rugby, CV23 9JF

Date of Report : 29/10/2024







## Contact us

Need further information?

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