

18 October 2013

Your ref:
Planning ref:
Our ref: J13111/DB/c01

Mr P Rosewarne
Barratt Homes Southampton
Tollbar House
Tollbar Way
Hedge End
Southampton
Hampshire
SO30 2UH

Dear Mr Rosewarne,

RE: CAUSEWAY, FARM SITE PETERSFIELD, HANTS
PRE-PURCHASE DESK STUDY, GROUND INVESTIGATION AND
CONTAMINATED LAND ASSESSMENT LETTER REPORT

Further to an instruction by Barratt Homes Southampton on behalf of Barratt Homes, Bovis Homes and 4LL, we have carried out desk study research and subsequently attended the above site and carried out a walkover survey and preliminary ground investigation to provide information to assist with the redevelopment of the site through the construction of two storey new houses, together with driveways, access roads, hardstanding for car parking, soft landscaping and areas of private domestic gardens.

This report is provided in accordance with our standard terms, conditions and limitations. Our comments should be viewed in the context of the agreed scope of the investigation, the locations of the accessible sampling points and the range of data sources consulted, no liability can be accepted for information in other data sources

Scope of Work

A desk study has been carried out in accordance with current guidelines for best practice to establish the environmental site setting and development history of the site and the surrounding area. This desk study has been reviewed in the light of updated environmental data searches.

The desk study has been followed by a preliminary ground investigation to provide information to assist with the design of new foundations, pavements, soakaways and facilitate the inspection of soils and recovery of soil samples for contaminated land assessment.

The ground investigation has been carried out in three phases comprising an initial series of 27 small diameter boreholes drilled by means of an open drive percussive soil sampling rig to a depth of up to 6.45 m. This initial phase of investigation was supplemented with series of 10 trial pits excavated by means of a rubber tyred mechanical excavator in selected locations to depths of up to 2.20 m below ground level, to facilitate soakage testing and a further inspection of the near surface ground conditions. Combined soil gas and groundwater monitoring standpipes have been installed into a number of the boreholes to facilitate future groundwater and soil gas monitoring. A limited programme of winter water level monitoring is proposed to be carried out during the 2013 / 2014 winter period

The soils encountered in the boreholes and trial pits were inspected by a Chartered Geologist and representative soil samples were recovered for subsequent laboratory testing for geotechnical properties and for contaminated land soil analyses to determine the presence of a wide range of potential soil contaminants.

In accordance with current best practice, the findings of the desk study and ground investigation have been used to formulate a conceptual model for the site and facilitate a preliminary qualitative risk assessment and discussion of the implications of any identified issue of potential concerns with regards to ground contamination. On the basis of this assessment, the requirement for any further assessment or remedial action as part the redevelopment of this site for residential purposes has been determined.

Site Description

The site is irregularly shaped, with approximate maximum dimensions 500 m by 300 m and is predominantly formed by an area of open pasture land that is currently grazed by a herd of horses. The northwestern part of the site comprises a triangular parcel of land that is currently fenced and heavily vegetated with long grass, areas of brambles and sapling trees. There are a number of substantial mature, semi-mature and veteran trees along the site boundaries which are formed predominantly by mature hedges. Within the centre of the site, but outside of the site boundary are a number of former farm buildings that have been converted for residential use together with areas of driveway for car parking and private domestic gardens.

The majority of the northwestern site boundary is formed by a wire fence, beyond which are various fences, hedges and gates that mark the rear gardens of the various houses that front onto The Causeway to the north. Access to the site is provided by a gravel dressed track that leads from The Causeway into the cluster of residential converted former farm buildings, with field gates accessing the site from this track. The northeastern boundary to the site is formed by a tree lined small river that locally flows south and eastwards and eventually joins the River Rother. The southeastern site boundary is formed by a mature hedge, beyond which are further heavily grazed paddocks that form part of the wider site and are to be developed into a Country Park as part of the development proposals.

The southern part of the southwestern boundary to the site is formed by the extent of the Broadway Park, a static caravan site, whilst the northern part of the boundary is formed by a small area of woodland and land associated with a removals company depot.

The site has a complex topography with a general slope down from the northwest towards the small stream that marks the northeastern site boundary and a drainage ditch that is located on the boundary with the adjacent mobile home park. Within the heavily vegetated triangular parcel of land in the northwestern part of the site there are a number of hummocks and undulations indicative of historical excavations. Reference should be made to the topographic survey for a more complete review of the topography.

No indications of distressed vegetation were noted as part of the site walkover, although the topsoil was noted to be soft underfoot.

Site History

The history of the site and immediate surrounding area has been researched by reference to publically available historical Ordnance Survey (OS) maps together with supplementary information inspected at the Petersfield Library and anecdotal local knowledge.

The earliest map studied, dated 1869, indicates the site to have been open fields associated with a dairy farm at the centre of the site, but outside of the current site boundaries.

Subsequent maps indicate the site to have remained essentially unchanged although Petersfield is shown to have gradually developed and expanded.

It is understood that through most of this time the site has formed part of a dairy farm and has been used as pastureland, although it is understood that the site was used by a grass turf company as a site for growing retail turf during the 1980s and 1990s.

Whilst there are no mapping indications, it is understood that within the undulating and heavily vegetated part of the site within the northeastern part there was formerly a pond. It is considered possible that this may have been associated with a works adjoining the northwestern part of the site that may have been involved with brick works clay excavation, which could predate the earliest studied map. It is considered unlikely however that any excavations on site would have been in filled, which would explain the undulating nature of this part of the site resulting from abandoned brick works clay excavation pits, with the possible exception of a possible former pond that may have been locally filled.

Environmental Site Setting

Information provided by the British Geological Survey indicates the majority of the site to be underlain by the Gault Formation, which is known to locally comprise a generally stiff over consolidated clay. The underlying Lower Greensand is indicated to outcrop within the northwestern part of the site.

Information provided by the Environment Agency indicates the Gault Formation is classified as unproductive strata, whilst the Lower Greensand is classified as a Principal Bedrock Aquifer, although the site is not shown to be located in the vicinity of any source protection zones associated with licensed groundwater abstraction points.

Further information provided by the Environment Agency does not indicate the presence of any active or historical landfill sites in the vicinity of the site, and no indications of any other potentially contaminative land uses such as waste processing sites, fuel filling stations or pollution incidents have been recorded within 500 m of the site.

Information provided by the Health Protection Agency indicates the site to be located in an area where less than 1% of houses are above the action level for radon emissions, such that radon protective measures should not be required as part of the construction of new buildings.

Preliminary Conceptual Site Model Summary and Risk Assessment

The use of the majority of the site as open grazing is not considered to present a potentially contaminative history. The possible former use of the western corner of the site as part of a brick works clay excavation associated with an off site brickworks could present a potential source of ground contamination although elapsed since the operation of the works will have reduced the potential for ongoing generation of any potentially mobile contaminants; it is also understood that the former brick clay pits have not been used for filling.

Whilst the site is understood to have formed part of a dairy farm, the main farm buildings, where potentially contaminative activities and uses may be expected, are located outside of the boundary to the site and the predominantly clay soils are not anticipated to facilitate migration of any contaminants that may be present associated with the offsite former farm buildings that are now converted for residential use.

Ground Conditions

Underlying the topsoil that has been encountered to a relatively consistent depth of 0.30 m below ground level across the vast majority of the site, firm becoming stiff grey clay soils have been encountered to the full depth of investigation.

Within the northern and western parts of the site and within parts of the northeastern corner of the site underlying the topsoil a soft sandy clay has been encountered to depths up to 1.20 m below ground level. Within the northern part of the site, these soft superficial clay soils have been found to be underlain by a pale yellowish brown silty fine sand which is considered to be fluvially reworked Lower Greensand.

Groundwater was encountered as perched water within the northern parts of the site where the soft sandy clay has been encountered overlying stiff grey clay of the Gault. Within the northern part of the site, where fine silty sand soils have been encountered, groundwater has been encountered within a number of the exploratory positions at a depth of about 2.70 m below ground level, which is approximately consistent with the water level in the stream to the north of the site topsoil and within the sandier layers of clay within the near surface superficial clay soils within the southeastern part of the site.

Rootlets and root hairs were encountered to depths of up to 1.50 m in the vicinity of trees on the site boundary although no indications of desiccation were noted within the near surface soils.

No visual or olfactory indications of ground contamination were noted as part of the fieldwork phase of the ground investigation and the results of soil contamination testing are discussed below.

Foundation Design Advice

Moderate width pad or strip foundations are considered to be viable for the development at this site, although in view of the variable ground conditions, with different strengths, the use of spread foundations will require variable foundation designs. Foundations may be designed to found within the firm but locally soft near surface brown sandy clay soils at a minimum depth of 1.00 m below ground level and apply a net allowable bearing pressure of 75 kN/m². Foundations designed to bear within the firm becoming stiff clay soils at a minimum depth of 1.00 m below ground level may be designed to apply a net allowable bearing pressure of 125 kN/m², with a minimum width of 0.60m. Foundations designed to bear within the fine silty sand soils within the northern part of the site may be designed to apply a net allowable bearing pressure of 150 kN/m², at a minimum depth of 1.00 m below ground level, with a minimum width of 0.60m.

These values include an adequate factor of safety against bearing capacity failure and should ensure that settlement remains within normal tolerable limits. In the unlikely event that heavily or eccentrically loaded foundations are required, a check should however be made on the magnitude of settlement once the base sizes are known, as the design bearing pressure is settlement dependent.

Foundations will need to be deepened in the vicinity of existing and proposed trees and National House Building Council (NHBC) guidelines for medium plasticity clay soils. Due to the presence of abundant trees both within the site and along the various site boundaries, foundations may locally need to extend to a depth such that they are no longer viable and piled foundations may be required, for which further ground investigation would be necessary.

Where trees are to be removed the required founding depth should be determined on the basis of the existing tree height if it is less than 50% of the mature height and on the basis of full mature height if the current height is more than 50% of the mature height. Where a tree is to be retained the final mature height should be adopted and due allowance should be made for future growth of trees, with particular reference to the relatively dense additional planting that is proposed as part of the ecological

mitigation measures. As part of the foundation assessment an allowance for the group effects of trees and dense vegetation should be considered, with further ground investigation and plot specific assessment carried out as deemed necessary by the structural engineers. Notwithstanding NHBC guidelines, all foundations should extend beyond the zone of desiccation; in this respect it would be prudent to have all foundation excavations inspected by a suitably experienced engineer. The requirement for compressible material alongside foundations should be determined by reference to the NHBC guidelines. The results of laboratory geotechnical testing indicate the firm becoming stiff grey clay soils of the Gault Clay to be high plasticity, with the near surface sandy clay soils indicated to be low plasticity.

It is conceivable that within the heavily vegetated triangle parcel of land that piled foundations may be required as the depth of influence of trees and dense vegetation may preclude the efficient use of spread foundations, which may need to be excessively deepened.

Excavations

It is likely that across the majority of the site shallow excavations for services and foundations within the near surface soils are likely to remain dry and broadly stable in the short term. Within the northern part of the site, where sand soils predominate, excavation instabilities may be expected together with minor groundwater seepages at depth. During or following periods of sustained heavy rainfall it is likely that the near surface topsoil will become saturated and relatively significant inflows of surface water runoff could flow into any excavations on site. A surface water management strategy will be required to be formulated and adhered to as part of the construction at this site in order to ensure protection of the watercourse that forms the northern boundary to the site.

Where personnel are required to enter excavations, a risk assessment should be carried out and temporary lateral support or battering of the excavation sides considered in order to comply with normal safety requirements.

Ground Floor Slabs

In view of the presence of high shrinkability clay soils and the presence of numerous trees, it is anticipated that there will be a requirement for suspended ground floor slabs over a void in accordance with NHBC guidelines at this site. There is a potential that ground bearing floor slabs could be adopted within the northern part of the site, although further work would be required to accurately delineate the boundary between the sand and clay soils.

Pavement Design

The formation level for hardstandings and access roads across the majority of the site is likely to be within the near surface clay soils such that pavements may be designed on the basis of an assumed California Bearing Ratio (CBR) of "about 2%". CBR testing carried out using a MEXE cone penetrometer carried out as part of the ground investigation supports the suitability of this value for preliminary design, although insitu CBR testing may be of assistance in the detailed design of new pavements once the layout of the proposed development has been fixed.

Surface Water Drainage

Across the majority of the site the presence of clay soils will preclude the efficient use of soakaways. Within the northern part of the site that has been found to be underlain by fine silty sand soils, sustainable urban drainage principals may be efficiently utilised and the enclosed results of the limited soakage testing exercise may be used to aid the design of any soakaways or permeable pavements within this part of the site.

It is understood however that the site drainage scheme is to involve an attenuated discharge of surface waters into the stream that forms the northern boundary to the site, such that there is not likely to be a requirement for soakaways as part of the proposed development.

Effect of Sulphates

Chemical analyses of selected soil samples have revealed generally low concentrations of soluble sulphate, corresponding to Class DS-1 AC-1 of Table 2 of BRE Special Digest 1: SD1 Part 1 (August 2001). The guidelines contained in the above digest should be followed in the design of foundation concrete.

Potable Water Supply

The requirement for protection of underground sections of potable water supplies will need to be confirmed through discussions with the proposed statutory provider of mains water to the site, although precautions are not likely to be required for the development at this site.

Soil Contamination Test Results

Part IIA of the Environmental Protection Act 1990, which was inserted into that Act by Section 57 of the Environment Act 1995, provides the main regulatory regime for the identification and remediation of contaminated land. The determination of contaminated sites is based on a “suitable for use” approach which involves managing the risks posed by contaminated land by making risk-based decisions. This risk assessment is carried out on the basis of a source-pathway-receptor approach.

The results of comprehensive laboratory analyses carried out by an MCERTS accredited laboratory on a limited number of soil samples recovered from this site are enclosed. At the time of reporting only a relatively limited selection of Soil Guideline Values have been released following the withdrawal of the previous guidance. The significance of the measured concentrations of any chemicals of concern has therefore been assessed in relation to the available SGVs together with the revised and updated values that have been adopted by the Chartered Institute of Environmental Health (CIEH)¹. Whilst the values that have been adopted by the CIEH are not statutory, they are widely accepted as providing a suitable initial screening value against which measured concentrations of potential contaminants can be assessed to determine the requirement for site specific quantitative risk assessment.

From a review of the enclosed results it is apparent that elevated concentrations of a wide range of potential soil contaminants have not been detected within the selected representative soil samples submitted to laboratory analyses.

Contaminated Land Discussion

The current and historical use of the site as open grazing land is not considered to present a potentially contaminative history and the results of the contaminated land soil testing have not indicated the presence of elevated concentrations of a wide range of potential soil contaminants, such that precautions with regards to ground contamination are not considered necessary as part of this site.

The presence of essentially impermeable clay soils is expected to effectively mitigate the potential for migration of any potentially mobile contaminants from off-site sources such as the former farmyard buildings.

Whilst the ground investigation carried out to date has not indicated the presence of elevated concentrations of a wide range of potential contaminants, as with any site it is conceivable that localised pockets of contamination could be present. It is therefore considered that the ground works for the proposed redevelopment at this site should be carried out under a geo-environmental watching brief in order that should any suspicious or contaminated soils be encountered, they can be appropriately investigated by a geo-environmental engineer and appropriately dealt with in consultation with the regulatory authorities.

1 *The LQM/CIEH Generic Assessment Criteria for Human Health Risk Assessment (2nd Edition) July 2009.*

Site workers should be made aware of the site history and the potential for contamination to be present and a programme of working should be identified to protect workers handling any soil. The method of site working should be in accordance with guidelines set out by HSE² and CIRIA³ and the requirements of the Local Authority Environmental Health Officer (EHO).

Further work

Once the development layout has been finalised and the detailed structural review completed, the design and assessment of spread foundations can be completed and the potential localised requirement for piled foundations can be assessed. Should piled foundation be required, further ground investigation will be required to obtain detailed design data.

Discussions should be held with the Local Authority Contaminated Land Officer in order to confirm the details of the proposed geo-environmental watching brief and the validation reporting requirements.

We trust that this letter provides sufficient information in the meantime, although please do not hesitate to contact me should you have any queries or questions.

Yours sincerely
Wilson Bailey Partnership

Dominic Brightman
BSc MSc DIC FGS CGeol ARSM
Principal Engineer

² HSE (1992) HS(G)66 Protection of workers and the general public during the development of contaminated land HMSO

³ CIRIA (1996) A guide for safe working on contaminated site Report 132, Construction Industry Research & Information Association

Project Name
Causeway Farm

Project No.
J13111

Co-ords: -

Hole Type
WLS

Location: Petersfield

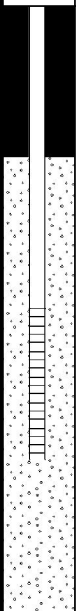
Level: -

Scale
1:50

Client: BDW Southampton

Dates: 20/03/2013

Logged By
DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.35			TOPSOIL	
		0.50	D					Brown and pale brown silty very clayey fine to medium SAND	
		1.00	D		1.20				1
		1.50	D					Pale brown silty fine to medium SAND	
		2.00	D						2
		2.50	D		2.50				
		3.00	D					Pale yellowish brown SAND	3
		3.50	D						
					4.00			End of Borehole at 4.00 m	4
									5
									6
									7
									8
									9

Remarks: Groundwater encountered at 2.80m. Standpipe installed with a response zone from 2.00m to 3.00m.

Project Name Causeway Farm	Project No. J13111	Co-ords: -	Hole Type WLS
Location: Petersfield		Level: -	Scale 1:50
Client: BDW Southampton		Dates: 20/03/2013	Logged By DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description		
		Depth (m)	Type	Results						
	▽	0.30	D	N=4 (1,1,1,1,1,1)	0.40			MADE GROUND (reworked topsoil with occasional fine tile fragments)	1	
		1.00 1.00	SPT D					Very soft pale brown very sandy slty CLAY with occasional rootlets to 0.50m		
		1.50	D							
		2.00 2.00	SPT D	N=1 (1,0,1,0,0,0)					2	
		2.50	D							
		3.00 3.00	SPT D	N=18 (2,2,3,4,5,6)	3.00 3.20			Medium dense pale grey silty fine SAND	3	
		3.40	D					Medium dense becoming dense dark grey fissured CLAY with layers of pale grey slty fine sand		
						3.60			End of Borehole at 3.60 m	4
										5
										6
								7		
								8		
								9		

Remarks: Groundwater seepage at 3.00m.



Project Name
 Causeway Farm

 Project No.
 J13111

Co-ords: -

 Hole Type
 WLS

Location: Petersfield

Level: -

 Scale
 1:50

Client: BDW Southampton

Dates: 20/03/2013

 Logged By
 DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.50	D		0.60			TOPSOIL with occasional rootlets	
					0.80			Soft pale brown silty CLAY	
		1.00	SPT	N=12				Medium dense becoming dense pale orange-brown silty sandy clay fine to medium SAND with occasional fine flint gravel	1
		1.00	D	(2,2,3,3,3,3)					
		1.50	D						
		2.00	SPT	N=41					2
		2.00	D	(3,7,9,10,10,12)	2.45				
								End of Borehole at 2.45 m	3
									4
									5
									6
									7
									8
									9
			Type	Results					

Remarks: Groundwater not encountered.

Project Name Causeway Farm	Project No. J13111	Co-ords: -	Hole Type WLS
Location: Petersfield		Level: -	Scale 1:50
Client: BDW Southampton		Dates: 20/03/2013	Logged By DPB

[illegible]

Remarks: Groundwater encountered at 2.10m.



Project Name
 Causeway Farm

 Project No.
 J13111

Co-ords: -

 Hole Type
 WLS

Location: Petersfield

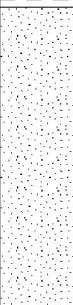
Level: -

 Scale
 1:50

Client: BDW Southampton

Dates: 20/03/2013

 Logged By
 DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.50	D		0.40			MADE GROUND (reworked topsoil)	
		1.00 1.00	SPT D	N=14 (1,2,2,3,4,5)	1.00			Soft pale brown silty CLAY with occasional flint gravel	
		1.50	D					Brown medium to coarse SAND	1
		2.00 2.00	SPT D	N=21 (3,4,4,5,6,6)					2
		2.50	D						
					3.00			End of Borehole at 3.00 m	3
									4
									5
									6
									7
									8
									9
			Type	Results					

Remarks: Groundwater not encountered.

Project Name Causeway Farm	Project No. J13111	Co-ords: -	Hole Type WLS
Location: Petersfield		Level: -	Scale 1:50
Client: BDW Southampton		Dates: 20/03/2013	Logged By DPB

[illegible]

Remarks: Groundwater not encountered.



Project Name Causeway Farm	Project No. J13111	Co-ords: -	Hole Type WLS
Location: Petersfield		Level: -	Scale 1:50
Client: BDW Southampton		Dates: 20/03/2013	Logged By DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description		
		Depth (m)	Type	Results						
	▽				0.25			TOPSOIL		
		0.50	D					Firm pale grey pale brown and grey mottled fissured CLAY	1	
		1.00	SPT	N=7						
		1.00	D	(1,1,1,2,2,2)						
		1.50	D							
		2.00	SPT	N=9					2	
		2.00	D	(1,2,2,2,2,3)						
					2.45					
									End of Borehole at 2.45 m	3
										4
								5		
								6		
								7		
								8		
								9		

Remarks: Fast inflow of groundwater encountered at 0.20m within topsoil.



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Co-ords: -

 Hole Type
 WLS

Location: Petersfield

Level: -

 Scale
 1:50

Client: BDW Southampton

Dates: 20/03/2013

 Logged By
 DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.50	D		0.60			TOPSOIL	
		1.00 1.00	SPT D	N=4 (1,1,1,1,1,1)				Soft pale brown and pale grey mottled silty very sandy CLAY	1
		1.50	D						
		2.00	SPT	N=13 (2,2,3,3,3,4)	1.70 1.90 2.00			Pale brown and pale grey mottled silty very clayey fine SAND	
								Stiff grey fissured CLAY	2
								End of Borehole at 2.00 m	
									3
									4
									5
									6
									7
									8
									9
			Type	Results					

Remarks: Groundwater not encountered.

Project Name
 Causeway Farm

 Project No.
 J13111

Co-ords: -

 Hole Type
 WLS

Location: Petersfield

Level: -

 Scale
 1:50

Client: BDW Southampton

Dates: 20/03/2013

 Logged By
 DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.50	D		0.60			MADE GROUND (reworked topsoil with ash and clinker)	
		1.00	D					Soft pale brown very sandy silty CLAY locally clayey fine sand	1
		1.50	D						
	▽	2.00	D		2.20				2
		2.50	D					Pale yellowish brown silty fine SAND	
					3.00			End of Borehole at 3.00 m	3
									4
									5
									6
									7
									8
									9

Remarks: Groundwater encountered at 2.20m.

Project Name Causeway Farm	Project No. J13111	Co-ords: -	Hole Type WLS
Location: Petersfield		Level: -	Scale 1:50
Client: BDW Southampton		Dates: 08/05/2013	Logged By DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		0.50	D	N=10 (1,2,3,2,3,2)	0.30			TOPSOIL			
		1.00 1.00	SPT D		1.00			Firm locally soft pale grey and pale orange-brown silty CLAY with occasional partings of fine orange-brown silty sand	1		
		1.50	D					Stiff grey fissured CLAY with occasional partings of ornage-brown fine silty and silty sand			
		2.00 2.00	SPT D	N=15 (2,3,4,4,3,4)					2		
		2.50	D								
		3.00 3.00	SPT D	N=18 (4,4,3,5,5,5)					3		
					3.45				End of Borehole at 3.45 m	4	
											5
											6
											7
								8			
								9			

Remarks: Groundwater not encountered.



Project Name Causeway Farm	Project No. J13111	Co-ords: -	Hole Type WLS
Location: Petersfield		Level: -	Scale 1:50
Client: BDW Southampton		Dates: 08/05/2013	Logged By DPB

[illegible]

Remarks: Groundwater not encountered.



Project Name
 Causeway Farm

 Project No.
 J13111

Co-ords: -

 Hole Type
 WLS

Location: Petersfield

Level: -

 Scale
 1:50

Client: BDW Southampton

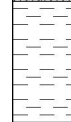
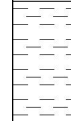
Dates: 08/05/2013

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 DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.20			TOPSOIL	
		0.50	D					Firm locally soft pale grey and pale orange-brown silty CLAY with occasional partings of fine orange-brown silty sand	
		1.00	SPT	N=9	0.90				1
		1.00	D	(1,1,1,2,3,3)				Stiff grey fissured CLAY with occasional partings of orange-brown fine silt and silty sand with occasional reddish brown mottling	
		1.50	D						
		2.00	SPT	N=11					2
		2.00	D	(2,2,2,3,3,3)					
		2.50	D						
		3.00	SPT	N=21					3
		3.00	D	(4,4,4,5,6,6)					
					3.45			End of Borehole at 3.45 m	
									4
									5
									6
									7
									8
									9

Remarks: Groundwater not encountered.

Project Name Causeway Farm	Project No. J13111	Co-ords: -	Hole Type WLS
Location: Petersfield		Level: -	Scale 1:50
Client: BDW Southampton		Dates: 08/05/2013	Logged By DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.50	D	N=7 (1,1,2,1,2,2)	0.40			TOPSOIL		
		1.00	SPT		N=11 (2,2,3,2,3,3)		1.20		Firm locally soft pale grey and pale orange-brown silty CLAY with occasional partings of fine orange-brown silty sand	1
		1.00	D							
		1.50	D							
		2.00	SPT	N=21 (3,4,4,6,5,6)	3.45			Stiff grey fissured CLAY with occasional partings of orange-brown fine silt and silty sand with occasional reddish brown mottling	2	
		2.00	D							
		2.50	D							
		3.00	SPT		End of Borehole at 3.45 m			3		
		3.00	D							
								4		
								5		
								6		
								7		
								8		
								9		
						</				

Remarks: Groundwater not encountered.



Project Name
 Causeway Farm

 Project No.
 J13111

Co-ords: -

 Hole Type
 WLS

Location: Petersfield

Level: -

 Scale
 1:50

Client: BDW Southampton

Dates: 08/05/2013

 Logged By
 DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.50	D		0.30			TOPSOIL	
		1.00 1.00	SPT D	N=10 (1,2,2,2,3,3)	1.30			Firm locally softpale grey and pale orange-brown silty CLAY with occasional partings of fine orange-brown silty sand	1
		1.50	D					Stiff grey fissured CLAY with occasional partings of orange-brown fine silt and silty sand with occasional reddish brown mottling	2
		2.00 2.00	SPT D	N=13 (2,2,3,3,3,4)					3
		2.50	D						
		3.00 3.00	SPT D	N=18 (3,3,4,4,5,5)	3.45				
								End of Borehole at 3.45 m	4
									5
									6
									7
									8
									9

Remarks: Groundwater not encountered.

Project Name
 Causeway Farm

 Project No.
 J13111

Co-ords: -

 Hole Type
 WLS

Location: Petersfield

Level: -

 Scale
 1:50

Client: BDW Southampton

Dates: 08/05/2013

 Logged By
 DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.30			TOPSOIL	
		0.50	D					Firm locally soft oake grey and ale orange-brown silty CLAY with occasional partings of fine orange-brown silty sand	1
		1.00	D						
		1.50	D		1.40			Stiff grey fissured CLAY with occasional partings of orange-brown fine silt and silty sand with occasional reddish brown mottling	2
		2.00	D						
		2.50	D						
		3.00	D						3
					3.45			End of Borehole at 3.45 m	4
									5
									6
									7
									8
									9

Remarks: Groundwater not encountered.

Project Name
 Causeway Farm

 Project No.
 J13111

Co-ords: -

 Hole Type
 WLS

Location: Petersfield

Level: -

 Scale
 1:50

Client: BDW Southampton

Dates: 08/05/2013

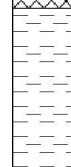
 Logged By
 DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.20			TOPSOIL	
		0.50	D		0.60			Firm locally soft pale grey and pale orange-brown silty CLAY with occasional partings of fine orange-brown silty sand	
		1.00	D					Stiff grey fissured CLAY with occasional partings of orange-brown fine silt and silty sand with occasional reddish brown mottling	1
		1.50	D						
		2.00	D						2
		2.50	D						
		3.00	D						3
					3.45			End of Borehole at 3.45 m	4
									5
									6
									7
									8
									9

Remarks: Groundwater not encountered.

Project Name Causeway Farm				Project No. J13111		Co-ords: -		Hole Type WLS		
Location: Petersfield						Level: -		Scale 1:50		
Client: BDW Southampton						Dates: 08/05/2013		Logged By DPB		
Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.50	D	N=8 (1,1,2,1,2,3)	0.30			TOPSOIL		
		1.00 1.00	SPT D		0.80			Firm locally soft pale grey and pale orange-brown silty CLAY with occasional partings of fine orange-brown silty sand	1	
		1.50	D	N=13 (3,3,3,3,3,4)				Stiff grey fissured CLAY with occasional partings of orange-brown fine silt and silty sand with occasional reddish brown mottling		
		2.00 2.00	SPT D							
		2.50	D							
		3.00 3.00	SPT D	N=21 (4,4,5,4,6,6)	3.45			End of Borehole at 3.45 m	3	
										4
										5
										6
										7
						8				
						9				
Remarks: Groundwater not encountered.										
										

Project Name Causeway Farm	Project No. J13111	Co-ords: -	Hole Type WLS
Location: Petersfield		Level: -	Scale 1:50
Client: BDW Southampton		Dates: 24/09/2013	Logged By DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30	D		0.40			MADE GROUND (reworked topsoil with brick and clinker with abundant rootlets)	1 2 3 4 5 6 7 8 9
		0.50	D					Soft pale brown, pale yellowish brown and reddish brown silty very sandy CLAY with abundant root hairs to 1.30m	
		1.00	SPT	N=4	1.50			Firm grey and brown mottled fissured CLAY	
		1.00	D	(1,1,1,1,1,1)					
		2.00	SPT	N=8	2.10			Stiff dark grey fissured CLAY	
		2.00	D	(1,1,1,2,2,3)					
		2.50	D		4.45				
		3.00	SPT						
		3.00	D	(3,3,4,4,5,5)					
		3.50	D		4.45				
4.00	SPT	N=17							
		4.00	D	(3,3,3,4,5,5)					
		End of Borehole at 4.45 m							

Remarks: Groundwater not encountered.



Project Name
 Causeway Farm

 Project No.
 J13111

Co-ords: -

 Hole Type
 WLS

Location: Petersfield

Level: -

 Scale
 1:50

Client: BDW Southampton

Dates: 24/09/2013

 Logged By
 DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30	D		0.40			TOPSOIL (with abundant rootlets and scattered flint gravel)	
		0.50	D					Soft pale grey and pale yellowish brown silty very sandy CLAY with rootlets and root hairs to 0.70m	1
		1.00	SPT	N=4	1.30				
		1.00	D	(1,1,1,1,1,1)					
		1.50	D					Firm becoming stiff dark grey fissured CLAY	2
		2.00	SPT	N=10					
		2.00	D	(1,2,2,2,3,3)					
		2.50	D						
		3.00	SPT	N=15	3.45				3
		3.00	D	(2,3,3,4,4,4)					
								End of Borehole at 3.45 m	4
									5
									6
									7
									8
									9
			Type	Results					

Remarks: Groundwater not encountered.

Project Name Causeway Farm	Project No. J13111	Co-ords: -	Hole Type WLS
Location: Petersfield		Level: -	Scale 1:50
Client: BDW Southampton		Dates: 24/09/2013	Logged By DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.25	D		0.45 0.60			TOPSOIL	1
		0.50	D				Soft pale brown sandy CLAY with root hairs to 0.60m		
		1.00	SPT	N=7 (1,2,2,1,2,2)				Firm becoming stiff dark grey fissured CLAY	2
		1.00	D						
		1.50	D					Rootlets to 1.20m	3
		2.00	SPT						
		2.00	D	N=11 (1,2,2,3,3,3)				Claystone encountered at 2.80m	4
		2.50	D						
		3.00	SPT	N=15 (3,3,3,4,4,4)					5
		3.00	D						
							End of Borehole at 3.45 m	6	
								7	
								8	
								9	

Remarks: Groundwater not encountered.



Project Name
 Causeway Farm

 Project No.
 J13111

Co-ords: -

 Hole Type
 WLS

Location: Petersfield

Level: -

 Scale
 1:50

Client: BDW Southampton

Dates: 24/09/2013

 Logged By
 DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.25	D		0.35			MADE GROUND (reworked topsoil with brick and chalk fragments and abundant rootlets)	
		0.50	D					Soft pale brown with grey and pale grey mottling CLAY	
		1.00	SPT	N=8	1.00			Firm becoming stiff dark grey fissured CLAY	1
		1.00	D	(1,1,2,2,2,2)					
		1.50	D						
		2.00	SPT	N=15	3.00				2
		2.00	D	(2,2,3,3,4,5)					
		2.50	D						
								End of Borehole at 3.00 m	3
									4
									5
									6
									7
									8
									9
			Type	Results					

Remarks: Groundwater not encountered.

Project Name Causeway Farm	Project No. J13111	Co-ords: -	Hole Type WLS
Location: Petersfield		Level: -	Scale 1:50
Client: BDW Southampton		Dates: 24/09/2013	Logged By DPB

[illegible]

Remarks: Groundwater not encountered.





Project Name Causeway Farm	Project No. J13111	Co-ords: -	Hole Type WLS
Location: Petersfield		Level: -	Scale 1:50
Client: BDW Southampton		Dates: 24/09/2013	Logged By DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description				
		Depth (m)	Type	Results								
		0.20	D	N=10 (1,2,2,2,3,3)	0.30 0.50			MADE GROUND (reworked topsoil with tile fragments)	1			
		0.50	D					Soft pale brown and grey mottled CLAY				
		1.00 1.00	SPT D					Firm becoming stiff dark grey fissured CLAY				
		1.50	D					Claystones at 1.50m and 1.80m				
		2.00 2.00	SPT D		2							
		2.50	D									
		3.00								End of Borehole at 3.00 m	3	
											4	
												5
												6
								7				
								8				
								9				

Remarks: Groundwater not encountered.





Project Name
 Causeway Farm

 Project No.
 J13111

 Co-ords: -
 Level: -

 Date
 08/05/2013

Location: Petersfield

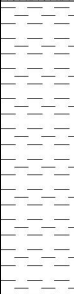
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 Scale
 1:25

Client: BDW Southampton

 Depth
 2.20m

 Logged By
 DPB

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
0.50	D		0.30			TOPSOIL	
						Firm pale brown silty very sandy CLAY	
1.00	D		1.30			Pale brown with pale grey mottled silty clayey fine to medium SAND	1
1.50	D						
2.00	D		2.20			Trialpit Complete at 2.20 m	2
							3
							4

Remarks: Trial pit sides stable.

Groundwater: Groundwater not encountered.



Project Name
 Causeway Farm

 Project No.
 J13111

 Co-ords: -
 Level: -

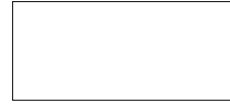
 Date
 08/05/2013

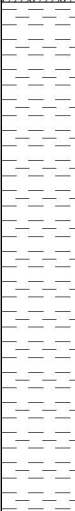
Location: Petersfield

Dimensions: -

 Scale
 1:25

Client: BDW Southampton

 Depth
 2.50m

 Logged By
 DPB

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
0.50	D		0.40			TOPSOIL	
1.00	D					Firm orange-brown silty sandy locally very sandy CLAY	1
1.50	D						
2.00	D						2
			2.10			Orange-brown silty SAND with pockets and layers of firm brown sandy clay	
			2.50			Trialpit Complete at 2.50 m	3
							4

Remarks: Trial pit sides stable.

Groundwater: Groundwater not encountered.



Project Name
 Causeway Farm

 Project No.
 J13111

 Co-ords: -
 Level: -

 Date
 08/05/2013

Location: Petersfield

Dimensions: -

 Scale
 1:25

Client: BDW Southampton

 Depth
 2.50m

 Logged By
 DPB

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
						TOPSOIL	
0.50	D		0.30			Pale yellowish brown silty fine to medium coarse SAND	
1.00	D						1
1.50	D						
2.00	D						2
			2.30			Brown silty fine SAND	
			2.50			Trialpit Complete at 2.50 m	
							3
							4

Remarks: Trial pit sides unstable.

Groundwater: Groundwater not encountered.



Project Name Causeway Farm		Project No. J13111	Co-ords: - Level: -	Date 08/05/2013
Location: Petersfield			Dimensions: -	Scale 1:25
Client: BDW Southampton			Depth 2.50m	Logged By DPB

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
0.50	D		0.40			TOPSOIL	
1.00	D		1.00			Firm orange-brown silty sandy CLAY with occasional fine to medium flint gravel	
1.50	D					Pale grey and yellow silty fine to coarse SAND with occasional fine to medium grey clay bands	1
2.00	D					Strata noted as damp below 1.60m	
			2.50			Trialpit Complete at 2.50 m	
							3
							4

Remarks: Trial pit sides stable.

Groundwater: Groundwater not encountered. Strata noted as damp below 1.60m.



Project Name
 Causeway Farm

 Project No.
 J13111

 Co-ords: -
 Level: -

 Date
 08/05/2013

Location: Petersfield

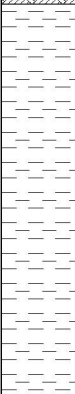
Dimensions: -

 Scale
 1:25

Client: BDW Southampton

 Depth
 2.50m

 Logged By
 DPB

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
0.50	D		0.40			TOPSOIL	
1.00	D					Firm locally soft very sandy silty CLAY with scattered flint gravel	1
1.50	D						
2.00	D		1.70			Orange-brown silty fine to medium coarse SAND with layers of soft grey clay	2
			2.50			Trialpit Complete at 2.50 m	3
							4

Remarks: Trial pit sides stable.

Groundwater: Groundwater not encountered.

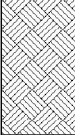
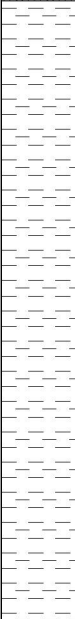


Project Name Causeway Farm		Project No. J13111	Co-ords: - Level: -	Date 08/05/2013
Location: Petersfield			Dimensions: -	Scale 1:25
Client: BDW Southampton			Depth 2.60m	Logged By DPB

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
0.50	D		0.50			TOPSOIL	
1.00	D					Orange-brown silty very sandy CLAY locally grading into a clayey fine to coarse sand	1
1.50	D						
2.00	D						2
2.50	D		2.60				
						Trialpit Complete at 2.60 m	3
							4

Remarks:	Trial pit sides stable.	
Groundwater:	Groundwater not encountered.	

Project Name Causeway Farm		Project No. J13111	Co-ords: - Level: -	Date 08/05/2013
Location: Petersfield			Dimensions: -	Scale 1:25
Client: BDW Southampton			Depth 2.50m	Logged By DPB

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
0.50	D		0.45			TOPSOIL	
1.00	D					Soft locally firm orange-brown very sandy very silty CLAY with pockets and layers of very clayey silty ine to medium coarse sand	1
1.50	D						
2.00	D					Strata noted as damp below 1.80m	2
			2.50				
						Trialpit Complete at 2.50 m	3
							4

Remarks:	Trial pit sides stable.	
Groundwater:	Groundwater not encountered. Strata noted as damp below 1.80m.	

Site Causeway Farm Site, The Causeway, Petersfield

Client BDW Southampton

Job Number
J12156

Sheet
1 / 2

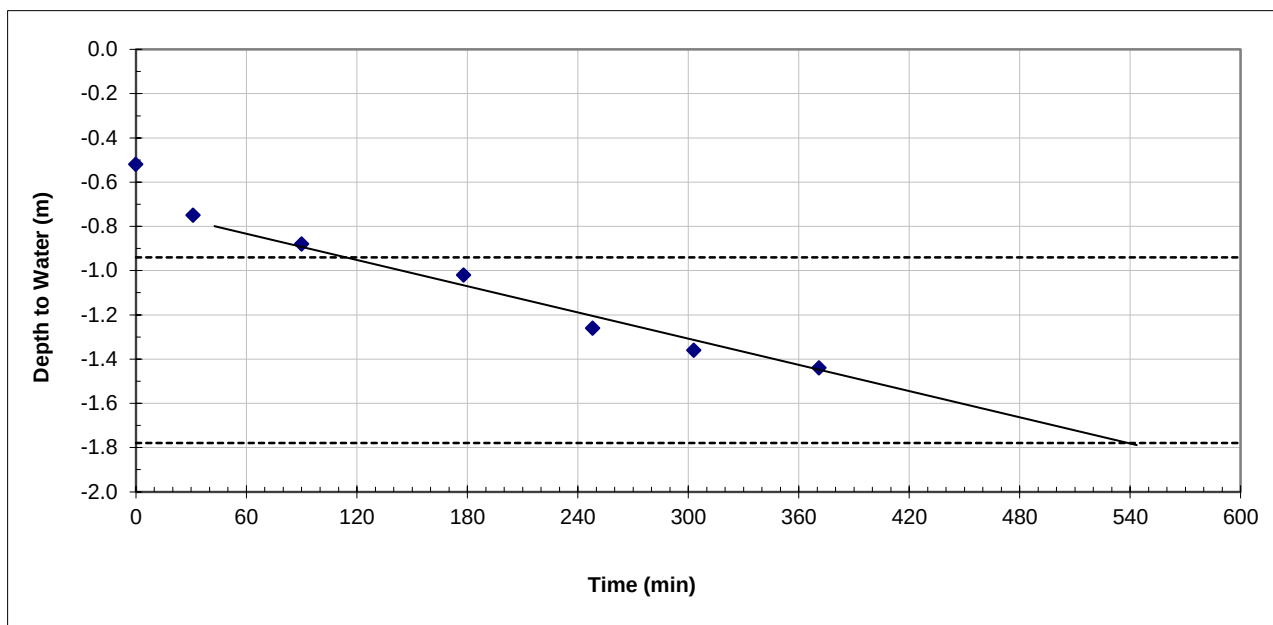
Trial Pit No. 1

Soakage Test No. 1

Pit Length (m) 1.8

Pit Width (m) 0.65

Pit Depth (m) 2.2



Design Soakage Rate 5.0E-06 m/s (based on linear portion of graph as shown)
0.43 m/day

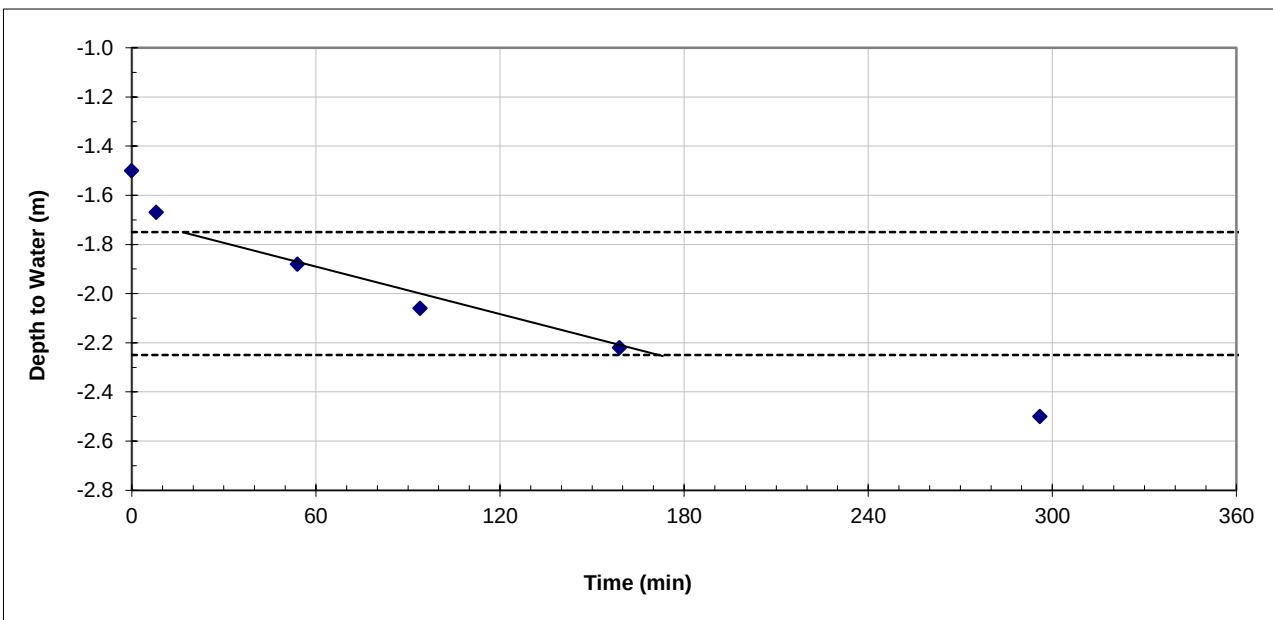
Trial Pit No. 2

Soakage Test No. 1

Pit Length (m) 1.85

Pit Width (m) 0.65

Pit Depth (m) 2.5



Design Soakage Rate 6.4E-06 m/s (based on linear portion of graph as shown)
0.55 m/day

Site Causeway Farm Site, The Causeway, Petersfield

Job Number
J13111

Client BDW Southampton

Sheet
2 / 2

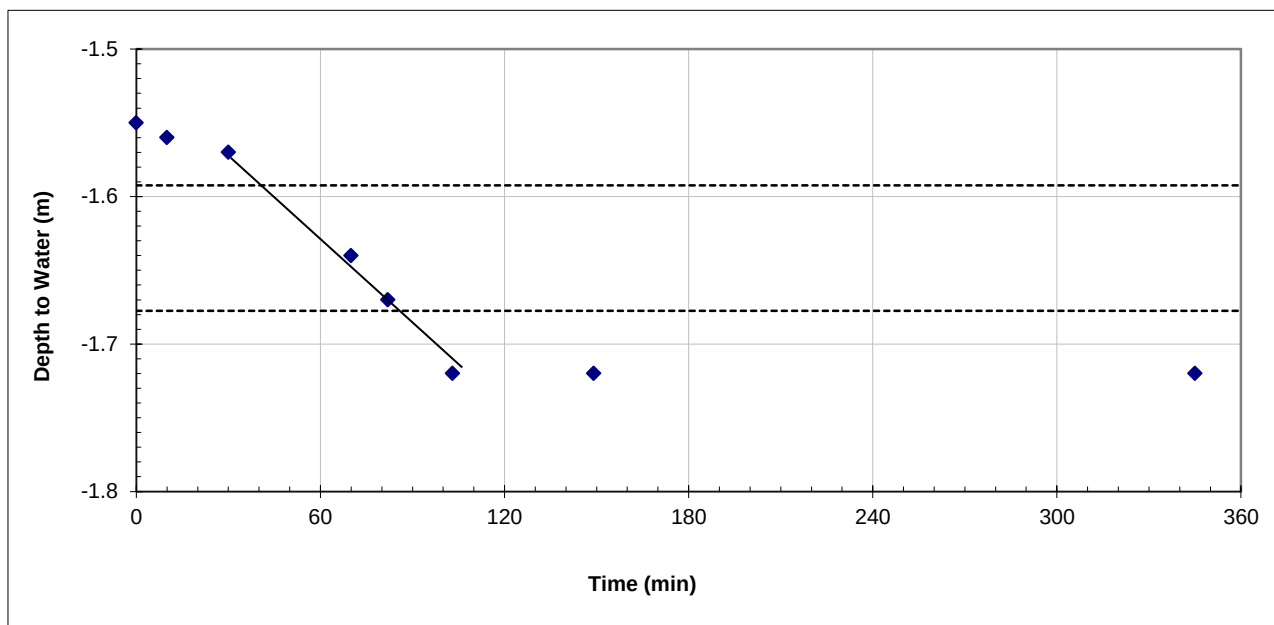
Trial Pit No. 3

Soakage Test No. 1

Pit Length (m) 1.5

Pit Width (m) 0.65

Pit Depth (m) 1.72



Design Soakage Rate

2.6E-05

m/s

(based on linear portion of graph as shown)

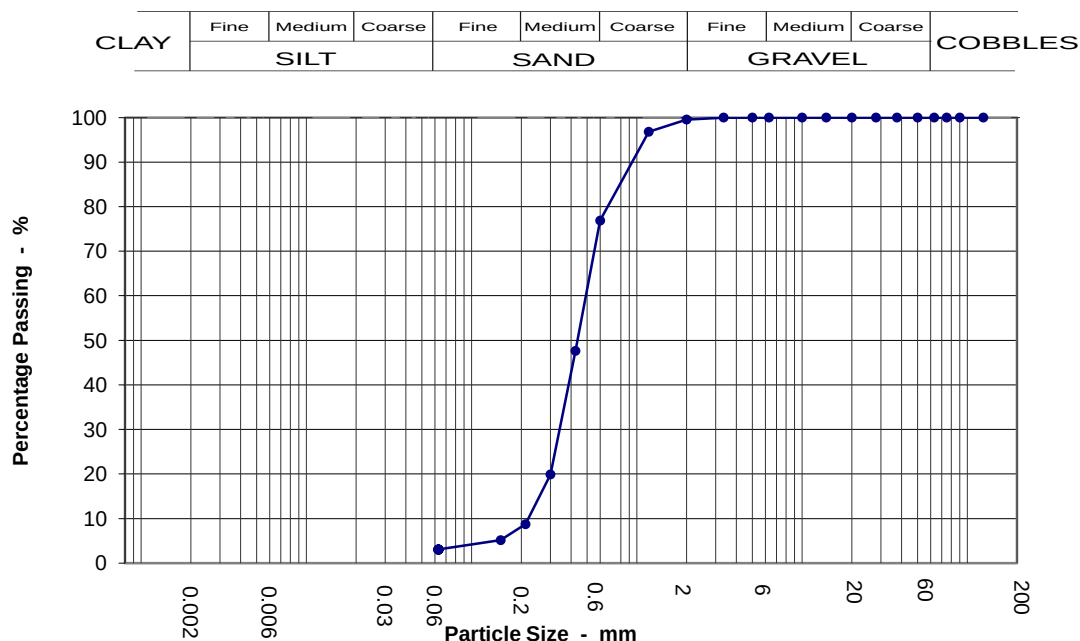
2.22

m/day

Project Name: Causeway Farm, Petersfield						Samples Received: 21/05/2013			
						Project Started: 23/07/2013			
Client: Wilson Bailey Geotechnical & Environmental						Testing Started: 05/08/2013			
Project No: -			Our job/report no: 14996			Date Reported: 07/08/2013			
Borehole No:	Sample No:	Depth (m)	Description	Moisture content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 0.425 mm (%)	Remarks
BH1	-	1.00	Orange brown sandy CLAY	19	28	14	14	100	
BH2	-	1.00	Orange brown sandy CLAY	18	27	13	14	100	
BH3	-	3.50	Grey CLAY with pockets of orange brown sand	18	37	15	22	100	
BH4	-	1.00	Orange brown and brown slightly gravelly sandy CLAY (gravel is fmc and sub-angular)	32	46	21	25	85	
BH6	-	0.80	Orange brown and brown sandy CLAY	24	37	17	20	100	
BH7	-	1.00	Orange brown and brown sandy CLAY	21	31	14	17	100	
BH7	-	2.00	Grey brown CLAY	30	64	25	39	100	
BH8	-	1.00	Brown and grey brown sandy CLAY	16	23	14	9	100	
BH8	-	2.00	Grey brown CLAY	25	60	24	36	100	
BH9	-	1.50	Orange brown sandy CLAY	18	29	15	14	100	
BH10	-	0.80	Grey brown and orange brown CLAY with occasional sandy patches	33	77	26	51	100	
BH10	-	1.50	Dark grey CLAY	28	72	27	45	100	
BH11	-	1.00	Brown and grey CLAY with orange brown sandy patches	37	81	29	52	100	
BH15	-	1.00	Grey and orange brown CLAY with occasional sandy patches	34	70	29	41	100	
BH15	-	2.00	Dark grey CLAY	28	68	27	41	100	
BH16	-	1.00	Grey brown CLAY	36	77	25	52	100	
BH16	-	2.00	Dark grey and orange brown CLAY with occasional sandy patches	34	75	28	47	100	
BH17	-	1.00	Grey CLAY with orange brown sandy patches	36	78	28	50	100	
BH17	-	2.00	Grey and orange brown CLAY	32	77	30	47	100	
 Summary of Test Results BS 1377 : Part 2 : Clause 4.4 : 1990 Determination of the liquid limit by the cone penetrometer method. BS 1377 : Part 2 : Clause 5 : 1990 Determination of the plastic limit and plasticity index. BS 1377 : Part 2 : Clause 3.2 : 1990 Determination of the moisture content by the oven-drying method.									Checked and Approved Initials: K.P Date: 07/08/2013
Test Report by K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU Test Results relate only to the sample numbers shown above. Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr) All samples connected with this report ,incl any on 'hold' will be stored and disposed off according to Company policy.Acropy of this policy is available on request.									

Project Name: Causeway Farm, Petersfield					Samples Received: 21/05/2013		K4 SOILS 			
					Project Started: 23/07/2013					
Client: Wilson Bailey Geotechnical & Environmental					Testing Started: 05/08/2013					
Project No: -			Our job/report no: 14996		Date Reported: 07/08/2013					
Borehole No:	Sample No:	Depth (m)	Description	Moisture content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 0.425 mm (%)	Remarks	
BH17	-	3.00	Dark grey CLAY with pockets of brown sand	28	73	28	45	100		
BH18	-	2.00	Grey and brown CLAY	30	75	29	46	100		
BH18	-	3.00	Dark grey CLAY with orange brown sandy patches	27	68	28	40	100		
 Summary of Test Results BS 1377 : Part 2 : Clause 4.4 : 1990 Determination of the liquid limit by the cone penetrometer method. BS 1377 : Part 2 : Clause 5 : 1990 Determination of the plastic limit and plasticity index. BS 1377 : Part 2 : Clause 3.2 : 1990 Determination of the moisture content by the oven-drying method. Checked and Approved Initials: K.P Date: 07/08/2013										
Test Report by K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU Test Results relate only to the sample numbers shown above. Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr) All samples connected with this report ,incl any on 'hold' will be stored and disposed off according to Company policy.Acoppy of this policy is available on request. MSF-11/R2										

K4 SOILS 	PARTICLE SIZE DISTRIBUTION BS 1377 : Part 2 : 1990 : Clause 9	Our Report No:	14996
		Project No:	-
Location	Causeway Farm, Petersfield	Borehole / Trial Pit No:	BH3
Visual Soil Description		Depth	1.00 - 1.50 m
	Orange and brown SAND with small brown sandy clay lumps	Sample Type/No	-



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	97		
0.6	77		
0.425	48		
0.3	20		
0.212	9		
0.15	5		
0.063	3		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	N/A
Suitable Amount Of Sample Received	Yes

Sample Proportions	
Cobbles	0.0
Gravel	0.4
Sand	96.5
Silt & Clay	3.1

Grading Analysis	
D100	125.0
D60	0.5
D10	0.2
Uniformity Coefficient	2

K4 SOILS LABORATORY

Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU.
E-mail: k4soils@aol.com

Approved Signatories:

K.Phaure(Tech.Mgr) J.Phaure(Lab.Mgr)

Test results relate only to the sample numbers shown above

Checked and Approved

Initials: kp

Date: 08/08/2013



Project Name: Causeway Farm, Petersfield					K4 SOILS 
Client: Wilson Bailey Geotechnical &		Project no: -			
Our job no: 14996					
Borehole No:	Sample No:	Depth m	Description	pH	Sulphate content (g/l)
BH11	-	1.00	Brown and grey CLAY with orange brown sandy patches	7.5	0.20
BH15	-	1.00	Grey and orange brown CLAY with occasional sandy patches	7.6	0.12
BH17	-	1.00	Grey CLAY with orange brown sandy patches	7.6	0.13
Summary of Test Results BS 1377 : Part 3 :Clause 5 : 1990 Determination of sulphate content of soil and ground water : gravimetric method					Checked and Approved Initials : kp
Date 08/08/2013					



Dominic Brightman
Wilson Bailey Geotechnical & Environmental Ltd
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QTS Environmental Report No: 13-13714

Site Reference: Causeway

Project / Job Ref: None Supplied

Order No: None Supplied

Sample Receipt Date: 22/03/2013

Sample Scheduled Date: 25/03/2013

Report Issue Number: 1

Reporting Date: 02/04/2013

Authorised by:

Russell Jarvis
Director

On behalf of QTS Environmental Ltd

Authorised by:

Kevin Old
Director

On behalf of QTS Environmental Ltd



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Soil Analysis Certificate

QTS Environmental Report No: 13-13714	Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Causeway	TP / BH No	BH2	BH3	BH6	BH8
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	Depth (m)	0.30	0.50	0.30	0.50
Reporting Date: 02/04/2013	QTSE Sample No	64704	64705	64706	64707

Determinand	Unit	MDL	Accreditation				
pH	pH Units	N / a	MCERTS	6.9	6.7	6.8	6.4
Total Organic Carbon (TOC)	%	< 0.1	NONE	0.5	0.7	0.9	2.1
Arsenic (As)	mg/kg	< 2	MCERTS	7	7	10	10
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	1.5
Cadmium (Cd)	mg/kg	< 0.5	MCERTS	< 0.5	< 0.5	< 0.5	< 0.5
Chromium (Cr)	mg/kg	< 2	MCERTS	18	19	22	20
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	32	24	11	42
Lead (Pb)	mg/kg	< 3	MCERTS	49	40	20	118
Mercury (Hg)	mg/kg	< 1	NONE	1.6	< 1	< 1	1.6
Nickel (Ni)	mg/kg	< 3	MCERTS	11	11	12	11
Selenium (Se)	mg/kg	< 3	NONE	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	42	41	41	53
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C

Analysis carried out on the dried sample is corrected for the stone content

Subcontracted analysis ⁽⁵⁾



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Soil Analysis Certificate - Speciated PAHs						
QTS Environmental Report No: 13-13714	Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
Wilson Bailey Geotechnical & Environmental	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
Site Reference: Causeway	TP / BH No	BH2	BH3	BH6	BH8	
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	
Order No: None Supplied	Depth (m)	0.30	0.50	0.30	0.50	
Reporting Date: 02/04/2013	QTSE Sample No	64704	64705	64706	64707	

Determinand	Unit	MDL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	

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Soil Analysis Certificate - TPH CWG Banded						
QTS Environmental Report No: 13-13714	Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
Wilson Bailey Geotechnical & Environmental	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
Site Reference: Causeway	TP / BH No	BH2	BH3	BH6	BH8	
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	
Order No: None Supplied	Depth (m)	0.30	0.50	0.30	0.50	
Reporting Date: 02/04/2013	QTSE Sample No	64704	64705	64706	64707	

Determinand	Unit	MDL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Aliphatic >C8 - C10	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	
Aliphatic >C10 - C12	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	
Aliphatic >C12 - C16	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	
Aliphatic >C16 - C21	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	
Aliphatic >C21 - C34	mg/kg	< 6	NONE	< 6	< 6	< 6	< 6	
Aliphatic (C5 - C34)	mg/kg	< 12	NONE	< 12	< 12	< 12	< 12	
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Aromatic >C8 - C10	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	
Aromatic >C10 - C12	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	
Aromatic >C12 - C16	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	
Aromatic >C16 - C21	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	
Aromatic >C21 - C35	mg/kg	< 6	NONE	< 6	< 6	< 6	< 6	
Aromatic (C5 - C35)	mg/kg	< 12	NONE	< 12	< 12	< 12	< 12	
Total >C5 - C35	mg/kg	< 24	NONE	< 24	< 24	< 24	< 24	

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Soil Analysis Certificate - BTEX / MTBE						
QTS Environmental Report No: 13-13714	Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
Wilson Bailey Geotechnical & Environmental	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
Site Reference: Causeway	TP / BH No	BH2	BH3	BH6	BH8	
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	
Order No: None Supplied	Depth (m)	0.30	0.50	0.30	0.50	
Reporting Date: 02/04/2013	QTSE Sample No	64704	64705	64706	64707	

Determinand	Unit	MDL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
p & m-xylene	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
o-xylene	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C



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Soil Analysis Certificate - Sample Descriptions	
QTS Environmental Report No: 13-13714	
Wilson Bailey Geotechnical & Environmental Ltd	
Site Reference: Causeway	
Project / Job Ref: None Supplied	
Order No: None Supplied	
Reporting Date: 02/04/2013	

QTSE Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
64704	BH2	None Supplied	0.30	16.1	Light brown clayey sand with vegetation
64705	BH3	None Supplied	0.50	14.4	Light brown clayey sand with vegetation
64706	BH6	None Supplied	0.30	16.1	Light brown clayey sand with vegetation
64707	BH8	None Supplied	0.50	20.7	Light brown clay with vegetation

Insufficient sample ^{1/5}
Unsuitable Sample ^{1/5}



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Soil Analysis Certificate - Methodology & Miscellaneous Information	
QTS Environmental Report No: 13-13714	
Wilson Bailey Geotechnical & Environmental Ltd	
Site Reference: Causeway	
Project / Job Ref: None Supplied	
Order No: None Supplied	
Reporting Date: 02/04/2013	

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry	E016
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	AR	Asbestos Screening	Visual screening of samples for fibrous material	E024
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E021
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by turbidimeter	E020
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E023
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E011
Soil	D	Loss on Ignition @ 450°C	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	D	Phosphorus	Determination of phosphorus by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Sulphate (as SO ₄) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	D	Sulphate (as SO ₄) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	AR	Sulphide	Determination of sulphide by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia, potassium iodide/iodate followed by ICP-OES	E002
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E011
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E009
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E009
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E010
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E009
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	VPH (C6 - C10)	Determination of hydrocarbons C6-C10 by headspace GC-MS	E001
Soil	AR	EPH TEXAS	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	TPH CWG	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	TPH LQM	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	EPH (with florilil cleanup)	Determination of acetone/hexane extractable hydrocarbons with florilil cleanup step by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001

Key

D Dried
AR As Received



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QTS Environmental Report No: 13-16861

Site Reference: Causeway Triangle

Project / Job Ref: None Supplied

Order No: None Supplied

Sample Receipt Date: 27/09/2013

Sample Scheduled Date: 30/09/2013

Report Issue Number: 1

Reporting Date: 04/10/2013

Authorised by:

Russell Jarvis
Director

On behalf of QTS Environmental Ltd

Authorised by:

Kevin Old
Director

On behalf of QTS Environmental Ltd



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Soil Analysis Certificate						
QTS Environmental Report No: 13-16861	Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Causeway Triangle	TP / BH No	BHA	BHA	BHB	BHC	BHD
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	Depth (m)	0.30	1.50	0.30	1.50	0.30
Reporting Date: 04/10/2013	QTSE Sample No	80962	80963	80964	80965	80966

Determinand	Unit	MDL	Accreditation					
Asbestos Screen ⁽⁵⁾	N/a	N/a	ISO17025	None Detected		None Detected		None Detected
pH	pH Units	N / a	MCERTS	5.5	6.2	6.3	5.2	5.2
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	NONE		< 0.01		0.20	
Total Organic Carbon (TOC)	%	< 0.1	NONE	2.6		1.8		2
Arsenic (As)	mg/kg	< 2	MCERTS	7		9		11
W/S Boron	mg/kg	< 1	NONE	< 1		< 1		< 1
Cadmium (Cd)	mg/kg	< 0.5	MCERTS	< 0.5		< 0.5		< 0.5
Chromium (Cr)	mg/kg	< 2	MCERTS	14		17		17
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2		< 2		< 2
Copper (Cu)	mg/kg	< 4	MCERTS	15		13		18
Lead (Pb)	mg/kg	< 3	MCERTS	48		43		48
Mercury (Hg)	mg/kg	< 1	NONE	< 1		< 1		< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	7		9		9
Selenium (Se)	mg/kg	< 3	NONE	< 3		< 3		< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	32		39		37
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2		< 2		< 2

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C

Analysis carried out on the dried sample is corrected for the stone content

Subcontracted analysis ⁽⁵⁾



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Soil Analysis Certificate						
QTS Environmental Report No: 13-16861	Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Causeway Triangle	TP / BH No	BHE	BHE	BHF	BHG	BHG
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	Depth (m)	0.25	1.00	0.10	0.15	0.20
Reporting Date: 04/10/2013	QTSE Sample No	80967	80968	80969	80970	80971

Determinand	Unit	MDL	Accreditation					
Asbestos Screen ⁽⁵⁾	N/a	N/a	ISO17025	None Detected		None Detected	None Detected	None Detected
pH	pH Units	N / a	MCERTS	5.7	5.0	4.9	5.5	5.0
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	NONE		0.03			
Total Organic Carbon (TOC)	%	< 0.1	NONE	3.2		2.3	3.2	0.9
Arsenic (As)	mg/kg	< 2	MCERTS	11		10	8	14
W/S Boron	mg/kg	< 1	NONE	< 1		< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.5	MCERTS	< 0.5		< 0.5	< 0.5	< 0.5
Chromium (Cr)	mg/kg	< 2	MCERTS	19		19	16	24
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2		< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	67		8	11	11
Lead (Pb)	mg/kg	< 3	MCERTS	84		39	47	18
Mercury (Hg)	mg/kg	< 1	NONE	< 1		< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	11		11	7	17
Selenium (Se)	mg/kg	< 3	NONE	< 3		< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	51		45	36	46
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2		< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C

Analysis carried out on the dried sample is corrected for the stone content

Subcontracted analysis ⁽⁵⁾



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Soil Analysis Certificate						
QTS Environmental Report No: 13-16861	Date Sampled	None Supplied	None Supplied			
Wilson Bailey Geotechnical & Environmental Ltd	Time Sampled	None Supplied	None Supplied			
Site Reference: Causeway Triangle	TP / BH No	BHH	BHI			
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied			
Order No: None Supplied	Depth (m)	2.00	0.15			
Reporting Date: 04/10/2013	QTSE Sample No	80972	80973			

Determinand	Unit	MDL	Accreditation				
Asbestos Screen ^(S)	N/a	N/a	ISO17025		None Detected		
pH	pH Units	N / a	MCERTS	5.4	5.5		
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	NONE	0.02			
Total Organic Carbon (TOC)	%	< 0.1	NONE		1		
Arsenic (As)	mg/kg	< 2	MCERTS		10		
W/S Boron	mg/kg	< 1	NONE		< 1		
Cadmium (Cd)	mg/kg	< 0.5	MCERTS		< 0.5		
Chromium (Cr)	mg/kg	< 2	MCERTS		19		
Chromium (hexavalent)	mg/kg	< 2	NONE		< 2		
Copper (Cu)	mg/kg	< 4	MCERTS		14		
Lead (Pb)	mg/kg	< 3	MCERTS		30		
Mercury (Hg)	mg/kg	< 1	NONE		< 1		
Nickel (Ni)	mg/kg	< 3	MCERTS		9		
Selenium (Se)	mg/kg	< 3	NONE		< 3		
Zinc (Zn)	mg/kg	< 3	MCERTS		33		
Total Phenols (monohydric)	mg/kg	< 2	NONE		< 2		

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C

Analysis carried out on the dried sample is corrected for the stone content

Subcontracted analysis ^(S)



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Soil Analysis Certificate - Speciated PAHs						
QTS Environmental Report No: 13-16861	Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Causeway Triangle	TP / BH No	BHA	BHB	BHD	BHE	BHF
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	Depth (m)	0.30	0.30	0.30	0.25	0.10
Reporting Date: 04/10/2013	QTSE Sample No	80962	80964	80966	80967	80969

Determinand	Unit	MDL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

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Soil Analysis Certificate - Speciated PAHs						
QTS Environmental Report No: 13-16861	Date Sampled	None Supplied	None Supplied	None Supplied		
Wilson Bailey Geotechnical & Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied		
Site Reference: Causeway Triangle	TP / BH No	BHG	BHG	BHI		
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied		
Order No: None Supplied	Depth (m)	0.15	0.20	0.15		
Reporting Date: 04/10/2013	QTSE Sample No	80970	80971	80973		

Determinand	Unit	MDL	Accreditation				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C



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Soil Analysis Certificate - TPH CWG Banded

QTS Environmental Report No: 13-16861	Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Causeway Triangle	TP / BH No	BHA	BHB	BHD	BHE	BHF
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	Depth (m)	0.30	0.30	0.30	0.25	0.10
Reporting Date: 04/10/2013	QTSE Sample No	80962	80964	80966	80967	80969

Determinand	Unit	MDL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Aliphatic >C10 - C12	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Aliphatic >C12 - C16	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Aliphatic >C16 - C21	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Aliphatic >C21 - C34	mg/kg	< 6	NONE	< 6	< 6	< 6	< 6	< 6
Aliphatic (C5 - C34)	mg/kg	< 12	NONE	< 12	< 12	< 12	< 12	< 12
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Aromatic >C10 - C12	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Aromatic >C12 - C16	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Aromatic >C16 - C21	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Aromatic >C21 - C35	mg/kg	< 6	NONE	< 6	< 6	< 6	< 6	< 6
Aromatic (C5 - C35)	mg/kg	< 12	NONE	< 12	< 12	< 12	< 12	< 12
Total >C5 - C35	mg/kg	< 24	NONE	< 24	< 24	< 24	< 24	< 24

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Soil Analysis Certificate - TPH CWG Banded						
QTS Environmental Report No: 13-16861	Date Sampled	None Supplied	None Supplied	None Supplied		
Wilson Bailey Geotechnical & Environmental L	Time Sampled	None Supplied	None Supplied	None Supplied		
Site Reference: Causeway Triangle	TP / BH No	BHG	BHG	BHI		
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied		
Order No: None Supplied	Depth (m)	0.15	0.20	0.15		
Reporting Date: 04/10/2013	QTSE Sample No	80970	80971	80973		

Determinand	Unit	MDL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05		
Aliphatic >C8 - C10	mg/kg	< 1	NONE	< 1	< 1	< 1		
Aliphatic >C10 - C12	mg/kg	< 1	NONE	< 1	< 1	< 1		
Aliphatic >C12 - C16	mg/kg	< 1	NONE	< 1	< 1	< 1		
Aliphatic >C16 - C21	mg/kg	< 1	NONE	< 1	< 1	< 1		
Aliphatic >C21 - C34	mg/kg	< 6	NONE	< 6	< 6	< 6		
Aliphatic (C5 - C34)	mg/kg	< 12	NONE	< 12	< 12	< 12		
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05		
Aromatic >C8 - C10	mg/kg	< 1	NONE	< 1	< 1	< 1		
Aromatic >C10 - C12	mg/kg	< 1	NONE	< 1	< 1	< 1		
Aromatic >C12 - C16	mg/kg	< 1	NONE	< 1	< 1	< 1		
Aromatic >C16 - C21	mg/kg	< 1	NONE	< 1	< 1	< 1		
Aromatic >C21 - C35	mg/kg	< 6	NONE	< 6	< 6	< 6		
Aromatic (C5 - C35)	mg/kg	< 12	NONE	< 12	< 12	< 12		
Total >C5 - C35	mg/kg	< 24	NONE	< 24	< 24	< 24		

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C



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Soil Analysis Certificate - BTEX / MTBE						
QTS Environmental Report No: 13-16861	Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Causeway Triangle	TP / BH No	BHA	BHB	BHD	BHE	BHF
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	Depth (m)	0.30	0.30	0.30	0.25	0.10
Reporting Date: 04/10/2013	QTSE Sample No	80962	80964	80966	80967	80969

Determinand	Unit	MDL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
p & m-xylene	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
o-xylene	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C



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Soil Analysis Certificate - BTEX / MTBE						
QTS Environmental Report No: 13-16861	Date Sampled	None Supplied	None Supplied	None Supplied		
Wilson Bailey Geotechnical & Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied		
Site Reference: Causeway Triangle	TP / BH No	BHG	BHG	BHI		
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied		
Order No: None Supplied	Depth (m)	0.15	0.20	0.15		
Reporting Date: 04/10/2013	QTSE Sample No	80970	80971	80973		

Determinand	Unit	MDL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2		
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Ethylbenzene	ug/kg	< 10	MCERTS	< 10	< 10	< 10		
p & m-xylene	ug/kg	< 10	MCERTS	< 10	< 10	< 10		
o-xylene	ug/kg	< 10	MCERTS	< 10	< 10	< 10		

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C



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Soil Analysis Certificate - Sample Descriptions

QTS Environmental Report No: 13-16861

Wilson Bailey Geotechnical & Environmental Ltd

Site Reference: Causeway Triangle

Project / Job Ref: None Supplied

Order No: None Supplied

Reporting Date: 04/10/2013

QTSE Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
80962	BHA	None Supplied	0.30	17.6	Brown sandy loam with vegetation
80963	BHA	None Supplied	1.50	10.1	Light brown clay with vegetation and stones
80964	BHB	None Supplied	0.30	12.9	Brown sandy loam with vegetation
80965	BHC	None Supplied	1.50	30.4	Light brown clay
80966	BHD	None Supplied	0.30	20.3	Brown sandy loam with vegetation
80967	BHE	None Supplied	0.25	23.2	Brown clayey loam with vegetation and brick
80968	BHE	None Supplied	1.00	20.2	Grey clay
80969	BHF	None Supplied	0.10	32.8	Brown loamy clay with vegetation
80970	BHG	None Supplied	0.15	17.8	Light brown sandy loam with vegetation
80971	BHG	None Supplied	0.20	19	Grey clay with vegetation
80972	BHH	None Supplied	2.00	21.3	Light grey clay with vegetation
80973	BHI	None Supplied	0.15	11.4	Light brown sandy loam with vegetation

Insufficient sample ^{U/S}

Unsuitable Sample ^{U/S}



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Soil Analysis Certificate - Methodology & Miscellaneous Information	
QTS Environmental Report No: 13-16861	
Wilson Bailey Geotechnical & Environmental Ltd	
Site Reference: Causeway Triangle	
Project / Job Ref: None Supplied	
Order No: None Supplied	
Reporting Date: 04/10/2013	

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E021
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by turbidimeter	E020
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E023
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E011
Soil	D	Loss on Ignition @ 450°C	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	D	Phosphorus	Determination of phosphorus by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	AR	Sulphide	Determination of sulphide by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia, potassium iodide/iodate followed by ICP-OES	E002
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E011
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E009
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E009
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E010
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E009
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	VPH (C6 - C10)	Determination of hydrocarbons C6-C10 by headspace GC-MS	E001
Soil	AR	EPH TEXAS	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	TPH CWG	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	TPH LQM	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	EPH (with florisis cleanup)	Determination of acetone/hexane extractable hydrocarbons with florisis cleanup step by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	VOCS	Determination of volatile organic compounds by headspace GC-MS	E001

Key

D Dried
AR As Received



Wilson Bailey Partnership
Hollyhead House, FORGE FARM YARD,
SALISBURY/COMPTON CHAMBERLAYNE, SP3 5DS

GroundSure Reference:	GS-1113412
Your Reference:	DB
Report Date	9 Oct 2013
Report Delivery Method:	Email - pdf

GroundSure GeoInsight

Address: 106,THE CAUSEWAY,PETERSFIELD, GU31 4LL

Dear Sir/Madam,

Thank you for placing your order with GroundSure. Please find enclosed the **GroundSure GeoInsight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above GroundSure reference number.

Yours faithfully,

A handwritten signature in black ink, appearing to be "B. Bailey", followed by a large, stylized circular flourish.

Managing Director
Groundsure Limited

Enc.
GroundSure GeoInsight

Aerial Photograph of Study Site



Site Name: 106, THE CAUSEWAY, PETERSFIELD, GU31 4LL
Grid Reference: 474735, 122539
Size of Site: 9.95 ha

Aerial photography supplied by Getmapping PLC.
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Overview of Findings

The GroundSure GeoInsight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Shallow Mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and GroundSure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Report Section	Number of records found within (X) m of the study site boundary
1. Geology	Description
1.1 Artificial Ground,	
1.1.1 Is there any Artificial Ground /Made Ground present beneath the study site?*	No
1.1.2 Are there any records relating to permeability of artificial ground within the study site* boundary?	No
1.2 Superficial Geology & Landslips	
1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
1.2.2 Are there any records relating to permeability of superficial geology within the study site* boundary?	Yes
1.2.3 Are there any records of landslip within 500m of the study site boundary?	No
1.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No
1.3 Bedrock, Solid Geology & Faults	
1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
1.3.2 Are there any records relating to permeability of bedrock within the study site* boundary?	Yes
1.3.3 Are there any records of faults within 500m of the study site boundary?	No
1.3.4 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level
1.3.5 Is the property in an area where Radon Protection Measures are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary

* This includes an automatically generated 50m buffer zone around the site

Source:Scale 1:50,000 BGS Sheet No:316

Report Reference: [GS-1113412](#)

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2. Ground Workings	on-site	0-50	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	4	17	26	-	-
2.2 Historical Underground Workings Features from Small Scale Mapping	0	0	0	0	0
2.3 Current Ground Workings	0	0	2	1	4

3. Mining, Extraction & Natural Cavities	on-site	0-50	51-250	251-500	501-1000
3.1 Historical Mining	0	0	0	0	0
3.2 Coal Mining	0	0	0	0	0
3.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
3.4 Non-Coal Mining*	1	0	1	1	2
3.5 Non-Coal Mining Cavities	0	0	0	0	0
3.6 Natural Cavities	0	0	0	0	0
3.7 Brine Extraction	0	0	0	0	0
3.8 Gypsum Extraction	0	0	0	0	0
3.9 Tin Mining	0	0	0	0	0
3.10 Clay Mining	0	0	0	0	0

*This includes an automatically generated 50m buffer zone around the site

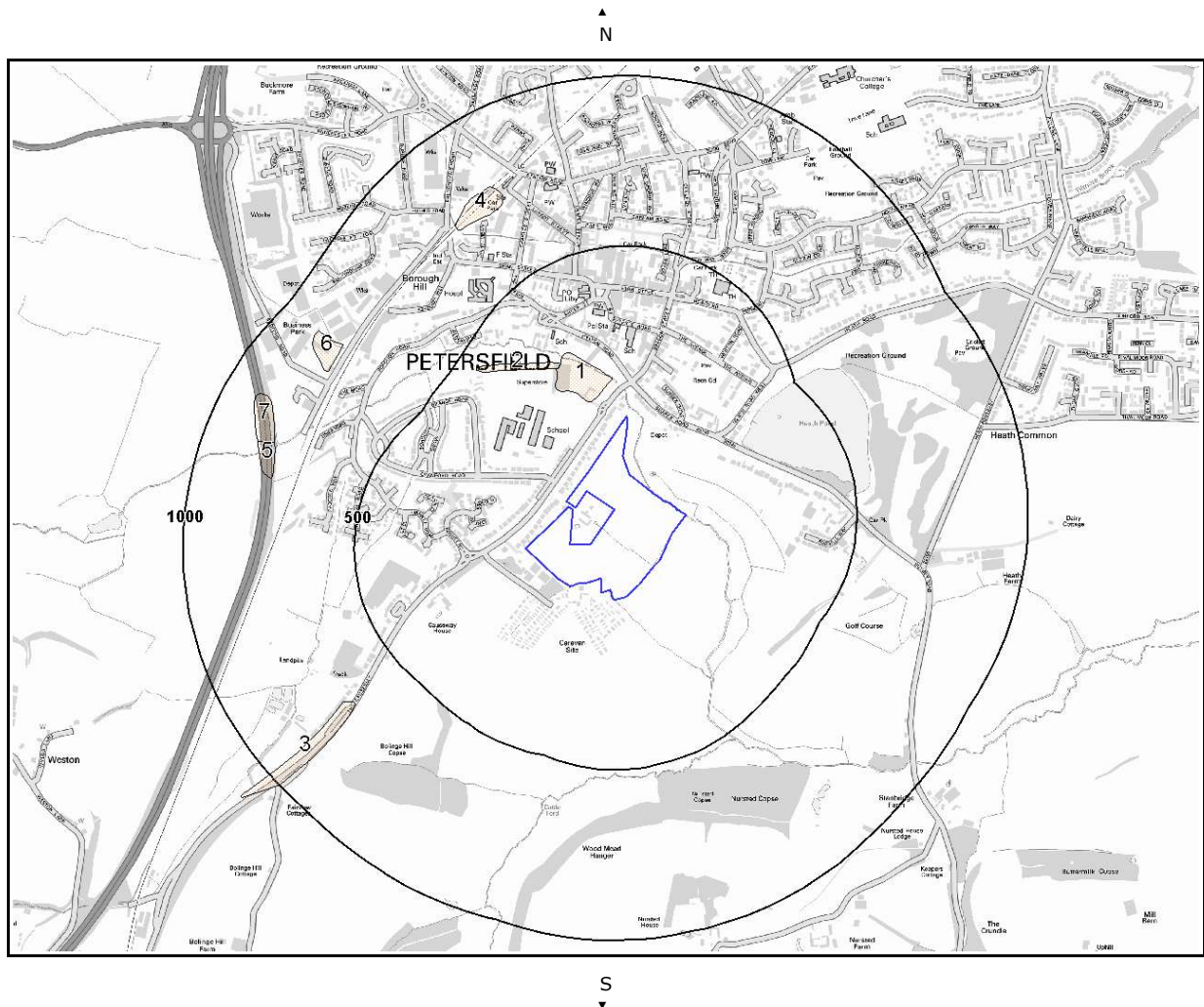
4. Natural Ground Subsidence	on-site*	0-50	51-250	251-500	501-1000
4.1 Shrink-Swell Clay	Moderate	-	-	-	-
4.2 Landslides	Very Low	-	-	-	-
4.3 Ground Dissolution of Soluble Rocks	Null	-	-	-	-
4.4 Compressible Deposits	Moderate	-	-	-	-
4.5 Collapsible Deposits	Very Low	-	-	-	-
4.6 Running Sand	Low	-	-	-	-

* This includes an automatically generated 50m buffer zone around the site

5. Borehole Records	on-site	0-50	51-250	251-500	501-1000
5.1 BGS Recorded Boreholes	0	0	9	-	-

6. Estimated Background Soil Chemistry	on-site	0-50	51-250	251-500	501-1000
6.1 Records of Background Soil Chemistry	7	4	0	-	-

1.1 Artificial Ground Map

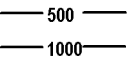


Artificial Ground Legend

Mapping
sourced from

Ordnance
Survey

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	Site Outline		Made Ground (undivided)		Disturbed Ground (undivided)
	Search Buffers (m)		Worked Ground (undivided)		Landscaped Ground (undivided)
			Infilled Ground		Reclaimed Ground

Geological information represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

Report Reference: [GS-1113412](#)

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1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:316

1.1.1 Artificial/Made Ground

Are there any records of Artificial/Made Ground within 500m of the study site boundary? **Yes**

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	103.0	NW	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	244.0	NW	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

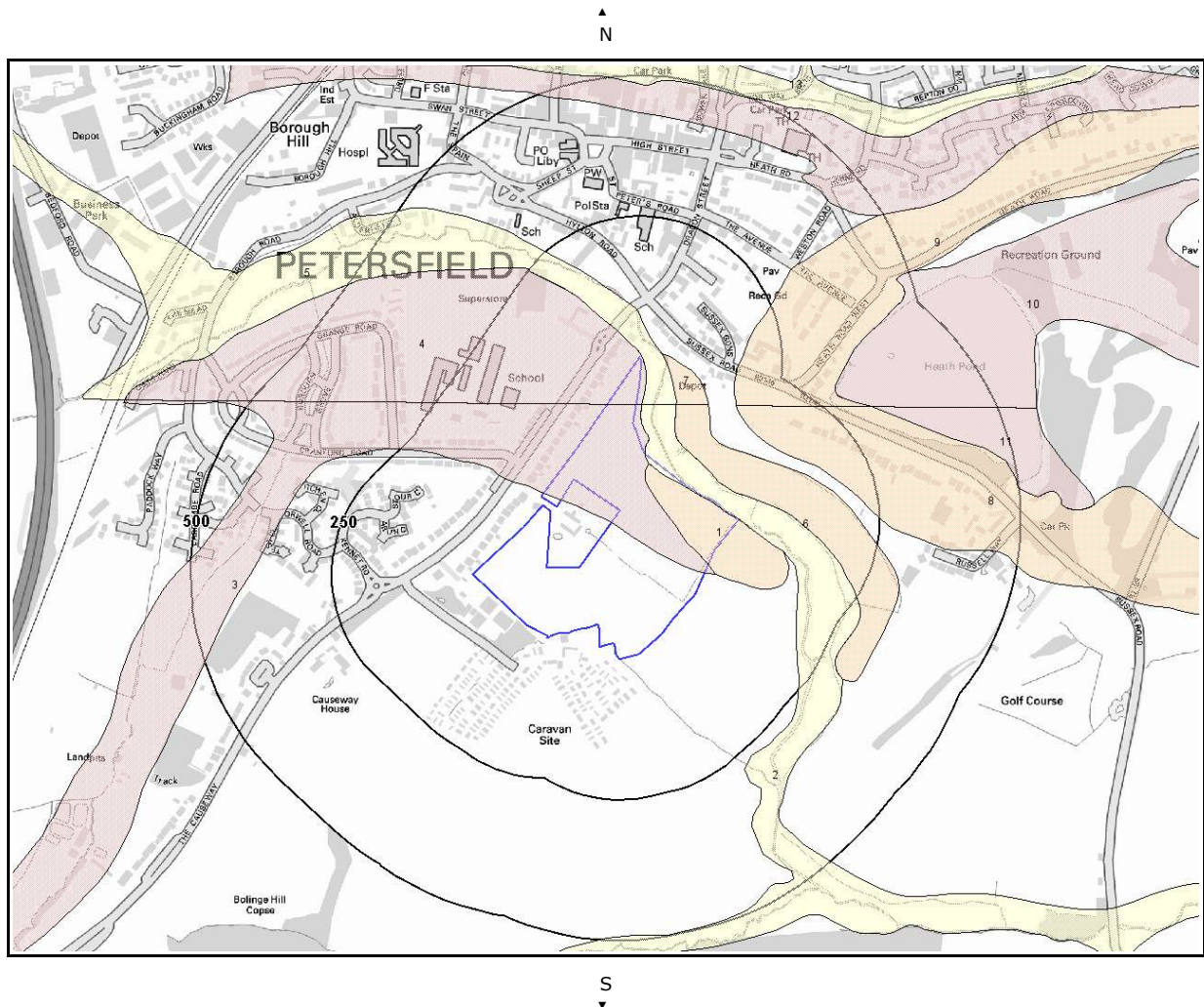
1.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site* boundary? **No**

Database searched and no data found.

* This includes an automatically generated 50m buffer zone around the site.

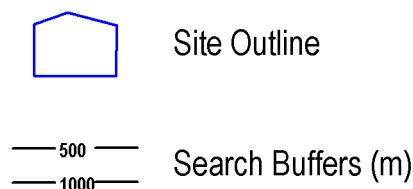
1.2 Superficial Deposits and Landslips Map



Superficial and Landslips Legend



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Geological information represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

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1.2 Superficial Deposits and Landslips

1.2.1 Superficial Deposits/Drift Geology

Are there any records of Superficial Deposits/Drift Geology within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	Lex Code	Description	Rock Description
1	0.0	On Site	RS1-SAGR	SUSSEX ROTHER TERRACE DEPOSITS, 1 MEMBER	SAND AND GRAVEL
2	0.0	On Site	ALV-CSSG	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
3	0.0	On Site	HEAD-CSSG	HEAD	CLAY, SILT, SAND AND GRAVEL
4	0.0	On Site	HEAD-CSSG	HEAD	CLAY, SILT, SAND AND GRAVEL
5	3.0	NE	ALV-CSSG	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
6	33.0	NE	RTD1-GRSS	RIVER TERRACE DEPOSITS, 1	GRAVEL, SAND AND SILT
7	39.0	E	RTD1-SAGR	RIVER TERRACE DEPOSITS, 1	SAND AND GRAVEL
8	140.0	NE	RS3-SAGR	SUSSEX ROTHER TERRACE DEPOSITS, 3 MEMBER	SAND AND GRAVEL
9	167.0	NE	RTD3-SAGR	RIVER TERRACE DEPOSITS, 3	SAND AND GRAVEL
10	282.0	NE	HEAD-CSSG	HEAD	CLAY, SILT, SAND AND GRAVEL
11	309.0	NE	HEAD-CSSG	HEAD	CLAY, SILT, SAND AND GRAVEL
12	427.0	N	HEAD-CSSG	HEAD	CLAY, SILT, SAND AND GRAVEL
13	483.0	N	ALV-CSSG	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

1.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site* boundary? Yes

Distance (m)	Direction	Flow type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	High	Very Low
0.0	On Site	Intergranular	High	Very Low
0.0	On Site	Intergranular	Very High	High
33.0	NE	Intergranular	Very High	Moderate
39.0	E	Intergranular	Very High	High

1.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary?

No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.2.4 Landslip Permeability

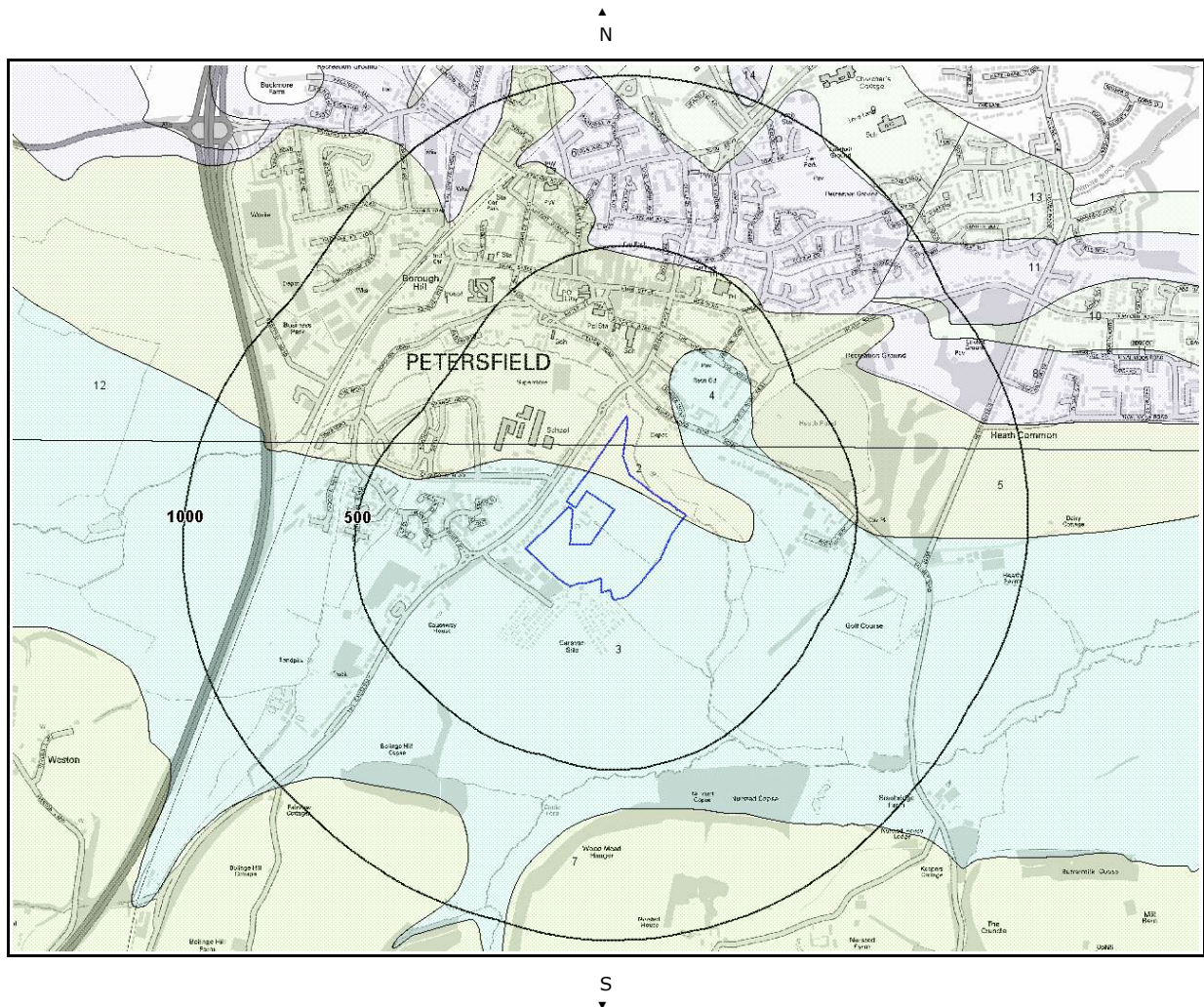
Are there any records relating to permeability of landslips within the study site* boundary?

No

Database searched and no data found.

*This includes an automatically generated 50m buffer zone around the site.

1.3 Bedrock and Faults Map



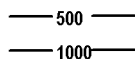
Bedrock & Faults Deposits Legend



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Site Outline



Search Buffers (m)

Geological information represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

Report Reference: [GS-1113412](#)

If you would like any further assistance regarding this report then please contact GroundSure on (T) 08444 159 000, email: info@4c.groundsure.com

1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:316

1.3.1 Bedrock/Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary:

ID	Distance (m)	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	FO-SDST	Folkestone Formation - Sandstone	Albian / Aptian
2	0.0	On Site	FO-SDST	Folkestone Formation - Sandstone	Albian / Aptian
3	0.0	On Site	GLT-MDST	Gault Formation - Mudstone	Albian
4	135.0	E	GLT-MDST	Gault Formation - Mudstone	Albian
5	291.0	NE	FO-SDST	Folkestone Formation - Sandstone	Albian / Aptian
6	465.0	N	MHC-MDST	Marehill Clay Member - Mudstone	Aptian

1.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site* boundary? **Yes**

Distance (m)	Direction	Flow type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Low	Very Low
0.0	On Site	Intergranular	High	High

1.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? **No**

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3.4 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level

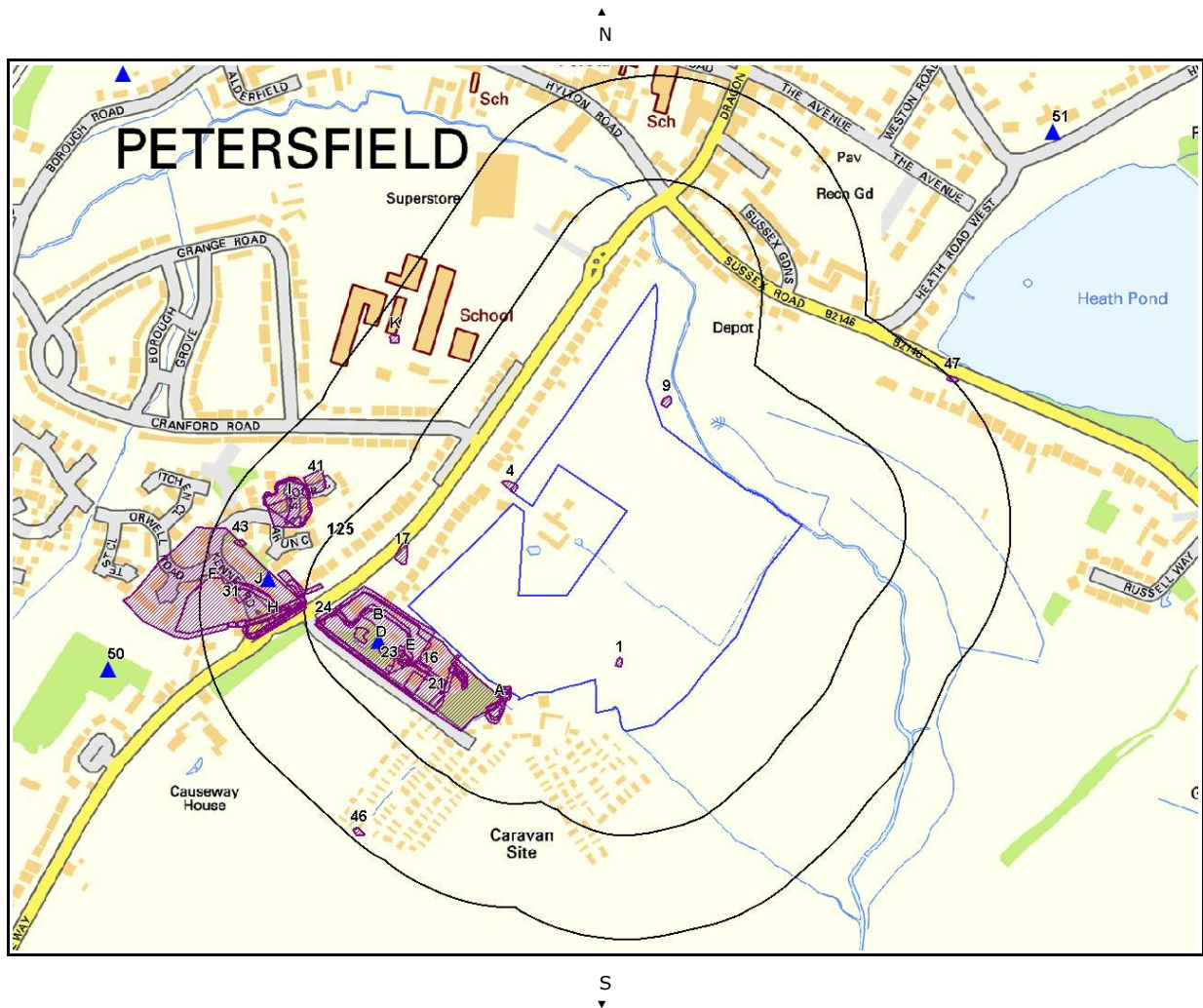
1.3.5 Radon Protection

* This includes an automatically generated 50m buffer zone around the site.

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?

No radon protective measures are necessary

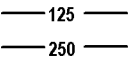
2. Ground Workings Map



Ground Workings Legend



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- | | | | |
|---|--------------------|---|----------------------------------|
|  | Site Outline |  | Historic Surface Ground Workings |
|  | Search Buffers (m) |  | Historic Underground Workings |
| | |  | Current Ground Workings |

Report Reference: [GS-1113412](#)

If you would like any further assistance regarding this report then please contact GroundSure on (T) 08444 159 000, email: info@4c.groundsure.com

2. Ground Workings

2.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on GroundSure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping.

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

The following Historical Surface Ground Working Features are provided by GroundSure:

ID	Distance (m)	Direction	NGR	Use	Date
1	0.0	On Site	474686,122424	Pond	1931
2A	0.0	On Site	474542,122373	Pond	1908
3A	0.0	On Site	474550,122391	Pond	1931
4	0.0	On Site	474556,122635	Pond	1908
5A	1.0	SW	474542,122369	Ponds	1957
6B	1.0	SW	474395,122462	Brick Works	1931
7C	2.0	SW	474495,122416	Unspecified Ground Workings	1931
8E	4.0	SW	474435,122425	Brick Works	1938
9	8.0	E	474744,122737	Pond	1908
10	9.0	SW	474393,122447	Brick Works	1908
B					
11	11.0	SW	474415,122434	Unspecified Ground Workings	1938
D					
12	12.0	SW	474494,122407	Unspecified Ground Workings	1957
C					
13	16.0	SW	474538,122368	Pond	1931
A					
14	20.0	SW	474382,122452	Unspecified Pit	1931
B					
15	25.0	SW	474400,122425	Unspecified Pit	1957
D					
16	36.0	SW	474464,122408	Unspecified Ground Workings	1931
17	38.0	NW	474426,122556	Unspecified Ground Workings	1869
18	40.0	SW	474436,122431	Unspecified Pit	1931
E					
19	43.0	SW	474391,122434	Unspecified Pit	1908
D					
20	45.0	SW	474429,122427	Pond	1931
E					
21	47.0	SW	474468,122380	Pond	1931
22	57.0	SW	474378,122456	Ponds	1931
B					
23	66.0	SW	474412,122417	Pond	1931
24	102.0	W	474333,122472	Pond	1931
25	105.0	W	474303,122514	Unspecified Ground Workings	1908
G					
26	122.0	W	474277,122474	Pond	1938
H					
27	122.0	W	474200,122519	Brick and Tile Works	1908
F					
28	122.0	W	474200,122519	Brick and Tile Works	1938
F					
29	122.0	W	474200,122519	Brick and Tile Works	1895
F					
30	122.0	W	474301,122494	Pond	1931
G					
31	122.0	W	474206,122524	Brick and Tile Works	1931
32	123.0	W	474276,122480	Pond	1869
H					
33	125.0	W	474273,122474	Pond	1957
H					
34	127.0	W	474294,122519	Pond	1895
G					
35	142.0	W	474267,122475	Pond	1931
H					
36	143.0	W	474266,122470	Pond	1908
H					
37J	154.0	W	474265,122501	Unspecified Ground Workings	1938

Report Reference: GS-1113412

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38I	159.0	NW	474290,122615	Unspecified Pit	1938
39I	160.0	NW	474270,122615	Unspecified Pit	1957
40I	161.0	NW	474290,122616	Unspecified Pit	1930
41	171.0	NW	474322,122641	Unspecified Pit	1982
42J	190.0	W	474236,122504	Pond	1931
43	208.0	W	474233,122567	Pond	1931
44	212.0	NW	474418,122812	Pond	1930
K					
45	212.0	NW	474418,122812	Pond	1908
K					
46	236.0	SW	474376,122221	Pond	1931
47	247.0	NE	475086,122764	Pond	1930

2.2 Historical Underground Workings Features derived from Historical Mapping

This data is derived from the GroundSure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? **No**

Database searched and no data found.

2.3 Current Ground Workings

This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary? **Yes**

The following Current Ground Workings information is provided by British Geological Society:

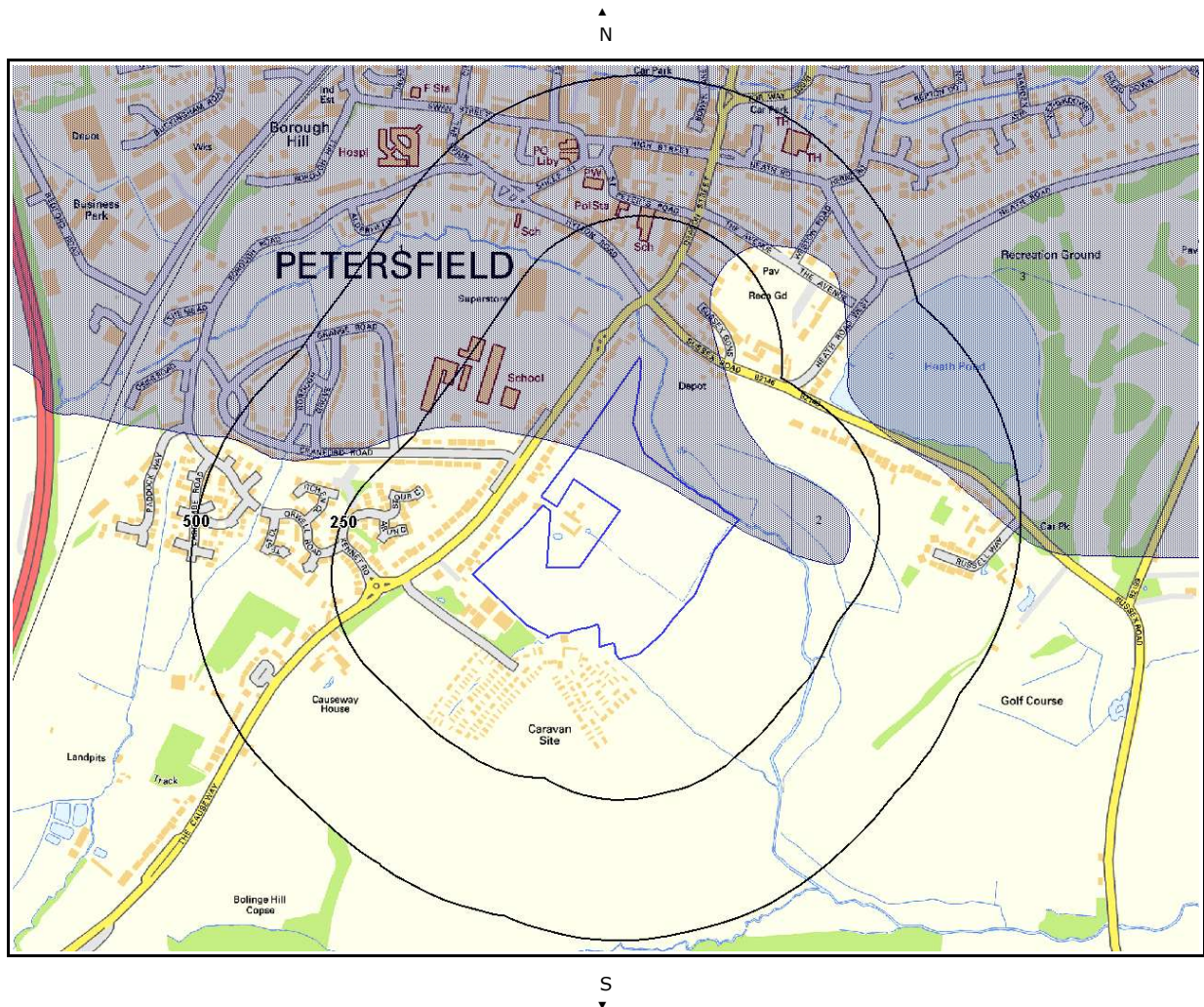
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
48B	56.0	SW	4743 99,12 2449	Clay & Shale	Causeway Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
49J	171.0	W	4742 67,12 2524	Clay & Shale	Causeway Brick & Tile Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
50	368.0	W	4740 75,12 2415	Clay & Shale	Petersfield Brick & Tile Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
51	508.0	E	4752 05,12 3061	Sand	Heath Road Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
52	669.0	NW	4740 93,12 3131	Sand	Borough Hill Sand Pits	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

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Not shown	747.0	NW	4740 13,12 3152	Sand	Borough Hill Sand Pits	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	976.0	N	4749 52,12 3829	Sand	Ram's Hill Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

3. Mining, Extraction & Natural Cavities Map



Mining, Extraction & Natural Cavities
Legend



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3. Mining, Extraction & Natural Cavities

3.1 Historical Mining

This dataset is derived from GroundSure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

3.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

3.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary?

No

The following information provided by JPB is not represented on Mapping:

Database searched. No results found.

3.4 Non – Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary?

Yes

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Sand	Rare - Infrequent minor mining may have occurred but restricted in extent.
2	95.0	E	Not available	Sand	Rare - Infrequent minor mining may have occurred but restricted in extent.
3	291.0	NE	Not available	Sand	Rare - Infrequent minor mining may have occurred but restricted in extent.
Not shown	614.0	S	Not available	Sand	Unlikely - Some small scale mining may have occurred but restricted in extent.
Not shown	689.0	SE	Not available	Sand	Unlikely - Some small scale mining may have occurred but restricted in extent.

Report Reference: [GS-1113412](#)

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3.5 Non – Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled "Review of mining instability in Great Britain, 1990" PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? **No**

Database searched and no data found.

3.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary? **No**

Database searched and no data found.

3.7 Brine Extraction

This dataset provides information from the Brine Compensation Board which has been discontinued and is now covered by the Coal Authority.

Are there any Brine Extraction areas within 1000m of the study site boundary? **No**

Database searched and no data found.

3.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? **No**

Database searched and no data found.

3.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level. More detailed information on potential Tin Mining may be found in Section 3.4 – Non-Coal Mining Hazards.

Are there any Tin Mining areas within 1000m of the study site boundary? **No**

Database searched and no data found.

3.10 Clay Mining

This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

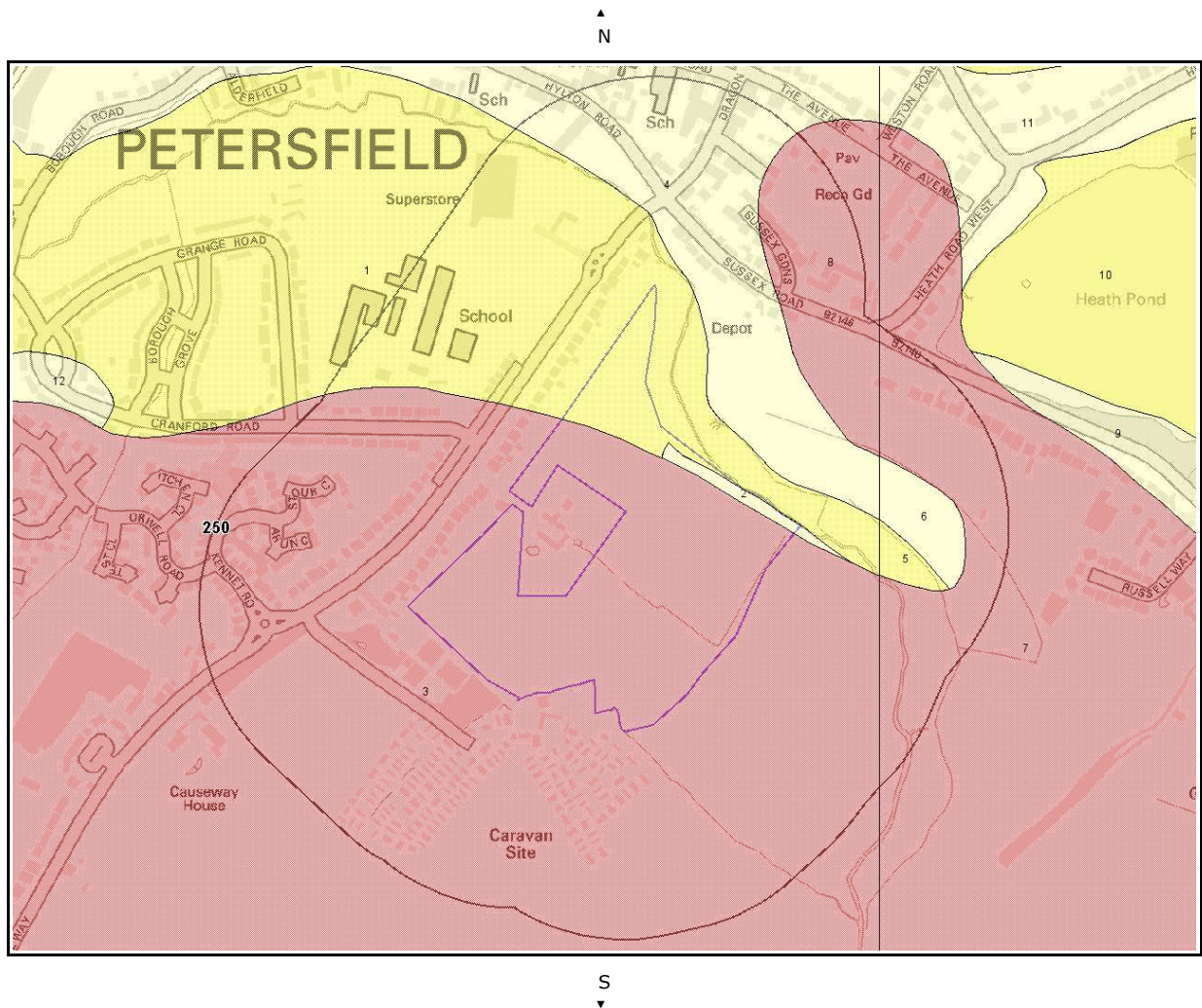
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

4. Natural Ground Subsidence

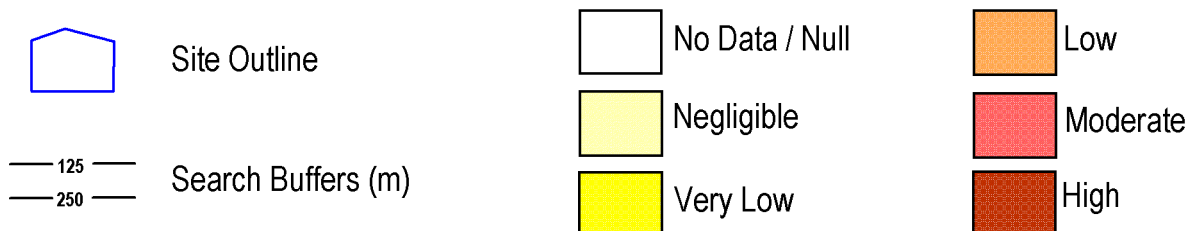
4.1 Shrink-Swell Clay Map



Shrink-Swell Clay Legend



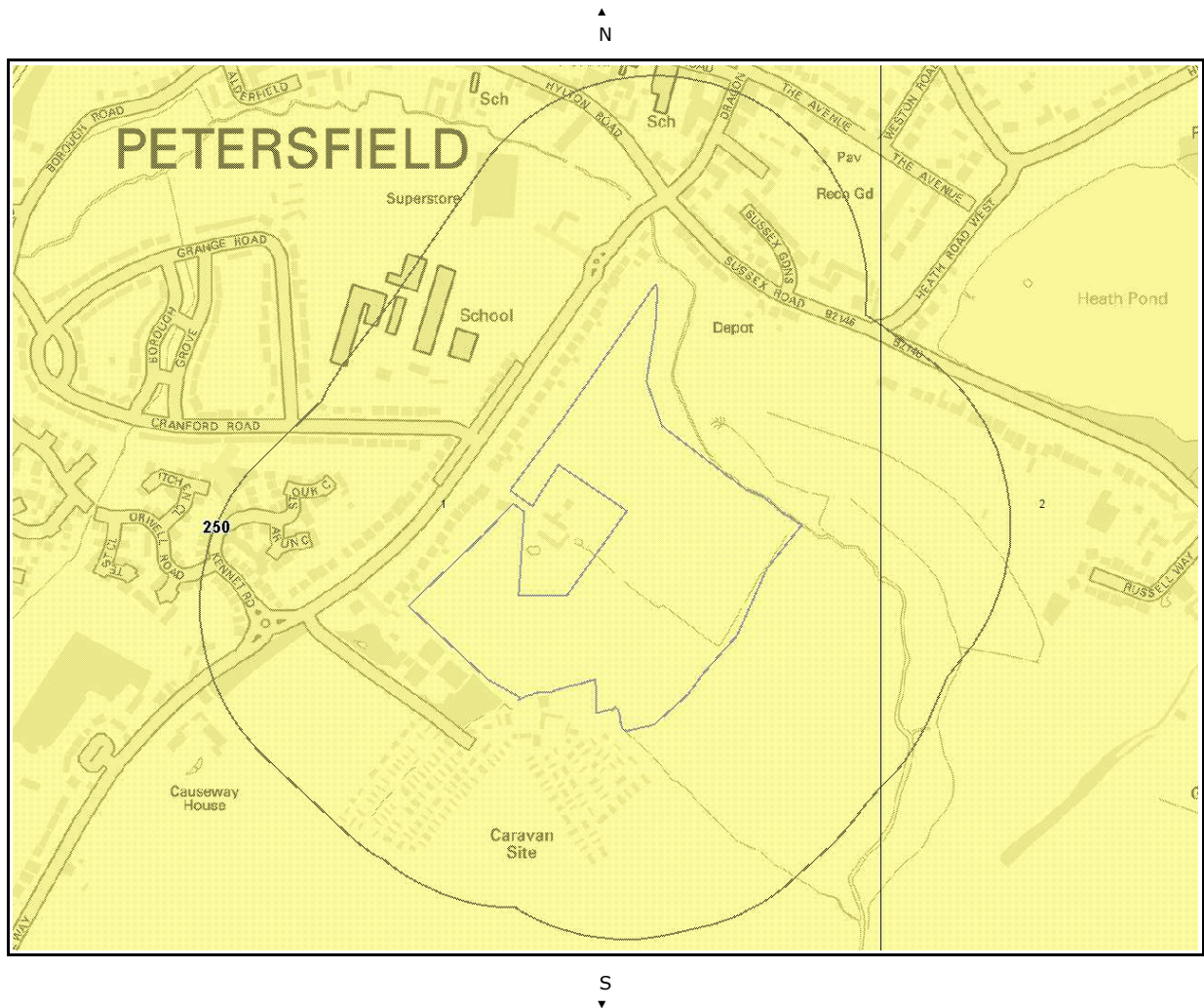
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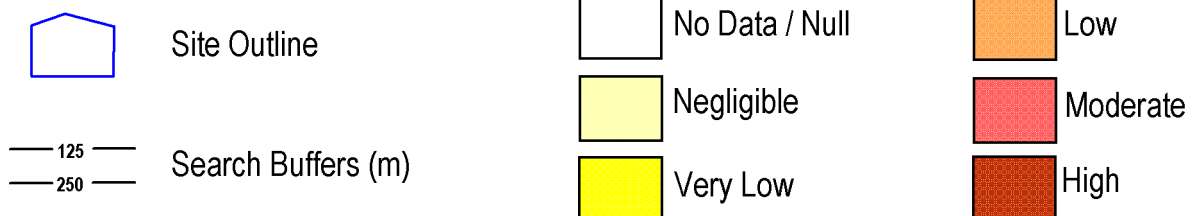
4.2 Landslides Map



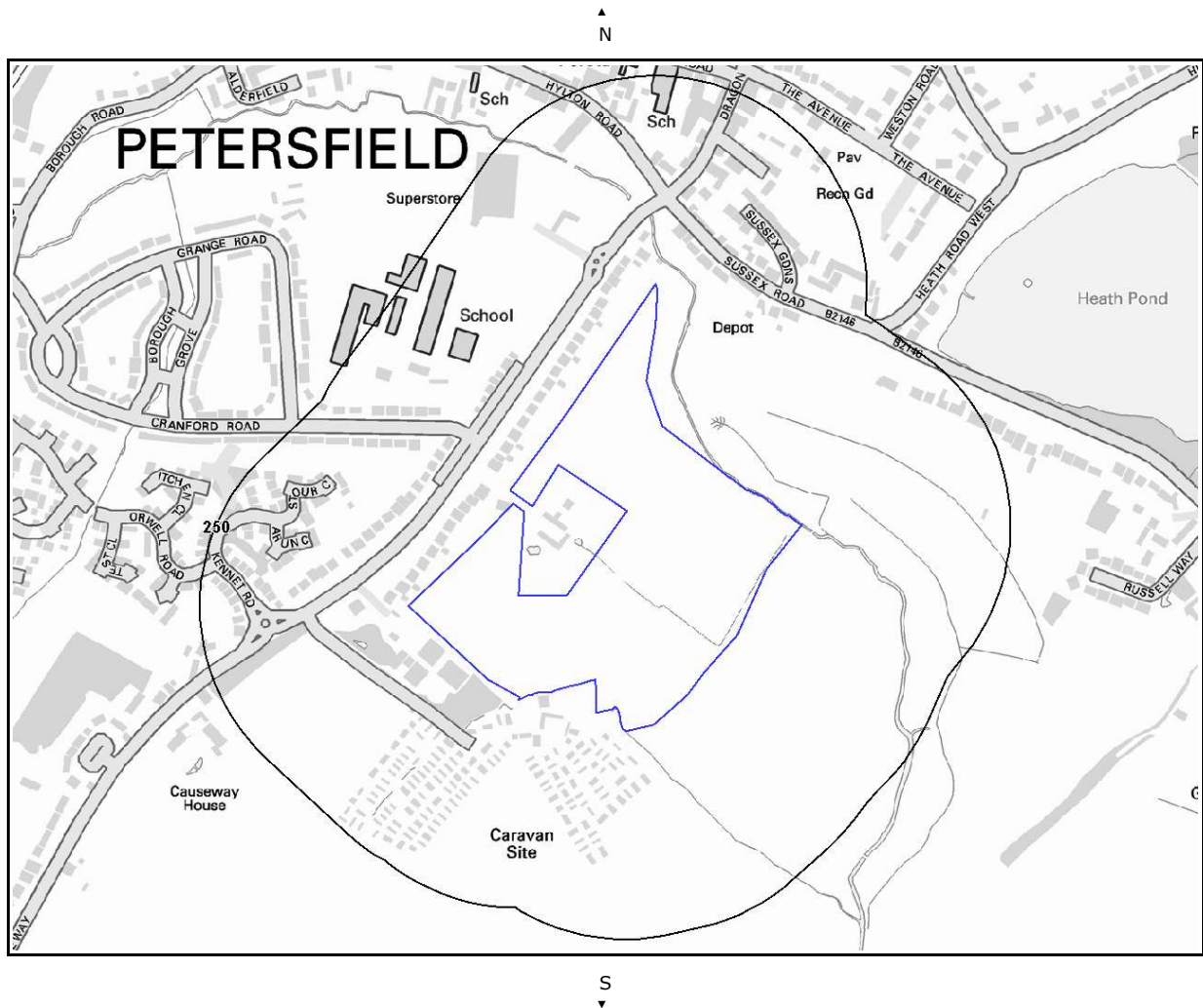
Landslides Legend



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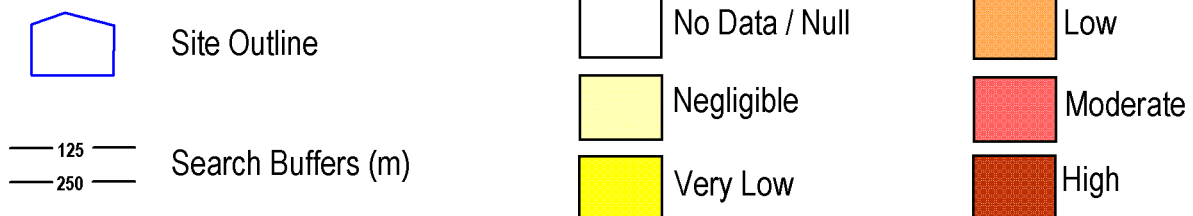
4.3 Ground Dissolution Soluble Rocks Map



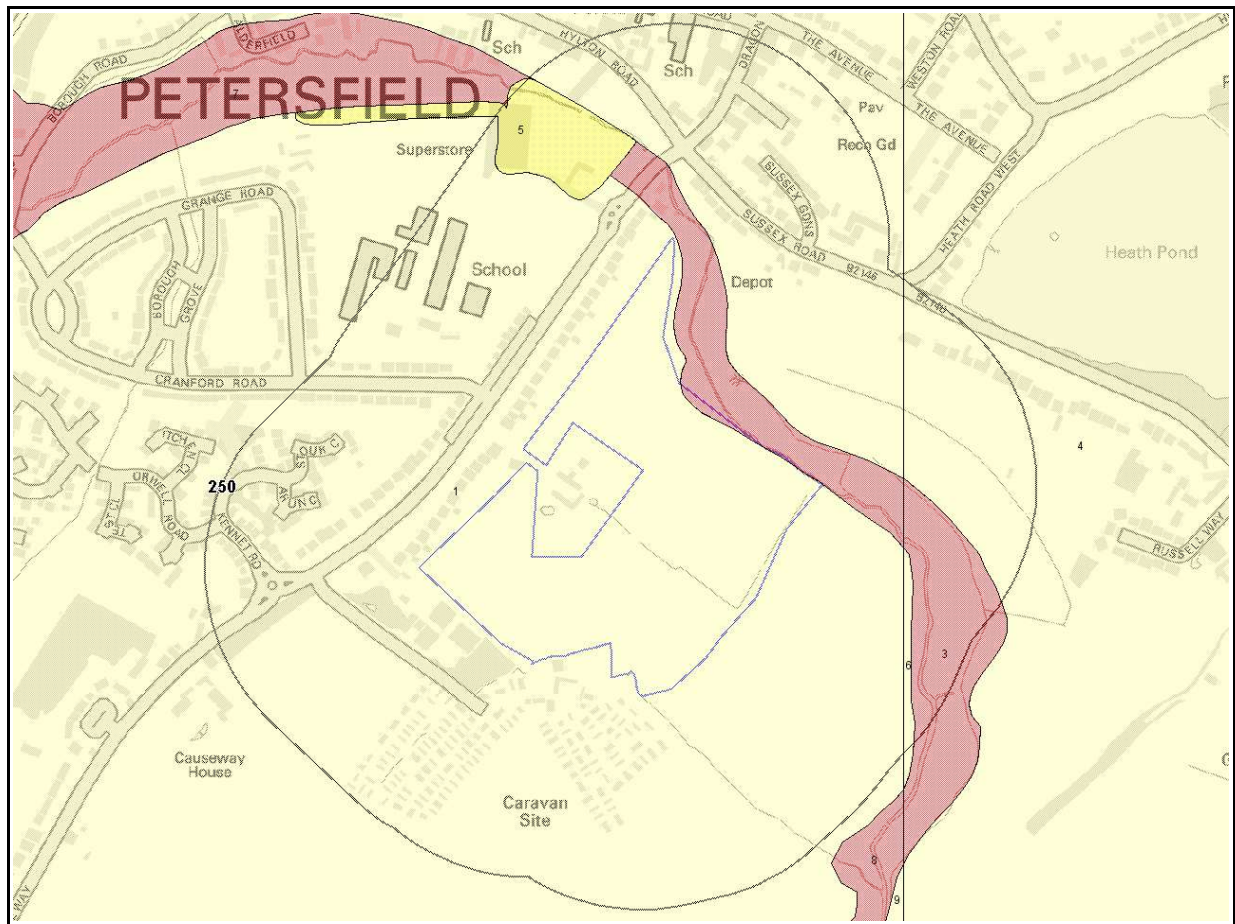
Ground Dissolution Soluble Rocks
Legend



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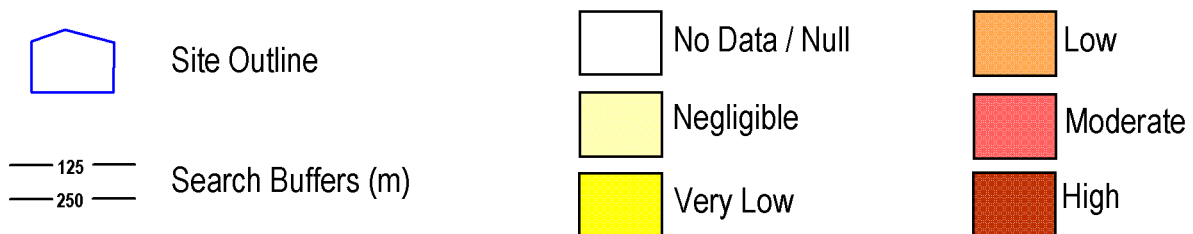
4.4 Compressible Deposits Map



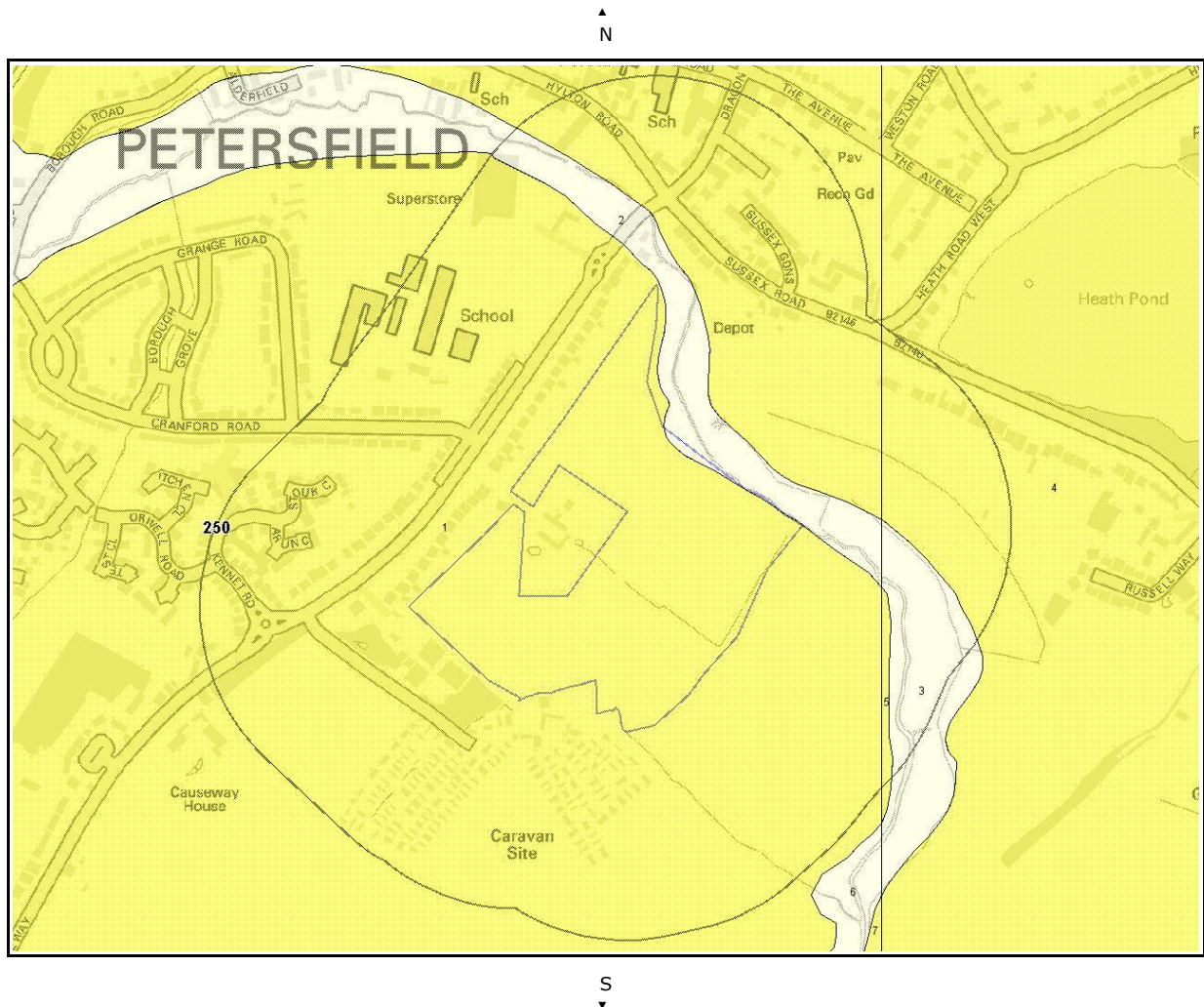
Compressible Deposits Legend



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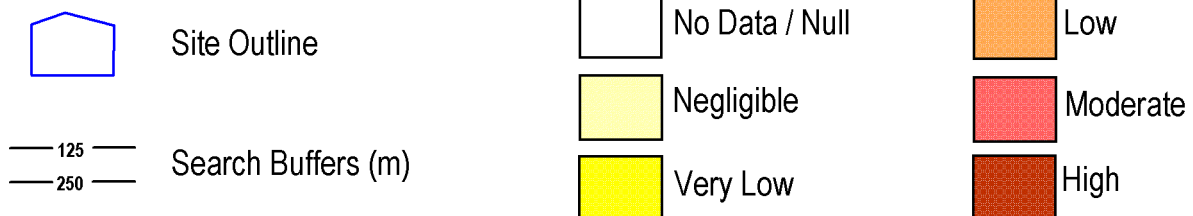
4.5 Collapsible Deposits Map



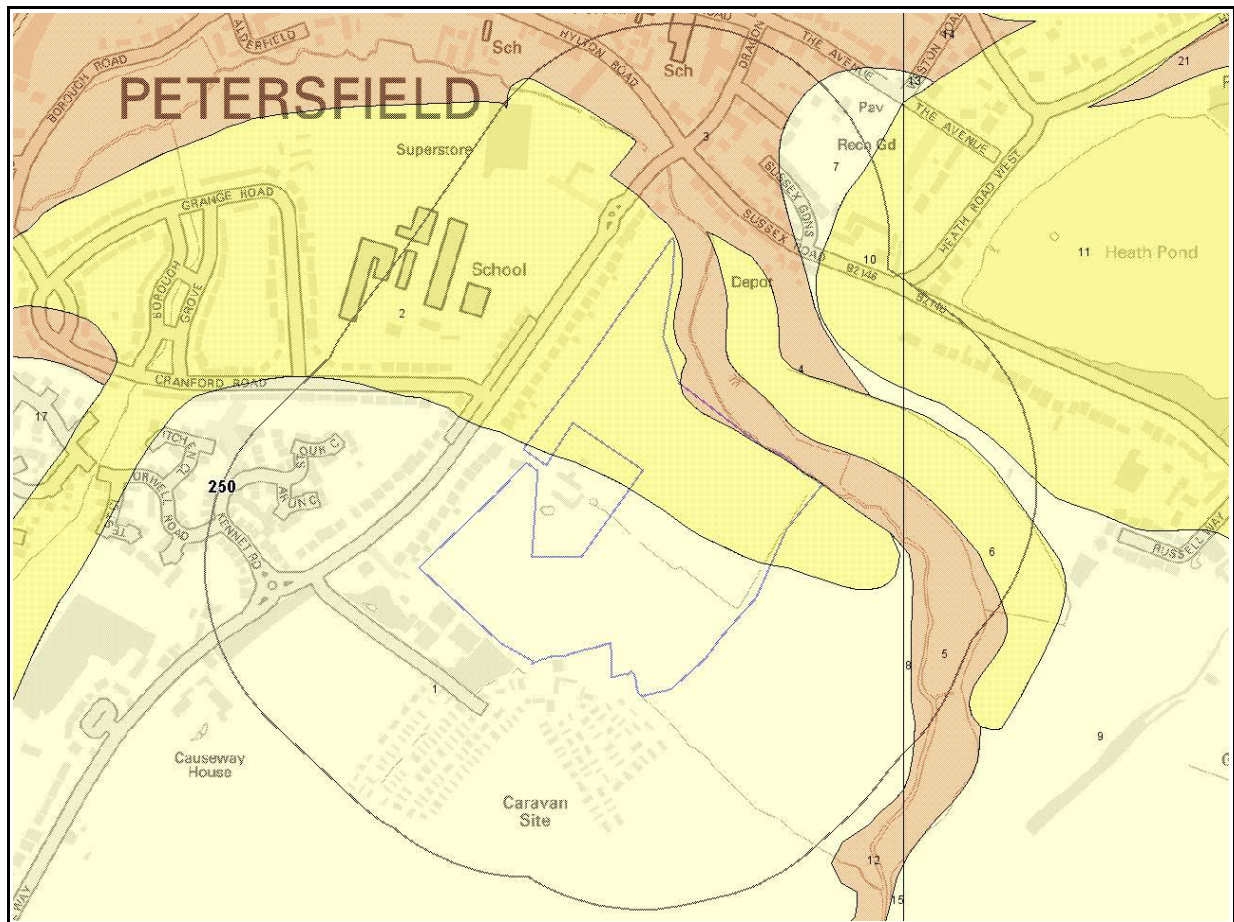
Collapsible Deposits Legend



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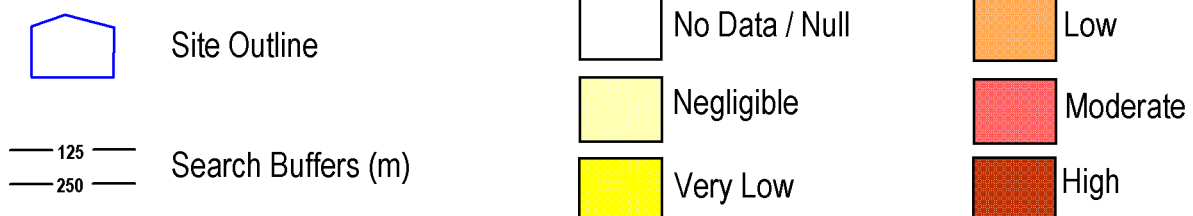
4.6 Running Sand Map



Running Sand Legend



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4. Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site* boundary? **Moderate**

4.1 Shrink – Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m) *	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
2	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.
3	0.0	On Site	Moderate	Ground conditions predominantly high plasticity. Do not plant or remove trees or shrubs near to buildings without expert advice about their effect and management. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a probable increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a probable increase in insurance risk during droughts or where vegetation with high moisture demands is present.
4	33.0	NE	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

4.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

4.3 Ground Dissolution of Soluble Rocks

The following Soluble Rocks information provided by the British Geological Survey:

*This includes an automatically generated 50m buffer zone around the study site boundary.

Report Reference: GS-1113412

If you would like any further assistance regarding this report then please contact GroundSure on (T) 08444 159 000, email: info@4c.groundsure.com

Distance (m)*	Direction	Hazard Rating	Details
0.0	On site	Null-Negligible	Soluble rocks are not present in the search area. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

4.4 Compressible Deposits

The following Compressible Ground information provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
2	0.0	On Site	Moderate	Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property - possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

4.5 Collapsible Deposits

The following Collapsible Rocks information is provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
2	0.0	On Site	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

4.6 Running Sands

The following Running Sands information is provided by the British Geological Survey:

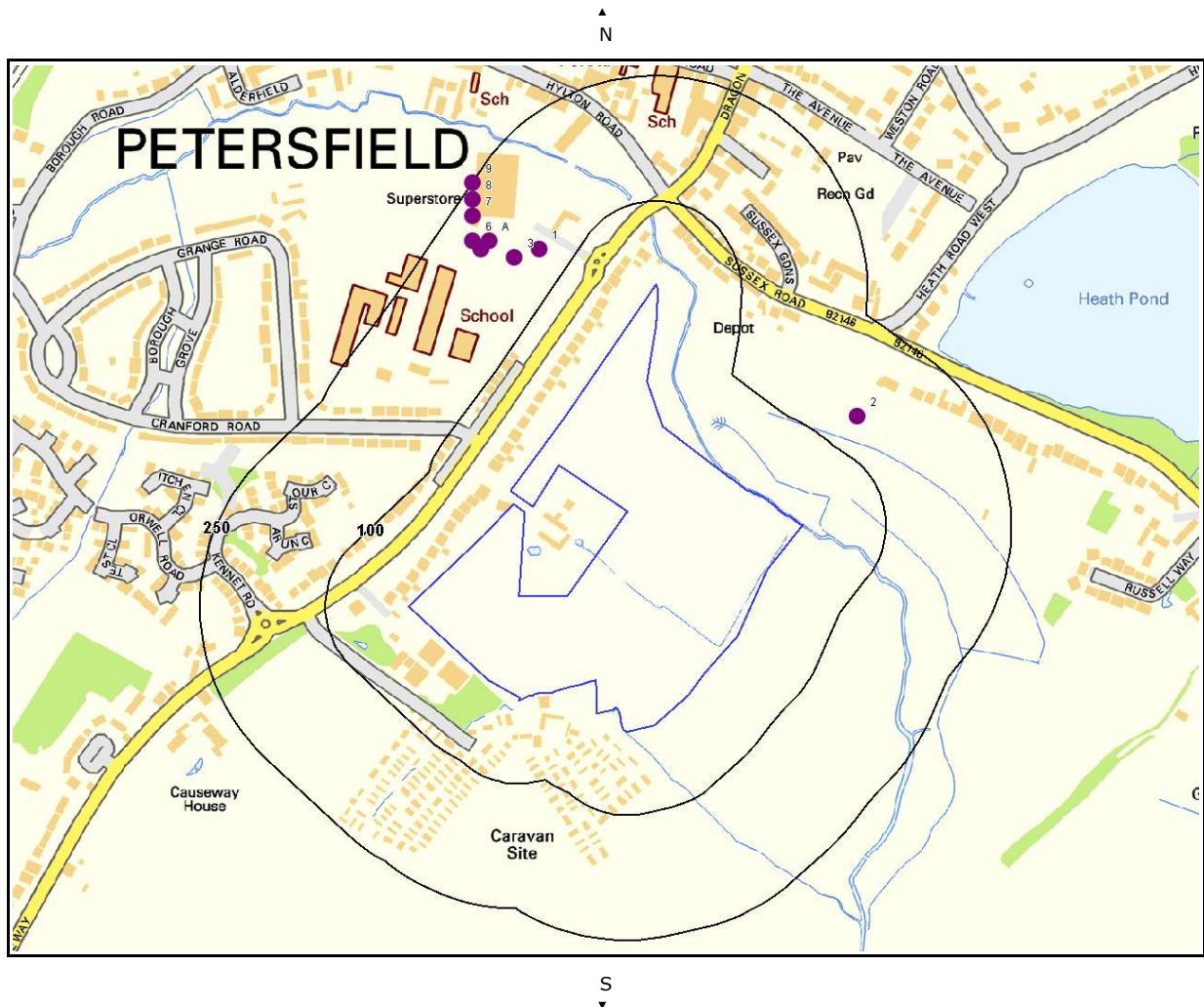
ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
3	0.0	On Site	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.

Report Reference: [GS-1113412](#)

If you would like any further assistance regarding this report then please contact GroundSure on (T) 08444 159 000, email: info@4c.groundsure.com

4	33.0	NE	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
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5. Borehole Records Map



Borehole Records Legend



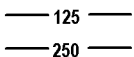
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Site Outline



Borehole Locations



Search Buffers (m)

5. Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

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ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length (m)	Borehole Name
1	139.0	NW	474590,12 2920	SU72SW78	-1.0	THE CAUSEWAY PETERSFIELD WS6
2	145.0	NE	474970,12 2720	SU72SW16	5.18	PETERSFIELD SEWER SCHEME BH4
3	158.0	NW	474560,12 2910	SU72SW77	-1.0	THE CAUSEWAY PETERSFIELD WS5
4A	194.0	NW	474530,12 2930	SU72SW72	-1.0	THE CAUSEWAY PETERSFIELD 3
5A	197.0	NW	474520,12 2920	SU72SW76	-1.0	THE CAUSEWAY PETERSFIELD WS4
6	211.0	NW	474510,12 2930	SU72SW71	-1.0	THE CAUSEWAY PETERSFIELD 2
7	228.0	NW	474510,12 2960	SU72SW75	-1.0	THE CAUSEWAY PETERSFIELD WS3
8	239.0	NW	474510,12 2980	SU72SW74	-1.0	THE CAUSEWAY PETERSFIELD WS2
9	250.0	NW	474510,12 3000	SU72SW73	-1.0	THE CAUSEWAY PETERSFIELD WS1

Additional online information is available for the following boreholes listed above:

#2: http://scans.bgs.ac.uk/sobi_scans/boreholes/426065

6. Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

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For further information on how this data is calculated and limitations upon its use, please see the GroundSure GeoInsight User Guide, available on request.

Estimated Geometric Mean Soil Concentrations (mg/kg)							
Distance (m)*	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
3.0	NE	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
33.0	NE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
35.0	NE	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
39.0	E	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg

*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

7. Contacts

GroundSure Helpline

Telephone: 08444 159 000
info@4c.groundsure.com



British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
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Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk
BGS Geological Hazards Reports and general geological enquiries



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Acknowledgements

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This report has been prepared in accordance with the GroundSure Ltd standard Terms and Conditions of business for work of this nature.

Report Reference: GS-1113412

If you would like any further assistance regarding this report then please contact
GroundSure on (T) 08444 159 000, email: info@4c.groundsure.com

Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:

"Beneficiary" means the person or entity for whose benefit the Client has obtained the Services.

"Client" means the party or parties entering into a Contract with GroundSure.

"Commercial" means any building or property which is not Residential.

"Confidential Information" means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by GroundSure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

"Support Services" means Support Services provided by GroundSure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

"Contract" means the contract between GroundSure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

"Third Party Data Provider" means any third party providing Third Party Content to GroundSure.

"Data Reports" means reports comprising factual data with no accompanying interpretation.

"Fees" has the meaning set out in clause 5.1.

"GroundSure" means GroundSure Limited, a company registered in England and Wales under number 03421028.

"GroundSure Materials" means all materials prepared by GroundSure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

"Intellectual Property" means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

"Mapping" means a map, map data or a combination of historical maps of various ages, time periods and scales.

"Order" means an electronic, written or other order form submitted by the Client requesting Services from GroundSure in respect of a specified Site.

"Ordnance Survey" means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

"Order Website" means the online platform through which Orders may be placed by the Client and accepted by GroundSure.

"Report" means a Risk Screening Report or Data Report for Commercial or Residential property.

"Residential" means any building or property used as or intended to be used as a single dwelling.

"Risk Screening Report" means a risk screening report comprising factual data with an accompanying interpretation by GroundSure.

"Services" means any Report, Mapping and/or Support Services which GroundSure has agreed to provide by accepting an Order pursuant to clause 2.6.

"Site" means the area of land in respect of which the Client has requested GroundSure to provide the Services.

"Third Party Content" means data, database information or other information which is provided to GroundSure by a Third Party Data Provider.

"User Guide" means the user guide, as amended from time to time, available upon request from GroundSure and on the website (www.groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 GroundSure agrees to provide the Services in accordance with the Contract.

2.2 GroundSure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of GroundSure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, GroundSure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and GroundSure will have no liability therefor. In addition you acknowledge and agree that GroundSure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 GroundSure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure. GroundSure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by GroundSure. GroundSure's acceptance of an Order shall be binding only when made in writing and signed by GroundSure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to GroundSure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.

3.3 The Client shall supply to GroundSure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as GroundSure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client's approval or decision is required to enable GroundSure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the GroundSure Materials, or use the GroundSure Materials in a manner for which they were not intended. The Client may make the GroundSure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that GroundSure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by GroundSure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by GroundSure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

- (i) the Beneficiary,
- (ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
- (iv) the first purchaser or first tenant of the Site, and
- (v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by GroundSure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1 GroundSure shall charge and the Client shall pay fees at the rate and frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by GroundSure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to GroundSure in full without deduction, counterclaim or set off within 30 days of the date of GroundSure's invoice or such other period as may be agreed in writing between GroundSure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of GroundSure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

- (i) full payment of all relevant Fees and
- (ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the GroundSure Materials.

6.2 All Intellectual Property in the GroundSure Materials are and shall remain owned by GroundSure or GroundSure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the GroundSure Materials shall:

- (i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to GroundSure or any third party from the Services;
- (ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;
- (iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);
- (iv) not combine the Services with or incorporate such Services into any other information data or service;
- (v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);
- (vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and
- (vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that

contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the GroundSure Materials in order to advise the Beneficiary in a professional capacity. However, GroundSure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify GroundSure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7. Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of GroundSure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

- (i) any breach of contract, including any deliberate breach of the Contract by GroundSure or its employees, agents or subcontractors;
 - (ii) any use made of the Reports, Services, Materials or any part of them; and
 - (iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.
- 7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.
- 7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 GroundSure shall not be liable for

- (i) loss of profits;
- (ii) loss of business;
- (iii) depletion of goodwill and/or similar losses;
- (iv) loss of anticipated savings;
- (v) loss of goods;
- (vi) loss of contract;
- (vii) loss of use;
- (viii) loss or corruption of data or information;
- (ix) business interruption;
- (x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;
- (xi) loss or damage that arise as a result of the use of all or part of the GroundSure Materials in breach of the Contract;
- (xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the GroundSure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;
- (xiii) loss or damage to a computer, software, modem, telephone or other property; and
- (xiv) loss or damage caused by a delay or loss of use of GroundSure's internet ordering service.

7.5 GroundSure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 GroundSure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of GroundSure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against GroundSure in relation to the Services or other matters arising pursuant to the Contract.

8 GroundSure's right to suspend or terminate

8.1 If GroundSure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, GroundSure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 GroundSure shall be entitled to terminate the Contract immediately on written notice in the event that:

- (i) the Client fails to pay any sum due to GroundSure within 30 days of the Payment Date; or
- (ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or
- (iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon GroundSure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

(a) supplied to the Client's specification(s) and in any event

(b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) GroundSure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in GroundSure's possession or control; and

(ii) the Client shall pay to GroundSure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay GroundSure any additional costs incurred in relation to the termination or suspension of the Contract. 11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of GroundSure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to GroundSure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through GroundSure.

12.3 GroundSure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of GroundSure.

12.4 No failure on the part of GroundSure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 GroundSure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;

(ii) fire, storm, flood, tempest or epidemic;

(iii) Acts of God or the public enemy;

(iv) riot, civil commotion or war;

(v) strikes, labour disputes or industrial action;

(vi) acts or regulations of any governmental or other agency;

(vii) suspension or delay of services at public registries by Third Party Data Providers;

(viii) changes in law; or

(ix) any other reason beyond GroundSure's reasonable control.

In the event that GroundSure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then GroundSure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant

party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 GroundSure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at GroundSure who will respond in a timely manner.

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law.

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Wilson Bailey Partnership
Hollyhead House, FORGE FARM YARD,
SALISBURY/COMPTON
CHAMBERLAYNE, SP3 5DS

GroundSure Reference:	GS-1113411
Your Reference:	DB
Report Date:	9 Oct 2013
Report Delivery Method:	xml
Client Email:	dominic.brightman@wilson-bailey.co.uk

GroundSure EnviroInsight

Address: 106,THE CAUSEWAY,PETERSFIELD, GU31 4LL

Dear Sir/Madam,

Thank you for placing your order with GroundSure. Please find enclosed the GroundSure EnviroInsight as requested

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above GroundSure reference number.

Yours faithfully,

A handwritten signature in black ink, appearing to be "D. Brightman", followed by a small circle and a period.

Managing Director
Groundsure Limited

Enc.
GroundSure EnviroInsight

Client: Wilson Bailey Partnership



Brought to you by GroundSure

Aerial Photograph of Study Site



Aerial photography supplied by Getmapping PLC.
© Copyright Getmapping PLC 2003. All Rights Reserved.

Site Name: 106, THE CAUSEWAY, PETERSFIELD, GU31 4LL
Grid Reference: 474735, 122539
Size of Site: 9.95 ha

Report Reference: [GS-1113411](#)

If you would like any further assistance regarding this report then please contact
GroundSure on (T) 08444 159 000, email: info@4c.groundsure.com

Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Report Section	Number of records found within (X) m of the study site boundary					
----------------	---	--	--	--	--	--

1. Environmental Permits, Incidents and Registers	on-site	0-50	51-250	251-500	501-1000	1000-1500
---	---------	------	--------	---------	----------	-----------

1.1 Industrial Sites Holding Environmental Permits and/or Authorisations

Records of historic IPC Authorisations	0	0	0	0	-	-
Records of Part A(1) and IPPC Authorised Activities	0	0	0	0	-	-
Records of Water Industry Referrals (potentially harmful discharges to the public sewer)	0	0	0	0	-	-
Records of Red List Discharge Consents (potentially harmful discharges to controlled waters)	0	0	0	0	-	-
Records of List 1 Dangerous Substances Inventory sites	0	0	0	0	-	-
Records of List 2 Dangerous Substances Inventory sites	0	0	0	0	-	-
Records of Part A(2) and Part B Activities and Enforcements	0	0	1	1	-	-
Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0	-	-
Records of Licensed Discharge Consents	0	1	5	4	-	-
Records of Planning Hazardous Substance Consents and Enforcements	0	0	0	0	-	-

1.2 Records of COMAH and NIHHS sites

0	0	0	0	-	-
---	---	---	---	---	---

1.3 Environment Agency Recorded Pollution Incidents

National Incidents Recording System, List 2	0	0	2	-	-	-
National Incidents Recording System, List 1	0	0	0	-	-	-

1.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

0	0	0	0	-	-
---	---	---	---	---	---

2. Landfill and Other Waste Sites	on-site	0-50	51-250	251-500	501-1000	1000-1500
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2.1 Landfill Sites

Environment Agency Registered Landfill Sites	0	0	0	0	0	-
Environment Agency Historic Landfill Sites	0	0	0	0	0	0
BGS/DoE Landfill Site Survey	0	0	0	0	0	0
GroundSure Local Authority Landfill Sites Data	0	0	0	0	0	0

2.2 Landfill and Other Waste Sites Findings

Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	-	-
Environment Agency Licensed Waste Sites	0	0	0	0	6	0

3. Current Land Uses	on-site	0-50	51-250	251-500	501-1000	1000-1500
3.1 Current Industrial Sites Data	0	2	10	-	-	-
3.2 Records of Petrol and Fuel Sites	0	0	1	0	-	-
3.3 Underground High Pressure Oil and Gas Pipelines	0	0	0	0	-	-

4. Geology	Description
4.1 Are there any records of Artificial Ground and Made Ground present beneath the study site? *	No
4.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site? *	Yes
4.3 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
Source: Scale: 1:50,000 BGS Sheet 316	

* This includes an automatically generated 50m buffer zone around the site.

5. Hydrogeology and Hydrology	on-site	0-50	51-250	251-500	501-1000	1001-2000
5.1 Are there any records of Productive Strata in the Superficial Geology within 500m of the study site?				Yes		
5.2 Are there any records of Productive Strata in the Bedrock Geology within 500m of the study site?				Yes		
5.3 Groundwater Abstraction Licences (within 2000m of the study site).	0	0	0	0	0	4
5.4 Surface Water Abstraction Licences (within 2000m of the study site).	0	0	0	0	14	2
5.5 Potable Water Abstraction Licences (within 2000m of the study site).	0	0	0	0	0	2
5.6 Are there any Source Protection Zones within 500m of the study site?					No	
5.7 River Quality	on-site	0-50	51-250	251-500	501-1000	1001-1500
Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	No	No
5.8 Detailed River Network entries within 500m of the site	4	4	7	10	-	-
5.9 Surface water features within 250m of the study site	Yes	Yes	Yes	-	-	-

6. Flooding	
6.1 Are there any Environment Agency indicative Zone 2 floodplains within 250m of the study site?	Yes
6.2 Are there any Environment Agency indicative Zone 3 floodplains within 250m of the study site?	Yes
6.3 Are there any Flood Defences within 250m of the study site?	No
6.4 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
6.5 Are there any areas used for Flood Storage within 250m of the study site?	No
6.6 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Very High
6.7 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Moderate

7. Designated Environmentally Sensitive Sites	on-site	0-50	51-250	251-500	501-1000	1001-2000
7.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
7.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0

7.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
7.3 Records of Local Nature Reserves (LNR)	0	0	0	0	0	1
7.4 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
7.5 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
7.6 Records of Ramsar sites	0	0	0	0	0	0
7.7 Records of World Heritage Sites	0	0	0	0	0	0
7.8 Records of Environmentally Sensitive Areas	0	0	0	0	0	1
7.9 Records of Areas of Outstanding Natural Beauty (AONB)	1	0	0	0	0	2
7.10 Records of National Parks	1	0	0	0	0	0
7.11 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
7.12 Records of Nitrate Vulnerable Zones	1	0	0	0	0	0
7.13 Records of Ancient Woodlands	0	0	0	0	2	3

8. Natural Hazards

8.1 What is the maximum risk of natural ground subsidence? Moderate

9. Mining

9.1 Are there any coal mining areas within 75m of the study site? No

9.2 What is the risk of subsidence relating to shallow mining within 150m of the study site? Low

9.3 Are there any brine affected areas within 75m of the study site? No

Using this Report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between GroundSure and the Client. The document contains the following sections:

1. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

2. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

3. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure underground oil and gas pipelines.

4. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

5. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

6. Flooding

Provides information on surface water flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

7. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

8. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence.

9. Mining

Provides information on areas of coal and shallow mining.

10. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, GroundSure provide a free Technical Helpline (08444 159000) for further information and guidance.

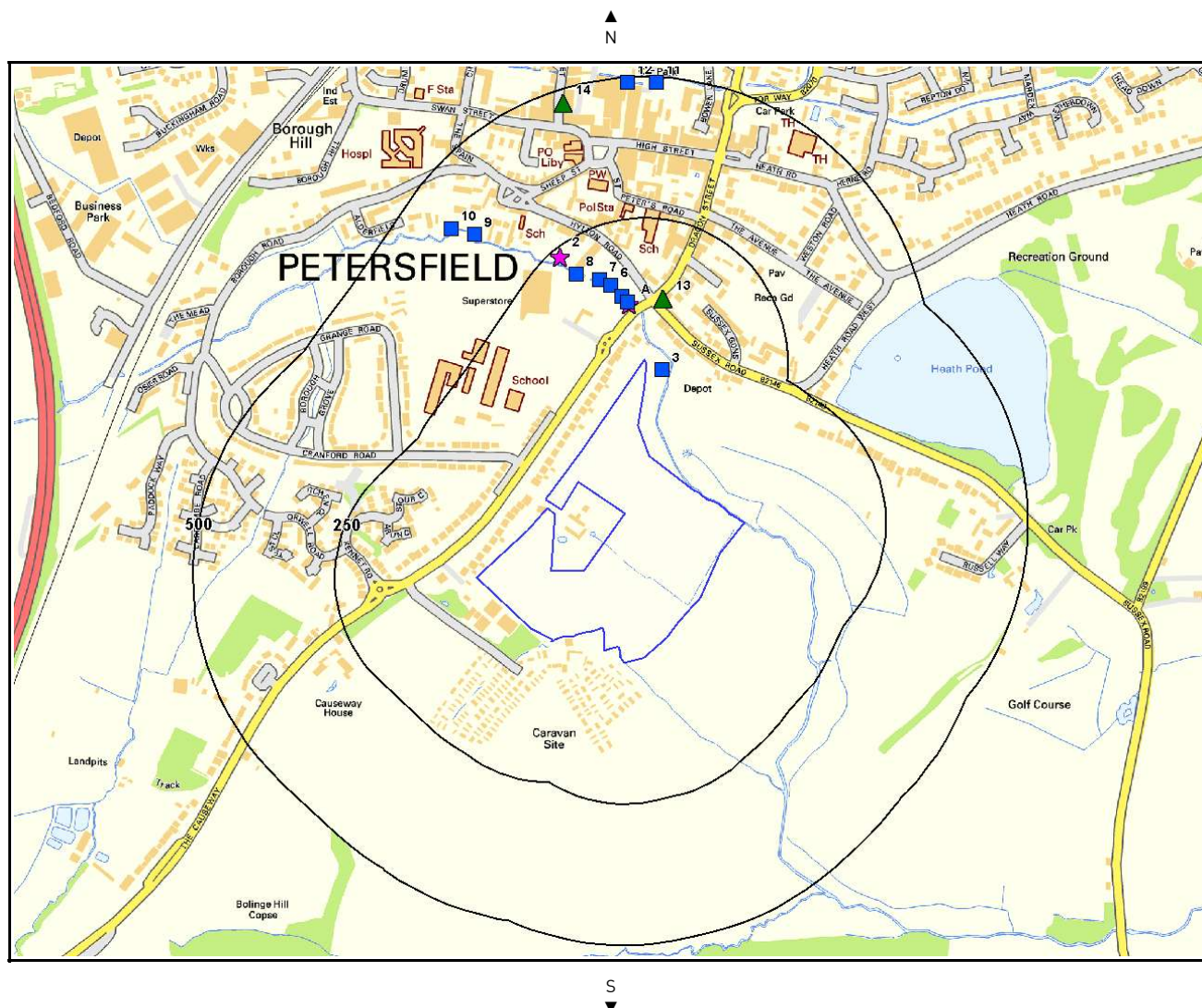
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Environmental Permits, Incidents and Registers Map



Authorisations, Incidents and Registers Legend



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- | | | | | | |
|--|--------------------|--|-------------------------------|--|--|
| | Site Outline | | Recorded Pollution Incident | | RAS 3 & 4 Authorisations |
| | Search Buffers (m) | | Dangerous Substances (List 1) | | Part A(1) Authorised Processes and Historic IPC Authorisations |
| | | | Dangerous Substances (List 2) | | Part A(2) and Part B Authorised Processes |
| | | | Water Industry Referrals | | COMAH / NIHHS Sites |
| | | | Licenced Discharge Consents | | Sites Determined as Contaminated Land |
| | | | Red List Discharge Consents | | Hazardous Substance Consents and Enforcements |

1.Environmental Permits, Incidents and Registers

1.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

Records of historic IPC Authorisations within 500m of the study site: 0

Database searched and no data found.

Records of Part A(1) and IPPC Authorised Activities within 500m of the study site: 0

Database searched and no data found.

Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site: 0

Database searched and no data found.

Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site: 0

Database searched and no data found.

Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site: 0

Database searched and no data found.

Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site: 0

Database searched and no data found.

Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site: 2

The following Part A(2) and Part B Activities are represented as points on the Authorisations, Incidents and Registers map:

ID	Distance	Direction	NGR	Details	
13	109.0	N	474762, 122983	Address: TotalfinaElf UK Ltd,Coach House Service Station, 40-44 Dragon Street, Petersfield, GU31 4JJ Process: Unloading of petrol into storage at a petrol station Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

14	472.0	N	474587, 123329	Address: Liphook Valet Service, 5b Chapel Street, Petersfield, GU32 3DT Process: Dry cleaning Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
----	-------	---	-------------------	---	---

Records of Category 3 or 4 Radioactive Substance Licences within 500m of the study site:

0

Database searched and no data found.

Records of Licensed Discharge Consents within 500m of the study site:

10

The following Licensed Discharge Consents records are represented as points on the Authorisations, Incidents and Registers map:

ID	Distance	Direction	NGR	Details	
3	28.0	E	474760, 122860	Address: Housing Estate In The Causeway, Housing Estate In The Causeway, Petersfield, Hampshire Effluent Type: Miscellaneous Discharges - Surface Water Permit Number: S01066 Permit Version: 1	Receiving Water: Freshwater River Status: Pre Nra Legislation Where Issue Date < 01-sep-89 (historic Only) Issue date: 6/3/1964 Effective Date: 6/3/1964 Revocation Date: 25/6/1997
4A	105.0	N	474700, 122980	Address: Builders Yard In Hylton Road, Builders Yard In Hylton Road, Petersfield, Hampshire Effluent Type: Miscellaneous Discharges - Surface Water Permit Number: S01087 Permit Version: 1	Receiving Water: Freshwater River Status: Lapsed Under Schedule 23 Environment Act 1995 Issue date: - Effective Date: - Revocation Date: 31/3/1997
5A	118.0	N	474690, 122990	Address: The Mint House, The Mint House, The Causeway, Petersfield, Hampshire Effluent Type: Miscellaneous Discharges - Surface Water Permit Number: P00113 Permit Version: 1	Receiving Water: Freshwater River Status: Pre Nra Legislation Where Issue Date < 01-sep-89 (historic Only) Issue date: 12/9/1985 Effective Date: 12/9/1985 Revocation Date: 1/7/1991
6	144.0	NW	474670, 123010	Address: Builders Yard In Hylton Road, Builders Yard In Hylton Road, Petersfield, Hampshire Effluent Type: Miscellaneous Discharges - Surface Water Permit Number: S01087 Permit Version: 1	Receiving Water: Freshwater River Status: Lapsed Under Schedule 23 Environment Act 1995 Issue date: - Effective Date: - Revocation Date: 31/3/1997
7	162.0	NW	474650, 123020	Address: Builders Yard In Hylton Road, Builders Yard In Hylton Road, Petersfield, Hampshire Effluent Type: Miscellaneous Discharges - Surface Water Permit Number: S01087 Permit Version: 1	Receiving Water: Freshwater River Status: Lapsed Under Schedule 23 Environment Act 1995 Issue date: - Effective Date: - Revocation Date: 31/3/1997
8	193.0	NW	474610, 123030	Address: Factory-land, Factory-land, 10 Hylton Road, Petersfield, Hampshire Effluent Type: Miscellaneous Discharges - Surface Water Permit Number: N01561 Permit Version: 1	Receiving Water: Freshwater River Status: Pre Nra Legislation Where Issue Date < 01-sep-89 (historic Only) Issue date: 30/5/1979 Effective Date: 30/5/1979 Revocation Date: 20/8/2001
9	373.0	NW	474430, 123100	Address: Alderfield, Alderfield, Borough Road, Petersfield, Hampshire Effluent Type: Miscellaneous Discharges - Surface Water Permit Number: P00439 Permit Version: 1	Receiving Water: Freshwater River Status: Pre Nra Legislation Where Issue Date < 01-sep-89 (historic Only) Issue date: 9/4/1986 Effective Date: 9/4/1986 Revocation Date: -
10	411.0	NW	474390, 123110	Address: Petersfield Community Hospital, Petersfield Community Hospital, Swan Street, Petersfield, Hampshire Effluent Type: Miscellaneous Discharges - Surface Water Permit Number: P01860 Permit Version: 1	Receiving Water: Freshwater River Status: Pre Nra Legislation Where Issue Date < 01-sep-89 (historic Only) Issue date: 18/8/1988 Effective Date: 18/8/1988 Revocation Date: -

11	491.0	N	474750, 123370	Address: Central Car Park, Central Car Park, Winton Road, Petersfield, Hampshire Effluent Type: Miscellaneous Discharges - Surface Water Permit Number: S01609 Permit Version: 1	Receiving Water: Freshwater River Status: Pre Nra Legislation Where Issue Date < 01-sep-89 (historic Only) Issue date: 3/7/1967 Effective Date: 3/7/1967 Revocation Date: -
12	492.0	N	474700, 123370	Address: Central Car Park, Central Car Park, Petersfield, Hampshire Effluent Type: Miscellaneous Discharges - Surface Water Permit Number: S01091 Permit Version: 1	Receiving Water: Freshwater River Status: Pre Nra Legislation Where Issue Date < 01-sep-89 (historic Only) Issue date: 19/9/1963 Effective Date: 19/9/1963 Revocation Date: -

Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site: 0

Database searched and no data found.

1.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site: 0

Database searched and no data found.

1.3 Environment Agency Recorded Pollution Incidents

Records of National Incidents Recording System, List 2 within 250m of the study site: 2

The following NIRS List 2 records are represented as points on the Authorisations, Incidents and Registers Map:

ID	Distance	Direction	NGR	Details
1A	101.0	N	474701, 122976	Incident Date: 13/03/2003 Incident Identification: 142880 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2	235.0	NW	474580, 123060	Incident Date: 17/09/2001 Incident Identification: 31144 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

Records of National Incidents Recording System, List 1 within 250m of the study site: 0

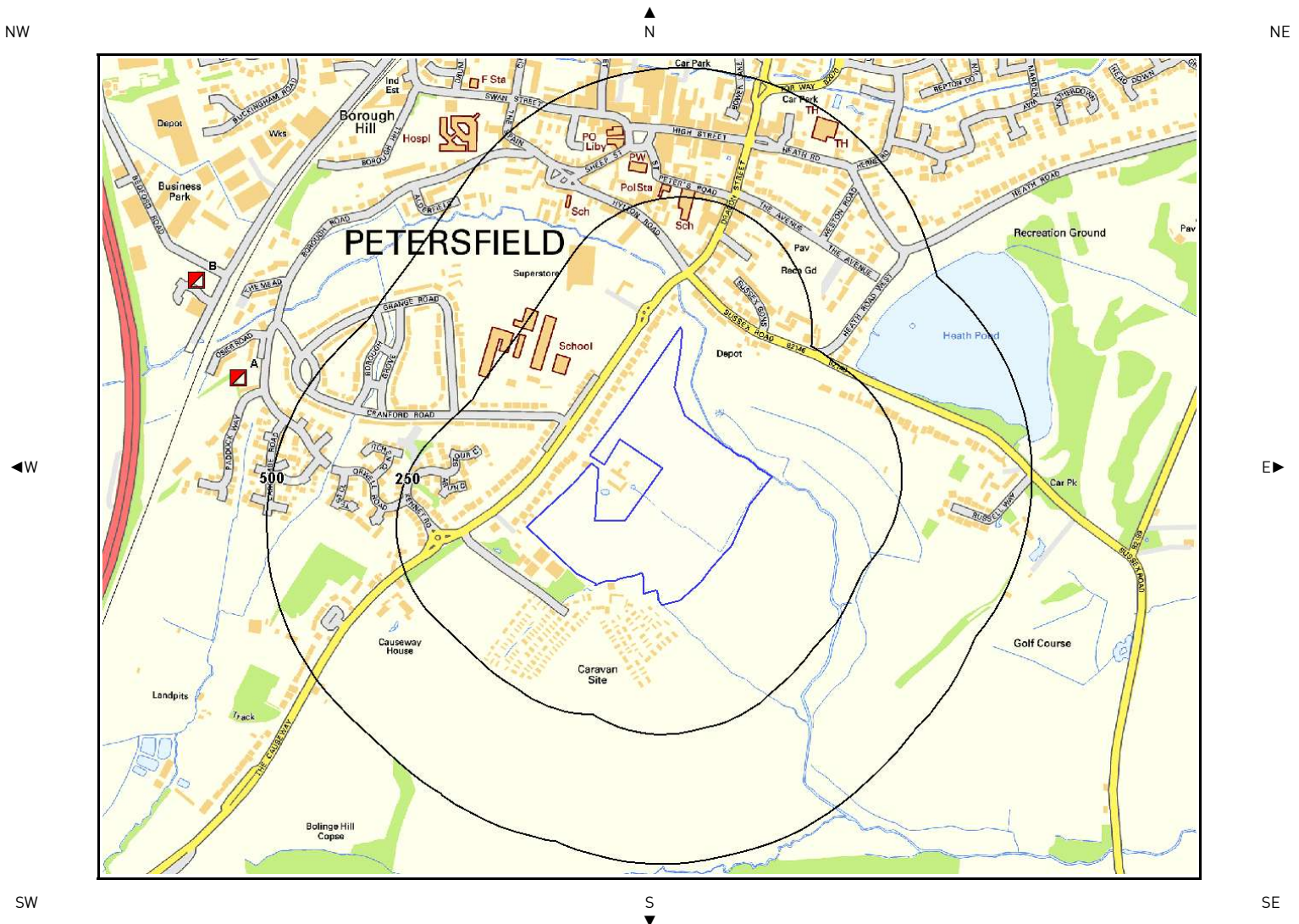
Database searched and no data found.

1.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site? 0

Database searched and no data found.

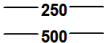
2. Landfill and Other Waste Sites Map



Landfill & Other Waste Sites Legend



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- | | | | | | |
|---|--------------------------|--|---------------------------|--|----------------------------------|
|  | Site Outline |  | E.A. Active Landfill |  | Historic and Planned Waste Sites |
|  | E.A. Historic Landfill |  | E.A. Licensed Waste Site | | |
|  | Local Authority Landfill |  | BGS / DoE Survey Landfill | | |
|  | Search Buffers (m) | | | | |

2. Landfill and Other Waste Sites

2.1 Landfill Sites

Records from Environment Agency landfill data within 1000m of the study site: **0**

Database searched and no data found.

Records of Environment Agency historic landfill sites within 1500m of the study site: **0**

Database searched and no data found.

Records of BGS/DoE non-operational landfill sites within 1500m of the study site: **0**

Database searched and no data found.

Records of Local Authority landfill sites within 1500m of the study site: **0**

Database searched and no data found.

2.2 Other Waste Sites

Records of waste treatment, transfer or disposal sites within 500m of the study site: **0**

Database searched and no data found.

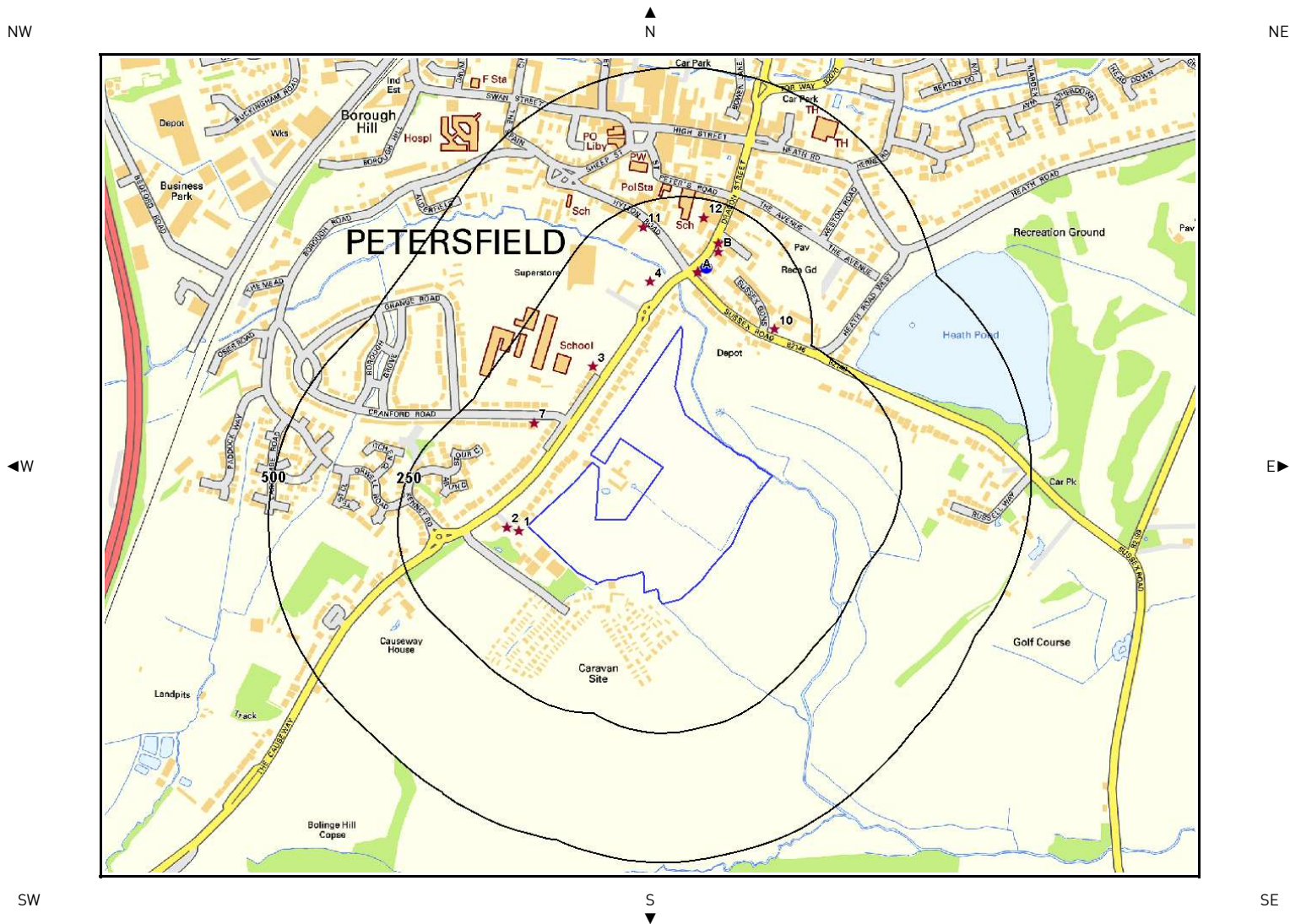
Records of Environment Agency licensed waste sites within 1500m of the study site: **6**

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance	Direction	NGR	Details
1A	625.0	NW	473880, 122780	Site Address: Petersfield Depot, Borough Road, Petersfield, Hampshire, GU32 3ND Type: Physical Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RAY002 EPR reference: - Operator: Raynesway Construction Southern Limited Waste Management licence No: 10121 Annual Tonnage: 24999.0 Issue Date: 27/12/2003 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Petersfield Depot Correspondence Address: -, Partnership House, Moorside Road, Winnall, Winchester, Hampshire, SO23 7RX
2A	625.0	NW	473880, 122780	Site Address: Petersfield Depot, Borough Road, Petersfield, Hampshire, GU32 3ND Type: Physical Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RAY002 EPR reference: EA/EPR/AP3399LB/S003 Operator: Raynesway Construction Southern Limited Waste Management licence No: 10121 Annual Tonnage: 0.0 Issue Date: 27/12/2003 Effective Date: - Modified: - Surrendered Date: 11/09/2008 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Petersfield Depot Correspondence Address: -, -

3B	795.0	NW	473800, 122970	Site Address: Hopkins Recycling Limited, Bedford Road, Petersfield, Hampshire, GU32 3QG Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: HOP001 EPR reference: EA/EPR/AP3594HE/A001 Operator: Hopkins Recycling Ltd Waste Management licence No: 19739 Annual Tonnage: 75000.0	Issue Date: 28/02/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Petersfield Household Waste Site Correspondence Address: -, -
4B	795.0	NW	473800, 122970	Site Address: Hopkins Recycling Limited, Bedford Road, Petersfield, Hampshire Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: HOP001 EPR reference: - Operator: Hopkins Recycling Ltd Waste Management licence No: 19739 Annual Tonnage: 4999.0	Issue Date: 28/02/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Petersfield Household Waste Site Correspondence Address: -, Bridge Farm, Unit 10, Curbridge, Botley, Southampton, Hampshire, SO30 2HB
Not shown	888.0	E	475790, 122660	Site Address: Totton Depot, Jacobs Gutter Lane, Howndown, Southampton, Hampshire, SO40 9FT Type: Physical Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: AME013 EPR reference: EA/EPR/AP3696LB/A001 Operator: Amey L G Ltd Waste Management licence No: 100497 Annual Tonnage: 24999.0	Issue Date: 15/12/2008 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Totton Depot Correspondence Address: -, -
Not shown	888.0	E	475790, 122660	Site Address: Petersfield Depot, Borough Road, Petersfield, Hampshire, GU32 3ND Type: Physical Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: AME018 EPR reference: EA/EPR/CP3393LE/V002 Operator: Amey L G Ltd Waste Management licence No: 100645 Annual Tonnage: 24999.0	Issue Date: 08/12/2008 Effective Date: - Modified: 18/06/2010 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Petersfield Depot Correspondence Address: -, -

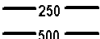
3. Current Land Use Map



Current Land Use Legend



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-  Site Outline
-  Current Industrial Sites
-  Petrol & Fuel Sites
-  Underground High Pressure Oil & Fuel Pipelines
-  Search Buffers (m)

3. Current Land Uses

3.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site:

12

The following records are represented as points on the Current Land Uses map.

ID	Distance	Direction	Company	Address	Activity	Category
1	19.0	SW	Simply Store Ltd	140, The Causeway, Petersfield, GU31 4LL	Container and Storage	Transport, Storage and Delivery
2	40.0	W	Electricity Sub Station	GU31	Electrical Features	Infrastructure and Facilities
3	97.0	NW	Gas Governor	GU31	Gas Features	Infrastructure and Facilities
4	105.0	NW	Electricity Sub Station	GU31	Electrical Features	Infrastructure and Facilities
5A	109.0	N	Total UK Ltd	40-44, Dragon Street, Petersfield, GU31 4JJ	Petrol and Fuel Stations	Road and Rail
6A	109.0	N	MPK Coach House Service Station	40-44 Dragon Street, Sussex Road, Petersfield, Hampshire, GU31 4JJ	Petrol and Fuel Stations	Road and Rail
7	125.0	NW	Max Pest Control Services	2, Cranford Road, Petersfield, GU32 3LX	Pest and Vermin Control	Contract Services
8B	161.0	NE	Mint Medical Ltd	34, Dragon Street, Petersfield, GU31 4JJ	Industrial Repairs and Servicing	Repair and Servicing
9B	176.0	NE	Evolution Audio Visual Ltd	32, Dragon Street, Petersfield, GU31 4JJ	Electronic Equipment	Industrial Products
10	177.0	E	Electricity Sub Station	GU31	Electrical Features	Infrastructure and Facilities
11	205.0	N	Gas Governor	GU32	Gas Features	Infrastructure and Facilities
12	215.0	N	ATS Euromaster Ltd	15-19, Dragon Street, Petersfield, GU31 4JN	Vehicle Parts and Accessories	Infrastructure and Facilities Motoring

3.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site:

1

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance	Direction	NGR	Company	Address	LPG	Status
13A	122.0	NE	474779, 122991	Texaco	Coach House Service Station, 40-44, Dragon Street, Dragon Street, Sussex Road, Petersfield, Hampshire, GU31 4JJ	No	Open

3.3 Underground High Pressure Oil and Gas Pipelines

Records of high pressure underground pipelines within 500m of the study site:

0

Database searched and no data found.

4. Geology

4.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

4.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
RS1-SAGR	SUSSEX ROTHER TERRACE DEPOSITS, 1 MEMBER	SAND AND GRAVEL
ALV-CSSG	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
HEAD-CSSG	HEAD	CLAY, SILT, SAND AND GRAVEL
HEAD-CSSG	HEAD	CLAY, SILT, SAND AND GRAVEL
ALV-CSSG	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
RTD1-GRSS	RIVER TERRACE DEPOSITS, 1	GRAVEL, SAND AND SILT
RTD1-SAGR	RIVER TERRACE DEPOSITS, 1	SAND AND GRAVEL

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

4.3 Bedrock and Solid Geology

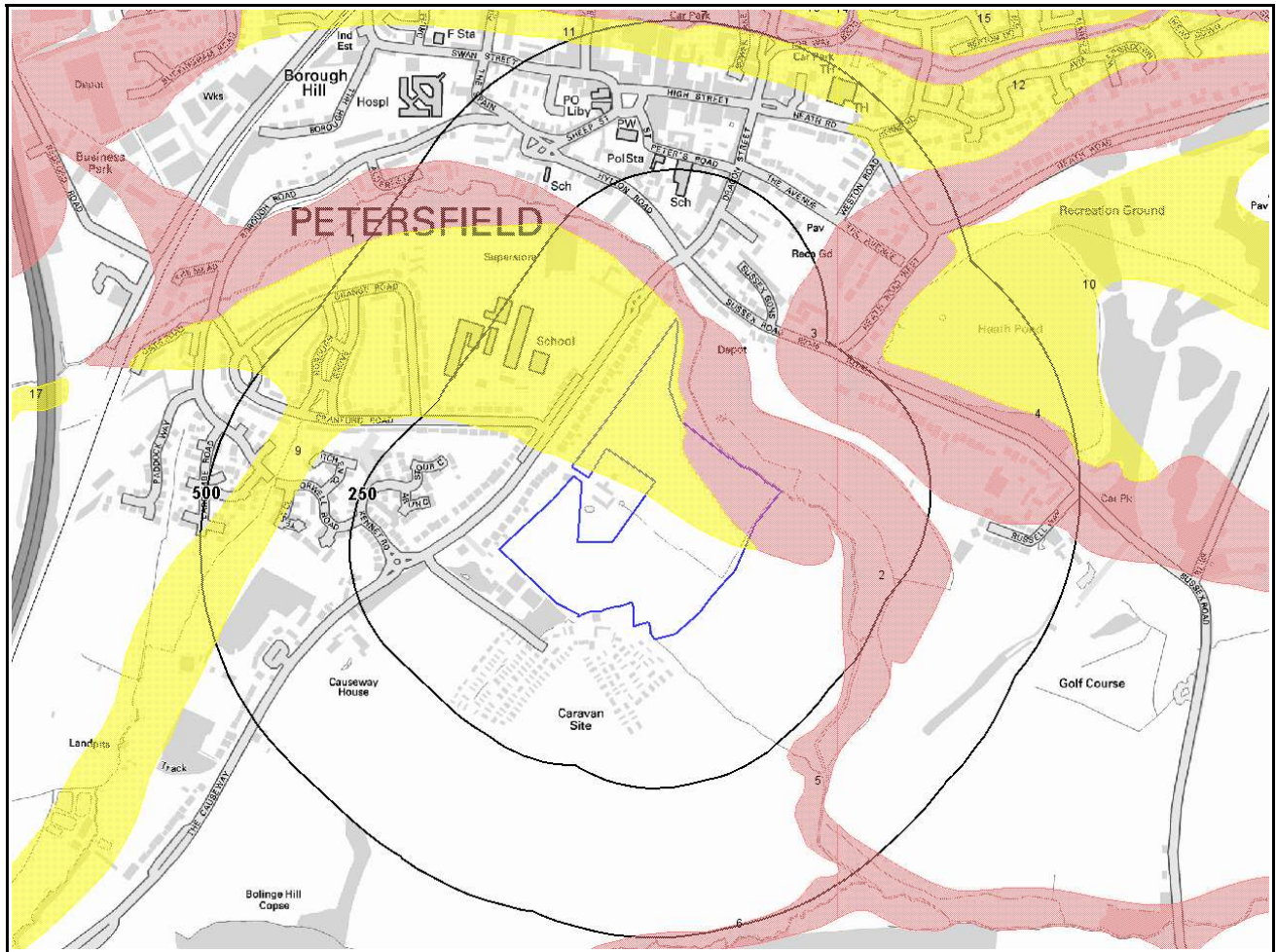
The database has been searched on site, including a 50m buffer.

LEX Code	Description	Rock Type
GLT-MDST	GAULT FORMATION	MUDSTONE
FO-SDST	FOLKESTONE FORMATION	SANDSTONE
FO-SDST	FOLKESTONE FORMATION	SANDSTONE

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

For more detailed geological and ground stability data please refer to the "GroundSure GeoInsight". Available from our website.

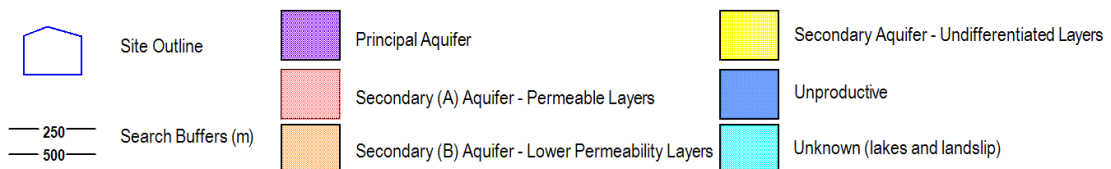
5a. Hydrogeology - Aquifer Within Superficial Geology



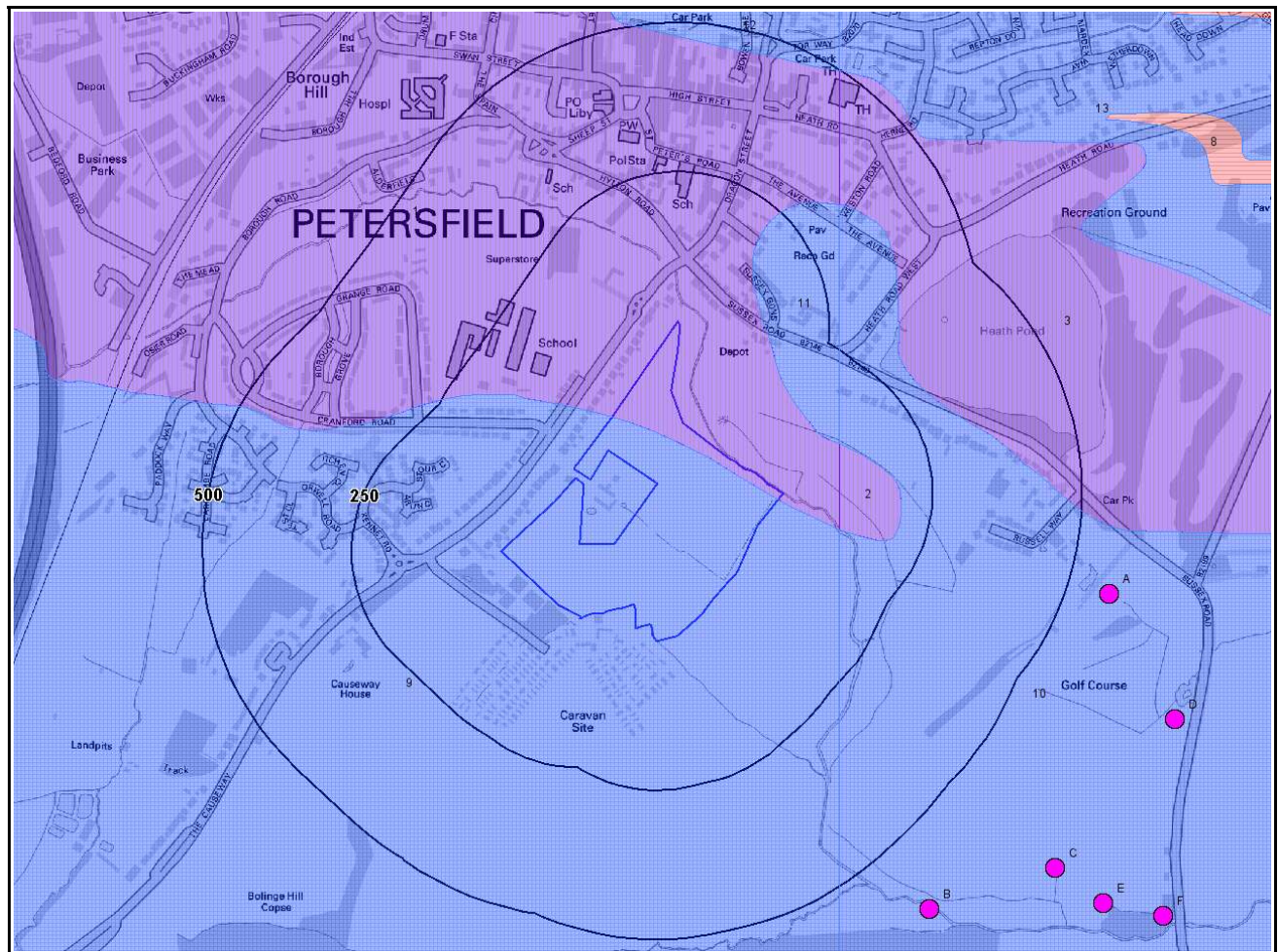
Aquifer Within Superficial Geology Legend



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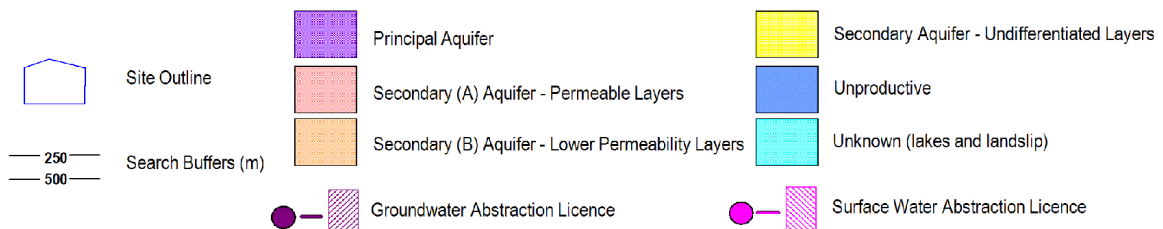
5b. Hydrogeology - Aquifer Within Bedrock Geology and Abstraction Licenses



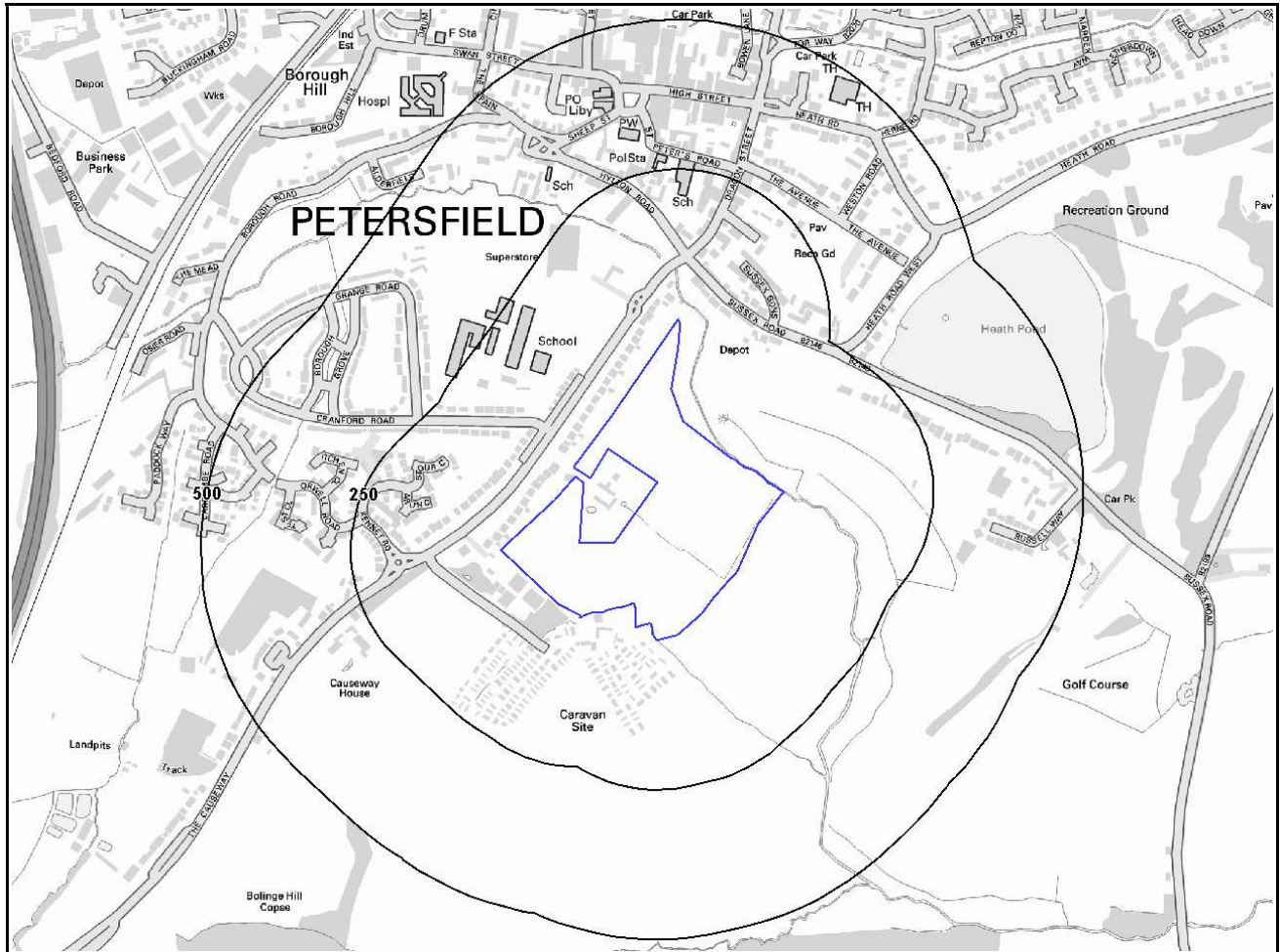
Aquifer Within Bedrock Geology Legend



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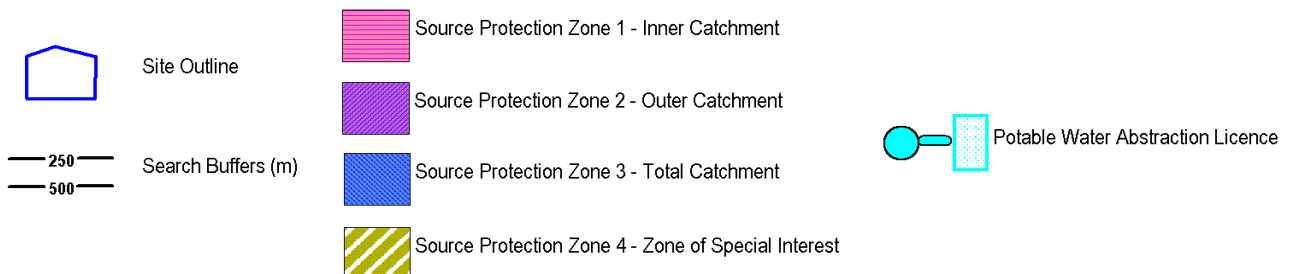
5c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



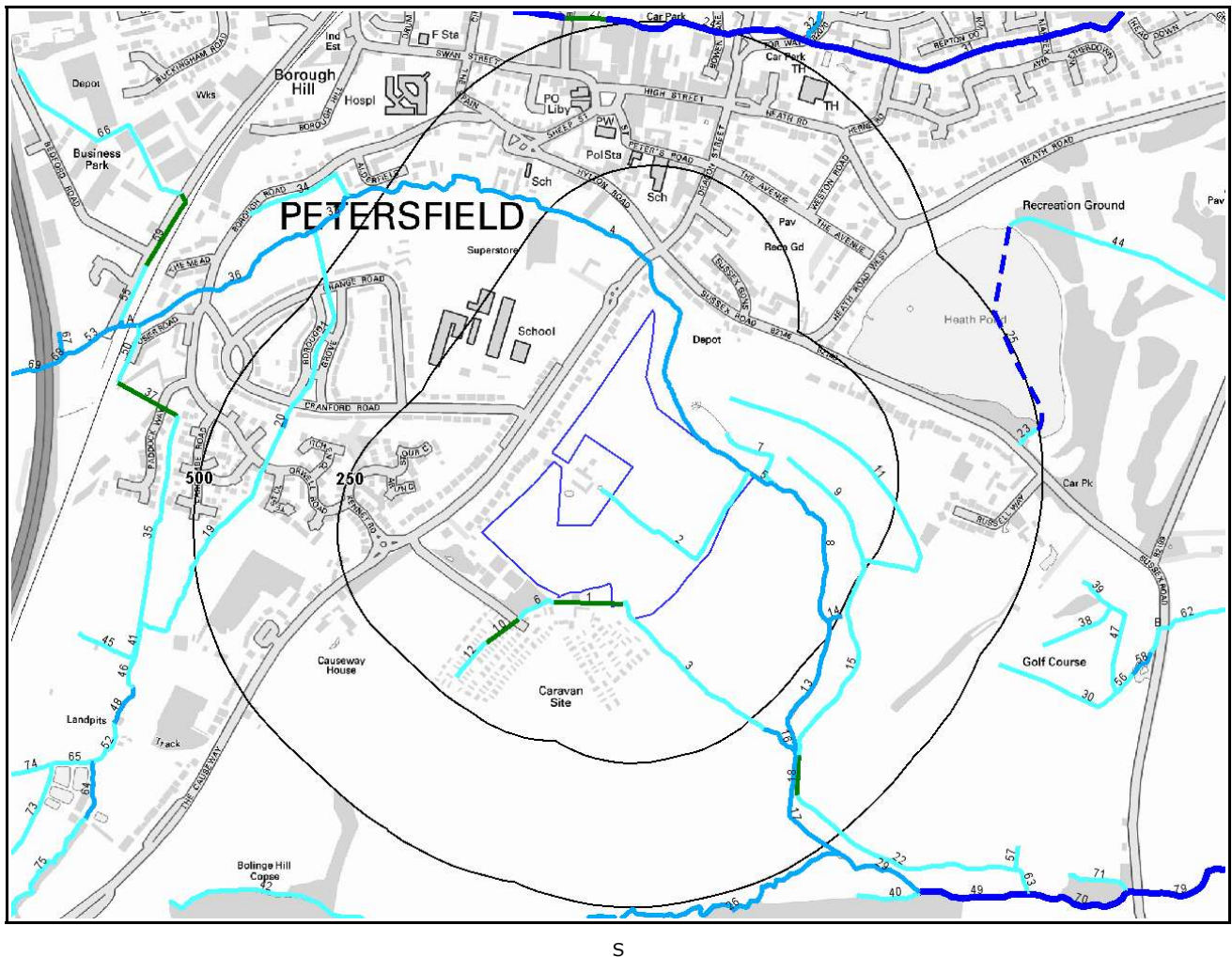
SPZ and Potable Water Abstraction Licenses
Legend



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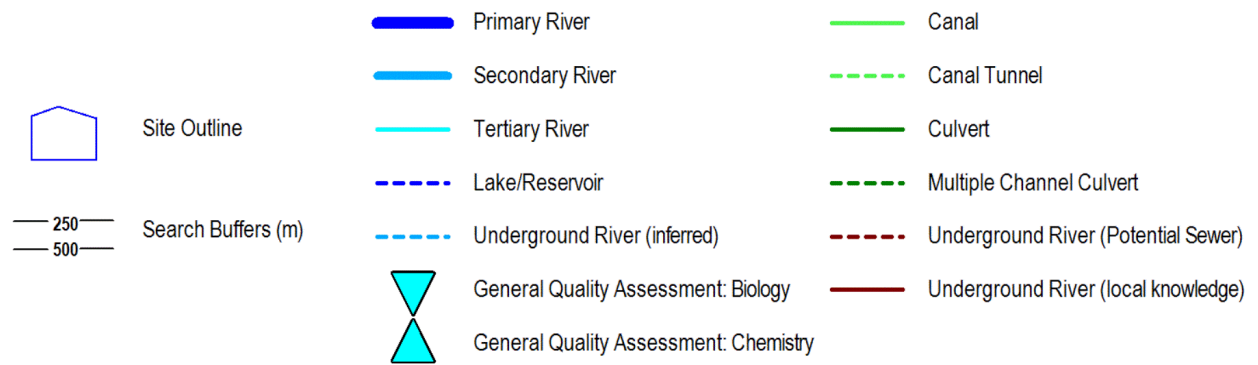
5d. Hydrology – Detailed River Network and River Quality



Hydrology Legend



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5. Hydrogeology and Hydrology

5.1 Aquifer within Superficial Deposits

Are there records of productive strata within the superficial geology at or in proximity to the property?

Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the GroundSure Enviroinsight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (5a):

ID	Distance [m]	Direction	Designation	Description
1	0.0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
9	0.0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	95.0	E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
3	140.0	NE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	147.0	NE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
5	267.0	SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
10	282.0	NE	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
11	427.0	N	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
12	429.0	NE	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
6	473.0	SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
7	483.0	N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

5.2 Aquifer within Bedrock Deposits

Are there records of productive strata within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the GroundSure Enviroinsight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (5b):

ID	Distance [m]	Direction	Designation	Description
1	0.0	On Site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
9	0.0	On Site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
2	95.0	E	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
10	112.0	SE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
11	116.0	NE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
3	291.0	NE	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
12	465.0	N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
13	499.0	NE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

5.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (5b):

ID	Distance	Direction	NGR	Details
Not shown	1971.0	N		Licence No: 10/41/436102 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: Borehole B At Sheet Pumping Station Data Type: Point Annual Volume (m³): 2072976 Max Daily Volume (m³): 6819 Original Application No: NPS/WR/005424 Original Start Date: - Expiry Date: - Issue No: 102 Version Start Date: 27/10/2010 Version End Date:
Not shown	1971.0	N		Licence No: 10/41/436102 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: Borehole A At Sheet Pumping Station Data Type: Point Annual Volume (m³): 2072976 Max Daily Volume (m³): 6819 Original Application No: NPS/WR/005424 Original Start Date: - Expiry Date: - Issue No: 102 Version Start Date: 27/10/2010 Version End Date:

Not shown	1971.0	N	Licence No: 10/41/436102 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: Borehole A At Sheet Pumping Station Data Type: Point	Annual Volume (m³): 2072976 Max Daily Volume (m³): 6819 Original Application No: WR.077C Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 4/11/2004 Version End Date:
Not shown	1971.0	N	Licence No: 10/41/436102 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: Borehole B At Sheet Pumping Station Data Type: Point	Annual Volume (m³): 2072976 Max Daily Volume (m³): 6819 Original Application No: WR.077C Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 4/11/2004 Version End Date:

5.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site?

Yes

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (5b):

ID	Distance	Direction	NGR	Details	
19A	571.0	E	475450, 122420	Licence No: 10/41/435110 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Point A On Stanbridge Stream, Petersfield Data Type: Point	Annual Volume (m³): 14723 Max Daily Volume (m³): 113.6 Application No: 169/114 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 9/6/2009 Version End Date:
20A	571.0	E	475450, 122420	Licence No: 10/41/435110 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: Point A On Stanbridge Stream, Petersfield Data Type: Point	Annual Volume (m³): 14723 Max Daily Volume (m³): 113.6 Application No: 169/114 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 9/6/2009 Version End Date:
21B	623.0	SE	475150, 121890	Licence No: 10/41/435110 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: Point F On Stanbridge Stream, Petersfield Data Type: Point	Annual Volume (m³): 14723 Max Daily Volume (m³): 113.6 Application No: 169/114 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 9/6/2009 Version End Date:
22B	623.0	SE	475150, 121890	Licence No: 10/41/435110 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Point F On Stanbridge Stream, Petersfield Data Type: Point	Annual Volume (m³): 14723 Max Daily Volume (m³): 113.6 Application No: 169/114 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 9/6/2009 Version End Date:
23C	727.0	SE	475360, 121960	Licence No: 10/41/435110 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Point C On Stanbridge Stream, Petersfield Data Type: Point	Annual Volume (m³): 14723 Max Daily Volume (m³): 113.6 Application No: 169/114 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 9/6/2009 Version End Date:
24C	727.0	SE	475360, 121960	Licence No: 10/41/435110 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: Point C On Stanbridge Stream, Petersfield Data Type: Point	Annual Volume (m³): 14723 Max Daily Volume (m³): 113.6 Application No: 169/114 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 9/6/2009 Version End Date:

25D	757.0	SE	475560, 122210	Licence No: 10/41/435110 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: Point B On Stanbridge Stream, Petersfield Data Type: Point	Annual Volume (m³): 14723 Max Daily Volume (m³): 113.6 Application No: 169/114 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 9/6/2009 Version End Date:
26D	757.0	SE	475560, 122210	Licence No: 10/41/435110 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Point B On Stanbridge Stream, Petersfield Data Type: Point	Annual Volume (m³): 14723 Max Daily Volume (m³): 113.6 Application No: 169/114 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 9/6/2009 Version End Date:
27E	827.0	SE	475440, 121900	Licence No: 10/41/435110 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: Point D On Stanbridge Stream, Petersfield Data Type: Point	Annual Volume (m³): 14723 Max Daily Volume (m³): 113.6 Application No: 169/114 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 9/6/2009 Version End Date:
28E	827.0	SE	475440, 121900	Licence No: 10/41/435110 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Point D On Stanbridge Stream, Petersfield Data Type: Point	Annual Volume (m³): 14723 Max Daily Volume (m³): 113.6 Application No: 169/114 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 9/6/2009 Version End Date:
Not shown	863.0	SE	475420, 121820	Licence No: 10/41/435110 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: Point E On Stanbridge Stream, Petersfield Data Type: Point	Annual Volume (m³): 14723 Max Daily Volume (m³): 113.6 Application No: 169/114 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 9/6/2009 Version End Date:
Not shown	863.0	SE	475420, 121820	Licence No: 10/41/435110 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Point E On Stanbridge Stream, Petersfield Data Type: Point	Annual Volume (m³): 14723 Max Daily Volume (m³): 113.6 Application No: 169/114 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 9/6/2009 Version End Date:
31F	916.0	SE	475540, 121880	Licence No: 10/41/435110 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Point G On Stanbridge Stream, Petersfield Data Type: Point	Annual Volume (m³): 14723 Max Daily Volume (m³): 113.6 Application No: 169/114 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 9/6/2009 Version End Date:
32F	916.0	SE	475540, 121880	Licence No: 10/41/435110 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: Point G On Stanbridge Stream, Petersfield Data Type: Point	Annual Volume (m³): 14723 Max Daily Volume (m³): 113.6 Application No: 169/114 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 9/6/2009 Version End Date:
Not shown	1871.0	NE	476250, 123970	Licence No: 10/41/435006 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: Points C-d, River Rother Near St. Mary's Adhurst Data Type: Line	Annual Volume (m³): 18184 Max Daily Volume (m³): 480 Application No: 169/0053 Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 9/6/2009 Version End Date:
Not shown	1871.0	NE	476250, 123970	Licence No: 10/41/435006 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Points C-d, River Rother Near St. Mary's Adhurst Data Type: Line	Annual Volume (m³): 18184 Max Daily Volume (m³): 480 Application No: 169/0053 Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 9/6/2009 Version End Date:

5.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site?

Yes

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (5c):

ID	Distance	Direction	NGR	Details	
Not shown	1971.0	N	475320, 124760	Licence No: 10/41/436102 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: Borehole B At Sheet Pumping Station Data Type: Point	Annual Volume (m³): 2072976 Max Daily Volume (m³): 6819 Original Application No: NPS/WR/005424 Original Start Date: - Expiry Date: - Issue No: 102 Version Start Date: Version End Date:
Not shown	1971.0	N	475320, 124760	Licence No: 10/41/436102 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: Borehole A At Sheet Pumping Station Data Type: Point	Annual Volume (m³): 2072976 Max Daily Volume (m³): 6819 Original Application No: NPS/WR/005424 Original Start Date: - Expiry Date: - Issue No: 102 Version Start Date: Version End Date:

5.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site?

No

Database searched and no data found.

5.7 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site?

No

Biological Quality:

Database searched and no data found.

Chemical Quality:

Database searched and no data found.

5.8 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site?

Yes

The following Detailed River Network records are represented on the Hydrology Map (5d):

Report Reference: GS-1113411

ID	Distance	Direction	Details	
1	0.0	On Site	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
2	0.0	On Site	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
3	0.0	On Site	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
4	0.0	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
5	1.0	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
6	11.0	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
7	21.0	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
8	35.0	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
9	66.0	NE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
10	69.0	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
11	90.0	NE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
12	136.0	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
13	237.0	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
14	237.0	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
15	237.0	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
16	276.0	SE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
17	342.0	SE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
18	351.0	SE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
19	390.0	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
20	390.0	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
21	392.0	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
22	404.0	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
23	462.0	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
24	488.0	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
25	495.0	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Lake/Reservoir Main River Status: Currently Undefined

5.9 Surface Water Features

Are there any surface water features within 250m of the study site?

Yes

The following surface water records are not represented on mapping:

Distance to Surface Water (m)	on-site	0-50	51-250
Surface water features within 250m of the study site	Yes	Yes	Yes

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6. Environment Agency Flood Map

NW

N

NE

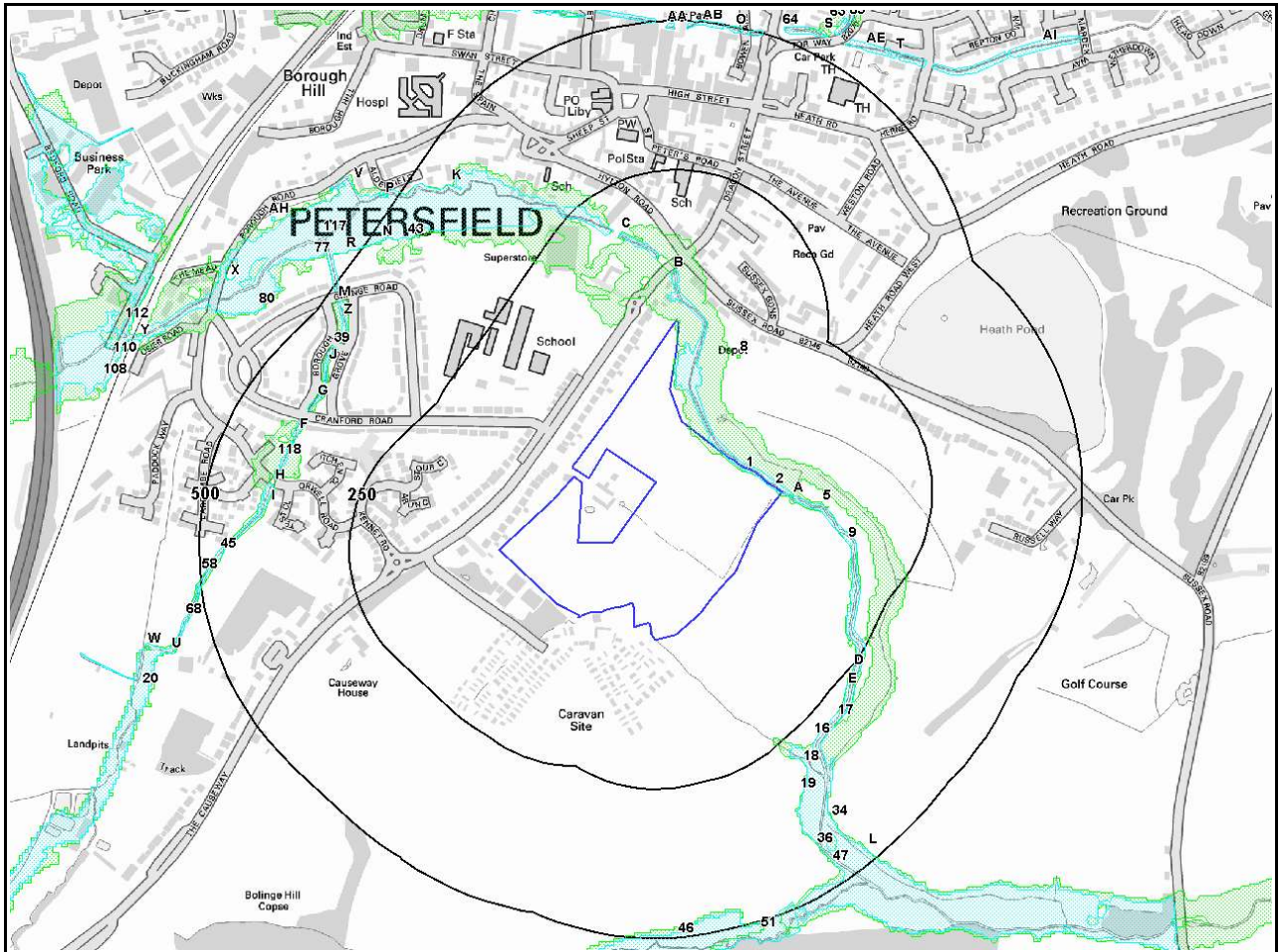
W

E

SW

S

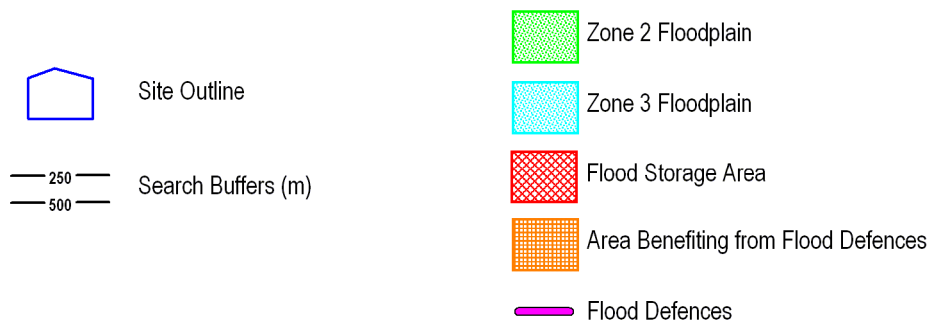
SE



Environment Agency Flood Legend



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6. Flooding

6.1 Zone 2 Flooding

Zone 2 floodplain estimates the annual probability of flooding as one in one thousand (0.1%) or greater from rivers and the sea but less than 1% from rivers or 0.5% from the sea. Alternatively, where information is available they may show the highest known flood level.

Is the site within 250m of an Environment Agency indicative Zone 2 floodplain?

Yes

The following floodplain records are represented as green shading on the Flood Map:

ID	Distance	Direction	Update	Type
1	0.0	On Site	09-Sep-2013	Zone 2 - (Fluvial Models)
2	0.0	On Site	09-Sep-2013	Zone 2 - (Fluvial Models)
3A	15.0	SE	09-Sep-2013	Zone 2 - (Fluvial Models)
4A	29.0	SE	09-Sep-2013	Zone 2 - (Fluvial Models)
5	69.0	E	09-Sep-2013	Zone 2 - (Fluvial Models)
6B	77.0	N	09-Sep-2013	Zone 2 - (Fluvial Models)
7B	82.0	N	09-Sep-2013	Zone 2 - (Fluvial Models)
8	100.0	E	09-Sep-2013	Zone 2 - (Fluvial Models)
9	129.0	SE	09-Sep-2013	Zone 2 - (Fluvial Models)
10C	171.0	NW	09-Sep-2013	Zone 2 - (Fluvial Models)
11C	182.0	NW	09-Sep-2013	Zone 2 - (Fluvial Models)
12D	249.0	SE	09-Sep-2013	Zone 2 - (Fluvial Models)

6.2 Zone 3 Flooding

Zone 3 estimates the annual probability of flooding as one in one hundred (1%) or greater from rivers and a one in two hundred (0.5%) or greater from the sea. Alternatively, where information is available they may show the highest known flood level.

Is the site within 250m of an Environment Agency indicative Zone 3 floodplain?

Yes

The following floodplain records are represented as blue shading on the Flood Map:

ID	Distance	Direction	Update	Type
113	0.0	On Site	09-Sep-2013	Zone 3 - (Fluvial Models)
114	15.0	SE	09-Sep-2013	Zone 3 - (Fluvial Models)
115B	59.0	N	09-Sep-2013	Zone 3 - (Fluvial Models)
116C	107.0	N	09-Sep-2013	Zone 3 - (Fluvial Models)
117	182.0	NW	09-Sep-2013	Zone 3 - (Fluvial Models)

6.3 Flood Defences

Are there any Flood Defences within 250m of the study site? **No**

6.4 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? **No**

6.5 Areas used for Flood Storage

Are there any areas used for Flood Storage within 250m of the study site? **No**

6.6 Groundwater Flooding Susceptibility Areas

Are there any British Geological Survey groundwater flooding susceptibility flood areas within 50m of the boundary of the study site? **Yes**

What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions? **Very High**

6.7 Groundwater Flooding Confidence Areas

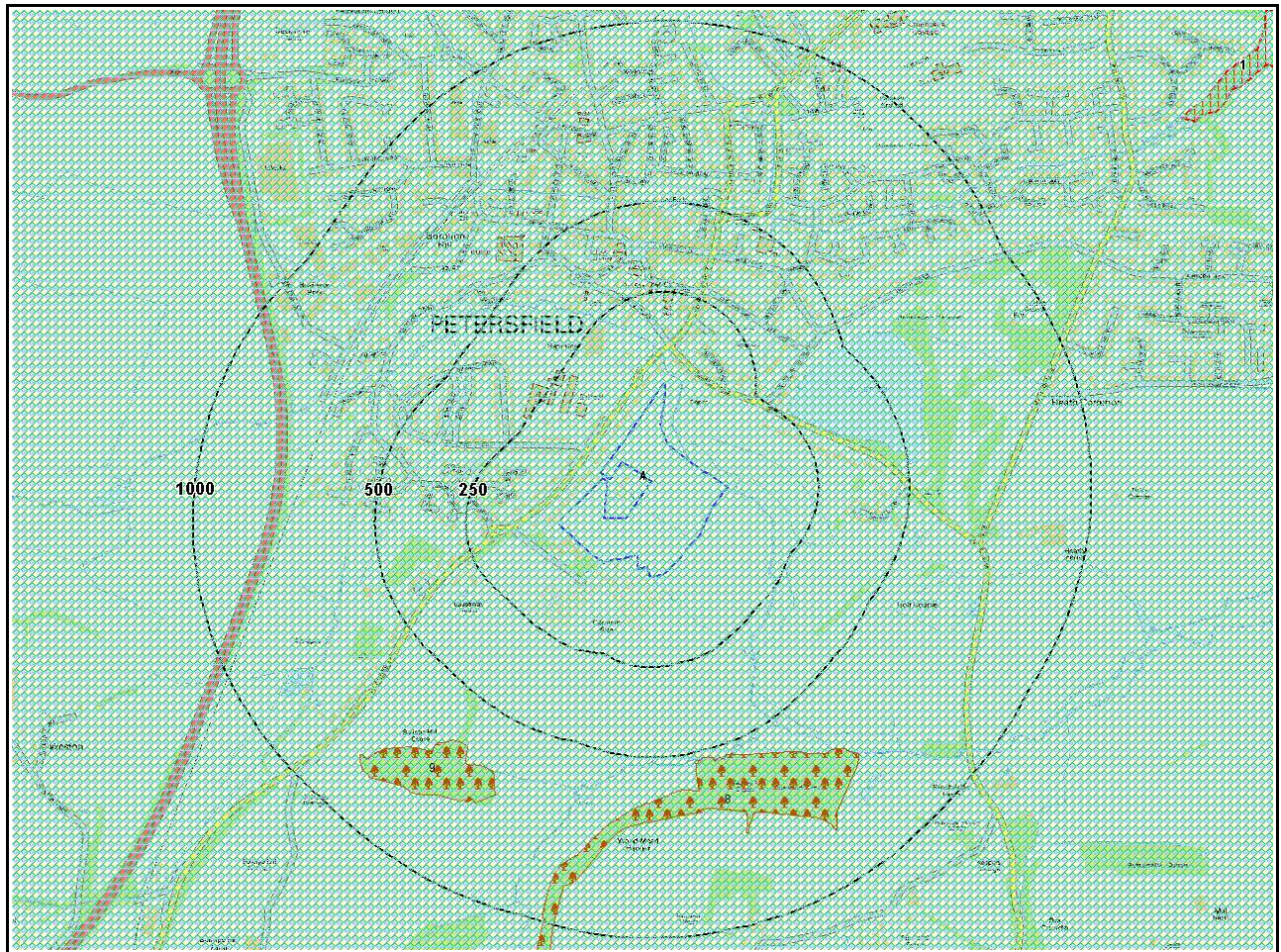
What is the British Geological Survey confidence rating in this result? **Moderate**

Notes:

Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The **confidence rating** is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

7.Designated Environmentally Sensitive Sites Map



Designated Environmentally Sensitive Sites Legend



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	Site Outline		SAC		SSSI		NNR		World Heritage Sites
	Areas of Outstanding Natural Beauty		SPA		Ramsar		LNR		Environmentally Sensitive Areas
			Nitrate Vulnerable Zones		Nitrate Sensitive Areas		National Parks		Ancient Woodlands

7. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site? **Yes**

Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site: **0**

Database searched and no data found.

Records of National Nature Reserves (NNR) within 2000m of the study site: **0**

Database searched and no data found.

Records of Special Areas of Conservation (SAC) within 2000m of the study site: **0**

Database searched and no data found.

Records of Special Protection Areas (SPA) within 2000m of the study site: **0**

Database searched and no data found.

Records of Ramsar sites within 2000m of the study site: **0**

Database searched and no data found.

Records of Local Nature Reserves (LNR) within 2000m of the study site: **1**

The following Local Nature Reserve (LNR) records provided by Natural England/Countryside Council for Wales and Scottish Natural Heritage are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance	Direction	LNR Name	Data Source
1	1603.0	NE	Rotherlands	Natural England

Records of World Heritage Sites within 2000m of the study site: **0**

Database searched and no data found.

Records of Environmentally Sensitive Areas within 2000m of the study site: **1**

The following Environmentally Sensitive Area records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance	Direction	ESA Name	Data Source
Not shown	1920.0	SW	South Downs	Natural England

Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site: **3**

Report Reference: [GS-1113411](#)

The following Area of Outstanding Natural Beauty (AONB) records and Scottish National Scenic Area (NSA) records provided by Natural England/Countryside Council for Wales/Scottish Government are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance	Direction	AONB/NSA Name	Data Source
4	0.0	On Site	East Hampshire	Natural England
Not shown	1875.0	E	Sussex Downs	Natural England
Not shown	1875.0	E	Sussex Downs	Natural England

Records of National Parks (NP) within 2000m of the study site:

1

The following National Park (NP) records provided by Natural England/Countryside Council for Wales/Scottish Natural Heritage are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance	Direction	NP Name	Data Source
2A	0.0	On Site	South Downs	Natural England

Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

Records of Nitrate Vulnerable Zones within 2000m of the study site:

1

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance	Direction	NVZ Type	Data Source
3A	0.0	On Site	NVZ Area	DEFRA

Records of Ancient Woodland within 2000m of the study site:

5

The following Ancient Woodland records are supplied by English Nature/Scottish Natural Heritage/Countryside Council for Wales and are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance	Direction	Ancient Woodland Name	Type
8	519.0	S	NURSTED COPSE/WOOD MEAD HANGER	Ancient and Semi-Natural Woodland
9	631.0	SW	BOLINGE HILL COPSE	Ancient and Semi-Natural Woodland
Not shown	1180.0	S	COSTERDALE CRUNDLE/ROUND COPSE	Ancient and Semi-Natural Woodland
Not shown	1826.0	W	WIDOW KNIGHTS COPSE	Ancient and Semi-Natural Woodland
Not shown	1998.0	SE	LATCHETTS COPSE	Ancient and Semi-Natural Woodland

8. Natural Hazards Findings

8.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a GroundSure GeoInsight, available from our website. The following information has been found:

8.1.1 Shrink Swell

What is the maximum Shrink-Swell* hazard rating identified on the study site? **Moderate**

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly high plasticity. Do not plant or remove trees or shrubs near to buildings without expert advice about their effect and management. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a probable increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a probable increase in insurance risk during droughts or where vegetation with high moisture demands is present.

8.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? **Very Low**

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

8.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? **Null - Negligible**

Soluble rocks are not present in the search area. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

8.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site? **Moderate**

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

8.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site?

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

8.1.6 Running Sand

What is the maximum Running Sand* hazard rating identified on the study site?

Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property no significant increase in insurance risk due to running sand problems is likely.

* This indicates an automatically generated 50m buffer and site.

9. Mining

9.1 Coal Mining

Are there any coal mining areas within 75m of the study site?

No

Database searched and no data found.

9.2 Shallow Mining

What is the subsidence hazard relating to shallow mining on-site*?

Low

*Please note this data is searched with a 150m buffer.

9.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site?

No

Guidance: No Guidance Required.

10. Contacts

GroundSure Helpline

Telephone: 08444 159 000
info@4c.groundsure.com



British Geological Survey (England & Wales)

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143. Fax: 0115 936 3276. Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk
BGS Geological Hazards Reports and general geological enquiries



Environment Agency

National Customer Contact Centre
PO Box 544
Rotherham
S60 1BY
Tel: 08708 506 506
Web: www.environment-agency.gov.uk
Email: enquiries@environment-agency.gov.uk



Public Health England

Public information access office, Public Health England
Wellington House, 133-155 Waterloo Road, London, SE1 8UG
<https://www.gov.uk/government/organisations/public-health-england>
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000



The Coal Authority

200 Lichfield Lane, Mansfield, Notts NG18 4RG
Tel: 0845 762 6848
DX 716176 Mansfield 5
Web: www.groundstability.com



Ordnance Survey

Romsey Road
Southampton SO16 4GU
Tel: 08456 050505



Local Authority

Authority: East Hampshire District Council
Phone: 01730 266 551
Web: www.easthants.gov.uk
Address: Penns Place, Petersfield, GU31 4EX

Get Mapping PLC

Virginia Villas, High Street, Hartley Witney, Hampshire RG27 8NW
Tel: 01252 845444



Acknowledgements

Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, English Nature who retain the Copyright and Intellectual Property Rights for the data.

PointX © Database Right/Copyright, Thomson Directories Limited © Copyright Link Interchange Network Limited © Database Right/Copyright and Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028]. This report has been prepared in accordance with the GroundSure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:

“Beneficiary” means the person or entity for whose benefit the Client has obtained the Services.

“Client” means the party or parties entering into a Contract with GroundSure.

“Commercial” means any building or property which is not Residential.

“Confidential Information” means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by GroundSure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

“Support Services” means Support Services provided by GroundSure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

“Contract” means the contract between GroundSure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

“Third Party Data Provider” means any third party providing Third Party Content to GroundSure.

“Data Reports” means reports comprising factual data with no accompanying interpretation.

“Fees” has the meaning set out in clause 5.1.

“GroundSure” means GroundSure Limited, a company registered in England and Wales under number 03421028.

“GroundSure Materials” means all materials prepared by GroundSure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

“Intellectual Property” means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

“Mapping” means a map, map data or a combination of historical maps of various ages, time periods and scales.

“Order” means an electronic, written or other order form submitted by the Client requesting Services from GroundSure in respect of a specified Site.

“Ordnance Survey” means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

“Order Website” means the online platform through which Orders may be placed by the Client and accepted by GroundSure.

“Report” means a Risk Screening Report or Data Report for Commercial or Residential property.

“Residential” means any building or property used as or intended to be used as a single dwelling.

“Risk Screening Report” means a risk screening report comprising factual data with an accompanying interpretation by GroundSure.

“Services” means any Report, Mapping and/or Support Services which GroundSure has agreed to provide by accepting an Order pursuant to clause 2.6.

“Site” means the area of land in respect of which the Client has requested GroundSure to provide the Services.

“Third Party Content” means data, database information or other information which is provided to GroundSure by a Third Party Data Provider.

“User Guide” means the user guide, as amended from time to time, available upon request from GroundSure and on the website (www.groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 GroundSure agrees to provide the Services in accordance with the Contract.

2.2 GroundSure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of GroundSure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, GroundSure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and GroundSure will have no liability therefor. In addition you acknowledge and agree that GroundSure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 GroundSure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by GroundSure. GroundSure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by GroundSure. GroundSure's acceptance of an Order shall be binding only when made in writing and signed by GroundSure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to GroundSure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.

3.3 The Client shall supply to GroundSure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as GroundSure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client's approval or decision is required to enable GroundSure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the GroundSure Materials, or use the GroundSure Materials in a manner for which they were not intended. The Client may make the GroundSure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that GroundSure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by GroundSure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by GroundSure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

- (i) the Beneficiary,
- (ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
- (iv) the first purchaser or first tenant of the Site, and
- (v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by GroundSure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1 GroundSure shall charge and the Client shall pay fees at the rate and frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by GroundSure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to GroundSure in full without deduction, counterclaim or set off within 30 days of the date of GroundSure's invoice or such other period as may be agreed in writing between GroundSure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of GroundSure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

- (i) full payment of all relevant Fees and
- (ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the GroundSure Materials.

6.2 All Intellectual Property in the GroundSure Materials are and shall remain owned by GroundSure or GroundSure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the GroundSure Materials shall:

- (i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to GroundSure or any third party from the Services;
- (ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;
- (iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);
- (iv) not combine the Services with or incorporate such Services into any other information data or service;

(v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);

(vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and

(vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the GroundSure Materials in order to advise the Beneficiary in a professional capacity. However, GroundSure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify GroundSure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7. Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of GroundSure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

- (i) any breach of contract, including any deliberate breach of the Contract by GroundSure or its employees, agents or subcontractors;
- (ii) any use made of the Reports, Services, Materials or any part of them; and
- (iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 GroundSure shall not be liable for

- (i) loss of profits;
- (ii) loss of business;
- (iii) depletion of goodwill and/or similar losses;
- (iv) loss of anticipated savings;
- (v) loss of goods;
- (vi) loss of contract;
- (vii) loss of use;
- (viii) loss or corruption of data or information;
- (ix) business interruption;
- (x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;
- (xi) loss or damage that arise as a result of the use of all or part of the GroundSure Materials in breach of the Contract;
- (xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the GroundSure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;
- (xiii) loss or damage to a computer, software, modem, telephone or other property; and
- (xiv) loss or damage caused by a delay or loss of use of GroundSure's internet ordering service.

7.5 GroundSure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 GroundSure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of GroundSure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against GroundSure in relation to the Services or other matters arising pursuant to the Contract.

8 GroundSure's right to suspend or terminate

8.1 If GroundSure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, GroundSure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 GroundSure shall be entitled to terminate the Contract immediately on written notice in the event that:

(i) the Client fails to pay any sum due to GroundSure within 30 days of the Payment Date; or

(ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or

(iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon GroundSure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are
(a) supplied to the Client's specification(s) and in any event
(b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) GroundSure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in GroundSure's possession or control; and

(ii) the Client shall pay to GroundSure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay GroundSure any additional costs incurred in relation to the termination or suspension of the Contract. 11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of GroundSure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to GroundSure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through GroundSure.

12.3 GroundSure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of GroundSure.

12.4 No failure on the part of GroundSure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 GroundSure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;

(ii) fire, storm, flood, tempest or epidemic;

(iii) Acts of God or the public enemy;

(iv) riot, civil commotion or war;

(v) strikes, labour disputes or industrial action;

(vi) acts or regulations of any governmental or other agency;

(vii) suspension or delay of services at public registries by Third Party Data Providers;

(viii) changes in law; or

(ix) any other reason beyond GroundSure's reasonable control.

In the event that GroundSure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then GroundSure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 GroundSure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at GroundSure who will respond in a timely manner.

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law.

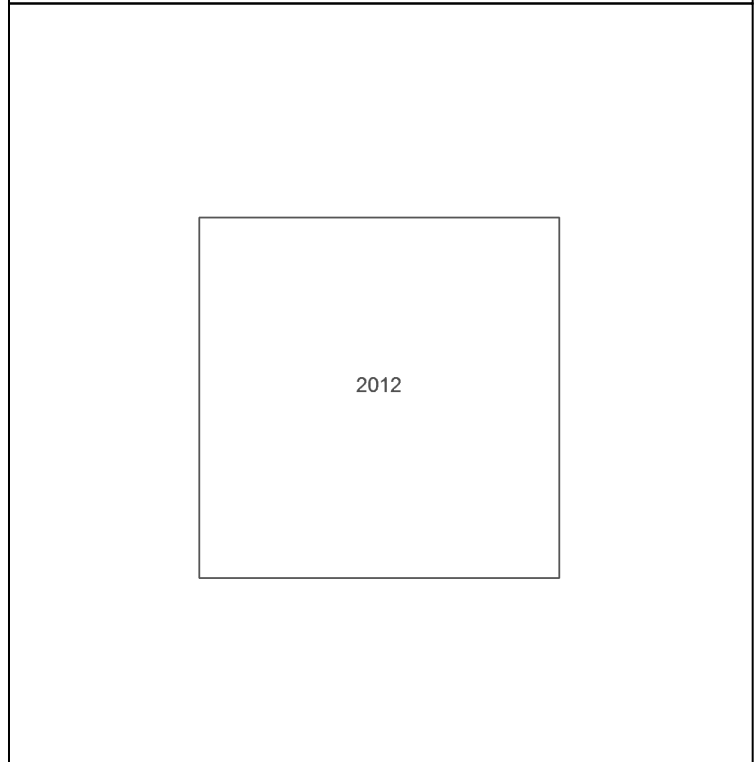
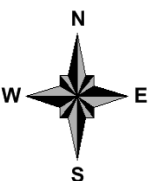
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Site Details:
106, THE CAUSEWAY, PETERSFIELD, GU31 4LL

Client Ref: DB
Report Ref: GS-1113410
Grid Ref: 474680, 122599

Map Name: MasterMap
Map date: 2012
Scale: 1:1,250
Printed at: 1:2,500



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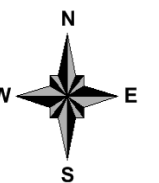
Client Ref: DB
Report Ref: GS-1113410
Grid Ref: 474680, 122599

Map Name: National Grid

Map date: 1994

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

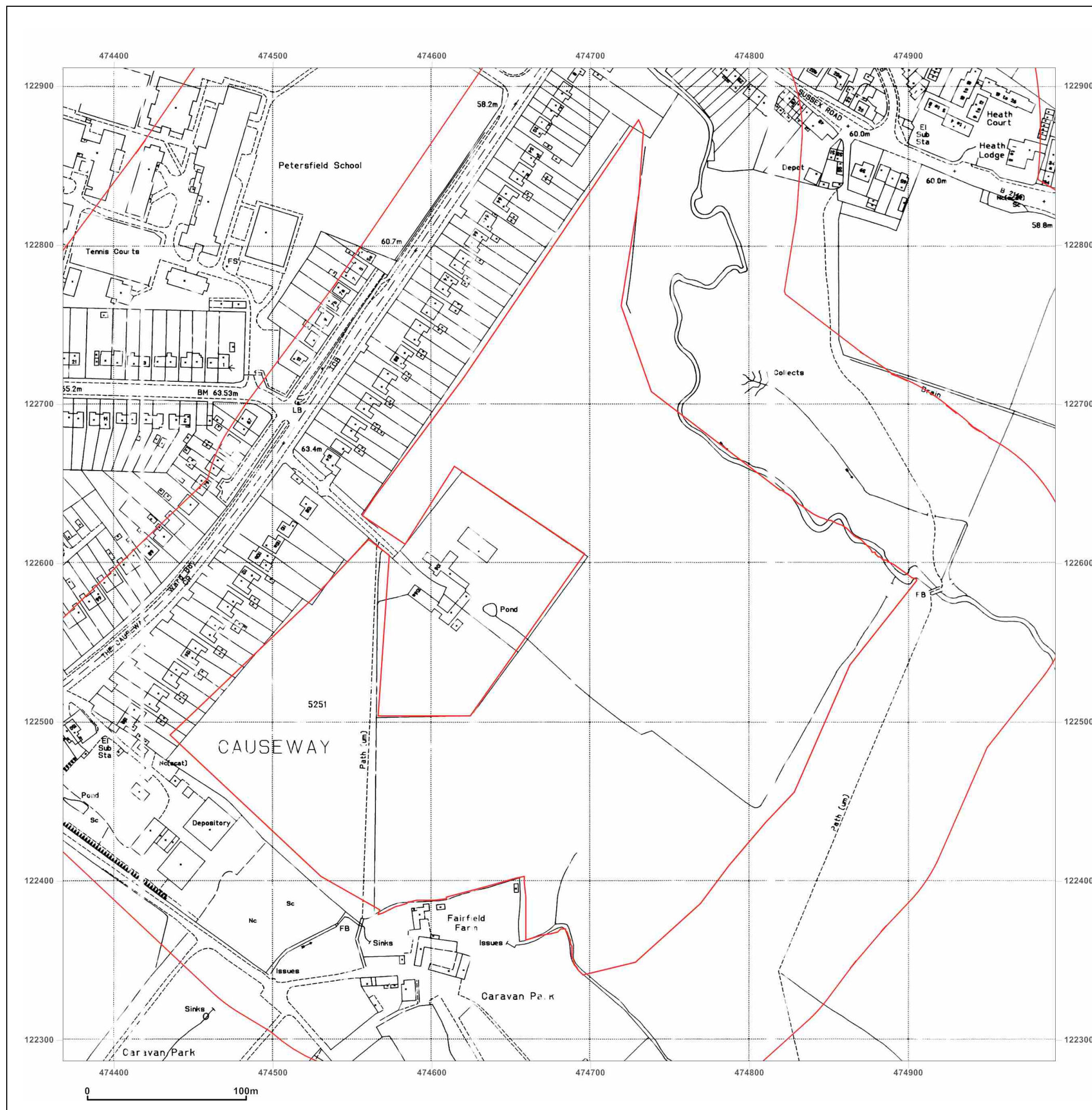


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106, THE
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Client Ref: DB
Report Ref: GS-1113410
Grid Ref: 474680, 122599

Map Name: National Grid

Map date: 1991

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

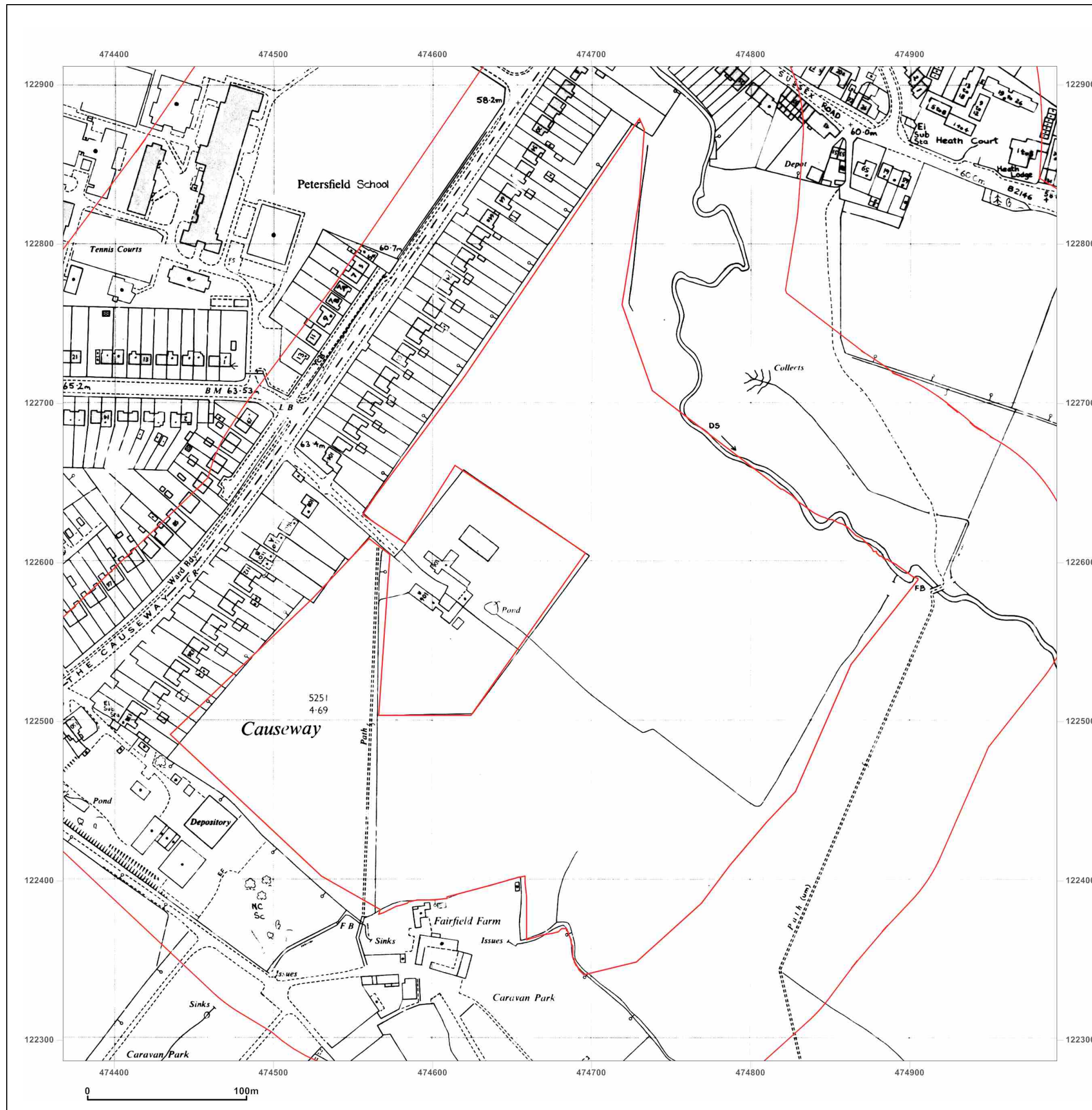


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Client Ref: DB
Report Ref: GS-1113410
Grid Ref: 474680, 122599

Map Name: National Grid

Map date: 1990

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1958
Revised 1990
Edition N/A
Copyright 1990
Levelled 1958

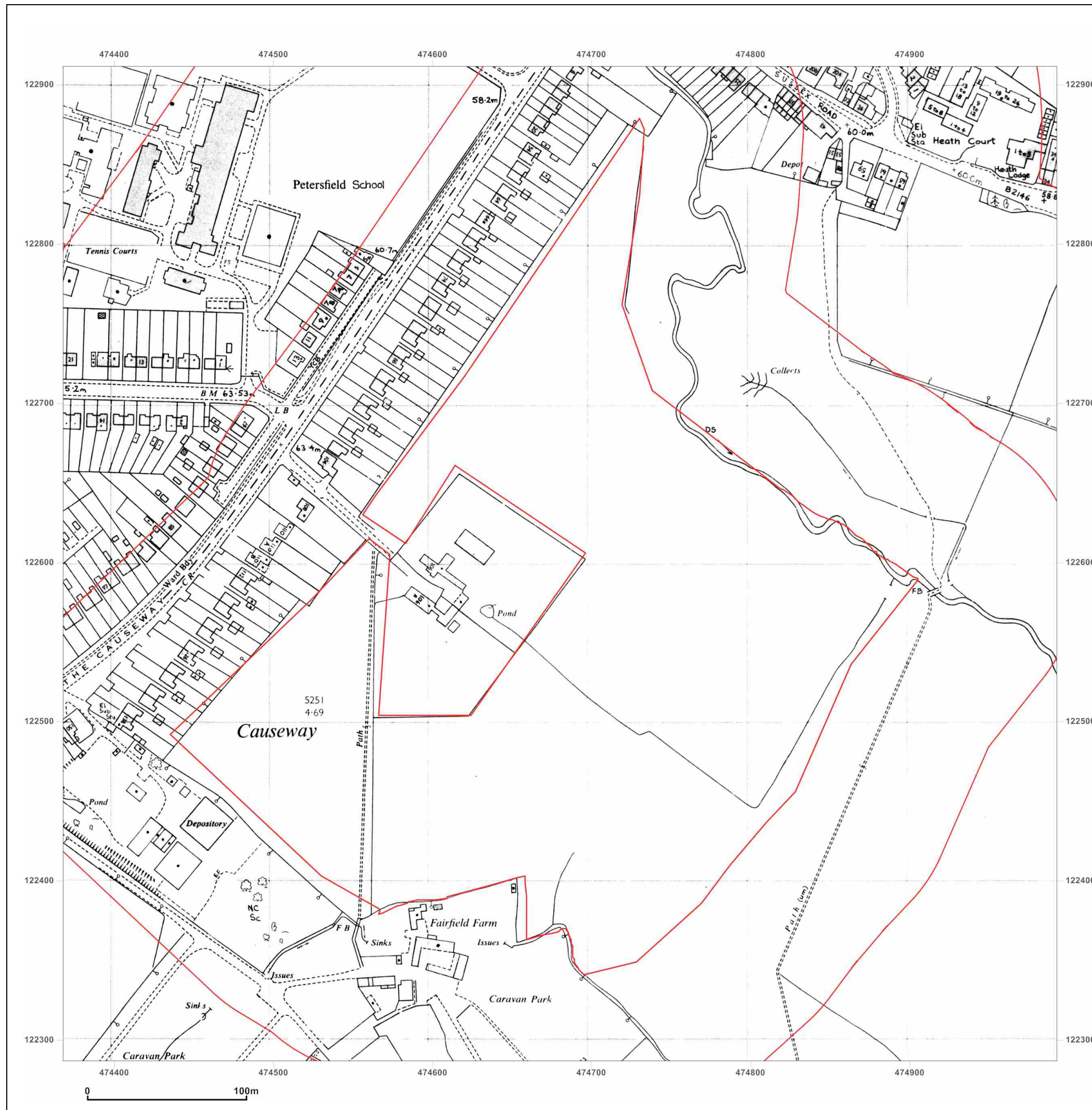


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Client Ref: DB
Report Ref: GS-1113410
Grid Ref: 474680, 122599

Map Name: National Grid

Map date: 1985

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1958
Revised 1985
Edition N/A
Copyright 1985
Levelled 1958

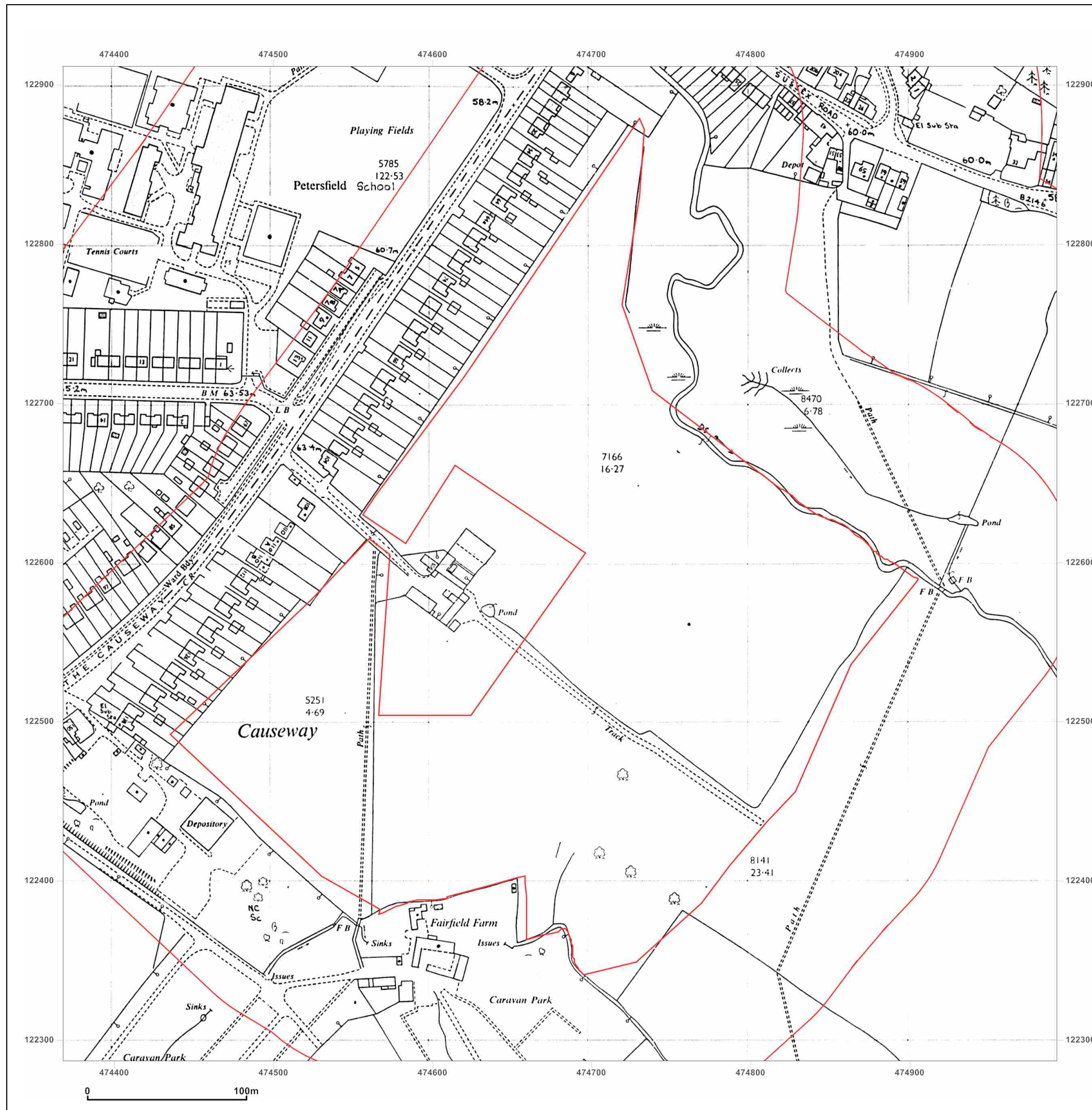


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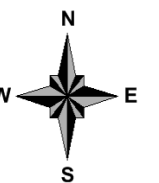
Client Ref: DB
Report Ref: GS-1113410
Grid Ref: 474680, 122599

Map Name: National Grid

Map date: 1966

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1966
Revised 1966
Edition N/A
Copyright 1968
Levelled 1958

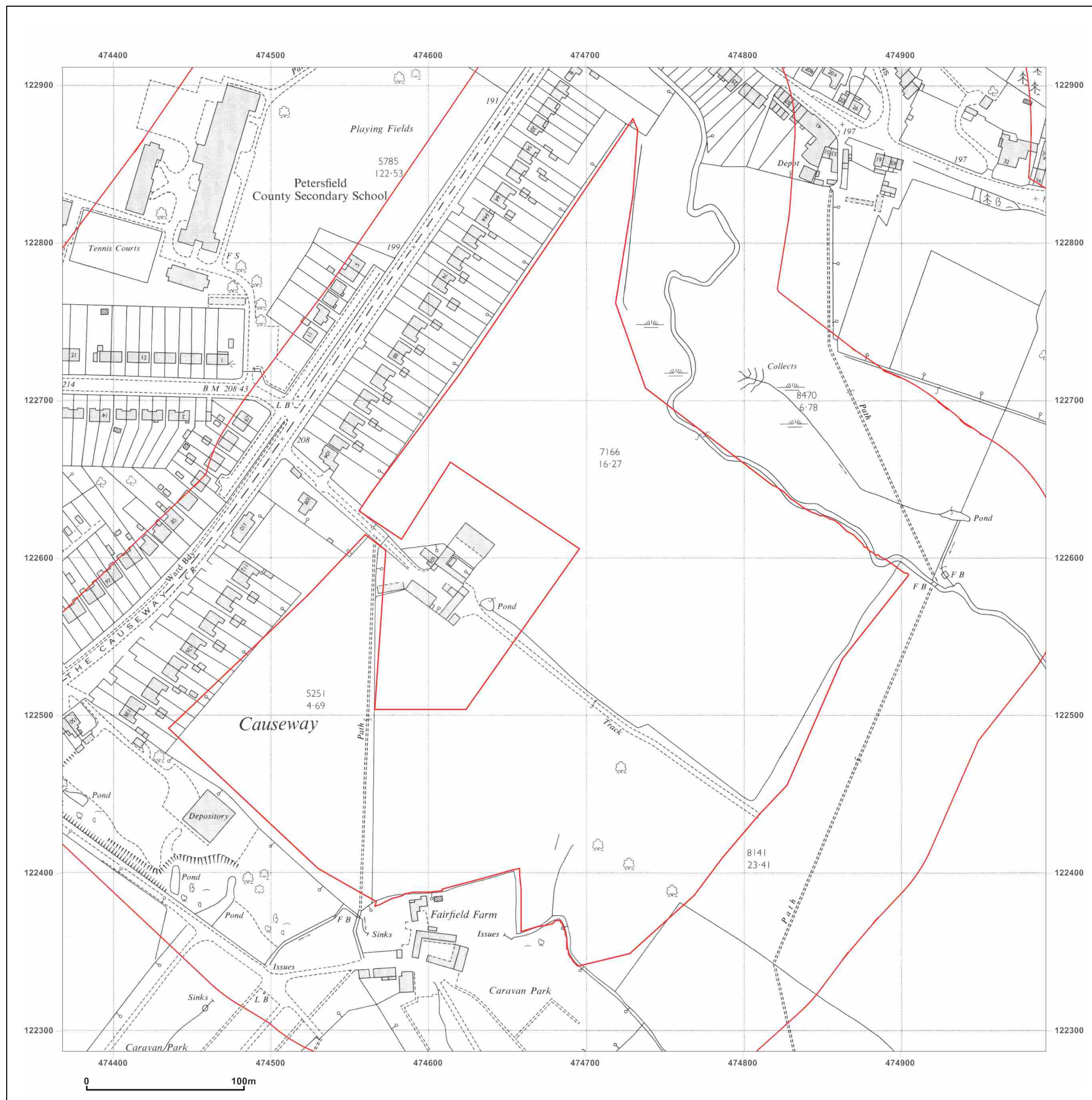


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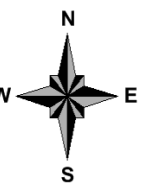
Client Ref: DB
Report Ref: GS-1113410
Grid Ref: 474680, 122599

Map Name: County Series

Map date: 1932

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1932
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1932
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

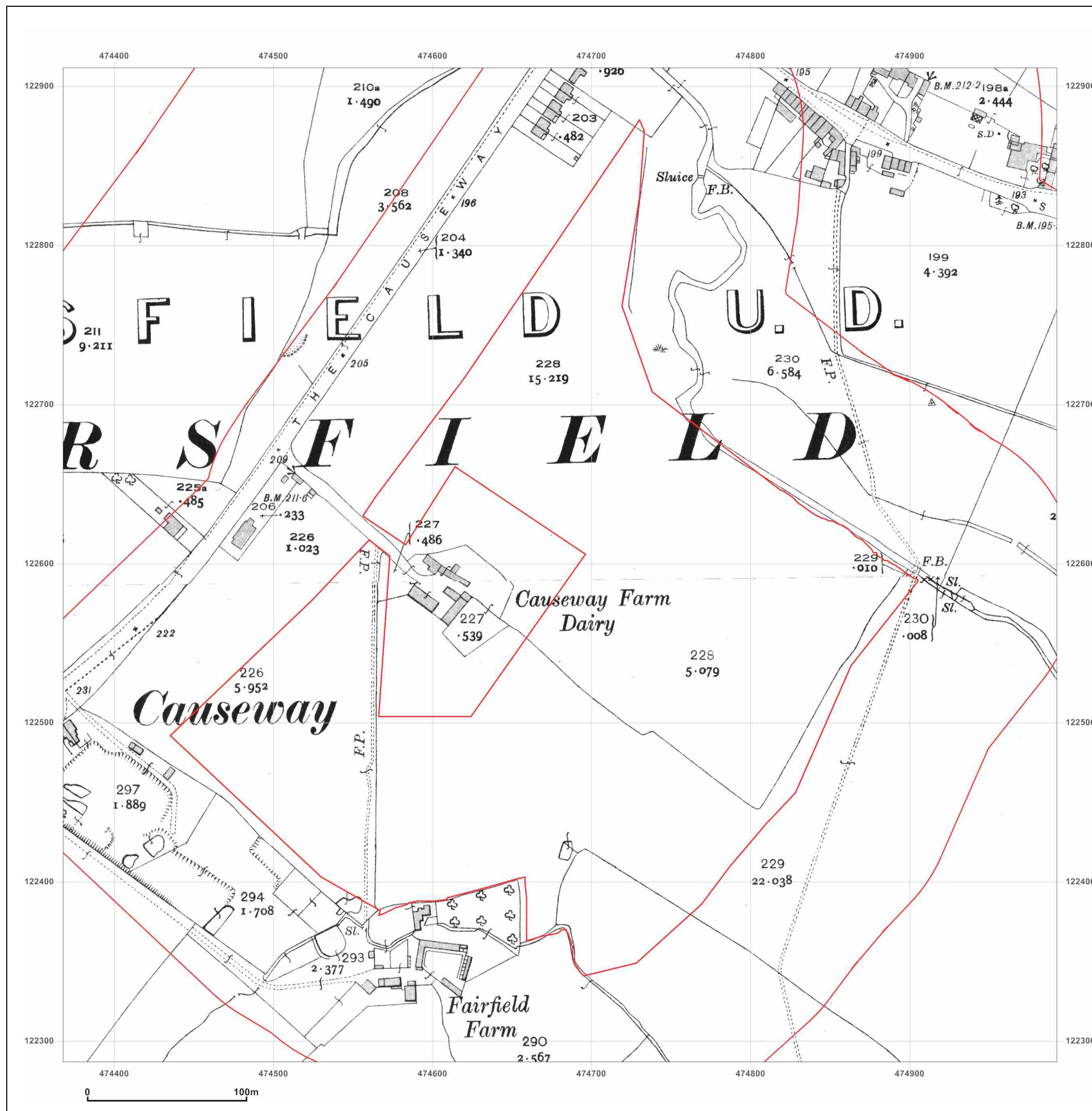


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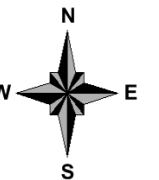
Client Ref: DB
Report Ref: GS-1113410
Grid Ref: 474680, 122599

Map Name: County Series

Map date: 1909

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1909
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1909
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

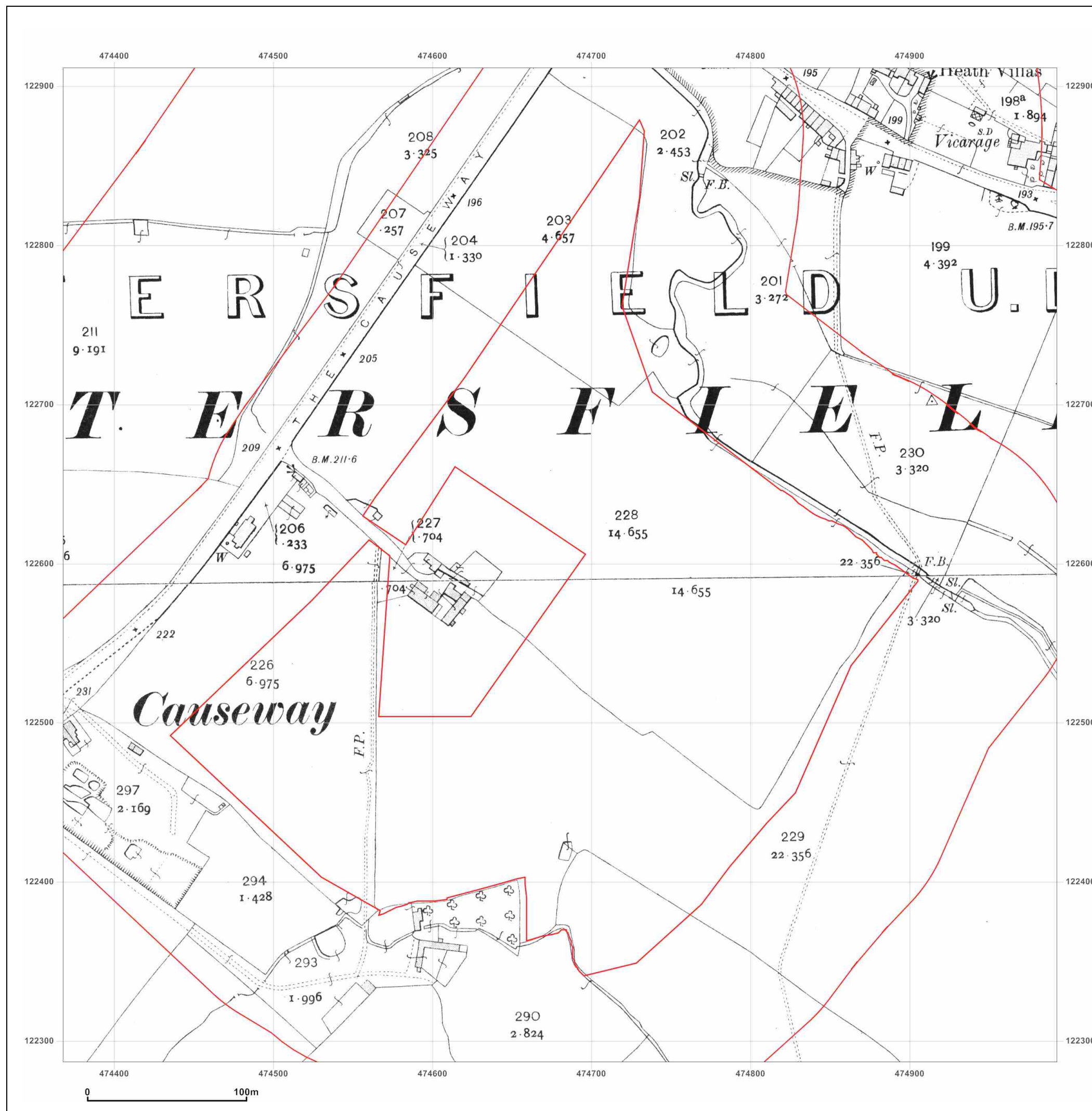


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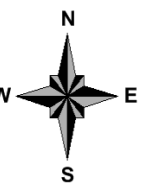
Client Ref: DB
Report Ref: GS-1113410
Grid Ref: 474680, 122599

Map Name: County Series

Map date: 1897

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1897
Revised 1897
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1897
Revised 1897
Edition N/A
Copyright N/A
Levelled N/A

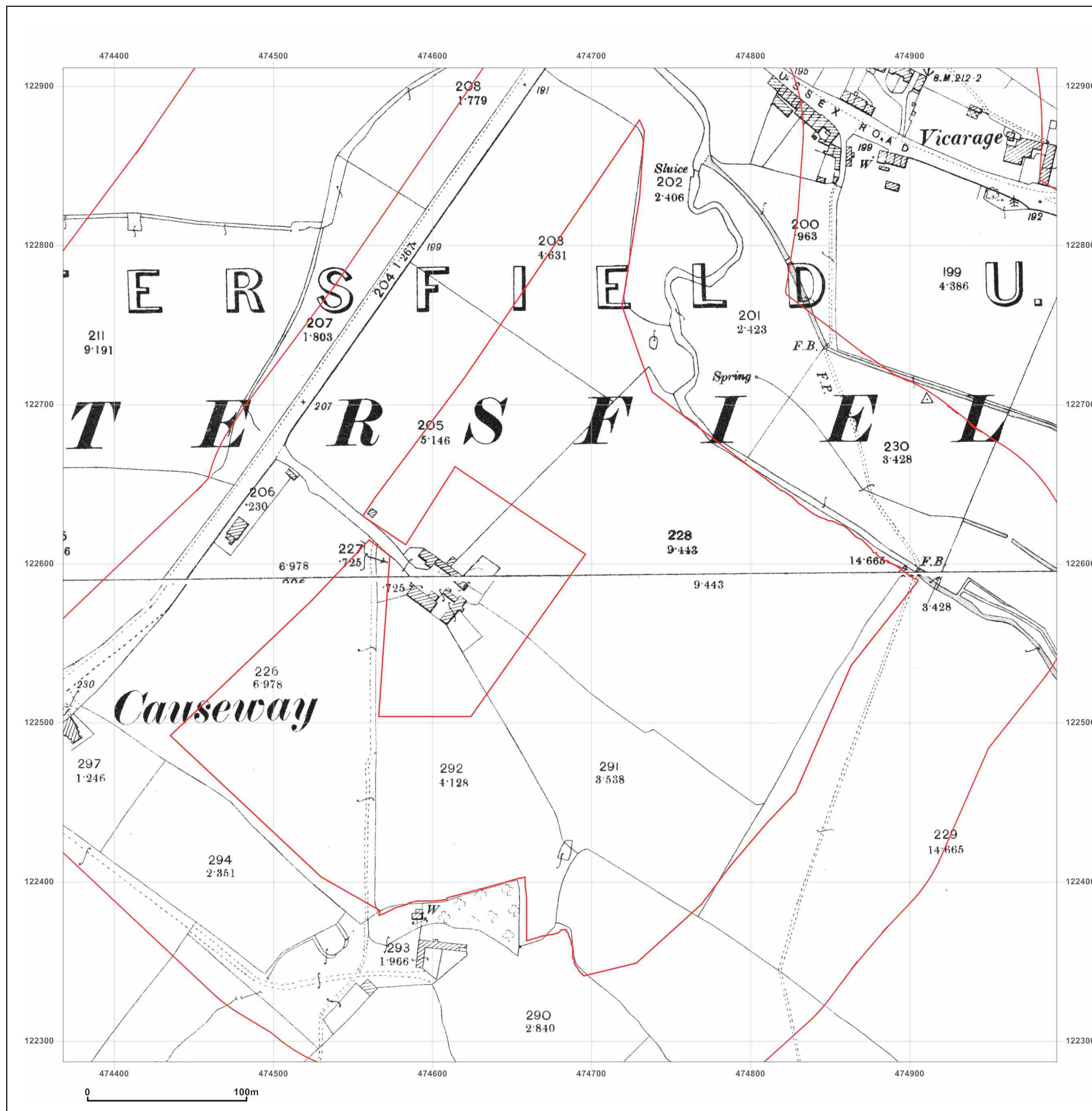


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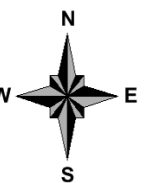
Client Ref: DB
Report Ref: GS-1113410
Grid Ref: 474680, 122599

Map Name: County Series

Map date: 1869

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1869
Revised 1869
Edition N/A
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Surveyed 1869
Revised 1869
Edition N/A
Copyright N/A
Levelled N/A

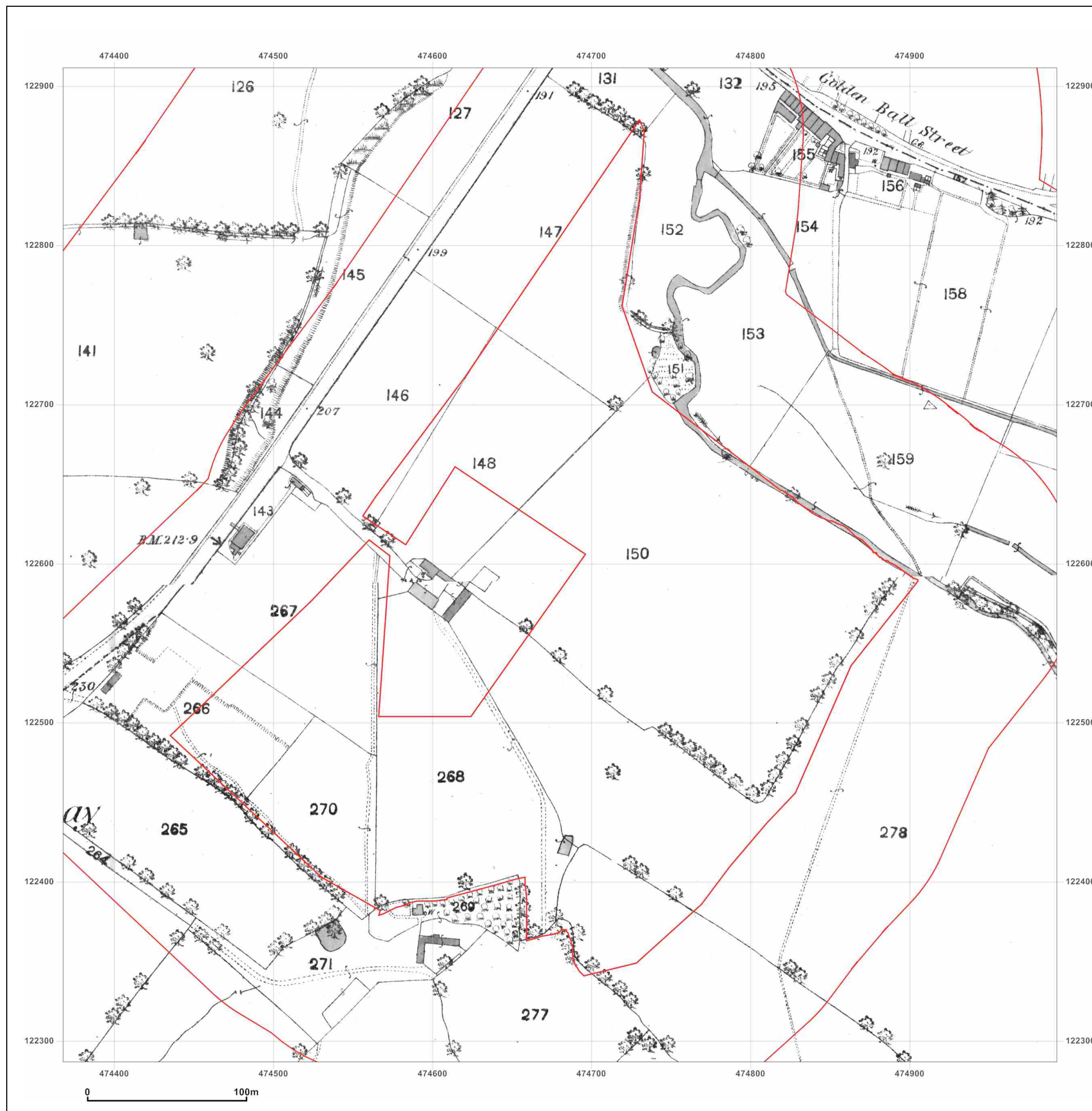


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Site Causeway Farm Site, The Causeway, Petersfield

Client BDW Southampton

