



Land at Billingshurst Trade Park, Billingshurst

**Flood Risk Assessment and Drainage
Strategy**

For

Dunmoore Group

Document Control Sheet

Land at Billingshurst Trade Park, Billingshurst
Dunmoore Group

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1.0 Introduction

- 1.1 Motion has been commissioned by Dunmoore Group Ltd to undertake a Flood Risk Assessment (FRA) and Drainage Strategy in support of a planning application for the proposed development at Billingshurst Trade Park, Billingshurst, West Sussex. This application consists of 102 residential units including affordable housing and industrial units 16, 17 and 18. The site plan can be found in **Appendix A**.
- 1.2 The proposed development at Billingshurst Trade Park is located on the site which forms part of the consented Phase 2 development on the site. The Phase 1 development has been constructed, but the Phase 2 development is yet to be constructed. This planning application varies the proposed development on the Trade Park site over what was consented as part of the Phase 2 Development.
- 1.3 The Drainage Strategy and SuDS Assessment for the Phase 1 and Phase 2 developments was undertaken by Motion in January 2019, as part of the original consented hybrid application. As this report is for a new planning application, it is intended to be a standalone report, however where necessary it considers the various current applications and variations to the original consented hybrid application.
- 1.4 The site is located approximately to the north of Billingshurst Village centre within the administrative boundaries of Horsham District Council (HDC) and West Sussex County Council (WSCC). The site is currently undeveloped agricultural land.
- 1.5 This FRA and Drainage Strategy will discuss the risks to the proposed development from all sources of flooding. This report will also define how the site will manage surface water so that the development does not increase flood risk in the area or to neighbouring properties.
- 1.6 This FRA and drainage strategy follows the guidance set out in:
 - ▶ National Planning Policy Framework (NPPF)
 - ▶ Technical Guidance to the National Planning Policy Framework
 - ▶ CIRIA SuDS Manual 2015 (C753)
 - ▶ Environment Agency Rainfall Runoff Management for Developments.
- 1.7 This FRA and drainage strategy pertains only to the design of the drainage system for the built site. It does not provide details of how the site will be drained during the construction phase. This is considered to be temporary works and can only be prescribed and provided by the eventual appointed contractor.
- 1.8 This report does not provide information on how the drainage infrastructure will be protected during the construction phase of the project. The provision of this information is the responsibility of the appointed contractor.

2.0 Site Description

Table 2.1 – Site Summary

Site Name	Land at Billingshurst Trade Park.
Location	Land at Billingshurst Trade Park, Stane Street, West Sussex, RH14 9HN.
Grid Reference	E 509394 N 126746.
Site Area	Approximately 5.3Ha.
Development Type	Construction of 102 residential units with associated roads and parking. In addition, Industrial units 16, 17 and 18 which were part of the previous consented Phase 2 development.
Environment Agency (EA) Flood Zone	The site is located wholly within Flood Zone 1 (less than 1 in 1,000 annual probability of flooding from rivers or the sea).
Surface Water Flood Risk	The updated EA surface water flood maps show that currently and, in the future, the majority of the site is not at risk of surface water flooding. In the EA current yearly surface water flood map there are some small areas of site at 'Low' chance of surface water flooding. In the EA Yearly chance of flooding between 2040 and 2060 Surface Water Flood Map there are some small areas of site at 'Low', 'Medium' and 'High' chance of surface water flooding. These areas of flood risk are located on the areas of proposed road.
Ground Water Flood Risk	The Envirocheck report shows that the site has not got geological and hydrogeological indicators for groundwater flooding to occur. According to the BGS Groundwater Flooding Susceptibility maps and the GeoSmart Information, the site is in an area of negligible risk.
Local Water Authority	Southern Water (SW).
Local Planning Authority	Horsham District Council (HDC).
Lead Local Flood Authority	West Sussex County Council (WSCC).

Site Location and Description

- 2.1 The site is located in the village of Billingshurst in the District of Horsham and County of West Sussex. The nearest post code is RH14 9HN and the site co-ordinates are E 509394 N 126746. The application site is approximately 5.3 hectare (ha). The site is made up of mostly agricultural land with some trees and can be described as Greenfield.
- 2.2 The development proposals are for approximately 102 residential units and industrial units 16, 17 and 18 which were part of the previous consented Phase 2 development. The illustrative masterplan can be found in full in **Appendix A**.

Topography

- 2.3 A topographical survey of the existing site was undertaken by Hollis in November 2019 which is provided in **Appendix B** of this report. The site generally falls from east to west with ground levels ranging from approximately 56.05mAOD to 49.23mAOD. There is a drainage ditch which runs along the site's southern boundary.

Geology

- 2.4 The British Geological Survey (BGS) online Geoindex Mapping indicates that the site is underlain by Weald Clay Formation, which is made up of clay, silt and sand with no superficial deposits of Head. Borehole records from the surrounding area have been obtained from the BGS online index and these can be found in **Appendix C**. These Borehole records support the findings of the BGS mapping and confirm that the site is underlain by clay, silt and sand.
- 2.5 The Department for the Environment, Food and Rural Affairs (Defra's) Magic Map states that soils in the area are 'Slowly Permeable Seasonally Wet Slightly Acid but Base-Rich Loamy and Clayey Soils'.

Infiltration Testing

- 2.6 Intrusive ground investigations (infiltration testing) were carried out for the Phase 1 and 2 site in August 2018 and the results can be found in **Appendix D**. The infiltration testing supports the findings of the BGS mapping and demonstrates that infiltration techniques are not considered possible on this site. As this site is underlain by the same geology as phase 1 and 2 it is assumed that infiltration techniques will also not be possible on this site as well.

Hydrogeology

- 2.7 Defra's Magic Map indicates that the site is not located in a Groundwater Source Protection Zone (SPZ) or in an Aquifer designation. A flood screening report has been obtained from Envirocheck Landmark Information Group Ltd, and this can be found in **Appendix E**. The report shows that the site has not got geological and hydrogeological indicators for groundwater flooding to occur. According to the BGS Groundwater Flooding Susceptibility maps and the GeoSmart Information, the site is in an area of negligible risk.

Existing Drainage Regime

- 2.8 The site is existing agricultural land site made up of open fields. Therefore, the existing site can be described as greenfield.
- 2.9 The nearest watercourse to the site is an unnamed ditch (a tributary of the River Arun) which flows in an easterly direction along the site's southern boundary. The nearest main river to the site is the River Adur which is located 1km east of the site.
- 2.10 Asset location plans were obtained from Southern Water (see **Appendix F**), and these indicate there are no surface water sewers which currently serve the site.
- 2.11 The total area of the site is approximately 5.3 ha. UKSuDS's online calculator was used to determine the QBAR greenfield runoff rate for the site area that is to be developed. This, showings a result of 39.22 l/s or 7.40 l/s/ha. The UKSuDS greenfield calculations can be found in Table 2.2 and in full in **Appendix G**.

Table 2.2 – Greenfield Runoff Rate

Return Period	1 in 1	1 in 30	1 in 100	QBAR
Discharge Rate (l/s/ha)	6.30	17.10	23.70	7.40
Discharge Rate (l/s)	33.39	90.63	125.61	39.22

3.0 Legislative and Policy Framework

Flood and Water Management Act

- 3.1 The Flood and Water Management Act 2010 (FWMA) received Royal Assent on 8th April 2010. The Act was introduced to enforce some of the key proposals set out within UK Government flood and water strategies along with UK Government's response to the Sir Michael Pitt's Review of the summer 2007 floods.
- 3.2 LLFA's, including West Sussex County Council (WSCC), have a responsibility under the FWMA to develop, maintain, apply and monitor the application of a strategy for local flood risk in their area. Local flood risk is defined as flood risk arising from surface run-off, groundwater and ordinary watercourses (i.e. non main rivers). The EA plays a role in managing the watercourses designated as 'main rivers'.

The Environment Agency Flood Map for Planning

- 3.3 The Environment Agency's (EA) Flood Map for Planning gives an indicative prediction of areas at risk of fluvial and tidal flooding. The mapping is an amalgamation of modelled flood levels and historical flood event outlines.
- 3.4 The Flood Map is split into 'Flood Zones', which demarcate the extent of flooding from rivers or the sea for different return periods. The Flood Map for Planning shows the extent of the natural floodplain if there were no defences or other man-made structures. They do not provide a definitive picture of where flooding would occur; rather, they provide an indicative prediction of areas at risk.
- 3.5 Table 3.1, below, lists the flood zone categories and explains the flood risk probabilities they represent.

Table 3.1 – Flood Zone Categories

Flood Zone	Definition
Zone 1 Low Probability	Land having a less than 1 in 1,000 annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map – all land outside Zones 2 and 3)
Zone 2 Medium Probability	Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding. (Land shown in light blue on the Flood Map)
Zone 3a High Probability	Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding. (Land shown in dark blue on the Flood Map)
Zone 3b The Functional Floodplain	This zone comprises land where water has to flow or be stored in times of flood. This is generally delineated as land having a 1 in 30 or greater annual probability of flooding. Local planning authorities should identify in their SFRAs areas of functional floodplain and its boundaries accordingly, in agreement with the EA. (Not separately distinguished from Zone 3a on the Flood Map)

The National Planning Policy Framework

- 3.6 The NPPF sets out the Government's national policies on different aspects of land use planning in England in relation to flood risk. The Technical Guidance to the NPPF provides further information on the policies set out in the NPPF. It encourages development to take place in areas of lower flood risk wherever possible and stresses the importance of preventing increases in flood risk off-site to the wider catchment area. This includes ensuring that flood risk is taken into account at all stages of the planning process, avoiding inappropriate development in areas at risk of flooding and directing development away from those areas where risks are highest.

- 3.7 A site-specific FRA is required for proposals of 1ha or greater in Flood Zone 1, all proposals for development in Flood Zones 2 and 3, or in an area within Flood Zone 1 that has critical drainage problems (as notified to the local planning authority by the EA). The FRA should identify and assess the risks of all forms of flooding to and from the development and demonstrate how these floods risks will be managed so that the development remains safe throughout its lifetime, taking climate change into account.
- 3.8 Within each Flood Zone, a key factor in determining planning applications for development is the flood risk vulnerability of a development. Table 2 of the Technical Guidance to the NPPF categorises different development types according to their vulnerability to flooding. These categories are:
- ▶ Essential infrastructure;
 - ▶ Highly vulnerable development;
 - ▶ More vulnerable development;
 - ▶ Less vulnerable development, and;
 - ▶ Water-compatible development.
- 3.9 Within the different Flood Zones each of the above development categories are considered appropriate or not permissible. The Technical Guidance to the NPPF lists these as:
- Flood Zone 1:**
- ▶ All the development categories listed above are appropriate.
- Flood Zone 2:**
- ▶ Water-compatible, less vulnerable development, more vulnerable development and essential infrastructure is appropriate in this zone.
- Flood Zone 3a:**
- ▶ Water-compatible and less vulnerable development is appropriate in this zone. Highly vulnerable development should not be permitted in this zone.
- Flood Zone 3b:**
- ▶ Only water-compatible development and essential infrastructure that has to be there should be permitted in this zone.
- 3.10 The above information sets out the basis by which developments must be assessed in terms of flood risk. Later in this report the proposed development will be reviewed against the Flood Zone in which it is located. This will inform the appropriateness of the proposed development, as per the advice within the Technical Guidance to the NPPF.

Lead Local Flood Authority

- 3.11 As of April 2015, the LLFA became a statutory consultee on all major planning applications. The LLFA is required to assess planning applications in respect of surface water drainage and sustainable drainage systems. WSCC is the LLFA for the Billingshurst Area.

4.0 Current Flood Risk

- 4.1 Flooding can arise from a variety or combination of sources. These may be natural or artificial and may be affected by climate change. These are discussed, in the following two sections and summarised in the next chapter. The probability of any likely impacts is also assessed.

Fluvial Flood Risk

- 4.2 The nearest watercourse to the site is an unnamed ditch (a tributary of the River Arun) which flows in an easterly direction along the site's southern boundary. The nearest main river to the site is the River Adur which is located 1km east of the site.
- 4.3 The EA's Flood Map for Planning (**Appendix H**) shows that the entire site is located within Flood Zone 1 (less than 1 in 1000 annual probability of flooding from rivers or the sea). The Envirocheck Flood Screening Report in **Appendix E** places the site outside of any fluvial or tidal flood risk areas. Residential development is considered to be 'more vulnerable' and Commercial development is considered to be 'less vulnerable' by the NPPF and both are appropriate in Flood Zone 1. Therefore, it is considered that the site is at a very low risk of flooding from rivers and the sea and the development is appropriately located.

Therefore, it is considered that the proposed development site is currently at a low risk of fluvial flooding.

Surface Water Flooding

- 4.4 Surface water, or pluvial flooding, results from rainfall-generated overland flow, where rainwater has not yet reached a watercourse or sewer and where the local drainage systems become overwhelmed. Pluvial flooding often occurs during short, very intense storms, but can also occur during longer periods of rainfall when the ground is already saturated, or where land has low permeability due to development.
- 4.5 In these conditions surface water can build up where the topography allows it to converge or pond. Where it gathers it will travel down prevailing gradients. Pluvial flooding then occurs at locations where significant surface water flow paths converge, at localised low points and/or due to overland obstructions. In urban areas pluvial flooding often occurs where the built environment channels overland flow routes (down roads that are bounded by kerbs, for example) or where there are obstacles to the natural overland flow routes. Boundary walls and buildings are often the main causes and, hence, the likelihood of pluvial flooding to impact property and gardens.
- 4.6 Pluvial flooding is exacerbated in many cases by the mistreatment or failure of the below ground infrastructure (including partial or full blockages of gullies and/or within the combined sewers and the accumulation of fats, oils and greases within the sewer networks).
- 4.7 Generally speaking, pluvial flooding is less of an issue in rural areas. This is partly because the natural 'greenfield' state of land allows for the interception of rainfall and the slowing down of overland flow, so the accumulation of surface water is less likely. It is also because there are much less 'receptors' of surface water flooding in rural areas and many incidences of surface water flooding in rural areas go unnoticed or unreported as they are of no consequence.
- 4.8 The Envirocheck Flood Screening Report in **Appendix E** provides detailed information on surface water flood risk on the site. Referring to the Jeremy Benn Associates (JBA) Comprehensive Flood Maps (CFM's), it shows that the site is not at risk from the 1 in 1,000-year (0.1% AEP) pluvial flood event.
- 4.9 The EA's Risk of Flooding from Surface Water (RoFSW) map for the site can be found in **Appendix I**. This mapping shows that the site is in the 'very low' surface water flood risk category (less than a 0.1% AEP surface water flood event).
- 4.10 The Environment Agency released updated flood risk mapping following the new National Flood Risk Assessment (NaFRA2) in early 2025. The updated mapping uses new and improved methods to assess

flood risk. An extract on the updated Surface Water mapping can be found in full Figure 4.3 and Figure 4.4 and can be found in full in **Appendix I**. The updated surface water flood maps show that currently and, in the future, the majority of the site is not at risk of surface water flooding. In the EA current yearly surface water flood map there are some small areas of site at 'Low' chance of surface water flooding. In the EA Yearly chance of flooding between 2040 and 2060 Surface Water Flood Map there are some small areas of site at 'Low', 'Medium' and 'High' chance of surface water flooding. These areas of flood risk are located on the areas of proposed road.

Figure 4.3 – EA Current yearly Surface Water Flood Map

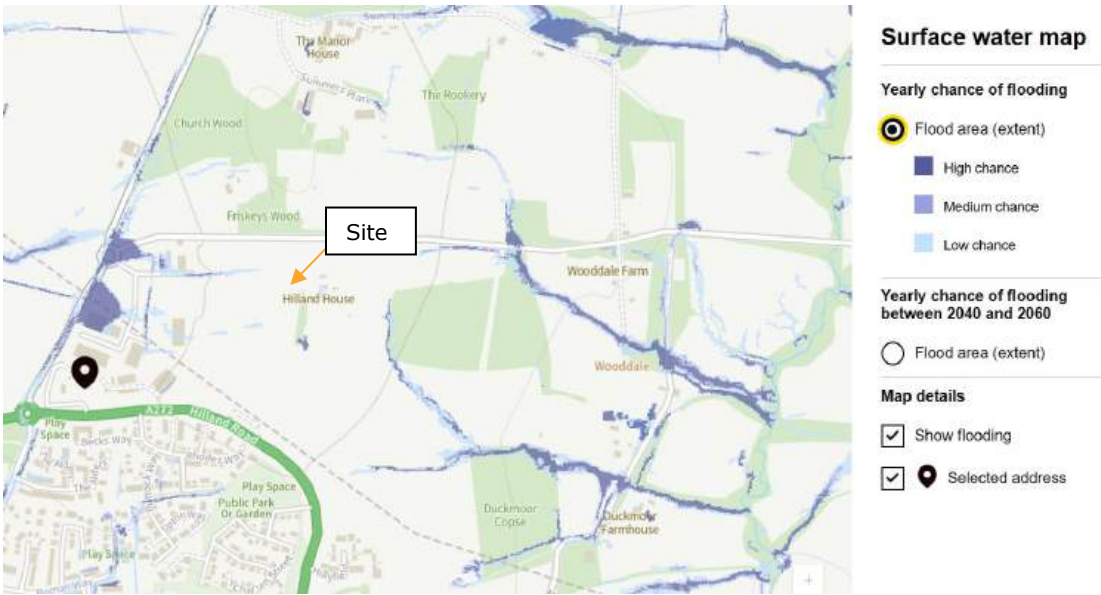
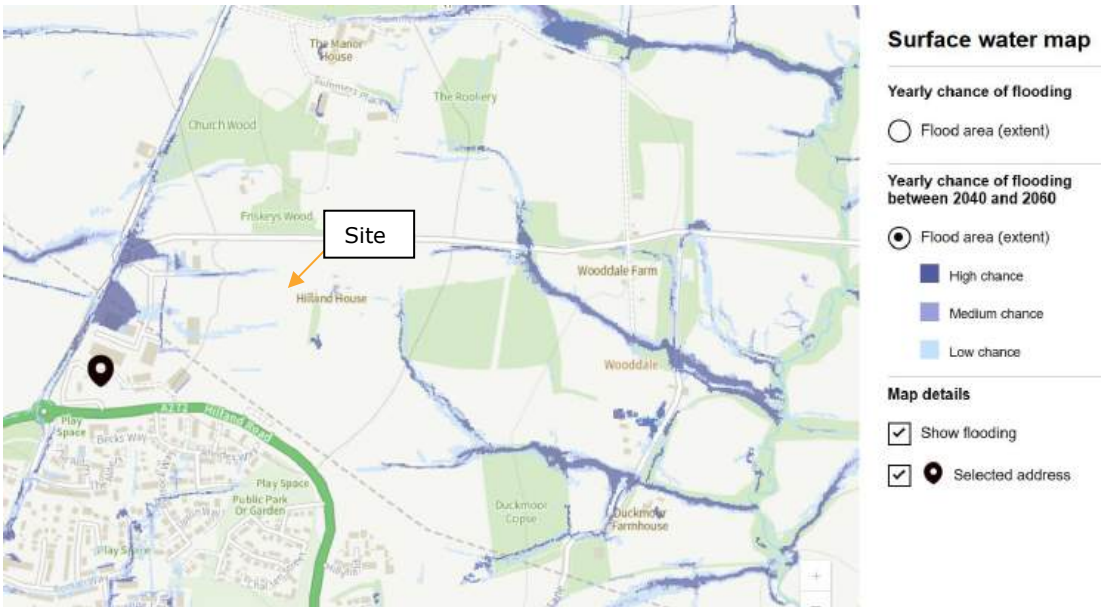


Figure 4.4 – EA Yearly chance of flooding between 2040 and 2060 Surface Water Flood Map



Therefore, it is considered that the proposed development site is at an overall very low to high risk of surface water flooding, with the small areas at risk of surface water flooding indicated at the location of lower ground levels which can be managed by an appropriate drainage strategy. The proposed residential and commercial units will only be located within the area of very low risk of surface water flooding.

Residential development is considered to be 'more vulnerable' and commercial development is considered to be 'less vulnerable' by the NPPF and both are appropriate in areas of very low surface water flood risk.

Therefore, it is considered that the site is at a very low to high risk of surface water flooding but the development is appropriately located in an area of very low risk of surface water flooding.

Groundwater Flooding

- 4.11 The risk of groundwater flooding is dependent on local geological and hydrogeological conditions at any given time. Groundwater levels rise during wet winter months and fall again in the summer when rainfall is low, and extractions are higher. In very wet winters, rising groundwater levels can reactivate flow in ephemeral streams that only flow for part of the year or even lead to the flooding of normally dry land.
- 4.12 As mentioned in paragraph 2.7, the Envirocheck Flood Screening Report in **Appendix E** shows that the site has not got geological and hydrogeological indicators for groundwater flooding to occur. According to the BGS Groundwater Flooding Susceptibility maps and the GeoSmart Information, the site is in an area of negligible risk.
- 4.13 Therefore, the site is considered to be at low risk of flooding from groundwater.**

Flooding from Infrastructure Failure

- 4.14 Sewer flooding can occur when the capacity of the infrastructure is exceeded by excessive flows, or because of a reduction in capacity due to collapse, siltation, blockage, or if the downstream system becomes surcharged. This can lead to the sewers flooding onto the surrounding ground via manholes and gullies, which can generate overland flows.
- 4.15 Typically, sewer systems are constructed to accommodate rainstorms with a 30-year return period or less, depending on their age. Consequently, rainstorm events greater than 1 in 30-years would be expected to result in surcharging of some parts of the sewer system. In fact, due to most gullies being poorly maintained and often partially blocked with silt, leaves and other debris, their capacity is often estimated to be closer to the 1 in 10-year storm.
- 4.16 The existing sewer runs in the vicinity of the site have not been surveyed using CCTV, so the condition of the connecting pipework is unknown. There are no records of flooding from the on-site sewerage on of the site.
- 4.17 Therefore, the site is considered to be at low risk of flooding from infrastructure failure.**

Flooding from Artificial sources

- 4.18 The EA provides a map showing the maximum potential flood extent should all reservoirs with a capacity of greater than 25,000 cubic metres fail and release the water they hold.
- 4.19 The map shows that the site would not experience flooding in this scenario. There are no other significant artificial waterbodies (such as canals) in proximity of the site.
- 4.20 Therefore, the site is considered to be at low risk of flooding from artificial sources.**

The Sequential and Exception Tests

- 4.21 In July 2021, Chapter 14 of the NPPF was updated with changes that required all plans to take into account all sources of flooding and apply a sequential, risk-based approach to the location of the development. This was specifically laid out in paragraphs 161 and 162, which stated that the aim should be to steer new development to areas with the lowest risk of flooding from any source and opportunities should be provided for new green and other infrastructure that can reduce the causes and impacts of flooding.

- 4.22 With specific regard to the proposed development, the EA Flood Product 4 dataset confirmed that the Site is located wholly within Flood Zone 1. The site is at low risk of groundwater flooding, infrastructure failure and of flooding from artificial sources. Both the JBA Pluvial Flood Risk Mapping and the EA's Risk of Flooding from Surface Water maps show that the Site is not affected by surface water flooding. The updated surface water flood maps show that currently and, in the future, the majority of the site is not at risk of surface water flooding. In the EA current yearly surface water flood map there are some small areas of site at 'Low' chance of surface water flooding. In the EA Yearly chance of flooding between 2040 and 2060 Surface Water Flood Map there are some small areas of site at 'Low', 'Medium' and 'High' chance of surface water flooding. These areas of surface water flood risk are located on the areas of proposed road and will be managed by an appropriate drainage strategy.
- 4.23 Therefore, the development will be safe with respect to flooding during its lifetime and will not increase the risk of flooding to other sites. Therefore, the proposed development meets the requirements of the Sequential and Exception Test.

5.0 Future Flood Risk & Climate Change

- 5.1 The 2021 NPPF and the supporting Technical Guidance document sets out how flood risk should be considered over the lifetime of a development. This requires an increase in flood risk due to climate change to be taken into account. Both peak river flows and rainfall intensity should be assessed.

Peak River Flows

- 5.2 The EA Flood map shows that the site is wholly located within Flood Zone 1.
- 5.3 The nearest watercourse to the site is an unnamed ditch (a tributary of the River Arun) which flows in an easterly direction along the site's southern boundary. The nearest main river to the site is the River Adur which is located 1km east of the site.
- 5.4 As the site is not near any higher risk flood zones, increases in future peak river flows do not need to be considered.

Peak Rainfall Intensity

- 5.5 With climate change it is becoming more common to see rainfall events of higher intensity, particularly in the southeast of England. Increased rainfall intensity affects river levels and drainage systems, with the result being an increase in surface water flooding and sewerage surcharge.
- 5.6 The NPPF states that, for flood risk assessments, the Peak Rainfall Allowances Map should be referenced to find out what the anticipated changes in peak rainfall are. For residential developments, which have a minimum lifespan of 100 years, the upper end climate change allowances for both the 3.3% AEP and 1% AEP events should be used.
- 5.7 The development site lies within the Arun and Western Streams Management Catchment. In this catchment, the upper end climate change allowance for the 3.3% AEP and 1% AEP rainfall events are 40% and 40%, respectively. Therefore, the development can expect peak rainfall increases of this magnitude and should use these percentage increases in the assessment of future surface water flood risk.
- 5.8 The majority of the site is at 'very low' risk of surface water flooding and is anticipated to remain that way. In the EA Yearly chance of flooding between 2040 and 2060 Surface Water Flood Map there are some small areas of site at 'Low', 'Medium' and 'High' chance of surface water flooding. These areas of flood risk are located on the areas of proposed road and will be managed by an appropriate drainage strategy.
- 5.9 However, acknowledging that peak rainfall intensities are expected to increase, it is important that:
- ▶ Any changes to the land in this area must remain sensitive to the local surface water flood risk. This will ensure that any natural overland flow routes and surface water pathways will remain the same and the conveyance of surface water is not impeded.
 - ▶ The surface water strategy for the site takes the latest climate change predictions into account, so as not to increase flood risk on- or off-site.

Residual Flood Risk

- 5.10 It is important to recognise that flood risk can never be fully mitigated and there will always be a residual risk of flooding. The residual risk is associated with several potential risk factors, including (but not limited to):
- ▶ A flood event that exceeds that for which the local flood defences or local drainage system has been designed to withstand.

- ▶ A residual danger posed to property and life because of flood defence failure through overtopping or structural collapse.
- ▶ General uncertainties inherent in the prediction of flooding.

5.11 Modelling of flood events is not an exact science. Therefore, there is an inherent uncertainty in the prediction of flood levels and extents used in the assessment of flood risk. EA's Flood Map for Planning is largely based upon detailed modelling within the area. However, other mapping products require numerous assumptions to be made. Whilst they all provide a good depiction of flood risk for specific modelled conditions, all modelling requires the making of core assumptions, and these might not occur in the open and dynamic environment of a flood event. Also, the EA's Flood Map for Planning and other flood modelling is updated regularly. Interested parties are recommended to keep abreast of this so that a significant change or increase in flood risk can be determined.

Table 5.1 – Residual Flood Risk

Flood Source	Risk Level				Comment
	High	Medium	Low	Very Low	
Fluvial/ Tidal				X	Flood Zone 1
Groundwater				X	Geology is hydraulically unproductive.
Surface Water	X	X	X	X	The majority of the site is at very low surface water flood risk. In the EA current yearly surface water flood map there are some small areas of site at 'Low' chance of surface water flooding. In the EA Yearly chance of flooding between 2040 and 2060 Surface Water Flood Map there are some small areas of site at 'Low', 'Medium' and 'High' chance of surface water flooding. These areas of surface water flood risk are located on the areas of proposed road and will be managed by an appropriate drainage strategy.
Canals				X	There are no canals in the vicinity of the site.
Reservoirs				X	The Reservoir Flood Risk Map places the site well outside a maximum extent of flooding.
Infrastructure Failure				X	No evidence that existing infrastructure has failed.
Increase due to Climate Change				X	Increased peak river flows and rainfall intensities are not expected to affect any infrastructure or properties.

6.0 Surface Water Drainage Strategy

Proposed Surface Water Drainage Strategy

- 6.1 Current planning policy and EA guidance requires developments to employ SuDS (Sustainable Drainage Systems) techniques wherever feasible. Careful design of SuDS features can ensure that a development's surface water drainage closely reflects the natural hydrology of the pre-developed site.
- 6.2 SuDS will attenuate and treat surface water run-off quantities at the source (source control) in line with NPPF and EA policies.
- 6.3 Source control systems treat surface water close to the point of origin, in features such as soakaways, permeable paving and swales, to name a few.
- 6.4 The existing and proposed impermeable areas for the development site are summarised in Table 6.1 below. This demonstrates that the proposed development will increase the hardstanding area of the site. An impermeable area plan is detailed in **Appendix J**.

Table 6.1 – Existing and Proposed Surface Cover

Land Use	Impermeable Area		Gardens and Landscaping	
	Area (ha)	% Cover	Area (ha)	% Cover
Existing	0.00	0	5.30	100
Proposed	2.17	41	3.13	59

The Drainage Hierarchy

- 6.5 The drainage hierarchy is a sequential check that intends to ensure that all practical and reasonable measures are taken to manage surface water as high up the hierarchy (with '1' being the highest) as possible, and that the amount of surface water managed at the bottom of the hierarchy is minimised. The PPG to the NPPF states that "Generally, the aim should be to discharge surface run off as high up the following hierarchy of drainage options as reasonably practicable".
- 6.6 The drainage hierarchy presented in the NPPF presents only four tiers of drainage options. This has been expanded on and adopted by others and now can be viewed as the following:
1. Store rainwater for later use.
 2. Use infiltration techniques, such as porous surfaces in non-clay areas.
 3. Attenuate rainwater in ponds or open water features for gradual release.
 4. Attenuate rainwater by storing in tanks or sealed water features for gradual release.
 5. Discharge rainwater direct to a watercourse.
 6. Discharge rainwater to a surface water sewer/drain.
 7. Discharge rainwater to the combined sewer.
 8. Discharge rainwater to the foul sewer.

- 6.7 The first two tiers of the drainage hierarchy ensure that surface water is retained within the site boundary and does not increase flood risk to others. This is always the most preferable method of surface water management.
- 6.8 The next six tiers of the hierarchy provide regional control, but with decreasing levels of pollution removal and reduced potential for amenity and habitat creation with each tier of the drainage hierarchy.
- 6.9 Within the lower six tiers of the drainage hierarchy, there must be some form of flow restriction, so that off-site surface water discharge resembles greenfield runoff rates, as much as is reasonably practicable. This requires on-site storage facilities, which may include ponds, swales, subsurface storage tanks and System C (non-infiltration) permeable pavements with flow control devices. Again, methods that provide the most potential for amenity and pollution removal should be favoured.
- 6.10 Each tier of the drainage hierarchy has been considered for the surface water drainage for the development. In order of preference, the outcome of these considerations is below.

Tier 1 - Store rainwater for later use

- 6.11 It is recommended that the new residential and commercial unit will be fitted with water butts. These will reduce the reliance on potable water supplies during activities such as gardening and car washing. They can also provide small amounts of storage for surface water. Water butts can also provide small amounts of storage for surface water and can often assist in achieving zero discharge for rainfall depths up to 5mm, which covers 50% of annual rainfall events (according to the EA's Rainfall Runoff Management for Developments report – SC030219).

Tier 2 - Use Infiltration techniques, such as porous surfaces in non-clay areas

- 6.12 As detailed in Chapter 2 the BGS mapping suggests that the site is underlain by Weald Clay Formation, which is made up of clay, silt and sand with no superficial deposits. Intrusive ground investigations (infiltration testing) were carried out for the phase 1 and 2 site in August 2018 and the infiltration testing supports the findings of the BGS mapping and demonstrates that infiltration techniques are not considered possible on this site. As part of this site is made up of the previously consented phase 2 development it is assumed that infiltration techniques will also not be possible on this site as well.

Tier 3 - Attenuate rainwater in ponds or open water features for gradual release

- 6.13 A hydraulic model has been produced using MicroDrainage's Network module to represent the proposed drainage strategy, which utilises permeable paving to discharge surface water.
- 6.14 The MicroDrainage model results can be found in **Appendix L**. The surface water drainage strategy can be found in full in **Appendix K**. The model was run for a number of events and return periods. They are as follows:
- ▶ 1 in 1-year rainfall for 15, 30, 60, 120, 240, 360, 480, 960 and 1440-minute storm durations
 - ▶ 1 in 30-year (plus 40% increase for climate change) rainfall for 15, 30, 60, 120, 240, 360, 480, 960 and 1440-minute storm durations
 - ▶ 1 in 100-year (plus 40% increase for climate change) rainfall for 15, 30, 60, 120, 240, 360, 480, 960 and 1440-minute storm durations.
- 6.15 This proposed development on Land at Billingshurst Trade Park replaces the as-yet unbuilt consented Phase 2 part of the development. The Phase 1 development has been constructed, and both the previous consented Phase 2 part of development, and this new proposed development at Land at Billingshurst Trade Park, are designed to drain through the Phase 1 development. Therefore, the hydraulic model that has been produced for this application includes the built Phase 1 development and the proposed development areas at Land at Billingshurst Trade Park, to demonstrate that the proposed development does not increase flood risk on site, elsewhere in the catchment and on the built Phase 1 development.

The consented Phase 1 model was built in 2019 and so the Land at Billingshurst Trade Park model has been built with the same model parameters as the approved 2019 MicroDrainage hydraulic model. Therefore, a CV value of 0.75 for summer and 0.84 for winter storms were used and FSR rainfall data was used.

6.16 In order to attenuate surface water from the development site it is proposed to have a number of attenuation tanks. The attenuation tanks vary from 0.4m deep to 1m deep and cover an area varying between 150m² to 450m². In addition, permeable paving will be used for the parking courts and some of the road areas. The permeable paving will be 450mm deep with 30% voids and will provide up to 137m³ of attenuation. There is also an attenuation pond which is 1m deep covering an area of 100m². The surface water will be drain from the site into the consented Phase 1 development and then into the drainage ditch located to the east of the site. There are two connections from the proposed development (Land at Billingshurst Trade Park) into the Phase 1 development both of which are unrestricted. However, there are flow controls on some of the attenuation tanks and permeable paving to maximise storage detailed in **Appendix K**. The MicroDrainage modelling includes the Phase 1 model to demonstrate that flood risk is not increased due to this proposed development.

6.17 The MicroDrainage Network model has shown that the proposed drainage strategy can discharge surface water with no flooding for the 1 in 100-year + 40% event. Therefore, the proposed drainage strategy can be considered as appropriate and suitable for the proposed development.

Tier 4 - Attenuate rainwater by storing in tanks or sealed water features for gradual release

6.18 As discussed above, attenuation tanks and permeable paving will be included in the drainage design to attenuate surface water.

Tier 5 - Discharge rainwater direct to a watercourse

6.19 As discussed above, it is proposed to discharge surface water through the phase 1 development and into the ordinary watercourse on the western boundary of the site.

Tier 6 - Discharge rainwater to a surface water sewer/drain

6.20 This tier of the drainage hierarchy will not be needed for surface water discharge.

Tier 7 - Discharge rainwater to the combined sewer

6.21 This tier of the drainage hierarchy will not be needed for surface water discharge.

Tier 8 - Discharge rainwater to the foul sewer

6.22 This tier of the drainage hierarchy will not be needed for surface water discharge.

Exceedance Event

6.23 An Exceedance Routing Plan for surface water is found in **Appendix M**. This details where surface water would flow to on site and where it would be stored in an extreme event.

Urban Creep

6.24 Urban Creep can be described as future urban expansion within a development such as extensions to buildings and paved gardens as the development matures. These activities increase the impermeable area of a site and often sit outside of the development control process.

6.25 A sensitivity test has been undertaken which looked at the effect of urban creep in the catchment. A 10% increase to the impermeable area of the residential units has been applied to the MicroDrainage model in accordance with the West Sussex LLFA Policy for the Management of Surface Water. The MicroDrainage model results for the urban creep can also be found in **Appendix L**. The MicroDrainage model results showed that there was an increase in flooding (2.568 m³) in the catchment which could be managed on

site for the 1 in 100+CC event including urban creep. This is because the majority of flooding is located close to the permeable where the impact to the residential developments and associated infrastructure is low.

Tier 5 - Discharge rainwater direct to a watercourse

- 6.26 This tier of the drainage hierarchy will not be needed for surface water discharge.

Tier 6 - Discharge rainwater to a surface water sewer/drain

- 6.27 This tier of the drainage hierarchy will not be needed for surface water discharge.

Tier 7 - Discharge rainwater to the combined sewer

- 6.28 This tier of the drainage hierarchy will not be needed for surface water discharge.

Tier 8 - Discharge rainwater to the foul sewer

- 6.29 This tier of the drainage hierarchy will not be needed for surface water discharge.

Surface Water Runoff Quality

- 6.30 The NPPF states that the development should not have a detrimental impact on the environment, including the water environment. The technical guidance to the NPPF provides further advice on the benefits of ensuring runoff quality is to an appropriate standard.
- 6.31 The CIRIA SuDS Manual provides guidance on the treatment of surface water runoff. With regards to the parking areas and access road on the site, Table 4.3 of the CIRIA SuDS Manual rates the pollution hazard from the site of approximately 100 homes as 'medium'. To mitigate a 'medium' pollution hazard, the CIRIA SuDS Manual recommends using a simple index approach in line with Section 26.7.1. This is discussed, below.
- 6.32 Table 26.2 of the CIRIA SuDS Manual provides pollution hazard indices for different land use classifications. The land use classification that requires consideration for the site is in Table 6.2.

Table 6.2 – Excerpt from Table 26.2 of CIRIA SuDS Manual

Land Use	Pollution Hazard Level	Total Suspended Solids (TSS)	Metals	Hydro-Carbons
Commercial yard and delivery areas, non-residential car parking with frequent change (eg hospitals, retail), all roads except low traffic roads and trunk roads/motorways.	Medium	0.7	0.6	0.7

- 6.33 To deliver adequate pollution treatment and mitigation, the CIRIA SuDS Manual recommends using a SuDS component that has a total pollution mitigation index (for each contaminant type) that equals or exceeds the pollution hazard index (for each contaminant type).
- 6.34 Table 26.3 of the CIRIA SuDS Manual provides indicative SuDS mitigation indices for each SuDS type. Table 6.3, below, which is an excerpt from Table 26.3, shows the mitigation index for ponds and permeable paving. Where mitigation components are used in series, the C753 SuDS manual states;

$$\text{Total SuDS mitigation index} = \text{mitigation index (component one)} + 0.5 \text{ mitigation index (component two)}$$

Table 6.3 – Excerpt from Table 26.3 of CIRIA SuDS Manual

Type of SuDS Component	Total Suspended Solids (TSS)	Metals	Hydro-Carbons
Permeable Paving	0.7	0.6	0.7
Pond	0.7	0.7	0.5

- 6.35 The mitigation indices for permeable pavements meets those of the highest pollution hazard index figures from Table 6.2.
- 6.36 Thus, the SuDS pond when it has followed the permeable pavements will provide the below mitigation indices as in Table 6.4:

Table 6.4: Pollution Mitigation Indices for Secondary SuDS Feature (SuDS Basin)

Type of pollution removal component	Total Suspended Solids (TSS)	Metals	Hydro-Carbons
Pond	0.35 (0.7 ÷ 2)	0.35 (0.7 ÷ 2)	0.25 (0.5 ÷ 2)

- 6.37 And the total mitigation indices for the site is as per Table 6.5, below:

Table 6.5: Total Pollution Mitigation Offered by Permeable Pavements and SuDS Basin:

Contaminant Type	Pollution Hazard Index	Pollution Mitigation Index	Difference
Total Suspended Solids	0.7	1.05 (0.7 + 0.35)	+ 0.35
Metals	0.6	0.95 (0.6 + 0.35)	+ 0.35
Hydrocarbons	0.7	0.95 (0.7 + 0.25)	+ 0.25

- 6.38 The above evidence shows how the permeable pavements, the swale and SuDS Basin combine to ensure all pollution hazards are completely mitigated.

7.0 SuDS Maintenance Regime

- 7.1 This section describes the proposed management and schedules for the maintenance to reduce the risk of the proposed network flooding due to poor maintenance.

Piped Network Maintenance

- 7.2 The piped network shall be maintained by either Southern Water or an approved maintenance company in accordance with DCG and the manufacturer's guidance.
- 7.3 This maintenance schedule should include; clearing gullies, removing any large obstructions within the pipes and cleaning catchpits at regular intervals to ensure the correct operation of the sewer network.

Permeable Paving Maintenance

The proposed SuDS features are to have a routine maintenance schedule that conforms to CIRIA SuDS Manual (C753) 2015 guidance. An approved maintenance company is to adhere to the maintenance schedule provided in Tables 7.1, below, for permeable paving and attenuation tanks to ensure the correct operation and maintenance of the drainage system.

Table 7.1- Operation and maintenance requirements for permeable paving and attenuation tanks

Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface).	Once a year, after autumn leaf fall, or reduced frequency as required, based on site specific observations of clogging or manufacturer's recommendations - pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is most likely to collect the most sediment.
Occasional Maintenance	Stabilise and mow contributing and adjacent areas.	As required
	Removal of weeds or management using glyphosate applied directly into the weeds by an applicator rather than spraying.	As required - once per year on less frequently used pavements
Remedial Actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised within 50mm of the level of the paving.	As requires
	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to structural performance or a hazard to users, and replace lost jointing material.	As required
	Rehabilitation of surface and upper substructure by remedial sweeping.	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Initial inspection	Monthly for 3 months after installation.
	inspect for evidence of poor operation and/or weed growth - if required, take remedial action.	Three-monthly, 48h after large storms in first 6 months.
	Inspect silt accumulation rates and establish appropriate brushing frequencies.	Annually
	Monitor inspection chambers	Annually

Table 7.2- Operation and maintenance requirements for permeable paving

Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface).	Once a year, after autumn leaf fall, or reduced frequency as required, based on site specific observations of clogging or manufacturer's recommendations - pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is most likely to collect the most sediment.
Occasional Maintenance	Stabilise and mow contributing and adjacent areas.	As required
	Removal of weeds or management using glyphosate applied directly into the weeds by an applicator rather than spraying.	As required - once per year on less frequently used pavements
Remedial Actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised within 50mm of the level of the paving.	As requires
	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to structural performance or a hazard to users, and replace lost jointing material.	As required
	Rehabilitation of surface and upper substructure by remedial sweeping.	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Initial inspection	Monthly for 3 months after installation.
	inspect for evidence of poor operation and/or weed growth - if required, take remedial action.	Three-monthly, 48h after large storms in first 6 months.
	Inspect silt accumulation rates and establish appropriate brushing frequencies.	Annually
	Monitor inspection chambers	Annually

8.0 Proposed Foul Water Drainage

- 8.1 Sewer records were requested from Southern Water to determine the existing surface and foul sewer network in vicinity of the site. The Southern Water sewer records can be found in full in **Appendix F**. However, as detailed in the previous application the foul drainage will drain through the Phase 1 development.
- 8.2 The peak foul flow rate from the proposed residential development has been calculated based on Southern Water's foul sewerage modelling criteria, the details of which can be found in **Appendix N**. In summary, the calculation is based on the foul flow element, plus an allowance for misconnected surface water. While this is unlikely on a new development, it provides a precautionary approach.
- 8.3 Based on Southern Water's foul sewerage modelling criteria, the calculated design foul flows from the proposed residential development are 0.67 l/s.
- 8.4 The peak foul flow rate from the commercial development has been based on the following assumptions as from Urban Drainage, Spon text, 3rd addition, David Butler and John W Davis.
- 8.5 The commercial area is made up of 6,533 m² of commercial. Therefore;
 $1,980 \times 65.33 = 129,353$ litres per day
 $129,353 / 86,400 = 1.50$ litres per second
- 8.6 The calculated peak foul flow rate from the commercial development is therefore 1.50 l/s.
- 8.7 Therefore, calculated peak foul flow rate from the site is therefore 2.17 l/s.
- 8.8 The foul water system will be designed and constructed with the current Building Regulations, BS EN: 752 drainage and sewer systems outside buildings, the local authority building control specifications.

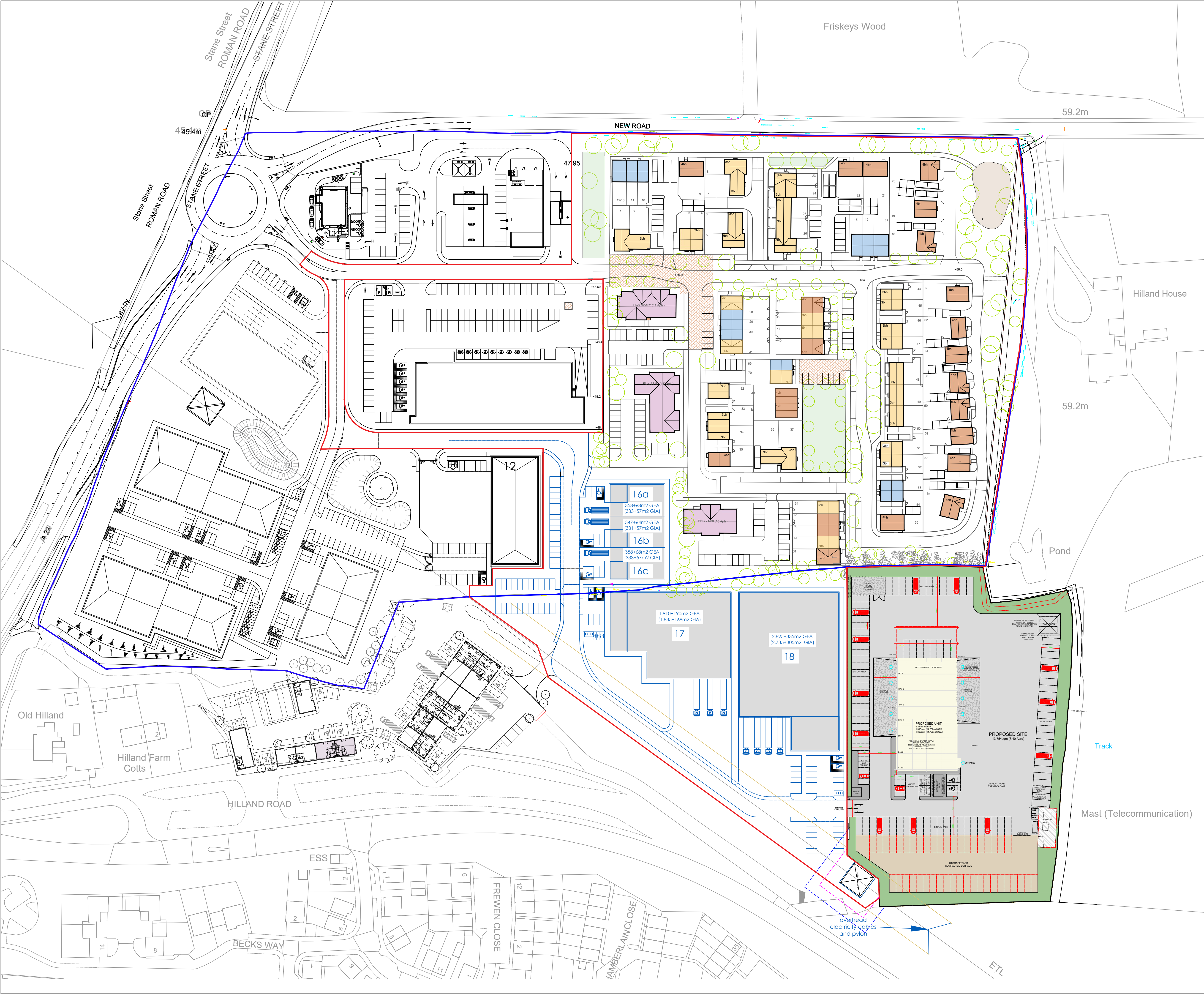
9.0 Summary and Conclusion

- 9.1 Motion has been commissioned by Dunmoore Group Ltd to undertake a Flood Risk Assessment (FRA) and Drainage Strategy in support of a planning application for the proposed development at Billingshurst Trade Park, Billingshurst, West Sussex. This application consists of 102 residential units including affordable housing and industrial units 16, 17 and 18.
- 9.2 The proposed development at Billingshurst Trade Park is located on the site which forms part of the consented Phase 2 development on the site. The Phase 1 development has been constructed, but the Phase 2 development is yet to be constructed. This planning application varies the proposed development on the Trade Park site over what was consented as part of the Phase 2 Development.
- 9.3 The Drainage Strategy and SuDS Assessment for the Phase 1 and Phase 2 developments was undertaken by Motion in January 2019, as part of the original consented hybrid application. As this report is for a new planning application, it is intended to be a standalone report, however where necessary it considers the various current applications and variations to the original consented hybrid application.
- 9.4 The site is located approximately to the north of Billingshurst Village centre within the administrative boundaries of Horsham District Council (HDC) and West Sussex County Council (WSCC). The site is currently undeveloped agricultural land.
- 9.5 The site is existing agricultural land site made up of open fields. Therefore, the existing site can be described as greenfield.
- 9.6 The nearest watercourse to the site is an unnamed ditch (a tributary of the River Arun) which flows in an easterly direction along the site's southern boundary. The nearest main river to the site is the River Adur which is located 1km east of the site.
- 9.7 The EA's Flood Map for Planning shows that the entire site is located within Flood Zone 1 (less than 1 in 1000 annual probability of flooding from rivers or the sea).
- 9.8 The site is at low risk of groundwater flooding, infrastructure failure and of flooding from artificial sources.
- 9.9 The majority of the site is at very low surface water flood risk. In the EA current yearly surface water flood map there are some small areas of site at 'Low' chance of surface water flooding. In the EA Yearly chance of flooding between 2040 and 2060 Surface Water Flood Map there are some small areas of site at 'Low', 'Medium' and 'High' chance of surface water flooding. These areas of flood risk are located on the areas of proposed road and will be managed by an appropriate drainage strategy.
- 9.10 Intrusive ground investigations (infiltration testing) were carried out for the phase 1 and 2 site in August 2018. The infiltration testing supports the findings of the BGS mapping and demonstrates that infiltration techniques are not considered possible on this site. As this site is underlain by the same geology as phase 1 and 2 it is assumed that infiltration techniques will also not be possible on this site as well.
- 9.11 This proposed development on Land at Billingshurst Trade Park replaces the as-yet unbuilt consented Phase 2 part of the development. The Phase 1 development has been constructed, and both the previous consented Phase 2 part of development, and this new proposed development at Land at Billingshurst Trade Park, are designed to drain through the Phase 1 development. Therefore, the hydraulic model that has been produced for this application includes the built Phase 1 development and the proposed development areas at Land at Billingshurst Trade Park, to demonstrate that the proposed development does not increase flooding on site, elsewhere in the catchment and on the built Phase 1 development. The consented Phase 1 model was built in 2019 and so the Land at Billingshurst Trade Park model has been built with the same model parameters as the approved 2019 MicroDrainage hydraulic model. Therefore, a CV value of 0.75 for summer and 0.84 for winter storms were used and FSR rainfall data was used.

- 9.12 In order to attenuate surface water from the development site it is proposed to have a number of attenuation tanks. The attenuation tanks vary from 0.4m deep to 1m deep and cover an area varying between 150m² to 450m². In addition, permeable paving will be used for the parking courts and some of the road areas. The permeable paving will be 450mm deep with 30% voids and will provide up to 137m³ of attenuation. There is also an attenuation pond which is 1m deep covering an area of 100m². The surface water will be drain from the site into the consented Phase 1 development and then into the drainage ditch located to the east of the site. There are two connections from the proposed development (Land at Billingshurst Trade Park) into the Phase 1 development both of which are unrestricted. However, there are flow controls on some of the attenuation tanks and permeable paving to maximise storage. The MicroDrainage modelling includes the Phase 1 model to demonstrate that flooding is not increased due to this proposed development.
- 9.13 This report demonstrates that the proposed development will not result in an increased risk of flooding on site or to neighbouring areas. Therefore, it can be concluded that the development fulfils the requirements of the PPG and the NPPF.

Appendix A

Proposed Site Layout



2 Bed - 13

3 Bed - 33

4 Bed - 23

Apartments - 32

S0216.08.25Industrial units updated, red line amendedPF

S0105.03.25First Issue

MarkDateDetailsBy

Client:

Dunmoore Properties Ltd

Project Title:

Land at Billingshurst Trade Park

Scale : 1:750

for the original size of : A1

Drawn by MD

Checked by : MD

Passed by : MD

Date : 05.03.2025

Drawing Status :

For Information

Drawing Originator :

DAVIESLANDSCAPE

ARCHITECTS

Office 1C, 1-2 King street, Stroud, Gloucestershire, GL5 3BS

w. www.d-ls.co.uk e. info@d-ls.co.uk t. 01453 760380

Drawing Title :

Residential Layout Option

Job No.	Drawing	Project	Origin	Volume	Level	Type	Discp	Number	Revision
2284	2273	DLA	100	-	DR	L	102	S02	

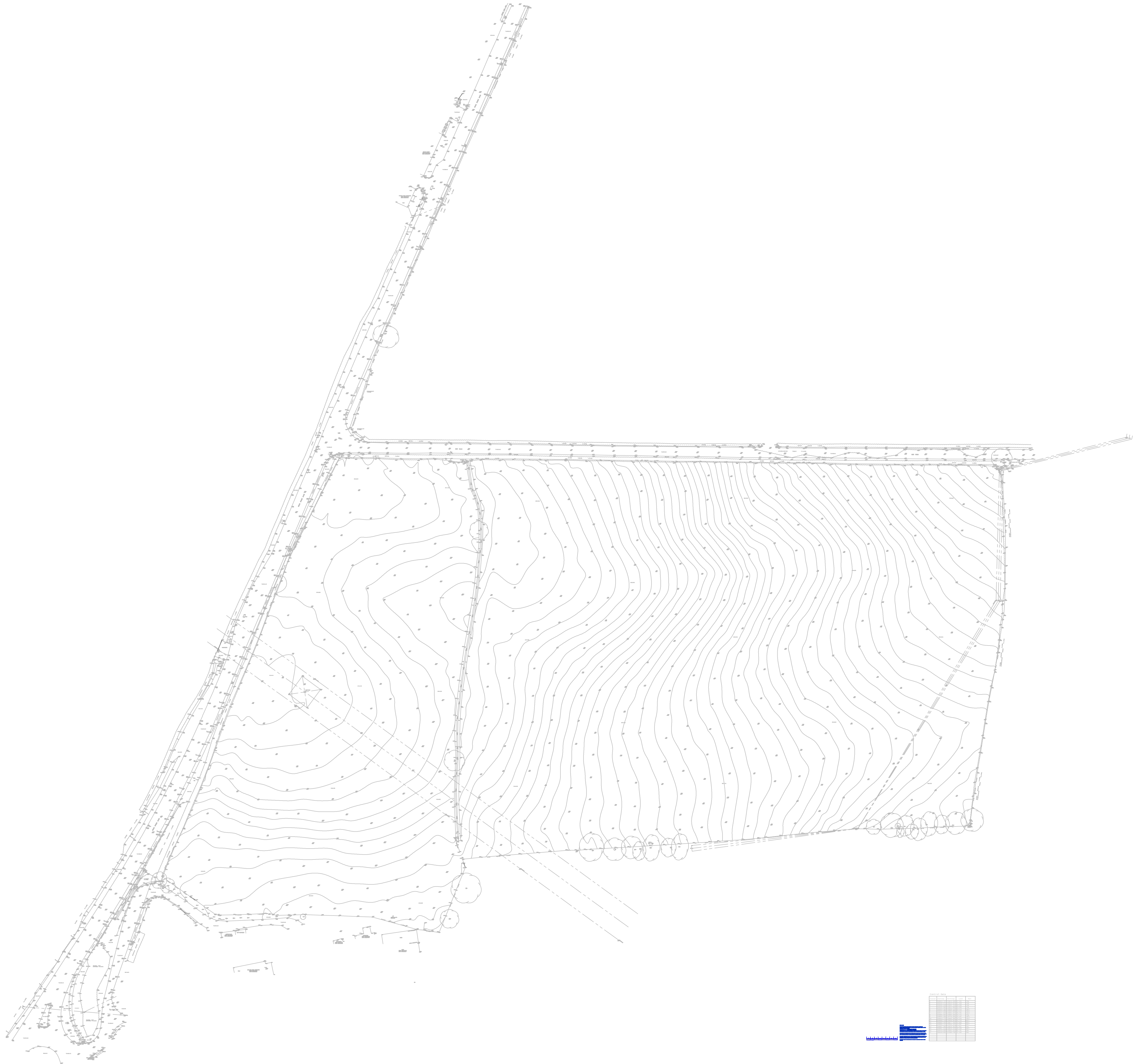
DO NOT SCALE FROM THIS DRAWING

Y:\Drawings\DATA\PROJECT FILES\2284-100-101 Residential Layout Option\2284-100-DR-L-102-S02 - House Types & New.dwg

Appendix B

Topographic Survey





Appendix C

BGS Borehole Records

301

N/S

TQ02/24

301/115

BILLINGSHURST.

Sussex 23NE

From Topleys notes, where it is given as Billingshurst

W.S.S. II, p. 159. 1911

From notes and specimens sent by Messrs. Topley

water at first stood $15\frac{1}{2}$ feet down. Started falling when the boring was $60\frac{1}{2}$ feet down and fell 19 feet down. When the hole was 80 feet deep stood at 52 feet down.

	Thickness	Depth.
Sand	15	15
Red clay	5	20
Bluish sand clay	4	24
Brown & red clay	10	34
Bluish clay	6	40
Yellow sandy clay	5	45
Stiff yellow clay	5	50
Blue clay	17	67
Sandstone	$\frac{1}{2}$	$67\frac{1}{2}$
Blue clay	$32\frac{1}{2}$	100.

Weald Clay

? Sussex 62, 23 N.E. (E.) Site not traced in field survey.

S.E.H. 20.3.41.

301/115 Billingshurst. Site not determined

N/S TQ 02 NE/19
TQ 02/24

W.S.Sx.II, p. 159. When bore less than 60%, R.W.L. 15½ down; bore 60%, R.W.L. 19 down;
bore 80, R.W.L. 52 down. Tilley, 1911.

WC

100

100

301/115		Thickness	Depth.
Weald Clay 100	Sand	15	15
	Red clay	5	20
	Bluish sand clay	4	24
	Brown & red clay	10	34
	Bluish clay	6	40
	Yellow sandy clay	5	45
	Stiff yellow clay	5	50
	Blue clay	17	67
	Sandstone	$\frac{1}{2}$	$67\frac{1}{2}$
	Blue clay	$32\frac{1}{2}$	100.

301/115 Billingshurst. Site not determined

N/S TQ 02 NE/
TQ 02/25

W.S.Sx.II, p. 159. When bore less than 60%, R.W.L. 15½ down; bore 60%, R.W.L. 19 d
bore 80, R.W.L. 52 down. Tilley, 1911.

WC

100

100

301/115		Thickness	Depth.
Weald Clay 100	Sand	15	15
	Red clay	5	20
	Bluish sand clay	14	24
	Brown & red clay	10	34
	Bluish clay	6	40
	Yellow sandy clay	5	45
	stiff yellow clay	5	50
	Blue clay	17	67
	Sandstone	½	67½
	Blue clay	32½	100.

MS 301/115
TQ02/24 301/115

BILLINGSHURST.

Sussex 23NE/E

From Topleys notes, where it is given as Billingshurst.

W.S.Sx. II, p. 159. 1911

From notes and specimens sent by Messrs. Tilley.

Water at first stood $15\frac{1}{2}$ feet down. Started falling when the boring was $60\frac{1}{2}$ feet down and fell to 19 feet down. When the hole was 80 feet deep it stood at 52 feet down.

	Thickness	Depth.
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Yellow sandy clay	5	45
Stiff yellow clay	5	50
Blue clay	17	67
Sandstone	$\frac{1}{2}$	$67\frac{1}{2}$
Blue clay	$32\frac{1}{2}$	100.

Weald Clay

? Sussex 6in. 23 NE. (E.) Site not traced in field survey.

S.S.G.H. 20.3.41.

? Possibly connected with old water-workings - see notes of MS notes on records

Appendix D

Infiltration Testing Results and Groundwater monitoring



Geo-Environmental

DESK STUDY REPORT

for

LAND OFF STANE STREET,

BILLINGSHURST,

WEST SUSSEX,

RH14 9HN

on behalf of

MOTION





Desk Study Report

Report:	DESK STUDY REPORT
Site:	LAND OFF STANE STREET, BILLINGSHURST, WEST SUSSEX, RH14 9HN
Client:	MOTION
Date:	22/08/2018
Reference:	GE17451-DSR-AUG18
Version:	2.0
Prepared by:	
	KATIE O'DEA BSc (Hons) MSc, FGS CONSULTING ENGINEER
Reviewed by:	
	GLYN EVANS B.Sc.,M.Sc., FGS.,P.G.Dip.,MIEnvSc DIRECTOR

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AMENDMENT RECORD

Revision ref.	Date	Reasons for amendment	Author's initials
1.0	21/08/2018	First issue	KO'D
2.0	22/08/2018	Updated to include reference to soakage testing carried out	SA



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FIGURE 1	Site Location Plan
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APPENDICES

APPENDIX A	Desk Study Information
APPENDIX B	Site Photographs



1.0 INTRODUCTION

1.1 General

Geo-Environmental Services Limited (Geo-Environmental) was instructed by Motion to undertake a Phase I desk study into the geotechnical and geo-environmental factors pertaining to the planned redevelopment of the land off Stane Street, Billingshurst, West Sussex, RH14 9HN herein referred to as 'the site'. The site's location is presented in Figure 1.

1.2 Form of Development

It is understood that the site is proposed to be developed for a commercial usage including a petrol filling station, hotel and other commercial units as well as areas of soft landscaping. Amenity space is also proposed.

1.3 Objectives

The investigation was to comprise a desk study of geotechnical and geo-environmental factors pertaining to the site, including a review of available historic maps and an examination of other available sources of geo-environmental information.

A preliminary Risk Assessment (PRA) was to be undertaken as part of the desk study in accordance with CLR11. The objective of the risk assessment was to evaluate plausible pollutant linkages with respect to the proposed development, adjacent land uses, and the wider environment, in the context of planning, immediate liabilities under the Environmental Protection Act 1990, and risks posed to Controlled Waters under the Water Resources Act.

1.4 Standards

Where practicable, the desk study was undertaken in accordance with the following documents and guidance:

- National Planning Policy Framework – March 2012;
- Planning Policy Statement 23 – Planning and Pollution Control;
- Model Procedures for the Management of Contaminated Land, CLR11, DEFRA and Environment Agency 2004;
- Environment Agency Guidance on Requirements for Land Contamination Reports, Version 1 dated July 2005;
- BS10175:2011+A1:2013 - Investigation of Potentially Contaminated Sites - Code of Practice, BSI 2013;
- BS5930: 2015 - Code of Practice for Site Investigations, BSI 2015;
- EN ISO 14688 Geotechnical Investigation and Testing Part 1-2002 and Part 2-2004;
- BS1377: 1990 - Soils for Civil Engineering Purposes, BSI1990;
- NHBC Standards Chapter 4.1 Land Quality - Managing Ground Conditions;
- NHBC Standards Chapter 4.2 Building Near Trees;
- CIRIA C665 – Assessing risks posed by hazardous ground gases to buildings (2007);
- NHBC 10627-R01(04)- Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present (2007);
- BS8485:2015 Code of practice for the characterisation and remediation from ground gas in affected developments;
- Department of Environment - Industry Profiles (1995 - 1996).

**1.5 Conditions**

The information collected from the desk study has been used to provide an interpretation of the geotechnical and environmental conditions pertaining to the site. The recommendations and opinions expressed in this report are based on the data obtained. Geo-Environmental takes no responsibility for conditions that have either not been revealed in the available records or that occur between or under points of any physical investigation. Whilst every effort has been made to interpret the conditions, such information is only indicative and liability cannot be accepted for its accuracy.

Information contained in this report is intended for the use of the Client, and Geo-Environmental can take no responsibility for the use of this information by any party for uses other than that described in this report. Geo-Environmental makes no warranty or representation whatsoever expressed or implied with respect to the use of this information by any third party. Geo-Environmental does not indemnify the Client or any third parties against any dispute or claim arising from any finding or other result of this investigation report or any consequential losses.



2.0 DESK STUDY

The findings of the Phase I desk study are presented in the following section. A copy of the information obtained as part of the desk study is presented in Appendix A. Photographs taken during the site walkover survey are presented in Appendix B.

2.1 Site Description

The site comprised an irregularly shaped parcel of land which extended to c. 8.28Ha and was located at NGR 509230, 126730. A site walkover survey was undertaken on the 8th August 2018 to help inform the desk study.

The site comprised two open agricultural fields bounded by agricultural land to the north and west, a residential property and agricultural land east and a residential property, farm buildings and agricultural land to the south. A ditch was running in a north to south direction through the site separating the two fields and a mature tree was located adjacent to the centre of this ditch. Overhead electricity cables on pylons appear to cross the site. The site boundary comprises a number of wooden fences, hedges and shrubs and a number of semi-mature to mature trees along the eastern and southern boundaries.

2.2 Geology

British Geological Survey (BGS) geological mapping indicated the site to overlie the Weald Clay Formation, with no superficial deposits recorded on site. In addition, given that adjacent areas to the site have been developed it is considered likely that, in addition to these natural strata, Made Ground could possibly be present overlying these natural strata.

BS5930:2015 defines **Made Ground** as anthropogenic ground in which the material has been placed without engineering control and/or manufactured by man in some way, such as through crushing or washing, or arising from an industrial process. Great variations in material type, thickness and degree of compaction invariably occur and there can be deleterious or harmful matter, as well as potentially methanogenic organic material. In addition, on sites which have undergone several phases of historic development it is not uncommon for asbestos to be present within Made Ground soils.

The **Weald Clay** consists of shales and mudstones with occasional thin beds of siltstones, sandstone, shelly limestone and clay ironstone. When fresh, the beds are normally dark grey weathering to mottled yellow and brown near the surface or at outcrop. Bands of red clay occur within the bed, usually in association with the sandstone.

2.3 Hydrogeology

With reference to information provided by the Environment Agency, the site was indicated to mainly overlie an area of 'Unproductive Strata' in the bedrock. These are defined as rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.

A portion of the north-west corner of the site was indicated to be located on a Bedrock Aquifer classified as a Secondary 'A' Aquifer. Secondary 'A' Aquifers are defined as 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.

According to information provided from the Environment Agency the site was not located within a groundwater



Source Protection Zone.

With reference to information provided by the BGS, the site was located outside of any area with potential for groundwater flooding of property situated below ground level and an area with potential for groundwater flooding to occur at the surface.

2.4 Hydrology

With reference to the Envirocheck dataset, the closest surface water feature was an unnamed pond located approximately 10m to the east of the site.

The site was located outside of any area affected by flooding from rivers or sea without defences.

No discharge consents were located within 500m of the site. Six discharge sites to controlled waters were located within 500m the site boundary, details of which are provided in Table 2.1 below:

Distance (m):	Property Type:	Location:	Date:	Discharge Type:	Receiving Water:
8 NW	Undefined Or Other	A29 London - Bognor Regis Road, Billingshurst, West Sussex	15th Nov 1972 - 31st Mar 1997	Discharge Of Other Matter-Surface Water	Freshwater River
9 NW	Undefined Or Other	A29 London - Bognor Regis Road, Billingshurst, West Sussex	15th Nov 1972 - 31st Mar 1997	Discharge Of Other Matter-Surface Water	Freshwater River
25 W	Undefined Or Other	A29 London - Bognor Regis Road, Billingshurst, West Sussex	15th Nov 1972 - 31st Mar 1997	Discharge Of Other Matter-Surface Water	Freshwater River
28 W	Undefined Or Other	A29 London - Bognor Regis Road, Billingshurst, West Sussex	15th Nov 1972 - 31st Mar 1997	Discharge Of Other Matter-Surface Water	Freshwater River
73 E	Domestic Property (Single) (Incl Farm House)	Hilland House New Road, Billingshurst, Horsham, West Sussex, RH14 9AA	7th Feb 2008 - Not Supplied	Sewage Discharges - Final/Treated Effluent - Not Water Company	Unnamed Ditch To River Adur
76 SW	Undefined Or Other	A29 London - Bognor Regis Road, Billingshurst, West Sussex	15th Nov 1972 - 31st Mar 1997	Discharge Of Other Matter-Surface Water	Freshwater River
109 N	Undefined Or Other	A29 London - Bognor Regis Road, Between Manor House to Pratts Fa, North of Billingshurst, Billingshurst, West Sussex	15th Nov 1972 - 31st Mar 1997	Discharge Of Other Matter-Surface Water	Freshwater River
114 W	Undefined Or Other	A29 London - Bognor Regis Road, Billingshurst, West Sussex	15th Nov 1972 - 31st Mar 1997	Discharge Of Other Matter-Surface Water	Freshwater River
454 SW	Domestic Property (Single) (Incl Farm House)	Johnmar, Little East Street, Billingshurst, West Sussex, RH14 9PN	20th Sep 1997 - Not Supplied	Sewage Discharges - Final/Treated Effluent - Not Water Company	Freshwater River
464 SW	Construction Of Buildings	Development, Rowan Ave/Coombe Hill, Billingshurst, West Sussex	28th Jun 1968 - 31st Mar 1997	Discharge Of Other Matter-Surface Water	Freshwater River

Table 2.1 Discharge consents within 500m of the site



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One pollution incidents to controlled waters were identified within a radius of 1000m of the site boundary:

- 29m SW, Environment Agency, Pollutant: General Biodegradable - Sewage Treated Effluent & Sewerage Material, Catchment area: Arun, Drainage Failures : Surface Water Sewer Failure, Receiving Water: Potential River, Category 3 (minor incident), 15/02/1999

2.5 Radon

The Envirocheck report states that the site lies in a lower probability radon area where less than 1% of homes are estimated to be at or above the Action Level as defined by Public Health England and the BGS. In addition, the BGS assessment states that no radon protective measures are required in the construction of new houses or extensions on the site.

2.6 Environmental Data

No Local Authority Pollution Prevention and Control authorisations were recorded within 1000m of the site.

The desk study identified four Contemporary Trade Directory entries within 500m of the site:

- 272 SW, Bora Bora Swimwear, Clothing & Fabrics – Manufacturers, Inactive;
- 415 SW, Crystal Clean Carpet Cleaning Co., Carpet, Curtain & Upholstery Cleaners, Inactive;
- 461 SW, Roman Way Garage, Garage Services, Inactive;
- 485 SW, Mr Clean, Carpet, Curtain & Upholstery Cleaners, Inactive.

The closest operational fuel station was Roman Way Garage identified 462m to the south-west of the site.

Searches of other various environmental databases were made as part of the desk study, including air pollution control sites, Part IIA contaminated land, Integrated Pollution Control (IPC) and Integrated Pollution Prevention and Control (IPPC) sites, registered radioactive substances, COMAH sites, explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS) sites, planning permissions for sites involving hazardous substances and fuel station registers. Additional detail is referenced in Appendix A.

2.7 Soil Chemistry

Data obtained as part of the desk study provides details on the estimated soil chemistry for the natural soils on site and in the vicinity of the site. The estimated soil quality on the subject site is presented Table 2.2.

Contaminant	Estimated Concentration
Arsenic	15 – 25 mg/kg
Cadmium	<1.8 mg/kg
Chromium	60-90 mg/kg
Lead	<100 mg/kg
Nickel	15-30 mg/kg

Table 2.2 Estimated soil chemical concentrations on site

The natural background concentrations for Arsenic, Cadmium, Chromium and Nickel were below respective published Suitable for Use Levels, Generic Assessment Criteria and Category 4 Screening Levels for the protection of human health under a residential land use (with home grown produce), i.e. the most conservative end use.



However these values are not necessarily representative of the site's soil chemistry and do not account for the potential presence of any Made Ground soils or historic site uses. Furthermore, some screening criteria are dependent on pH and soil organic matter content. Therefore, concentrations of specific determinants and the utilised S4UL/GAC/C4SL cannot be determined without site specific investigation and analysis.

2.8 Sensitive Land Uses

A search was made of environmentally sensitive areas including local and national nature reserves, areas of outstanding natural beauty (AONBs), Ramsar sites, sites of special scientific interest (SSSIs), conservation areas, special protection areas and biosphere reserves. Details of the environmentally sensitive areas identified within 500m of the site boundary are outlined below:

- Ancient Woodland, Name not Supplied, 89m NW;
- Ancient Woodland, Name not Supplied, 456m W.

According to the Envirocheck data set, the site lies within a surface water Nitrate Vulnerable Zone as defined by the Department for Environment, Food and Rural Affairs (DEFRA). Nitrate Vulnerable Zones (NVZ) are designated areas of land draining into waters polluted by nitrates from agriculture. The identified site is the River Arun (U/S Pallingham) NVZ, Surface Water.

2.9 Geotechnical Data

The site was located within an area considered by the Coal Authority as being in an area that might not be affected by coal mining.

National databases for a number of different geological hazards have been compiled by the BGS, and a summary of the hazard data pertaining to the site itself is presented in Table 2.3.

Hazard	Designation
Non-coal mining	Highly Unlikely
Collapsible ground	Very Low
Compressible ground	No Hazard
Ground dissolution	No Hazard
Landslide	Very Low
Running sand	No Hazard
Shrinking and Swelling clay	Low Hazard

Table 2.3 Summary of BGS geological hazards

2.10 Landfill and Waste Management Facilities

A search of BGS recorded landfill sites, IPC registered waste sites, licensed waste management facilities, local authority recorded landfill sites, other registered landfill sites, waste transfer stations and other waste treatment or disposal sites was undertaken as part of the desk study. Such sites may form an artificial source of ground gases, such as carbon dioxide and methane, where wastes are buried or disposed of to landfill. Three such landfill sites were recorded within 1 km of the site boundary:

- Wooddale Lane, Historical Landfill Site, Billingshurst, Sussex, First input: 31st December 1960, last input, 31st December 1965, 606m SE;
- Wooddale Road, Billingshurst, Local Authority Recorded Landfill Sites, 714m SE;

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- Wood Dale Road, Billingshurst, Local Authority Recorded Landfill Sites, Types of Waste: Household, Commercial, 714m SE

There are two records of potentially infilled land (water) within 1000m:

- Mapping date 1898, unknown filled ground (pond, marsh, stream, river, dock, etc.), 551m NE;
- Mapping date 1913, unknown filled ground (pond, marsh, stream, river, dock, etc.), 583m E;
- Mapping date 1961, unknown filled ground (pond, marsh, stream, river, dock, etc.), 713m N.

2.11 Historic Mapping

Historic maps dating back to 1876 were obtained as part of the desk study. A summary of the apparent key features observed on the map extracts both on the site and within the local area is presented within Table 2.4.

Date	On Site	Off Site
1876	The site comprised two open fields. A number of trees are mapped along the southern boundary of the site.	The wider vicinity of the site was shown predominantly to comprise open fields with areas of coniferous and non-coniferous forestry. Hill-land Barn and Hill Land farm and residential building were located c. 50m south-west of the site. An area of non-coniferous and coniferous trees was located c. 150m N and an area with scattered patches of coniferous trees was located c. 50m N of the site boundary. Pratt's Farm was located c. 120m N. An unnamed water feature was located c. 10m east of the site. A well was located c. 85m N of the site.
1879-1880	No significant changes indicated.	The built up Billingshurst area was mapped c. 500m to 1000m S of the site boundary and comprised residential buildings, post office, a school, church, graveyard, chapels, a corn mill and a number of wells. A number of farms were also located within the built up Billingshurst area. Somers Place and Summer House estate was located c. 350m N of the site. The River Adur was mapped c. 920m E of the site and was shown to be flowing in a southerly direction. A River was mapped c. 920m E of the site. A number of Farms were located in the area including Wooddale Farm c. 580m SE and Menzieswood Farm c. 610m NW. Two areas of cut ground (landscaped) were located c. 580m NE of the site boundary.
1897	No significant changes indicated.	A well was mapped c. 60m SW of the site boundary. The well (c. 85m N on 1876 map) was no longer mapped and a tank was mapped in its place. The area of non-coniferous and coniferous trees (c. 150m N on 1876 map) and the area with scattered patches of coniferous



Date	On Site	Off Site
		trees (c. 50m N on the 1876 map) were mapped as areas of mixed wood.
1898	No significant changes indicated.	A spring was mapped c. 470m SE of the site boundary. A brewery was mapped c. 570m SW of the site boundary. Home Farm was mapped c. 530m NE of the site. The river (c. 920m E on 1879-1880 map) was mapped as the River Adur and was shown to be flowing in a southerly direction. The two areas of cut ground (c. 580m NE on the 1879-1880 map) were mapped as fish ponds.
1911-1912	No significant changes indicated.	The road running north to south adjacent to the western boundary of the site was mapped as Stane Street (Roman Road). The area of mixed wood (c. 150m N on the 1897 map) was mapped and Church Wood and the area of mixed wood (c. 50m N on the 1897 map) was mapped as Friskeys. A tank was mapped c. 15m N of the site boundary.
1913-1914	No significant changes indicated.	A reservoir for the North Sussex Gas & Water Co. was mapped c. 780m S of the site boundary. A tank was mapped c. 660m SW of the site boundary.
1913	Mapping incomplete. No significant changes indicated.	Mapping incomplete. Tanks were mapped c. 580m N, c. 550m NE by Home Farm and c. 220m N by Summers Place.
1939	Mapping incomplete. No significant changes indicated.	Mapping incomplete. No significant changes indicated.
1947 (aerial)	No significant changes indicated.	No significant changes indicated.
1952	Mapping incomplete.	Mapping incomplete. The brewery (c. 570m SW, 1898 map) and the tank (c. 660m SW on 1913 - 1914 map) were no longer mapped. Some residential development was shown to have occurred in the built up area of Billingshurst. Menzieswood Farm (c. 610m NW on 1879-1880 map) was mapped as Wynstrode.
1961	No significant changes indicated.	Residential development was shown c. 380 to c. 980m SW of the site in the built up area of Billingshurst. Wynstrode Farm (c. 610m NW on 1952 map) was shown to have undergone development with a number of new farm buildings mapped. Summers Place (c. 350m N on 1879-1880 map) was mapped as a convent.
1971-1972z	A pylon was mapped in the western area of the site and the electricity lines were running NW to SE through the site.	A number of residential and farm buildings were shown to have been developed within the Hill Land farm area c. 50m S of the site and the buildings were renamed as Old Hilland Farm and Hilland Farm. A number of buildings also



Date	On Site	Off Site
		mapped as Hilland farm and associated access road were developed c. 40m E of the site boundary. The areas c. 10m N and NE of the site were mapped as orchards. The tank (15m on the 1911-1912 map) was no longer mapped. A strip of land immediately east of the site was mapped as non-coniferous trees.
1973	No significant changes indicated.	No significant changes indicated.
1974	Incomplete mapping. No significant changes indicated.	Incomplete mapping. No significant changes indicated.
1975	No significant changes indicated.	Significant residential development was shown to have occurred within the built up area of Billingshurst. One of the fish ponds (c. 580m NE on 1898 map) was no longer mapped. Wynstrode Farm (c. 610m NW 1952 map) was shown to have undergone further development with a number of new farm buildings mapped. Tisseran Piggeries and Tisseran Farm were mapped c. 950m N of the site.
1977	Incomplete mapping. No significant changes indicated.	Incomplete mapping. No significant changes indicated.
1982	Incomplete mapping. No significant changes indicated.	Incomplete mapping. No significant changes indicated.
1991	Incomplete mapping. No significant changes indicated.	Incomplete mapping. No significant changes indicated.
1993	No significant changes indicated.	No significant changes indicated.
1996	Mapping incomplete. No significant changes indicated.	Redevelopment of buildings was shown to have occurred within the Hilland Farm area (c. 50m S of the site) and an access road was shown to have been constructed.
1996	Incomplete mapping. No significant changes indicated.	Incomplete mapping. No significant changes indicated.
1999 (aerial)	No significant changes indicated.	A roundabout and road were shown to have been constructed c. 110m SW of the site providing a new access route to Hilland Farm.
2000	No significant changes indicated.	Residential development was shown to have occurred within the built up area of Billingshurst c. 350m S of the site. A drain containing water was shown to be flowing in a westerly direction from c. 30m W of the site and extending to over 1000m W of the site. Wynstrode Farm buildings (c. 610m NW 1952 map) have been mapped as Wynstrode Farm, Little Wynstrode Farm, Denver Poultry Farm and Chalk Farm.
2006	No significant changes indicated.	Further residential development was shown to have occurred within the built up area of Billingshurst c. 250m S of the site. The A29 road and associated roundabouts were shown to



Date	On Site	Off Site
		have been developed around the west side of Billingshurst town. The orchard 10m N of the site (1972 map) was mapped as an open field.
2017	No significant changes indicated.	Further residential development was shown to have occurred within the built up area of Billingshurst c. 200m S of the site. The orchard 10m NE of the site (1972 map) was mapped as an open field.

Table 2.4 Summary of Historic Map extracts

Historic mapping has shown that the site has comprised open field used as farmland for the duration of the mapping period (1876 to present).

The surrounding land comprised mainly open space, agricultural land, forestry and orchards and gradually became developed for residential and commercial purposes to the south, with scattered residential properties to the north and east. Facilities including schools, churches, a graveyard, fuel station and brewery were located within the built up Billingshurst town area to the south.

2.12 Asbestos

It is considered possible that asbestos containing materials (ACM) could be present within the site given the sites proximity to developed land. In line with current best practice, asbestos and ACM should be assumed to be present until proven otherwise.

In addition, given that land adjacent to the site has undergone development, the presence of asbestos within any Made Ground soils cannot be ruled out.

2.13 Previous Ground Investigations

Geo-Environmental undertook soakage testing at the site in August 2018 (report ref. GE17451/KOD01/180810). Soakage tests were carried out in broad accordance with BRE365 at seven locations across the site. The investigation revealed ground conditions comprising Topsoil overlying variously silty, silty sandy or sandy clays of the Weald Clay Formation. None of the soakage tests drained sufficiently to calculate a rate of infiltration.

There were no BGS borehole records within the immediate vicinity of the site. Four borehole records located approximately 650m south of the site reported the presence of interbedded clays, sand, sandstone, shale and marls with underlying flint gravel and silty fine sand, inferred by the BGS to be indicative of the Weald Clay.

2.14 Potential Contamination

No potentially contaminative activities have been identified on the site. An obsolete petrol filling station (PFS) was identified 462m SW of the site, albeit with the land between the subject site and the PFS comprising residential use and thus gross soil based contamination from the PFS impacting the subject site would be considered highly unlikely. An orchard was located 10m N and NE of the site. Orchards could pose a risk of contaminants contained within pesticides and fertilisers such as organophosphates and organochlorides. Elevated concentrations of contaminants of concern could potentially be present within any Made Ground and natural soils underlying the site given the site has been developed and also accounting for the BGS Soil Geochemistry data. In addition it is possible that the surrounding land uses may have resulted in the deposition of airborne contaminants on the surface and shallow soils on site including heavy metals, organic pollutants such as Polyaromatic hydrocarbons



(PAH), petroleum hydrocarbons/oils), inorganic compounds. Testing would be recommended to verify the actual concentrations of these substances within the near surface soils.

2.15 Ground Gas and Vapour Summary

No landfills (potential source of hazardous ground gas) were identified within 500m of the subject site. The closest landfill was a historical landfill 606m SE at Wooddale Lane, Billingshurst and the last input of waste was in December 1965. Also, an area of unknown filled ground (water) was located 551m NE from the site.

Given that residential land uses were present between the subject site and the PFS (c. 462m to the south-west) and the fact that the PFS is obsolete, the possible presence of in-ground vapour hazard associated with the PFS is considered unlikely.



3.0 PRELIMINARY ASSESSMENT

Based on the findings of the desk study, the following sections summarise the anticipated geotechnical and environmental factors likely to impact the site.

3.1 Geotechnical Risk Assessment

3.1.1 Potential Geotechnical Issues

The following factors that might impact the geotechnical condition of the site were identified as part of the desk study:

- The possible presence of Made Ground (e.g. varying depth and/or composition) which if encountered may affect the foundation design and construction.
- The presence of laterally and vertically variable strata, and the impact these could have on further construction.
- The suitability of shallow soils as a bearing stratum for conventional foundations.
- Consideration of the volume change potential of any cohesive soils and the affect this could have on foundations.
- The possible presence of shallow groundwater beneath the site.
- The potential for groundwater flooding, both at the surface and below ground level, to occur at the site.

3.2 Preliminary Environmental Conceptual Site Model & Risk Assessment

3.2.1 Methodology

A Preliminary Risk Assessment ('PRA') and Conceptual Site Model ('CSM'), see Figure 3, have been prepared in accordance with CLR11 based on information obtained as part of the desk study. Possible risks associated with potential sources of contamination and sensitive receptors identified have been qualitatively assessed following a source-pathway-receptor ('Pollutant Linkage') approach in accordance with current UK protocols.

A risk of harm may only exist where a plausible pollutant linkage is present, and where the quantity or concentration of a contaminant is sufficient so as to pose harm. Under the statutory definition, "Contamination" may only strictly exist where contaminants pose a risk of harm to a receptor. The risk classification has been assessed in accordance with CIRIA C552 (Rudland et al., 2001). A summary of how the risks are derived and their definitions are presented in Tables 3.1 and 3.2.



		Consequence			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very high risk	High risk	Moderate risk	Moderate/low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low Likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

Table 3.1 Risk ratings matrix

Risk Rating	Definitions
Very high risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not already undertaken) and remediation are likely to be required.
High risk	Harm is likely to arise to a designated receptor from an identified hazard Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not already undertaken) is required and remediation works may be necessary in the short term and are likely over the longer term.
Moderate risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild.
Moderate to low risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is unlikely that any such harm would be severe, or if any harm were to occur it is probable that the harm would be relatively mild.
Low risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low risk	There is low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Table 3.2 Risk rating definitions



3.2.2 Summary of Plausible Sources

Possible sources of contamination identified from the desk study are summarised in Table 3.3. As noted in Section 2.14, a petrol filling station (PFS) was located c. 462m to the west of the site, with land between comprising residential use. In addition, the PFS was located in an area of relatively lower elevation than the subject site. Given that contaminants generally follow the natural topography, hazardous ground gases or vapours would likely move in the opposite direction to the site. Therefore, this was not considered to represent a plausible source for hazardous ground gas and thus has not been considered further within this assessment.

Source	Description	Contaminants
Made Ground and shallow soils	The general quality of Made Ground and shallow soils could be impacted by the presence of contamination from the adjacent built up area of residential and farm building. In addition, the general quality of the shallow soils (and Made Ground if encountered) could be impacted by the presence of contamination as a result of aerial deposition on site.	Possible elevated concentrations of metals, metalloids, TPH and PAH compounds, sulphate and asbestos in Made Ground (if present).
Asbestos Containing Materials within shallow soils	There is a likelihood that residential buildings and farm buildings located adjacent to the site could have been constructed using asbestos containing materials. Consequently, the potential presence of asbestos in the near surface soils cannot be discounted.	Asbestos.
Off-site sources of potential contamination	An orchard was located 10m N and NE of the site. Orchards could pose a risk of contaminants contained within pesticides and fertilisers such as organophosphates and organochlorides and heavy metals.	Possible elevated concentrations of organophosphates and organochlorides.

Table 3.3 Possible sources of contamination

3.2.3 Summary of Plausible Pathways

The plausible pathways are summarised in Table 3.4. These pathways are based on the proposed end use of commercial usage including a petrol filling station, hotel and other commercial units as well as areas of soft landscaping. Amenity space is also proposed.

Pathway	Description
Direct Contact	Ingestion of soil particles, inhalation of soil derived dust (including tracked back dust), dermal contact.
Inhalation	Inhalation of soil dust both inside and outside of buildings. Inhalation of ground gas/vapours within buildings.
Vertical & Lateral Migration	Contaminant movement both vertically through leaching/gravity and horizontally along preferential pathways, e.g. services trenches, more permeable strata or with groundwater.



Pathway	Description
Shallow Groundwater	Shallow groundwater or perched water may be present within the Made Ground or underlying bedrock geology which could result in the vertical and lateral migration of contaminants.
Chemical Attack	Attack of buried plastics and concrete by aggressive ground conditions.
Root Uptake	Uptake of soil and waterborne contaminants by plants.

Table 3.4 Possible contamination pathways**3.2.4 Summary of Plausible Receptors**

Potential receptors associated with the site and its development are summarised in Table 3.5.

Receptor	Description	Comments
End Users	Employees/visitors of the proposed development.	The proposed development is for commercial usage including a petrol filling station, hotel and other commercial units as well as areas of soft landscaping. Amenity space is also proposed.
Soft Landscaping	Possible areas of planting including lawns, shrubs, trees, etc.	Soft landscaped areas are likely to comprise of managed gardens.
Built Environment	Buried concrete for foundations and plastics for potable water supply pipes may be laid in contact with contaminated soils.	Aggressive ground conditions and depths of Made Ground may be present beneath the site.
Adjacent Land Users	Sensitive land uses identified within the immediate vicinity.	Adjacent land use is primarily agricultural with some residential land use.
Groundwater	Controlled waters contained within the aquifer(s) beneath the site.	The north-west portion of the site overlies a Secondary 'A' Aquifer.
Surface Water	Controlled Waters within lakes, rivers, and ponds, etc., or coastal waters.	No surface water was identified on site. The nearest surface water feature identified was an unnamed pond located approximately 10m to the east of the site.
Ecological Receptors	Sensitive areas of ecological significance.	Two areas of Ancient Woodland were located within 1000m of the site boundary- 89m NW and 456m W.

Table 3.5 Possible receptors of contamination

Site workers involved in the preparation and construction of the development have not been considered further in this assessment as the Principal Contractor is duty bound under the current CDM Regulations to undertake their own risk assessments with respect to their employees.

Whilst the above sources and receptors have been identified, Table 3.6 summarises the identified plausible pollution linkages and a qualitative assessment of the risks based on the desk study research.



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Potential Source/media	Potential Receptors	Potential Pathways	Likelihood	Severity	Risk and Justification
Contaminants (including potential ACM's) within Made Ground (If present) & Shallow Natural Ground (aerial deposition)	End users	Direct contact	Likely	Mild	Moderate to Low End users are likely to come into contact with soils via direct contact in areas of soft landscaping. However limited areas of landscaping is proposed and would likely be completed with uncontaminated soils in the near surface root zone. The consequence is likely to be mild.
	Soft Landscaping	Root Uptake	Likely	Minor	Low Limited areas of soft landscaping are proposed. However, no evidence of harm to existing plant life was identified.
	Adjacent land users	Direct contact	Unlikely	Minor	Very Low Adjacent site users are unlikely to come into contact with soils. The consequence is likely to be minor.
	Water supply pipes	Direct contact	Likely	Mild	Moderate to Low Water supply pipes could come into contact with impacted soils depending upon depth of installation and extent of any soil impact. Barrier pipe may be required.
	Buildings and infrastructure	Direct contact	Unlikely	Mild	Very Low Foundations and utilities will be placed within potentially aggressive soils. However the consequence is anticipated to be minor.
	Groundwater	Vertical migration	Unlikely	Medium	Low Shallow, continuous groundwater (<5m bgl) is unlikely to be present. The strata beneath the north-west area of the site are classified as a Secondary 'A' Aquifer with the rest of the site classified as an Unproductive Strata. Fluctuations in groundwater levels are likely and could result in migration of mobile contaminants. However, given that site wide Made Ground or soil based impact is unlikely, the risk of harm to groundwater from Made Ground could be limited. Shallow groundwater (if present) is presumed to flow in a south-westerly direction, i.e. with topography.
Off-site sources (orchards c. 10m N and NE)	End users	Groundwater flow	Unlikely	Mild	Very Low End users are unlikely to come into contact with impacted groundwater due to the proposed end use and anticipated depth of groundwater. However, shallow groundwater (if present) and any associated contamination plume is presumed most likely to flow across the site from the orchards downgradient towards the site. The consequence is likely to be mild.

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Potential Source/media	Potential Receptors	Potential Pathways	Likelihood	Severity	Risk and Justification
	End Users	Direct contact	Likely	Minor	Low End users are likely to come into contact with soils via direct contact in areas of soft landscaping. However landscaping would be completed with uncontaminated soils in the near surface root zone. The consequence is likely to be minor.
	Adjacent land users	Direct contact	Likely	Minor	Low Adjacent site users may to come into contact with soils within areas of proposed soft landscaping. However any landscaped areas would also be completed with uncontaminated soils in the near surface root zone. The consequence is likely to be minor.
	Water supply pipes	Direct contact	Likely	Mild	Moderate to Low Water supply pipes could come into contact with impacted soils depending upon depth of installation and extent of any soil impact. Barrier pipe may be required.
	Soft Landscaping	Root Uptake	Unlikely	Minor	Very Low Areas of soft landscaping are proposed. However, no evidence of harm to existing plant life was identified for the current site condition.

Table 3.6 Plausible pollutant linkages & qualitative risk assessment

3.3 Preliminary Risk Assessment Summary

The Preliminary Risk Assessment (PRA) and Conceptual Site Model (CSM) developed from the information gathered as part of the desk study process have identified plausible potential pollutant linkages that exist in relation to the proposed redevelopment of the site. Based on the CSM the site has been classified as being of very low to moderate risk with an overall risk rating of low.

The potential pollutant linkages established within this desk study are not considered to prevent development on the subject site, but could require investigation and assessment to support further characterisation, calibration of the CSM and where/if necessary determine a remedial strategy to reduce, remove or otherwise control any risk within the site to key receptors.

In order to progress this assessment in line with the National Planning Policy Framework, to provide further characterisation of the site and refinement of the PRA and CSM, it is recommended that intrusive investigation and associated testing is undertaken to confirm the findings of the desk study report and to provide a robust risk assessment for the site and proposed redevelopment. As such it is recommended that geochemical and geotechnical investigation be carried out on the site to include analysis of soil and groundwater (if encountered) samples for the range of potential contaminants identified within the desk study.

3.4 Preliminary Geotechnical Assessment Summary

The site is anticipated to be underlain by potential Made Ground over the Weald Clay.

Given the anticipated underlying ground conditions, it is considered likely that shrinkable soils could be present beneath the site and thus volume change potential should be considered in the foundation design.

The foundation design would need to account for the presence of trees and hedgerows on the site boundary as well as planned locations of trees as proposed in the site plan. This could require the localised deepening of foundations, or possibly a requirement for piled foundations.

If shallow groundwater is present this might impact on the constructability of conventional foundations, e.g. sacrificial shuttering and groundwater control may be required.

An intrusive investigation will be required in due course in order to inform the design process. In addition, a tree survey will be required in order to confirm the species, condition etc of the trees and hedges present. This would then be used to inform the foundation assessment.

Soakage testing undertaken at the site recorded very low or negligible rates of infiltration. As such, It is unlikely that soakaways will function on this site due to the presence of relatively impermeable Weald Clay. It may be necessary to utilise on-site storage and attenuation of peak storm flow, through systems such as porous paving and cellular storage crates.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

It is concluded that there is a potential for localised contamination to exist at the site due to its nearby historic uses, and that this could influence the proposed development. Whilst the individual risk ratings for the potential pollutant linkages identified ranged from moderate to low to very low, further assessment is likely to be required to better characterise contamination on site as a result of current and historical land uses and the associated risk to identified receptors.

It is possible that conventional foundations would be suitable for the proposed development, although this is subject to confirmation following intrusive investigation. It may be prudent to assume that piled foundations could be required due to the presence of shrinkable soils and influence of trees (retained, removed or proposed).

It is understood that the site is proposed to be developed for a commercial usage including a petrol filling station, hotel and other commercial units as well as areas of soft landscaping. Amenity space is also proposed. Depending on the outcome of an intrusive investigation, it is possible that risk mitigation measures could be required including removal of Made Ground, remediation of soils and groundwater impacted by contaminants, localised soil removal, construction of a soil cover system in soft landscaped areas.

4.2 Recommendations

At this stage and based on the findings of the desk study and preliminary risk assessment, the following scope of works is recommended for the intrusive investigation on the site.

- Intrusive investigation works including targeted investigation of potential contamination sources should be carried out in order to clarify the geotechnical and geo-environmental issues pertaining to redevelopment of the site.
- In-situ CBR probing in the proposed car parks and access roads.
- Soil and groundwater (if encountered) sampling and analysis should be undertaken to inform subsequent geotechnical and geo-environmental risk assessment.
- Installation and monitoring of ground gas wells on a single occasion to confirmed perceived low risk.
- Laboratory analysis, on soil samples recovered from the exploratory holes for a range of geotechnical parameters to support foundation design and the like.
- Laboratory analysis, on shallow soil samples and groundwater samples recovered from the exploratory holes, for an analytical suite to include the potential contaminants identified within the desk study and encountered during any intrusive investigation. The suite should include commonly occurring metals, non-metals, asbestos, TPH, and PAH compounds.
- Waste Acceptance Criteria testing may be required if surplus spoil is to be disposed of from the development.

It may be necessary to undertake remediation/risk mitigation measures on this site in localised areas to break any identified pollutant linkages and thus protect key receptors such as human health, controlled waters, built environment, soft landscaping and the like. The requirement and extent of any such remediation cannot be determined until such time as an intrusive investigation and associated testing has been completed but could include soil and groundwater remediation, gas/vapour protection measures, barrier pipe and soil cover systems in gardens.

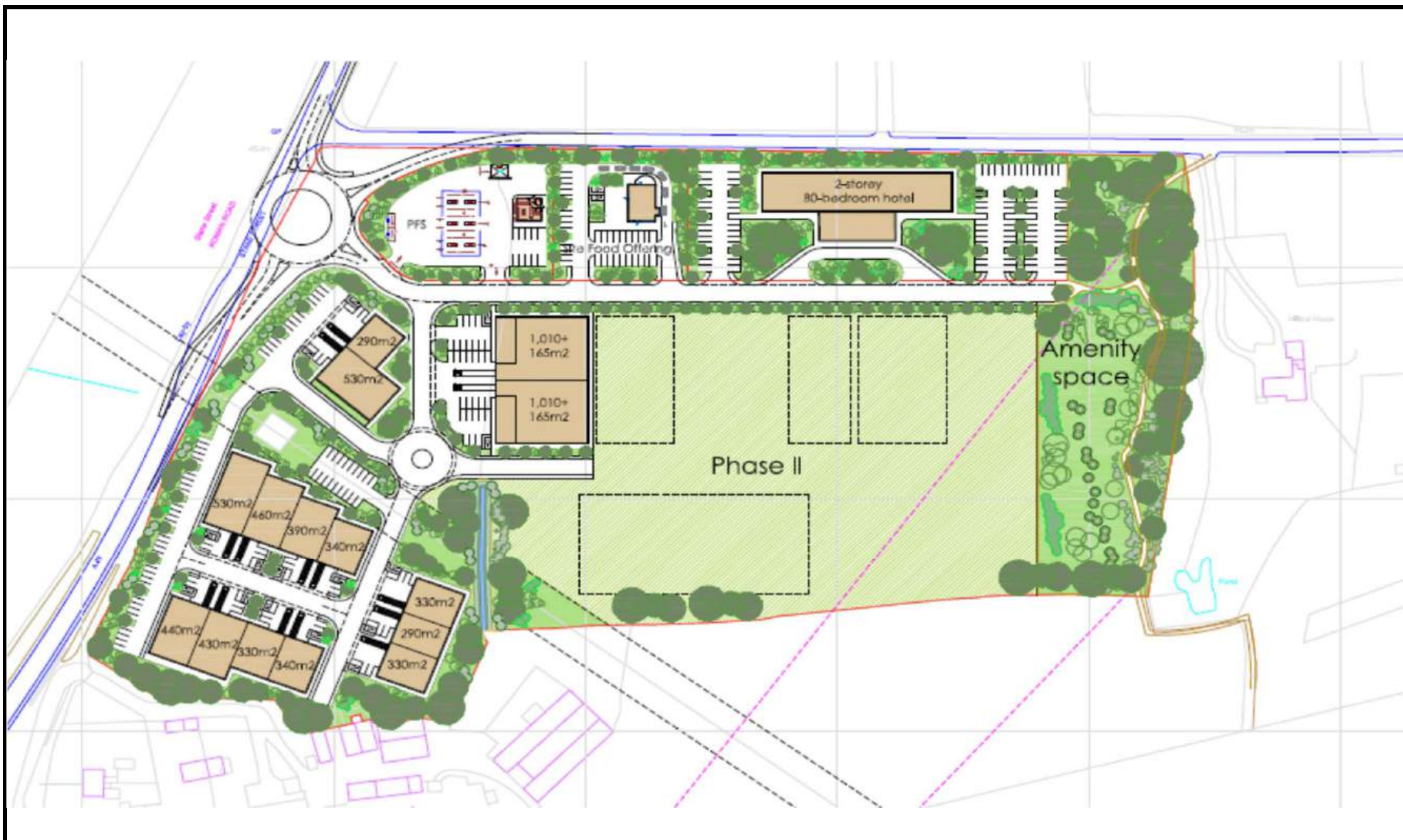


Figures





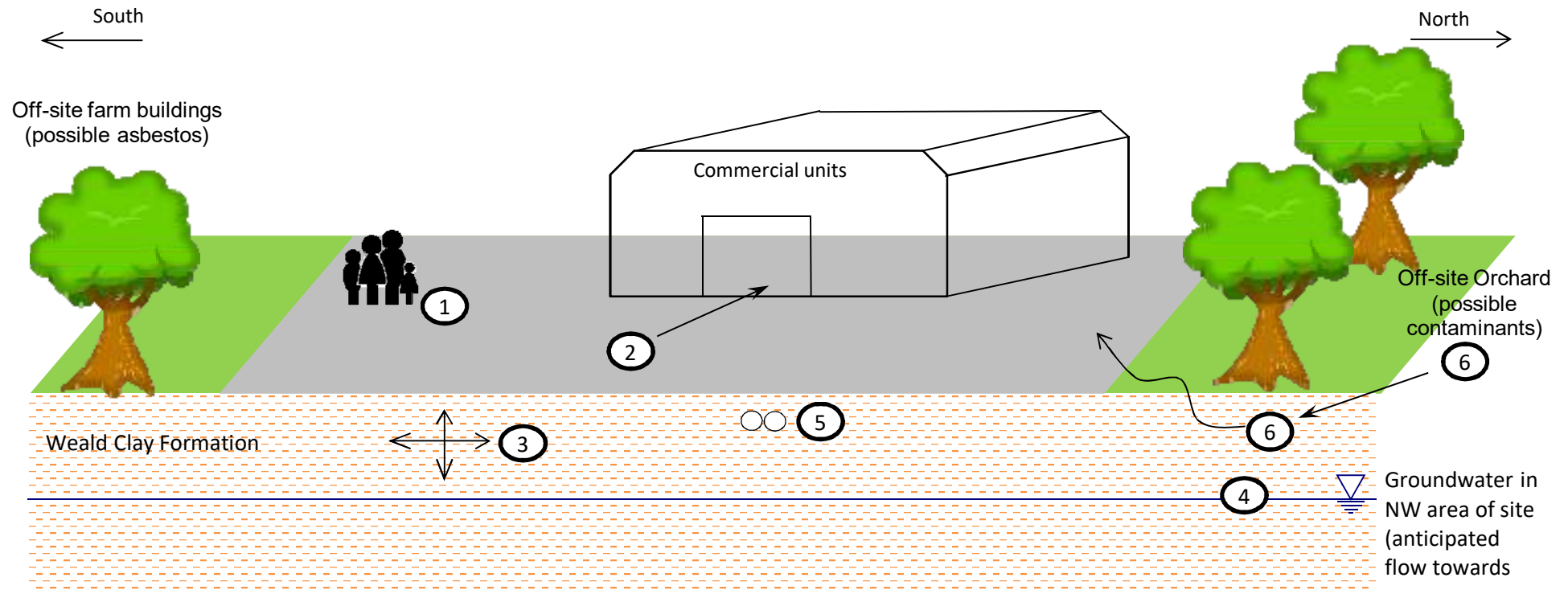
Project:	Land off Stane Street, Billingshurst			Title	Site Location Plan	
Client:	Motion			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net	 Geo-Environmental	
Ref No:	GE17451	Revision:	0			
Drawn:	KOD	Date:	09/08/2018			
Figure:	1	Scale:	Not To Scale			



Project:	Land off Stane Street, Billingshurst			Title	Proposed Layout Plan	
Client:	Motion			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net	 Geo-Environmental	
Ref No:	GE17451	Revision:	0			
Drawn:	SA	Date:	21/08/2018			
Figure:	2	Scale:	Not To Scale			

Possible Pollutant Linkages:

1. Direct contact with contaminated soils, ingestion of contaminated soils
2. Inhalation of soil dusts indoor and outdoor, and inhalation of gases/vapours within buildings
3. Vertical and lateral migration through permeable layers within the clay and with groundwater
4. Shallow groundwater vertical and lateral migration
5. Chemical attack of buried plastics and concrete



Project:	Land off Stane Street, Billingshurst			Title	Conceptual Site Model (for proposed commercial units and soft landscaping)	
Client:	Motion			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net	 Geo-Environmental	
Ref No:	GE17451	Revision:	0			
Drawn:	KOD	Date:	21/08/2018			
Figure:	3	Scale:	Not To Scale			



APPENDIX A

Desk Study Information



Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

175723966_1_1

Customer Reference:

GE17451

National Grid Reference:

509230, 126730

Slice:

A

Site Area (Ha):

8.28

Search Buffer (m):

1000

Site Details:

Hilland Farm, Stane Street
BILLINGSHURST
RH14 9HN

Client Details:

Ms K O'Dea
Geo Environmental Services Ltd
Unit 7 Danworth Farm
Cuckfield Road
Hurstpierpoint
West Sussex
BN6 9GL

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	14
Hazardous Substances	-
Geological	15
Industrial Land Use	17
Sensitive Land Use	20
Data Currency	21
Data Suppliers	26
Useful Contacts	27

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility					n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1		8	2	25
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 9		Yes		
Pollution Incidents to Controlled Waters	pg 9		1		
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions					
Water Industry Act Referrals					
Groundwater Vulnerability	pg 9	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 9	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 10		3	1	29



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 14				1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 14	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 14				2
Potentially Infilled Land (Non-Water)					
Potentially Infilled Land (Water)	pg 14				3
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 15	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 15	Yes			Yes
BGS Recorded Mineral Sites					
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 15	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 15	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 15	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards				n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 15	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 17			4	16
Fuel Station Entries	pg 18			1	
Points of Interest - Commercial Services					
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 18		1		6
Points of Interest - Public Infrastructure	pg 19			1	1
Points of Interest - Recreational and Environmental	pg 19			2	3
Gas Pipelines					
Underground Electrical Cables					



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 20		1	1	8
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 20	1			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	Discharge Consents Operator: West Sussex County Council Property Type: Undefined Or Other Location: A29 London - Bognor Regis Road, Between Manor House To Pratts Fa, North Of Billingshurst, , Billingshurs,West Susse Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S02126 Permit Version: 1 Effective Date: 15th November 1972 Issued Date: 15th November 1972 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A13NW (NW)	8	2	509100 126860
2	Discharge Consents Operator: West Sussex County Council Property Type: Undefined Or Other Location: A29 London - Bognor Regis Road, Between Manor House To Pratts Fa, North Of Billingshurst, , Billingshurs,West Susse Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S02126 Permit Version: 1 Effective Date: 15th November 1972 Issued Date: 15th November 1972 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A13NW (NW)	9	2	509160 126860
3	Discharge Consents Operator: West Sussex County Council Property Type: Undefined Or Other Location: A29 London - Bognor Regis Road, Between Manor House To Pratts Fa, North Of Billingshurst, , Billingshurs,West Susse Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S02126 Permit Version: 1 Effective Date: 15th November 1972 Issued Date: 15th November 1972 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A13SW (W)	25	2	509010 126720
3	Discharge Consents Operator: West Sussex County Council Property Type: Undefined Or Other Location: A29 London - Bognor Regis Road, Between Manor House To Pratts Fa, North Of Billingshurst, , Billingshurs,West Susse Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S02126 Permit Version: 1 Effective Date: 15th November 1972 Issued Date: 15th November 1972 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A13NW (W)	28	2	509020 126750



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	Discharge Consents Operator: Justin Donegan Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Hilland House New Road, Billingshurst, Horsham, West Sussex, Rh14 9aa Authority: Environment Agency, Southern Region Catchment Area: The River Arun Reference: Npswqd000651 Permit Version: 1 Effective Date: 7th February 2008 Issued Date: 7th February 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Unnamed Ditch To River Adur Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A13SE (E)	73	2	509504 126705
5	Discharge Consents Operator: West Sussex County Council Property Type: Undefined Or Other Location: A29 London - Bognor Regis Road, Between Manor House To Pratts Fa, North Of Billingshurst, , Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S02126 Permit Version: 1 Effective Date: 15th November 1972 Issued Date: 15th November 1972 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	76	2	508990 126550
6	Discharge Consents Operator: West Sussex County Council Property Type: Undefined Or Other Location: A29 London - Bognor Regis Road, Between Manor House To Pratts Fa, North Of Billingshurst, , Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S02126 Permit Version: 1 Effective Date: 15th November 1972 Issued Date: 15th November 1972 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A13NW (N)	109	2	509180 126960
7	Discharge Consents Operator: West Sussex County Council Property Type: Undefined Or Other Location: A29 London - Bognor Regis Road, Between Manor House To Pratts Fa, North Of Billingshurst, , Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S02126 Permit Version: 1 Effective Date: 15th November 1972 Issued Date: 15th November 1972 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A13SW (W)	114	2	508890 126620



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	Discharge Consents Operator: Mrs A Russell Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Johnmar, Little East Street, Billingshurst, West Sussex, Rh14 9pn Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: P06960 Permit Version: 1 Effective Date: 20th September 1997 Issued Date: 20th September 1997 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A8NW (SW)	454	2	508900 126180
9	Discharge Consents Operator: Hellett & Jenkins Ltd. Property Type: CONSTRUCTION OF BUILDINGS Location: Development, Rowan Ave/Coombe Hill, Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S01728 Permit Version: 1 Effective Date: 28th June 1968 Issued Date: 28th June 1968 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	464	2	508670 126310
10	Discharge Consents Operator: Mr & Mrs E Coulson Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Aspen Place, Billingshurst Aspen Place, Okehurst Road, Billingshurst, West Sussex, Rh14 9hs Authority: Environment Agency, Southern Region Catchment Area: The River Arun Reference: P12105 Permit Version: 1 Effective Date: 18th June 2004 Issued Date: 18th June 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Unnamed Ditch To River Arun Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A18SW (N)	541	2	508980 127380
11	Discharge Consents Operator: Residential Development Property Type: CONSTRUCTION OF BUILDINGS Location: Residential Development, Rosehill, Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N01538 Permit Version: 1 Effective Date: 13th December 1979 Issued Date: 13th December 1979 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A8NW (SW)	551	2	508900 126080



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	Discharge Consents Operator: Mr L T Ugland Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Minstrels Wood, Billingshurst Minstrels Wood, Okehurst Lane, Billingshurst, West Sussex, Rh14 9hr Authority: Environment Agency, Southern Region Catchment Area: The River Arun Reference: P12232 Permit Version: 1 Effective Date: 13th January 2005 Issued Date: 13th January 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Unnamed Trib. River Arun Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	572	2	508893 127386
13	Discharge Consents Operator: Residential Development Property Type: CONSTRUCTION OF BUILDINGS Location: Residential Development, Rosehill, Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N01538 Permit Version: 1 Effective Date: 13th December 1979 Issued Date: 13th December 1979 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	575	2	508880 126060
13	Discharge Consents Operator: Residential Development Property Type: CONSTRUCTION OF BUILDINGS Location: Residential Development, Rosehill, Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N01538 Permit Version: 1 Effective Date: 13th December 1979 Issued Date: 13th December 1979 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	600	2	508860 126040
13	Discharge Consents Operator: Hellett & Jenkins Ltd. Property Type: CONSTRUCTION OF BUILDINGS Location: Development At Rosehill, East Street, Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S01729 Permit Version: 1 Effective Date: 4th July 1968 Issued Date: 4th July 1968 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	602	2	508850 126040



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	Discharge Consents Operator: Residential Development Property Type: CONSTRUCTION OF BUILDINGS Location: Residential Development, Rosehill, Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N01538 Permit Version: 1 Effective Date: 13th December 1979 Issued Date: 13th December 1979 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	615	2	508840 126030
13	Discharge Consents Operator: Residential Development Property Type: CONSTRUCTION OF BUILDINGS Location: Residential Development, Rosehill, Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N01538 Permit Version: 1 Effective Date: 13th December 1979 Issued Date: 13th December 1979 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	618	2	508830 126030
14	Discharge Consents Operator: Hellett & Jenkins Ltd. Property Type: CONSTRUCTION OF BUILDINGS Location: Development, Rowan Ave/Coombe Hill, Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S01728 Permit Version: 1 Effective Date: 28th June 1968 Issued Date: 28th June 1968 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	598	2	508570 126220
15	Discharge Consents Operator: Hellett & Jenkins Ltd. Property Type: CONSTRUCTION OF BUILDINGS Location: Development At Rosehill, East Street, Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S01729 Permit Version: 1 Effective Date: 4th July 1968 Issued Date: 4th July 1968 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	612	2	508820 126040



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	Discharge Consents Operator: Hellett & Jenkins Ltd. Property Type: CONSTRUCTION OF BUILDINGS Location: Development At Rosehill, East Street, Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S01729 Permit Version: 1 Effective Date: 4th July 1968 Issued Date: 4th July 1968 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	631	2	508770 126040
16	Discharge Consents Operator: Ingrid Duncan & Anthony Sacker Property Type: Undefined Or Other Location: Tedfold Barns, Tedfold Stud, Rowner Road, Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P05412 Permit Version: 1 Effective Date: 26th July 1994 Issued Date: 26th July 1994 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A12NW (W)	625	2	508400 126800
16	Discharge Consents Operator: Mr R Crombie & Ms L Kingston Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Woodhatch, Tedfold Stud Woodhatch, Tedfold Stud, Rowner Road, Billingshurst, West Sussex, RH14 9HU Authority: Environment Agency, Southern Region Catchment Area: The River Arun Reference: P12089 Permit Version: 1 Effective Date: 24th May 2004 Issued Date: 24th May 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Pond - No Outlet Environment: Receiving Water: Seasonal Soakaway Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12NW (W)	649	2	508370 126780
17	Discharge Consents Operator: Mr K T Lawson Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: South Lodge, New Road, Billingshurst, West Sussex, RH14 9DT Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: P07427 Permit Version: 1 Effective Date: 13th November 1998 Issued Date: 13th November 1998 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A14NE (E)	632	2	510070 126880



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	Discharge Consents Operator: Mr S G O Cannon Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Woodhatch, Tedfold Stud, Okehurst Road, Billingshurst West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P06501 Permit Version: 1 Effective Date: 15th January 1997 Issued Date: 15th January 1997 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m	A12NW (W)	635	2	508430 126910
19	Discharge Consents Operator: Hellett & Jenkins Ltd. Property Type: CONSTRUCTION OF BUILDINGS Location: Development, Rowan Ave/Coombe Hill, Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: S01728 Permit Version: 1 Effective Date: 28th June 1968 Issued Date: 28th June 1968 Revocation Date: 31st March 1997 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	648	2	508550 126170
20	Discharge Consents Operator: Mary Elizabeth Jordan Property Type: Undefined Or Other Location: Dunelm, Okehurst Lane, Billingshurst, West Sussex, Rh14 9hr Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: P04495 Permit Version: 1 Effective Date: 15th October 1992 Issued Date: 15th October 1992 Revocation Date: 31st March 1997 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m	A18NE (N)	651	2	509300 127500
21	Discharge Consents Operator: Ma Shaieb, Cf Shaieb, Ka Buckley Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: The Gables, Billingshurst The Gables, Okehurst Lane, Billingshurst, West Sussex, Rh14 9hr Authority: Environment Agency, Southern Region Catchment Area: The River Arun Reference: P12364 Permit Version: 1 Effective Date: 10th May 2005 Issued Date: 10th May 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib. River Arun Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A18NW (N)	659	2	509080 127510



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	Discharge Consents Operator: Mr Houghton Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Chalk Farm, Okehurst Lane, Billingshurst, West Sussex, Rh14 9hr Authority: Environment Agency, Southern Region Catchment Area: The River Arun Reference: Npswd000900 Permit Version: 1 Effective Date: 3rd March 2008 Issued Date: 3rd March 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Storm Water Ditch Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A18NW (N)	702	2	508997 127546
23	Discharge Consents Operator: Mr D A Mowling Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Wildens, Coneyhurst Rd, Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: P09373 Permit Version: 1 Effective Date: 18th December 2000 Issued Date: 18th December 2000 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	767	2	509800 125990
24	Discharge Consents Operator: Scottish And Southern Energy Plc Property Type: MAKING OF COMPUTERS/ELECTRONICS/OPTICAL PRODUCTS Location: Electrical Primary Substation, Land Adjacent To A29, Billingshurst Bypass, East Sussex, Rh14 Authority: Environment Agency, Southern Region Catchment Area: The River Arun Reference: P12616 Permit Version: 1 Effective Date: 3rd February 2006 Issued Date: 3rd February 2006 Revocation Date: 3rd February 2018 Discharge Type: Trade Effluent Discharge-Site Drainage Discharge: Land/Soakaway Environment: Receiving Water: Groundwater Via A Soakaway Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	770	2	508300 126320
24	Discharge Consents Operator: Mrs E A Berry - Parish Clerk Property Type: SPORT, AMUSEMENT+RECREATION/GOLF CLUB/GYM/THHEME PK/SPA Location: Jubilee Fields Recreation Land, West Of A29 Billingshurst Bypass, Petworth Road, Billingshurst, West Sussex, Rh14 9hz Authority: Environment Agency, Southern Region Catchment Area: The River Arun Reference: P12399 Permit Version: 1 Effective Date: 27th July 2005 Issued Date: 27th July 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of River Arun Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	793	2	508270 126330



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	Discharge Consents Operator: Southern Water Services Ltd (S) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Gorselands, Billingshurst, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: A00480 Permit Version: 1 Effective Date: 1st April 1991 Issued Date: 1st April 1991 Revocation Date: 10th October 1994 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A3NW (S)	900	2	509100 125700
26	Discharge Consents Operator: Mr & Mrs M J Brister Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Southdown Hse, Tedfold Stud Farm, Okehurst Lane, Billingshurst, Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Supplied Reference: P09682 Permit Version: 1 Effective Date: 22nd March 2001 Issued Date: 22nd March 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m	A11NE (W)	919	2	508140 126950
27	Discharge Consents Operator: D O'Brien Esq Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Little Daux Farmhouse, LONDON ROAD, West Sussex Authority: Environment Agency, Southern Region Catchment Area: Not Given Reference: N02665 Permit Version: 1 Effective Date: 17th May 1983 Issued Date: 17th May 1983 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Freshwater River Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 100m	A3NE (S)	959	2	509240 125650
	Nearest Surface Water Feature	A13SE (E)	10	-	509435 126667
28	Pollution Incidents to Controlled Waters Property Type: Domestic/Residential Location: ON OLD A29 BY FARM BUILDING NEAR PYLONS Authority: Environment Agency, Southern Region Pollutant: General Biodegradable : Sewage Treated Effluent & Sewerage Material Note: Not Supplied Incident Date: 15th February 1999 Incident Reference: 1962 Catchment Area: Arun Receiving Water: Potential River Cause of Incident: Drainage Failures : Surface Water Sewer Failure Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	29	2	509000 126600
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 45 West Sussex and Surrey Scale: 1:100,000	A13NE (E)	0	2	509229 126732
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NW (NW)	0	1	509121 126817



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	A13NE (E)	0	1	509229 126732
	Superficial Aquifer Designations No Data Available				
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
29	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 225.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A13NW (W)	24	3	509023 126746
30	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 486.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A12NE (W)	244	3	508819 126829
31	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 33.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A12NE (W)	244	3	508819 126829
32	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 133.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SW (NE)	475	3	509661 127267
33	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 45.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A7NE (SW)	525	3	508560 126352
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 156.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SW (NE)	589	3	509810 127304
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SW (NE)	599	3	509731 127370



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 71.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	601	3	510032 126660
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 85.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SW (NE)	602	3	509733 127372
38	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 12.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SW (NE)	606	3	509892 127249
39	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 33.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SW (NE)	606	3	509892 127249
40	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 17.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SE (NE)	610	3	509916 127226
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 530.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SE (NE)	617	3	509931 127218
42	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SW (NE)	634	3	509800 127368
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 126.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SW (NE)	637	3	509801 127371
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 204.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	666	3	510096 126649



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 49.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A12NW (W)	706	3	508369 126948
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 285.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 2	A17NE (NW)	733	3	508766 127506
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19NW (NE)	740	3	509804 127491
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 417.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A12SW (W)	740	3	508271 126530
49	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 164.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19NW (NE)	744	3	509805 127494
50	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 438.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A12NW (W)	755	3	508321 126961
51	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 19.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19NW (NE)	849	3	509753 127636
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 331.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Adur Catchment Name: Adur and Teville Primacy: 1	A10NW (E)	859	3	510236 126381
53	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 345.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19NW (NE)	861	3	509749 127650



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
54	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 256.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Adur Catchment Name: Adur and Teville Primacy: 1	A15SW (E)	869	3	510294 126603
55	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Adur Catchment Name: Adur and Teville Primacy: 1	A10NW (E)	885	3	510253 126352
56	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 607.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Adur Catchment Name: Adur and Teville Primacy: 1	A10NW (E)	887	3	510255 126349
57	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 71.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A17SW (NW)	937	3	508288 127328
58	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 439.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Adur Catchment Name: Adur and Teville Primacy: 1	A15NW (E)	943	3	510397 126823
59	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 53.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A15NW (E)	973	3	510414 126770
60	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 96.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A17NW (NW)	974	3	508313 127432
61	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 190.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rother and Arun Primacy: 1	A17SW (NW)	992	3	508259 127386



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
62	Historical Landfill Sites Licence Holder: Not Supplied Location: Billingshurst, Sussex Name: Wooddale Lane Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD19983 First Input Date: 31st December 1960 Last Input Date: 31st December 1965 Specified Waste: Deposited Waste included Inert, Commercial and Household Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 3800/8228 BGS Ref: Not Supplied Other Ref: WD27/026	A9NW (SE)	606	2	509674 126106
	Local Authority Landfill Coverage Name: Horsham District Council - Has supplied landfill data		0	4	509229 126732
	Local Authority Landfill Coverage Name: West Sussex County Council - Has supplied landfill data		0	5	509229 126732
63	Local Authority Recorded Landfill Sites Location: Wooddale Road, Billingshurst Reference: Not Supplied Authority: West Sussex County Council, Environment & Development Last Reported Status: Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Applicable	A9SW (SE)	714	5	509700 126000
63	Local Authority Recorded Landfill Sites Location: Wood Dale Road, Billingshurst Reference: 27/026 Authority: Horsham District Council, Environmental Health Department Last Reported Status: Types of Waste: Household, Commercial Date of Closure: Not Supplied Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Applicable	A9SW (SE)	714	4	509700 126000
64	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1898	A19SW (NE)	551	-	509815 127251
65	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1913	A14SE (E)	583	-	509991 126530
66	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1961	A18NW (N)	713	-	508979 127555



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Wealden Group	A13NE (E)	0	1	509229 126732
	BGS 1:625,000 Solid Geology Description: Wealden Group	A13NE (E)	0	1	509245 126736
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (E)	0	1	509229 126732
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A15SW (E)	862	1	510260 126450
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	509229 126732
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	509229 126732
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	509229 126732
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	509229 126732
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	509229 126732
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A14SW (E)	241	1	509663 126637
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	509229 126732
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	509121 126817
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	509229 126732
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	16	1	509263 126601



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	17	1	509388 126890
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A14NW (E)	187	1	509628 126805
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	234	1	509389 126417
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	509229 126732
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	509229 126732



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
67	Contemporary Trade Directory Entries Name: Bora Bora Swimwear Location: San Blas, High Seat Copse, High Street, Billingshurst, West Sussex, RH14 9SN Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NW (SW)	272	-	508940 126358
68	Contemporary Trade Directory Entries Name: Crystal Clean Carpet Cleaning Co Location: 112, Coombe Hill, Billingshurst, West Sussex, RH14 9NW Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	415	-	508773 126288
69	Contemporary Trade Directory Entries Name: Roman Way Garage Location: 3, High Street, Billingshurst, West Sussex, RH14 9PL Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	461	-	508835 126197
69	Contemporary Trade Directory Entries Name: Mr Clean Location: 5, High Street, Billingshurst, West Sussex, RH14 9PL Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Manually positioned to the address or location	A7NE (SW)	483	-	508815 126183
70	Contemporary Trade Directory Entries Name: B B Electricals Location: Little East St, Billingshurst, West Sussex, RH14 9PN Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A8NW (SW)	543	-	508893 126090
70	Contemporary Trade Directory Entries Name: Aardvark Dry Carpet Cleaning Location: 26, Rosehill, Billingshurst, West Sussex, RH14 9QN Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	555	-	508884 126080
71	Contemporary Trade Directory Entries Name: Aurac Sound & Vision Location: 33, High Street, Billingshurst, RH14 9PP Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	591	-	508761 126089
72	Contemporary Trade Directory Entries Name: Sussex Laundry Location: 7, Jengers Mead, Billingshurst, West Sussex, RH14 9PB Classification: Dry Cleaners Status: Active Positional Accuracy: Automatically positioned to the address	A7NE (SW)	597	-	508686 126127
72	Contemporary Trade Directory Entries Name: Hurst Cleaners Location: 7, Jengers Mead, Billingshurst, West Sussex, RH14 9PB Classification: Dry Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	597	-	508686 126127
72	Contemporary Trade Directory Entries Name: Carfinance4less.Com Location: Unit 8, Laura House, Jengers Mead, Billingshurst, West Sussex, RH14 9NZ Classification: Car Dealers Status: Inactive Positional Accuracy: Manually positioned to the address or location	A7NE (SW)	644	-	508663 126086
73	Contemporary Trade Directory Entries Name: Austen'S Home Hardware Location: 48-52, High Street, Billingshurst, RH14 9NY Classification: Hardware Status: Active Positional Accuracy: Automatically positioned to the address	A7NE (SW)	646	-	508710 126054



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
73	Contemporary Trade Directory Entries Name: Waterstation Location: 48-52, High Street, Billingshurst, West Sussex, RH14 9NY Classification: Water Coolers Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	646	-	508710 126054
73	Contemporary Trade Directory Entries Name: Terrific Cleaners Billingshurst Location: 54a, High Street, Billingshurst, West Sussex, RH14 9NY Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address	A7SE (SW)	660	-	508698 126045
74	Contemporary Trade Directory Entries Name: John Weetman Location: 16, Pine Close, Billingshurst, West Sussex, RH14 9NL Classification: Agricultural Machinery - Sales & Service Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NW (SW)	703	-	508461 126186
74	Contemporary Trade Directory Entries Name: Shisa Gas & Heating Location: 16, Pine Close, Billingshurst, West Sussex, RH14 9NL Classification: Boilers - Servicing, Replacements & Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NW (SW)	703	-	508461 126186
75	Contemporary Trade Directory Entries Name: H R Holfeld (Pumps) Ltd Location: 74, High Street, Billingshurst, West Sussex, RH14 9QS Classification: Pump Manufacturers Status: Inactive Positional Accuracy: Manually positioned to the address or location	A7SE (SW)	752	-	508665 125957
76	Contemporary Trade Directory Entries Name: Smart Pro Location: 5, Nightingale Walk, Billingshurst, West Sussex, RH14 9TY Classification: Car Body Repairs Status: Active Positional Accuracy: Automatically positioned to the address	A8SW (S)	774	-	509005 125831
77	Contemporary Trade Directory Entries Name: Euroll (UK) Ltd Location: 87, High Street, BILLINGSHURST, West Sussex, RH14 9QX Classification: Roller Shutter Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A7SE (SW)	919	-	508650 125779
78	Contemporary Trade Directory Entries Name: L & W Contractors Ltd Location: Stane Street, Billingshurst, West Sussex, RH14 9AE Classification: Railway Equipment Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A23SE (N)	951	-	509432 127798
78	Contemporary Trade Directory Entries Name: Unigate Dairies Ltd Location: Tisserand Farm, Stane Street, Billingshurst, West Sussex, RH14 9AE Classification: Dairies Status: Inactive Positional Accuracy: Automatically positioned to the address	A23SE (N)	951	-	509432 127798
79	Fuel Station Entries Name: Roman Way Garage Location: 3, High Street Roman Way, , Billingshurst, West Sussex, RH14 9PL Brand: Obsolete Premises Type: Not Applicable Status: Obsolete Positional Accuracy: Automatically positioned to the address	A7NE (SW)	462	-	508834 126197
80	Points of Interest - Manufacturing and Production Name: Tank Location: RH14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SE (NE)	223	6	509432 127071
81	Points of Interest - Manufacturing and Production Name: Michael Kelly Location: New Road, Billingshurst, RH14 9DU Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A14NE (E)	549	6	509991 126784



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
81	Points of Interest - Manufacturing and Production Name: Michael Kelly Location: Wooddale Farm, New Road, Billingshurst, RH14 9DU Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A14NE (E)	549	6	509991 126784
82	Points of Interest - Manufacturing and Production Name: Denver Poultry Farm Location: RH14 Category: Farming Class Code: Poultry Farming, Equipment and Supplies Positional Accuracy: Positioned to address or location	A18NW (N)	595	6	509077 127446
83	Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8SW (S)	640	6	508947 125975
84	Points of Interest - Manufacturing and Production Name: Tank Location: RH14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	706	6	510052 127195
85	Points of Interest - Manufacturing and Production Name: Tedfold Cottage Farm Location: 1 Tedfold Cottages, Rowner Road, Billingshurst, RH14 9HU Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A12NW (W)	749	6	508310 126921
86	Points of Interest - Public Infrastructure Name: Billingshurst Community and Conference Centre Location: Roman Way, Billingshurst, RH14 9EW Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A7NE (SW)	388	6	508873 126260
87	Points of Interest - Public Infrastructure Name: Billingshurst Fire Station Location: West Street, Billingshurst, RH14 9LW Category: Central and Local Government Class Code: Fire Brigade Stations Positional Accuracy: Positioned to address or location	A7SW (SW)	985	6	508360 125887
88	Points of Interest - Recreational and Environmental Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8NW (S)	320	6	509081 126280
88	Points of Interest - Recreational and Environmental Name: Play Area Location: Norman Close, RH14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A8NW (S)	321	6	509089 126279
89	Points of Interest - Recreational and Environmental Name: Playground Location: Arun Crescent, RH14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	867	6	508298 126128
90	Points of Interest - Recreational and Environmental Name: Playground Location: High Street, RH14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A7SE (SW)	873	6	508676 125817
90	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	878	6	508667 125816



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
91	Ancient Woodland Name: Not Supplied Reference: 1478328 Area(m ²): 24322.19 Type: Ancient and Semi-Natural Woodland	A13NW (NW)	89	7	509135 126940
92	Ancient Woodland Name: Not Supplied Reference: 1478052 Area(m ²): 11376.14 Type: Ancient and Semi-Natural Woodland	A12NE (W)	456	7	508601 126854
93	Ancient Woodland Name: Not Supplied Reference: 1478362 Area(m ²): 15026.72 Type: Ancient and Semi-Natural Woodland	A14SE (E)	674	7	510049 126408
94	Ancient Woodland Name: Not Supplied Reference: 1478327 Area(m ²): 21887.59 Type: Ancient and Semi-Natural Woodland	A19NW (NE)	728	7	509783 127488
95	Ancient Woodland Name: Not Supplied Reference: 1478755 Area(m ²): 58650.11 Type: Ancient and Semi-Natural Woodland	A11SE (W)	815	7	508192 126559
96	Ancient Woodland Name: Not Supplied Reference: 1478363 Area(m ²): 16031.83 Type: Ancient and Semi-Natural Woodland	A15SW (E)	847	7	510276 126629
97	Ancient Woodland Name: Not Supplied Reference: 1478745 Area(m ²): 29069.99 Type: Ancient and Semi-Natural Woodland	A19SE (NE)	857	7	510213 127211
98	Ancient Woodland Name: Not Supplied Reference: 1478361 Area(m ²): 3722.75 Type: Ancient and Semi-Natural Woodland	A19SE (NE)	932	7	510222 127352
99	Ancient Woodland Name: Not Supplied Reference: 1478326 Area(m ²): 2060.95 Type: Ancient and Semi-Natural Woodland	A17SW (NW)	937	7	508288 127328
100	Ancient Woodland Name: Not Supplied Reference: 1478730 Area(m ²): 23563.75 Type: Ancient and Semi-Natural Woodland	A17NW (NW)	945	7	508364 127450
101	Nitrate Vulnerable Zones Name: River Arun (U/S Pallingham) Nvz Description: Surface Water Source: Environment Agency, Head Office	A13NE (E)	0	8	509229 126732



Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Horsham District Council - Environmental Health Department Chichester District Council - Environmental Health Department	February 2015 July 2013	Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - Southern Region	April 2018	Quarterly
Enforcement and Prohibition Notices Environment Agency - Southern Region	March 2013	As notified
Integrated Pollution Controls Environment Agency - Southern Region	October 2008	Variable
Integrated Pollution Prevention And Control Environment Agency - South East Region - Solent & South Downs Area Environment Agency - Southern Region	April 2018 April 2018	Quarterly Quarterly
Local Authority Integrated Pollution Prevention And Control Horsham District Council - Environmental Health Department Chichester District Council - Environmental Health Department	June 2015 October 2014	Variable Variable
Local Authority Pollution Prevention and Controls Horsham District Council - Environmental Health Department Chichester District Council - Environmental Health Department	June 2015 October 2014	Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Horsham District Council - Environmental Health Department Chichester District Council - Environmental Health Department	June 2015 October 2014	Variable Variable
Nearest Surface Water Feature Ordnance Survey	September 2017	
Pollution Incidents to Controlled Waters Environment Agency - Southern Region	December 1999	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - Southern Region	March 2013	As notified
Prosecutions Relating to Controlled Waters Environment Agency - Southern Region	March 2013	As notified
Registered Radioactive Substances Environment Agency - Southern Region	January 2015	
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register Environment Agency - South East Region - Solent & South Downs Area Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	April 2018 April 2018 April 2018	Quarterly Quarterly Quarterly
Water Abstractions Environment Agency - Southern Region	April 2018	Quarterly
Water Industry Act Referrals Environment Agency - Southern Region	October 2017	Quarterly
Groundwater Vulnerability Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified



Agency & Hydrological	Version	Update Cycle
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Environment Agency - Head Office	January 2018	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	May 2018	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	May 2018	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	May 2018	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	May 2018	Quarterly
Flood Defences Environment Agency - Head Office	May 2018	Quarterly
OS Water Network Lines Ordnance Survey	May 2018	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water Suitability Environment Agency - Head Office	October 2013	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified



Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - Head Office	April 2018	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Southern Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - South East Region - Solent & South Downs Area Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	April 2018 April 2018 April 2018	Quarterly Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - South East Region - Solent & South Downs Area Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	April 2018 April 2018 April 2018	Quarterly Quarterly Quarterly
Local Authority Landfill Coverage Chichester District Council - Environmental Health Department Horsham District Council - Environmental Health Department West Sussex County Council - Environment & Development	May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Chichester District Council - Environmental Health Department Horsham District Council - Environmental Health Department West Sussex County Council - Environment & Development	May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - Southern Region - Solent and South Downs Environment Agency - Southern Region - Sussex Area	March 2003 March 2003	Not Applicable Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Variable
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Horsham District Council - Planning Department Chichester District Council - Planning Department West Sussex County Council - Environment & Development	August 2015 February 2016 October 2006	Variable Variable Annual Rolling Update
Planning Hazardous Substance Consents Horsham District Council - Planning Department Chichester District Council - Planning Department West Sussex County Council - Environment & Development	August 2015 February 2016 October 2006	Variable Variable Annual Rolling Update



Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2018	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	May 2018	Quarterly
Fuel Station Entries Catalist Ltd - Experian	August 2018	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	June 2018	Quarterly
Points of Interest - Education and Health PointX	June 2018	Quarterly
Points of Interest - Manufacturing and Production PointX	June 2018	Quarterly
Points of Interest - Public Infrastructure PointX	June 2018	Quarterly
Points of Interest - Recreational and Environmental PointX	June 2018	Quarterly
Underground Electrical Cables National Grid	December 2015	Bi-Annually



Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	October 2017	Bi-Annually
Areas of Outstanding Natural Beauty Natural England	February 2018	Bi-Annually
Environmentally Sensitive Areas Natural England	January 2017	
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	February 2018	Bi-Annually
Marine Nature Reserves Natural England	January 2018	Bi-Annually
National Nature Reserves Natural England	February 2018	Bi-Annually
National Parks Natural England	April 2017	Bi-Annually
Nitrate Vulnerable Zones Environment Agency - Head Office Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	December 2017 October 2015	Bi-Annually
Ramsar Sites Natural England	February 2018	Bi-Annually
Sites of Special Scientific Interest Natural England	February 2018	Bi-Annually
Special Areas of Conservation Natural England	January 2018	Bi-Annually
Special Protection Areas Natural England	February 2018	Bi-Annually

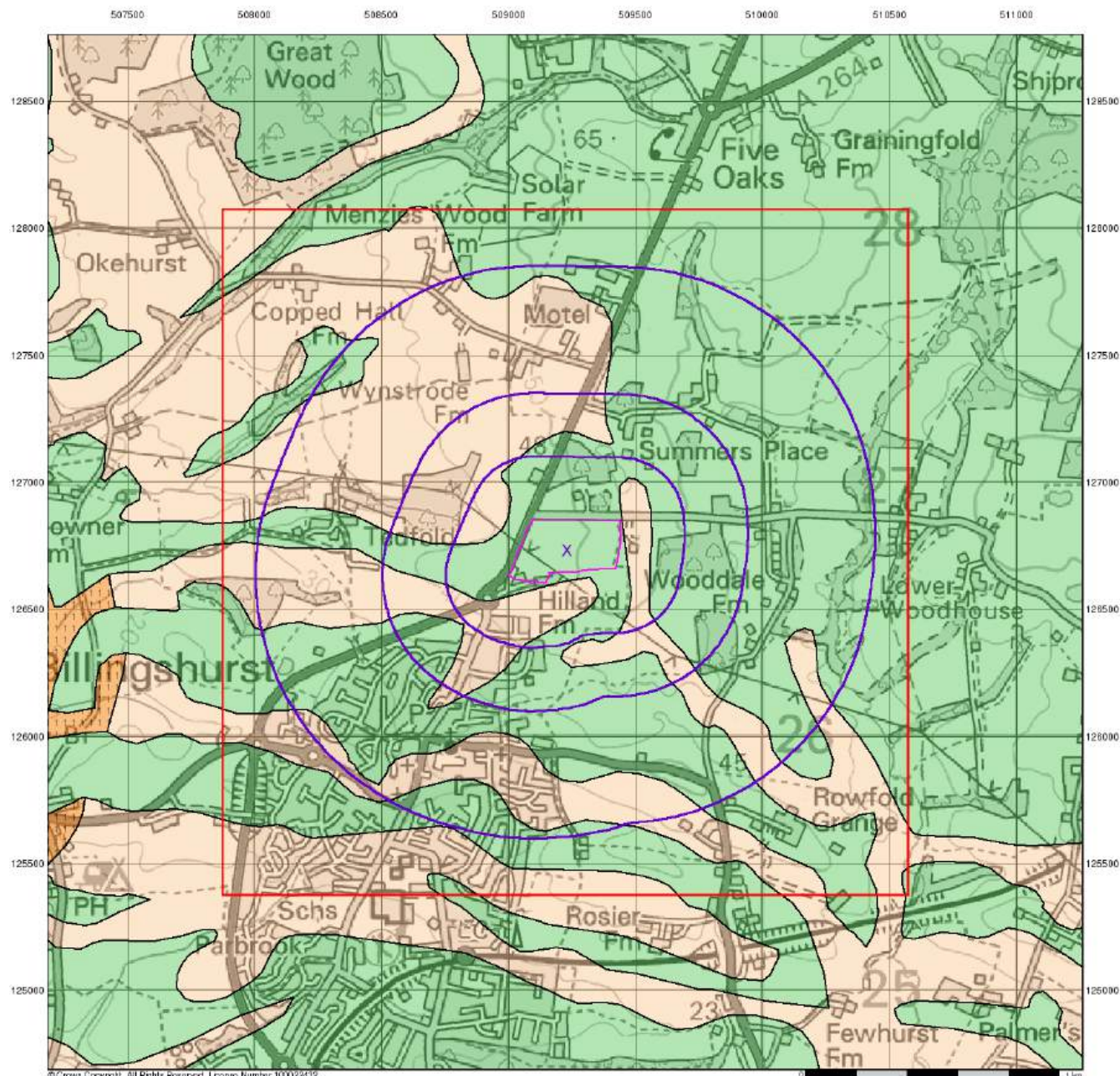
A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	



Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
4	Horsham District Council - Environmental Health Department Park House, North Street, Horsham, Sussex, RH12 1RL	Telephone: 01403 215100 Fax: 01403 732790 Website: www.horsham.gov.uk
5	West Sussex County Council - Environment & Development County Hall, Tower hall, Chichester, West Sussex, PO19 1RH	Telephone: 01243 777100 Website: www.westsussex.gov.uk
6	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
7	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
8	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



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Geo-Environmental Groundwater Vulnerability

General

- ◊ Specified Site ○ Specified Buffer(s) X Bearing Reference Point
- Slice 8 Map ID

Agency and Hydrological

Geological Classes

**Major Aquifer
(Highly Permeable)**

**Minor Aquifer
(Variably Permeable)**

**Non Aquifer
(Negligibly Permeable)**

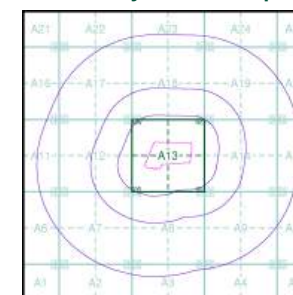
Water or Sea

Drift Deposit

Soil Classes

- High (H) 1, 2, 3, U
- Intermediate (I) 1, 2
- Low
- High (H) 1, 2, 3, U
- Intermediate (I) 1, 2
- Low

Site Sensitivity Context Map - Slice A



Order Details

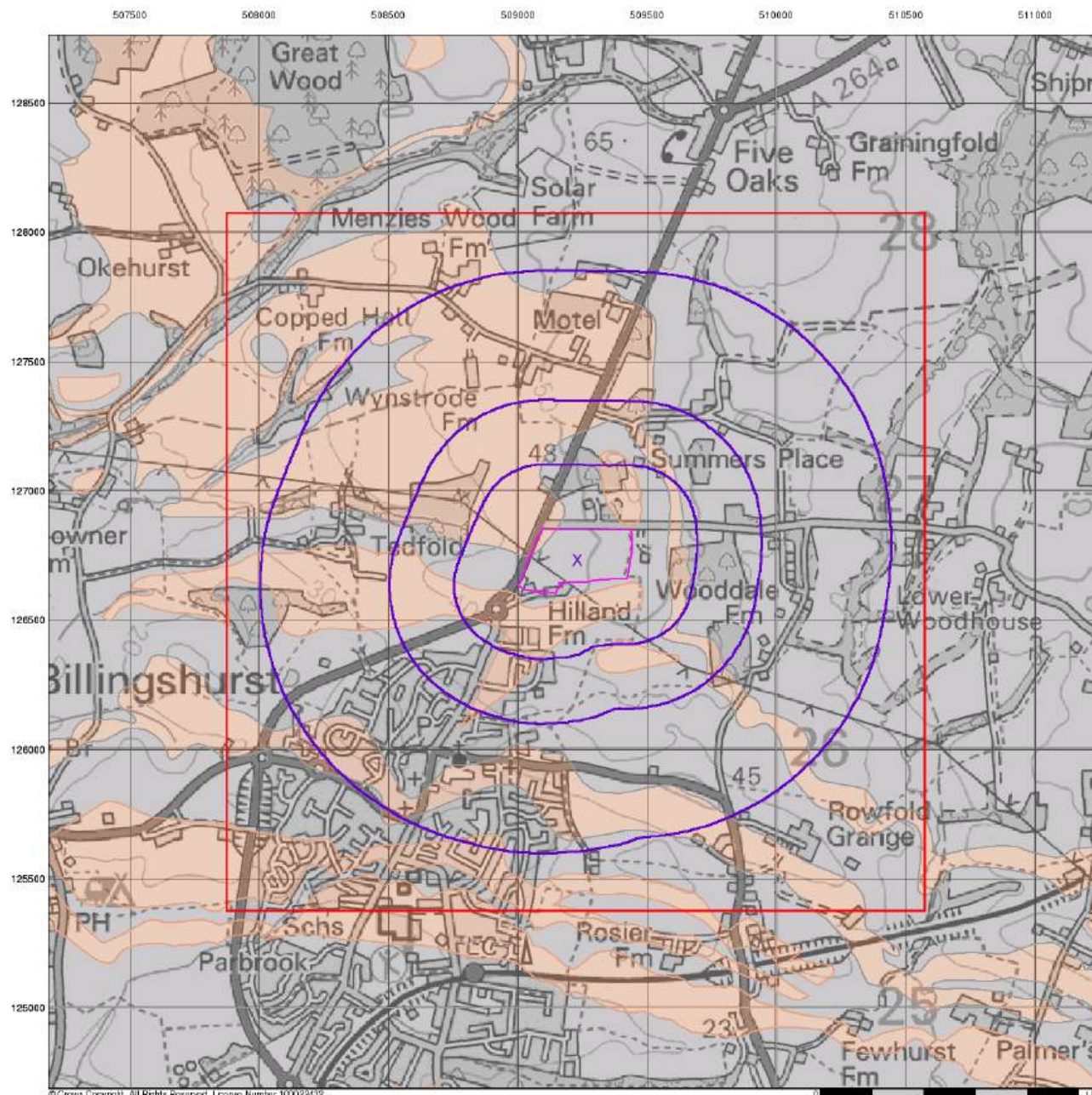
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 Slice: A
 Site Area (Ha): 8.28
 Search Buffer (m): 1000

Site Details

Hilland Farm, Stane Street, BILLINGSHURST, RH14 9HN

Landmark
 INFORMATION GROUP

Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



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Geo-Environmental Bedrock Aquifer Designation

General

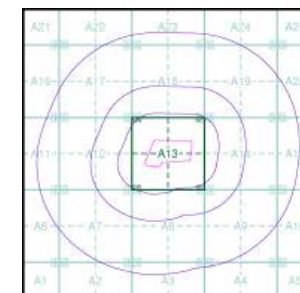
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- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

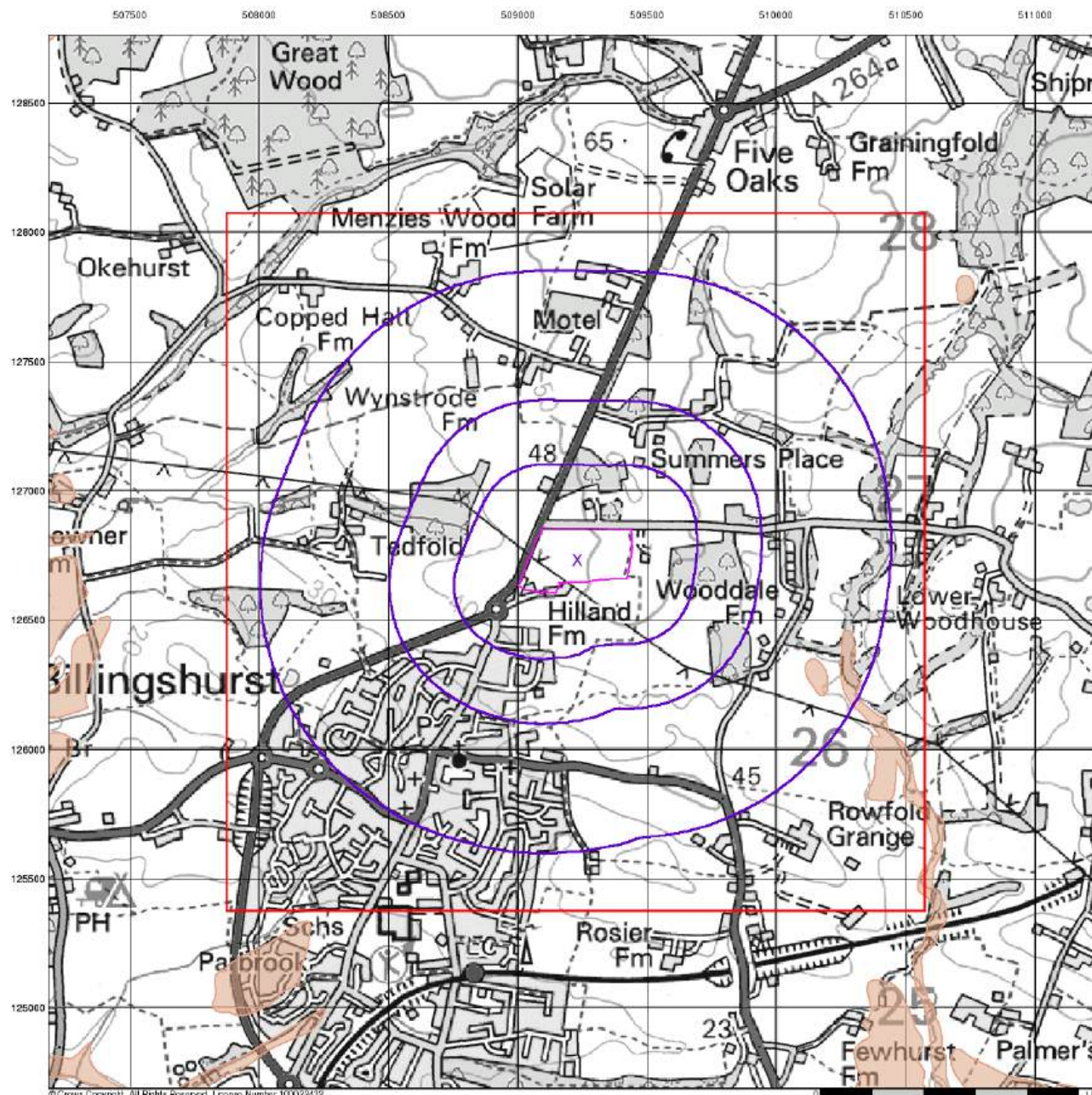
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 Site Area (Ha): 8.28
 Search Buffer (m): 1000

Site Details

Hilland Farm, Stane Street, BILLINGSHURST, RH14 9HN

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Geo-Environmental Superficial Aquifer Designation

General

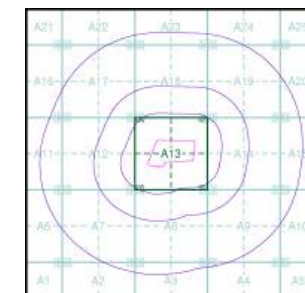
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- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

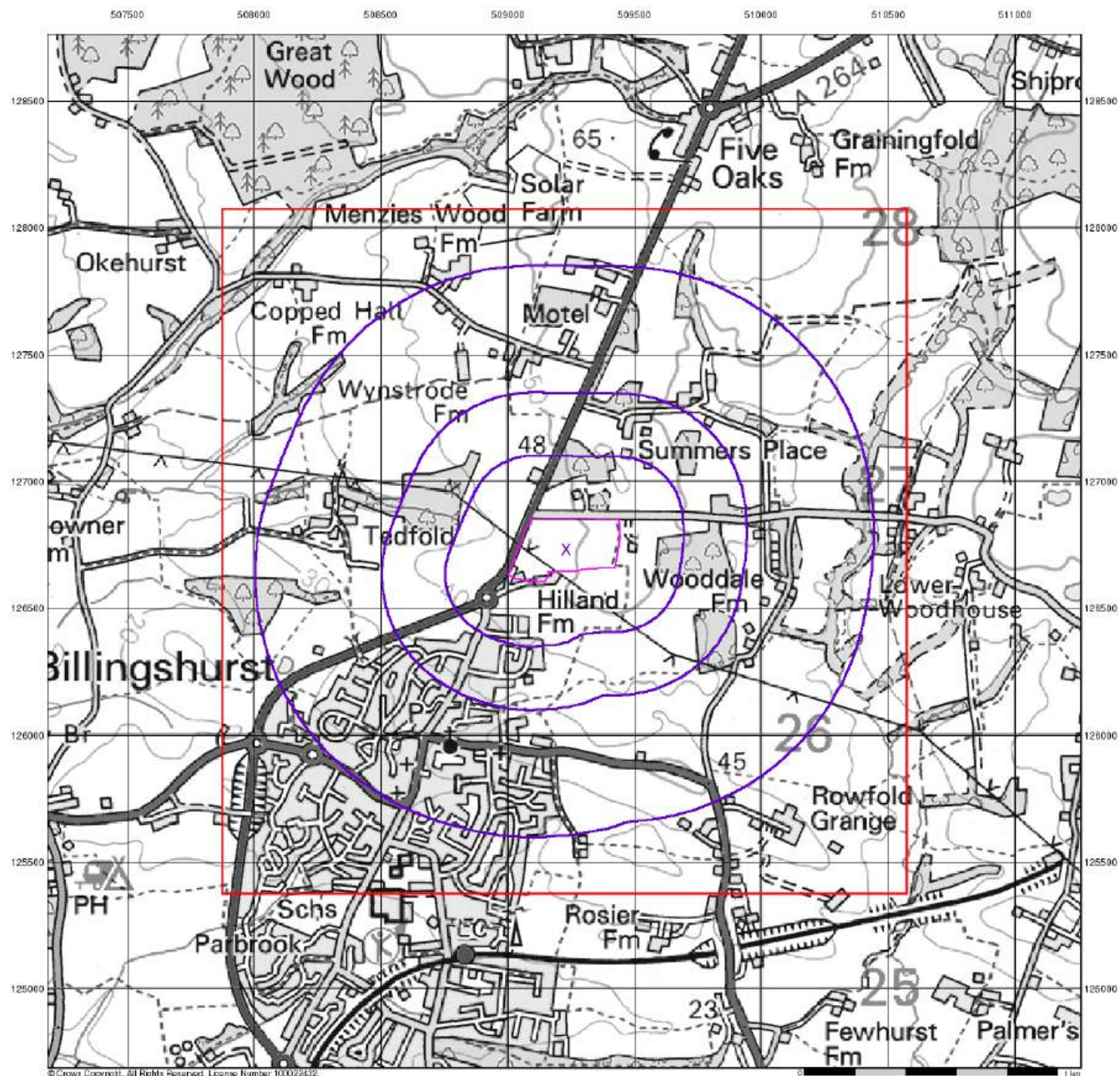
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 Slice: A
 Site Area (Ha): 8.28
 Search Buffer (m): 1000

Site Details

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Geo-Environmental Source Protection Zones

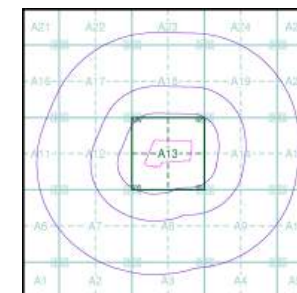
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



Order Details

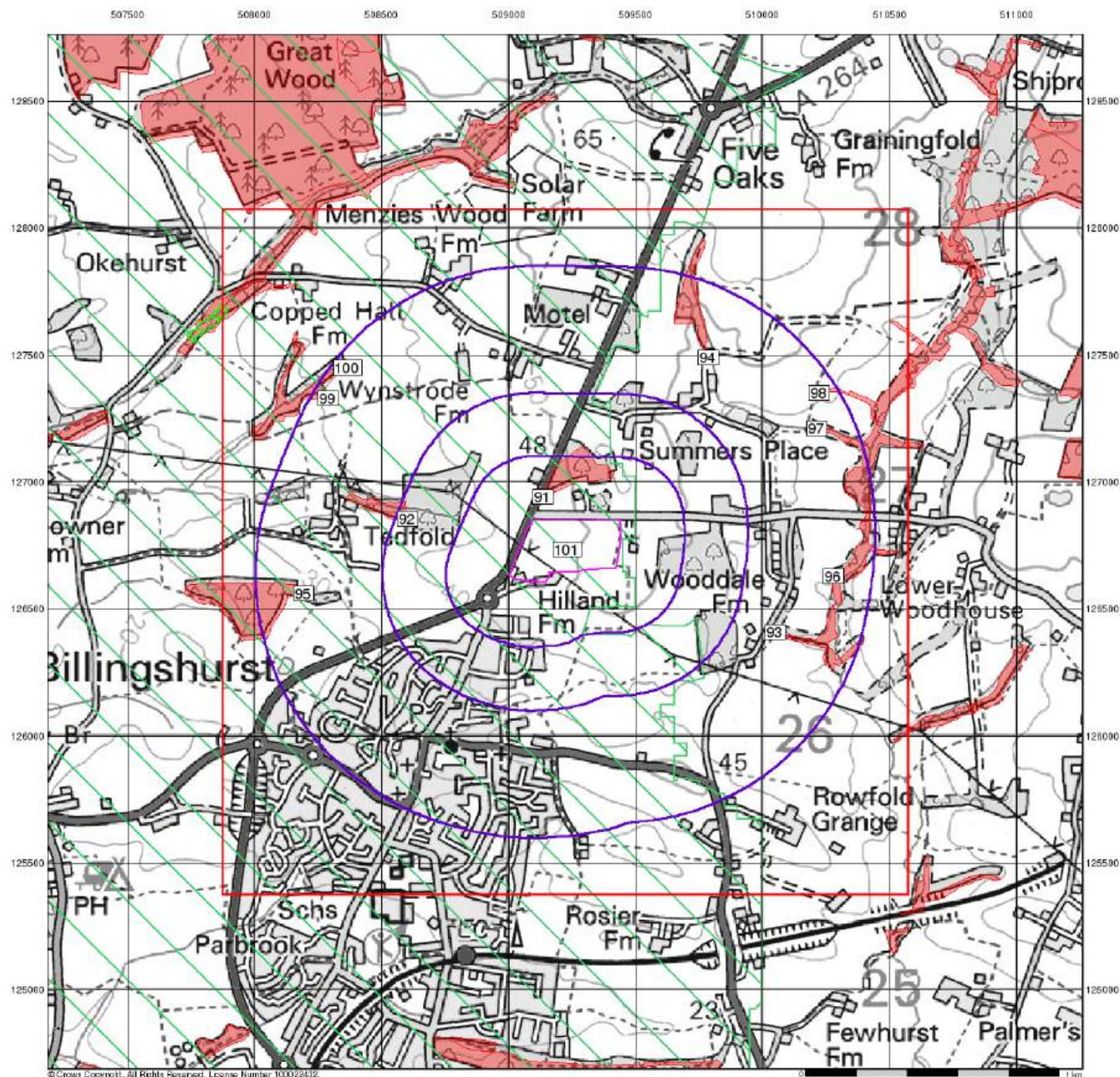
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Geo-Environmental Sensitive Land Uses

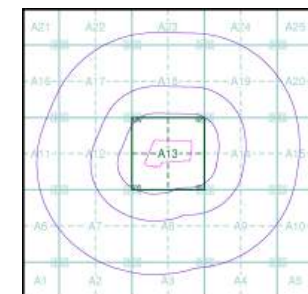
General

- ◇ Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- 8 Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- NP National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 175723966_1_1
 Customer Ref: GE17451
 National Grid Reference: 509230, 126730
 Slice: A
 Site Area (Ha): 8.28
 Search Buffer (m): 1000

Site Details

Hilland Farm, Stane Street, BILLINGSHURST, RH14 9HN

Landmark
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Geo-Environmental

BGS Flood GFS Data

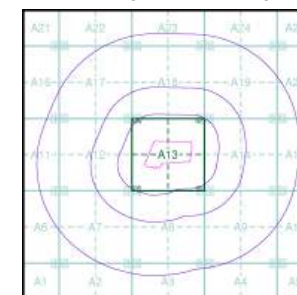
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

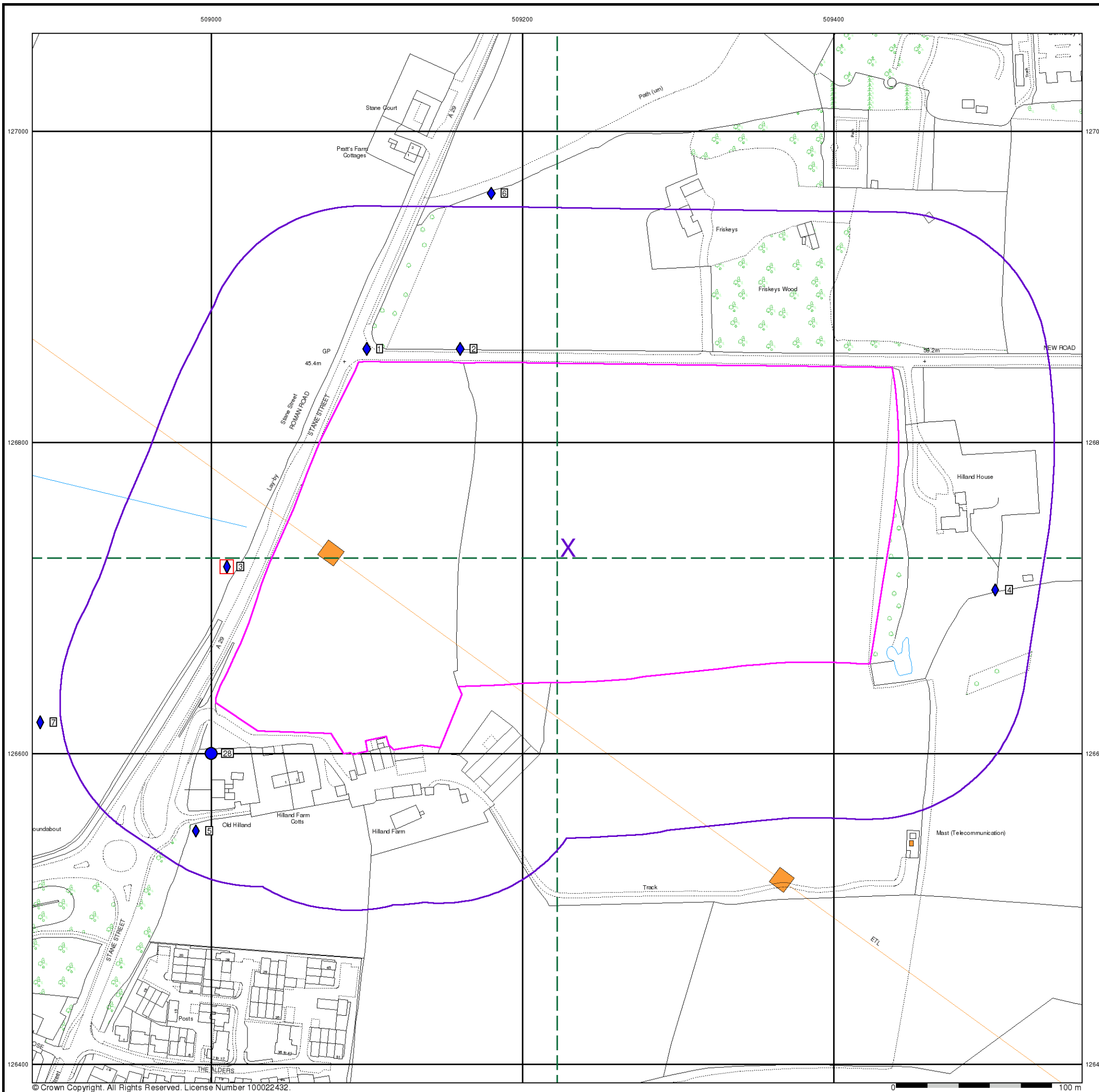
Order Number: 175723966_1_1
 Customer Ref: GE17451
 National Grid Reference: 509230, 126730
 Slice: A
 Site Area (Ha): 8.28
 Search Buffer (m): 1000

Site Details

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- General**

 - Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
 - Several of Types at Location
 - Pylon
 - Overhead Transmission Line

Agency and Hydrological

 - Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Integrated Pollution Prevention Control
 - Local Authority Integrated Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control Enforcement
 - Pollution Incident to Controlled Waters
 - Prosecution Relating to Authorised Processes
 - Prosecution Relating to Controlled Waters
 - Registered Radioactive Substance
 - River Network or Water Feature
 - River Quality Sampling Point
 - Substantiated Pollution Incident Register
 - Water Abstraction
 - Water Industry Act Referral

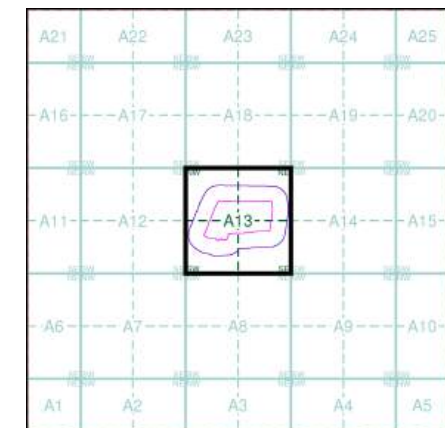
Hazardous Substances

 - COMAH Site
 - Explosive Site
 - NIHHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
 - BGS Recorded Mineral Site

Waste

 - BGS Recorded Landfill Site (Location)
 - BGS Recorded Landfill Site
 - EA Historic Landfill (Buffered Point)
 - EA Historic Landfill (Polygon)
 - Integrated Pollution Control Registered Waste Site
 - Licensed Waste Management Facility (Landfill Boundary)
 - Licensed Waste Management Facility (Location)
 - Local Authority Recorded Landfill Site (Location)
 - Local Authority Recorded Landfill Site
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Registered Landfill Site
 - Registered Landfill Site (Location)
 - Registered Landfill Site (Point Buffered to 100m)
 - Registered Landfill Site (Point Buffered to 250m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site (Location)
 - Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A13

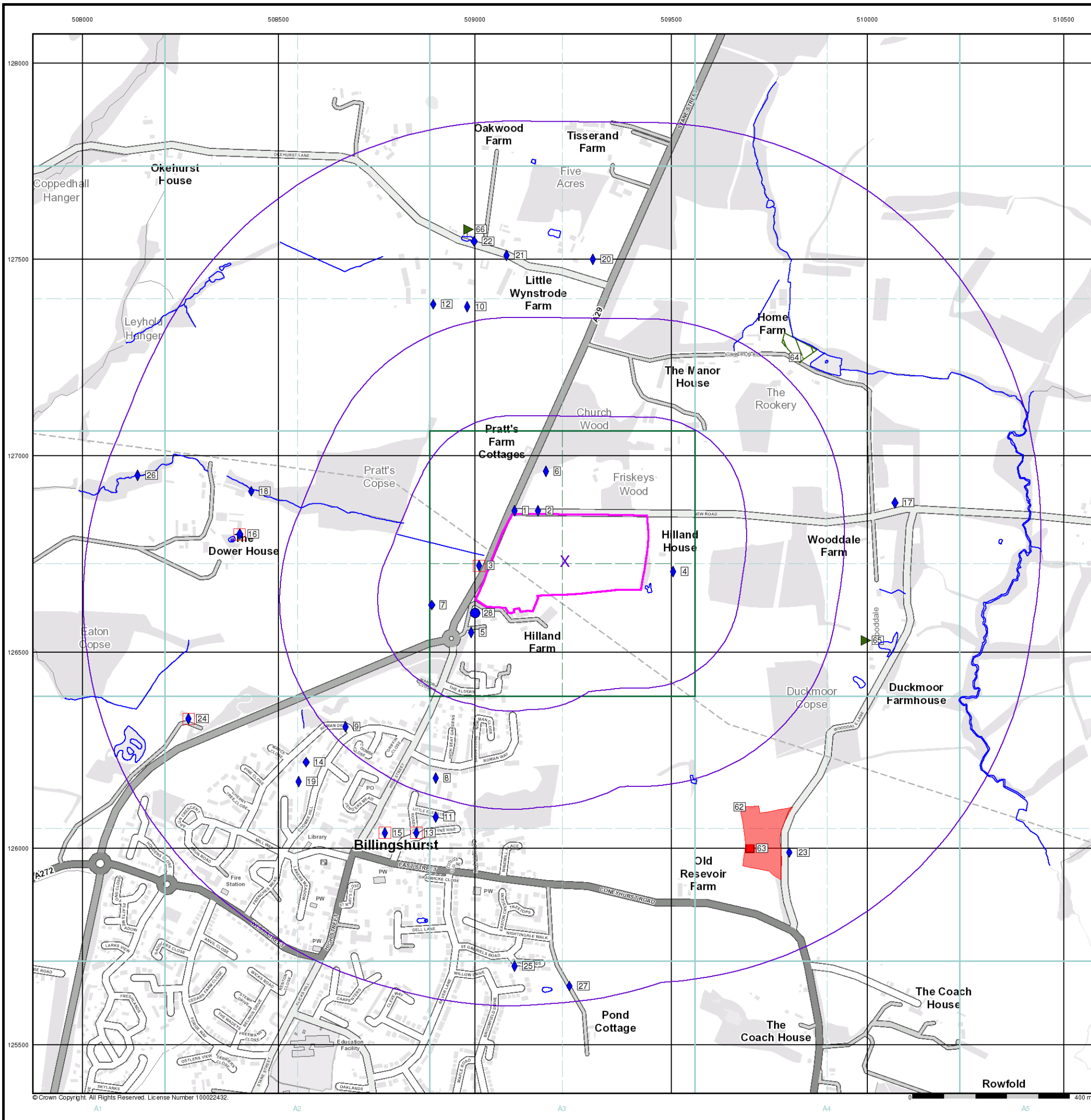


Order Details

Order Number: 175723966_1_1
Customer Ref: GE17451
National Grid Reference: 509230, 126730
Slice: A
Site Area (Ha): 8.28
Plot Buffer (m): 100

Site Details

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Geo-Environmental

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

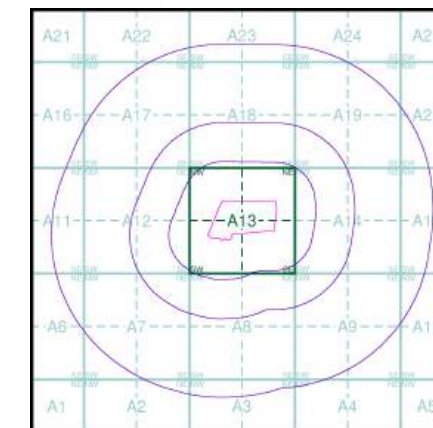
Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement
- BGS Recorded Mineral Site

Geological

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A



Order Details

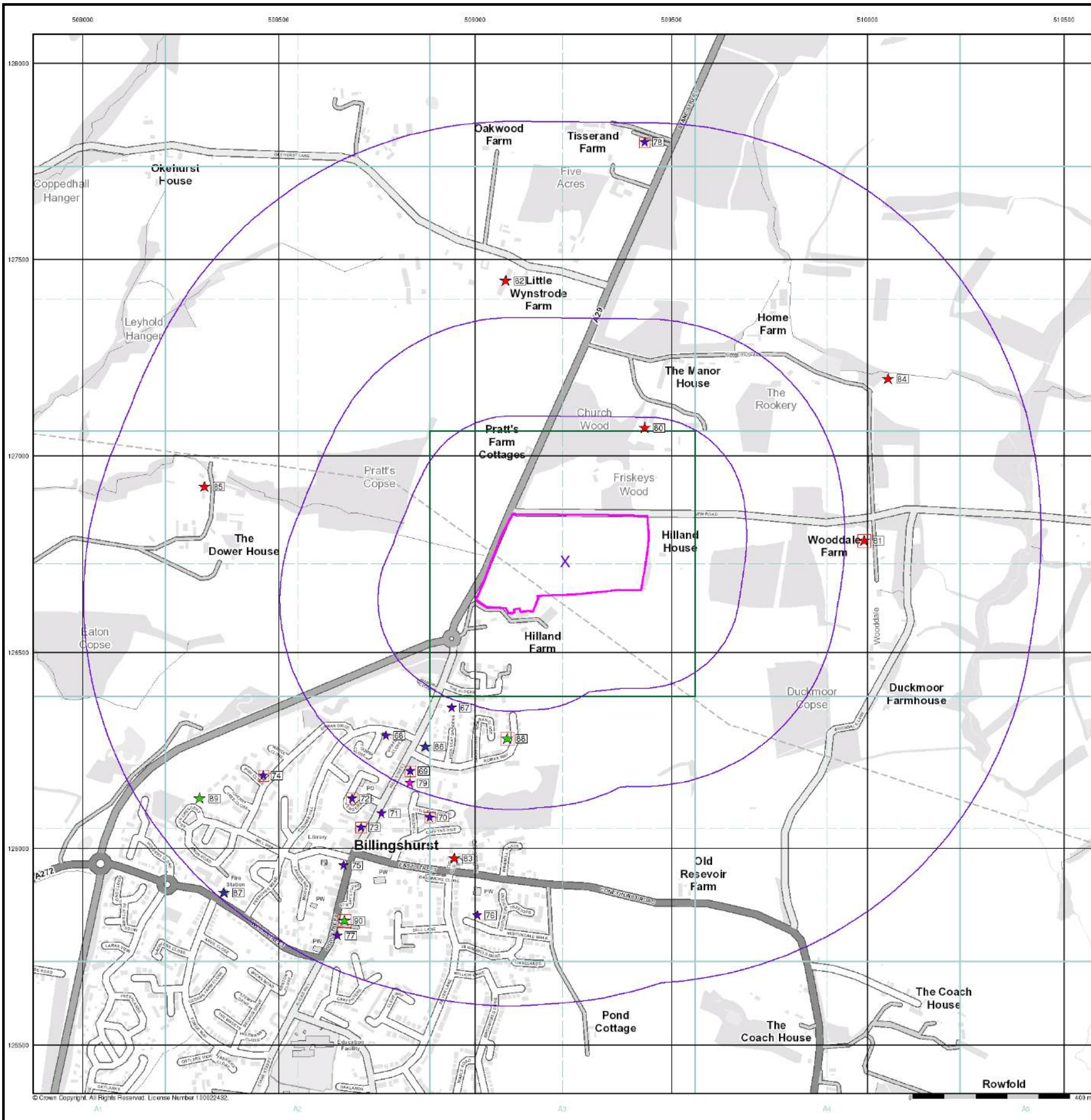
Order Number: 175723966_1_1
Customer Ref: GE17451
National Grid Reference: 509230, 126730
Slice: A
Site Area (Ha): 8.28
Search Buffer (m): 1000

Site Details

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Geo-Environmental Industrial Land Use Map

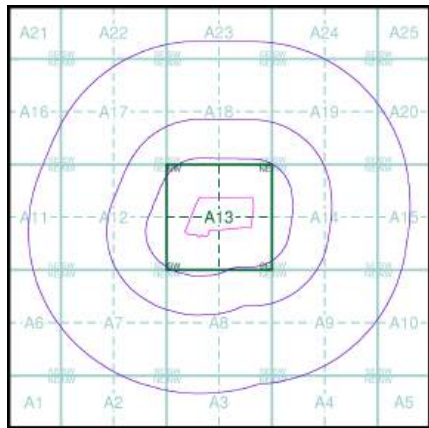
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



Order Details

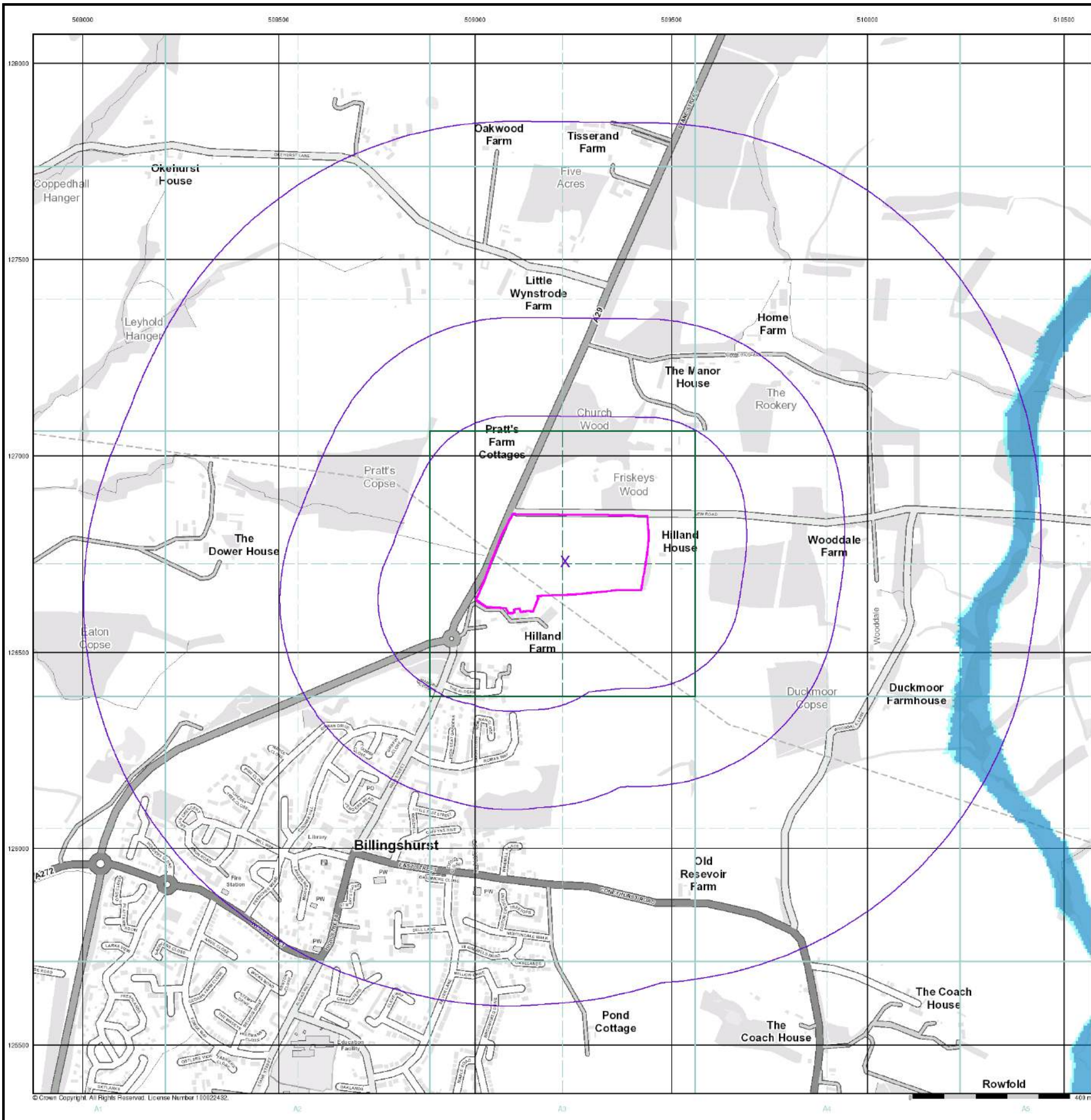
Order Number: 175723966_1_1
 Customer Ref: GE17451
 National Grid Reference: 509230, 126730
 Slice: A
 Site Area (Ha): 8.28
 Search Buffer (m): 1000

Site Details

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Geo-Environmental

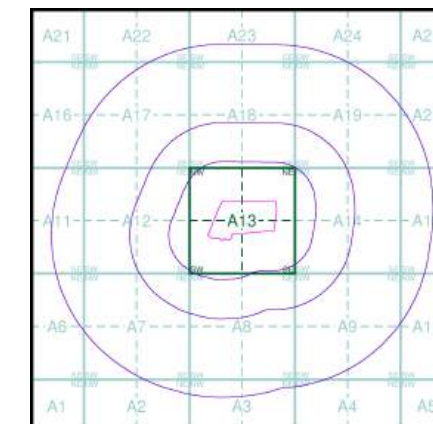
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



Order Details

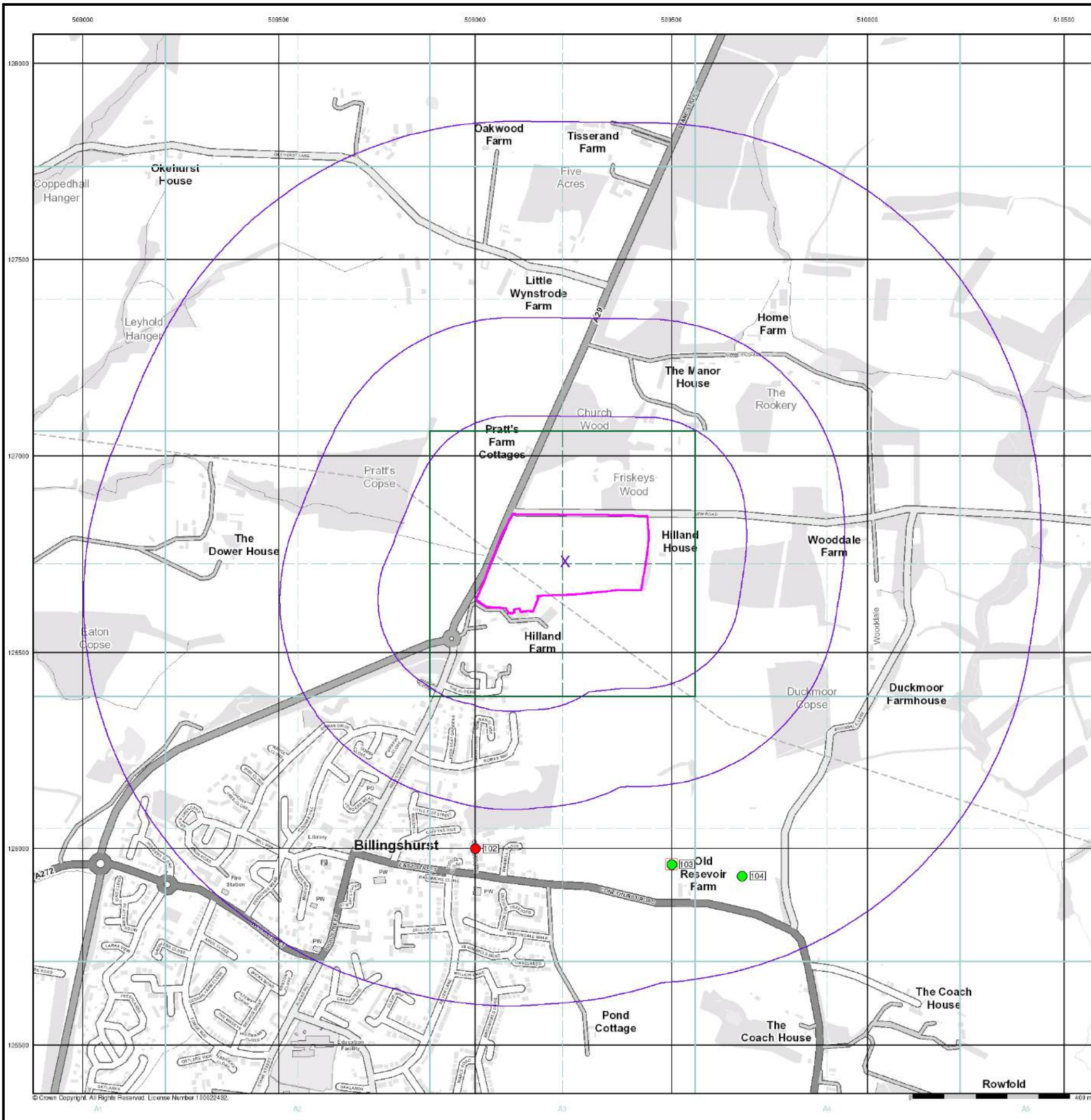
Order Number: 175723966_1_1
 Customer Ref: GE17451
 National Grid Reference: 509230, 126730
 Slice: A
 Site Area (Ha): 8.28
 Search Buffer (m): 1000

Site Details

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Geo-Environmental

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

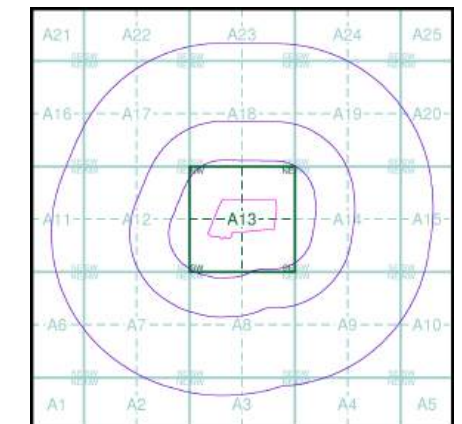
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



Order Details

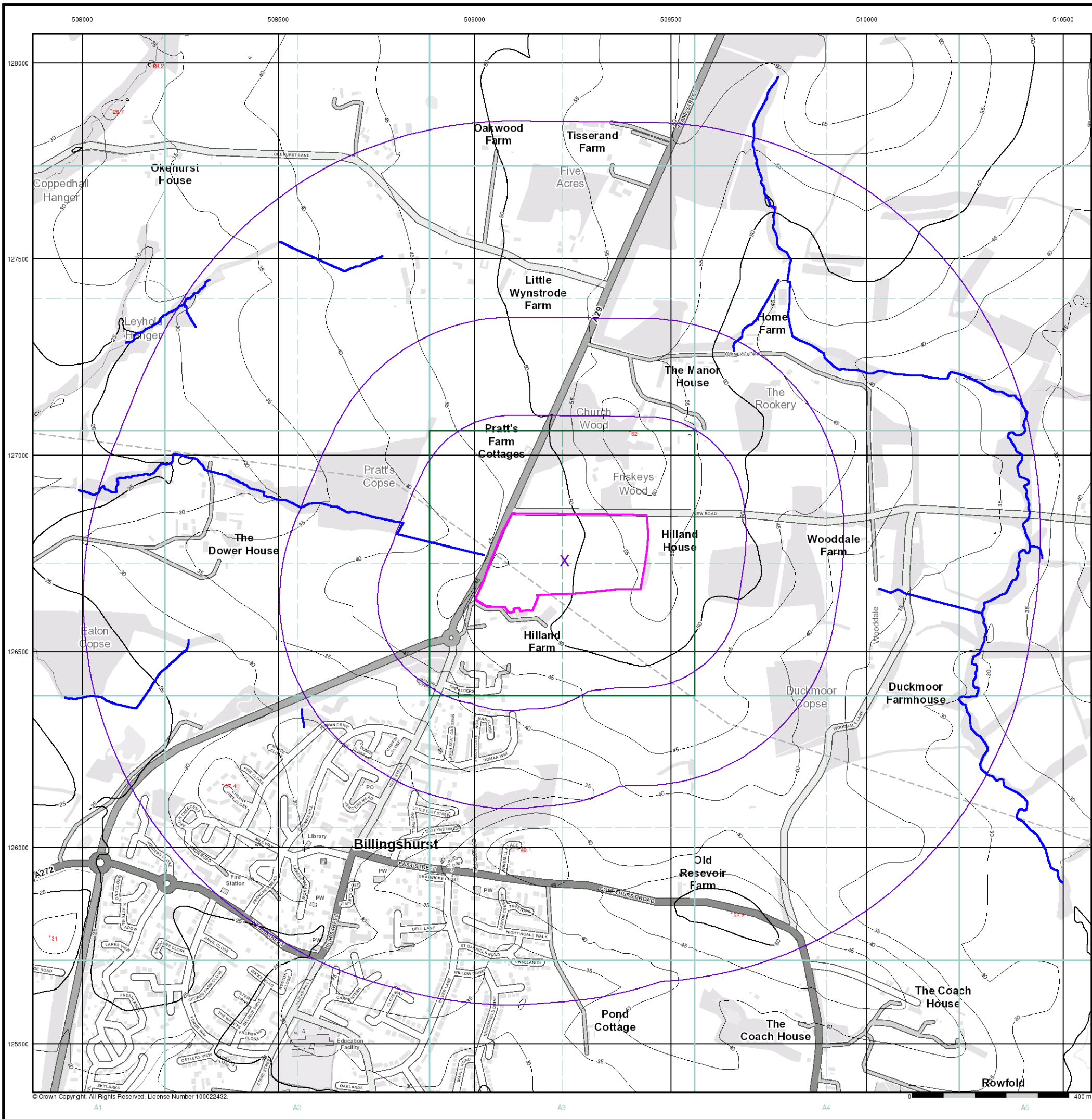
Order Number: 175723966_1_1
Customer Ref: GE17451
National Grid Reference: 509230, 126730
Slice: A
Site Area (Ha): 8.28
Search Buffer (m): 1000

Site Details

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Geo-Environmental

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

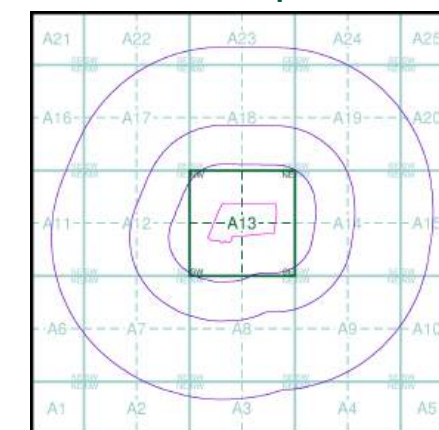
OS Water Network Data

- | | |
|--------------|-------------------------|
| Canal | Drain |
| Reservoir | Other |
| Foreshore | Lake |
| Marsh | Transfer |
| Tidal River | Lock Or Flight Of Locks |
| Inland River | Sea |

Contours (height in meters)

- Standard Contour 105 100 95
- Master Contour 105 100 95
- Spot Height 167.3
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



Order Details

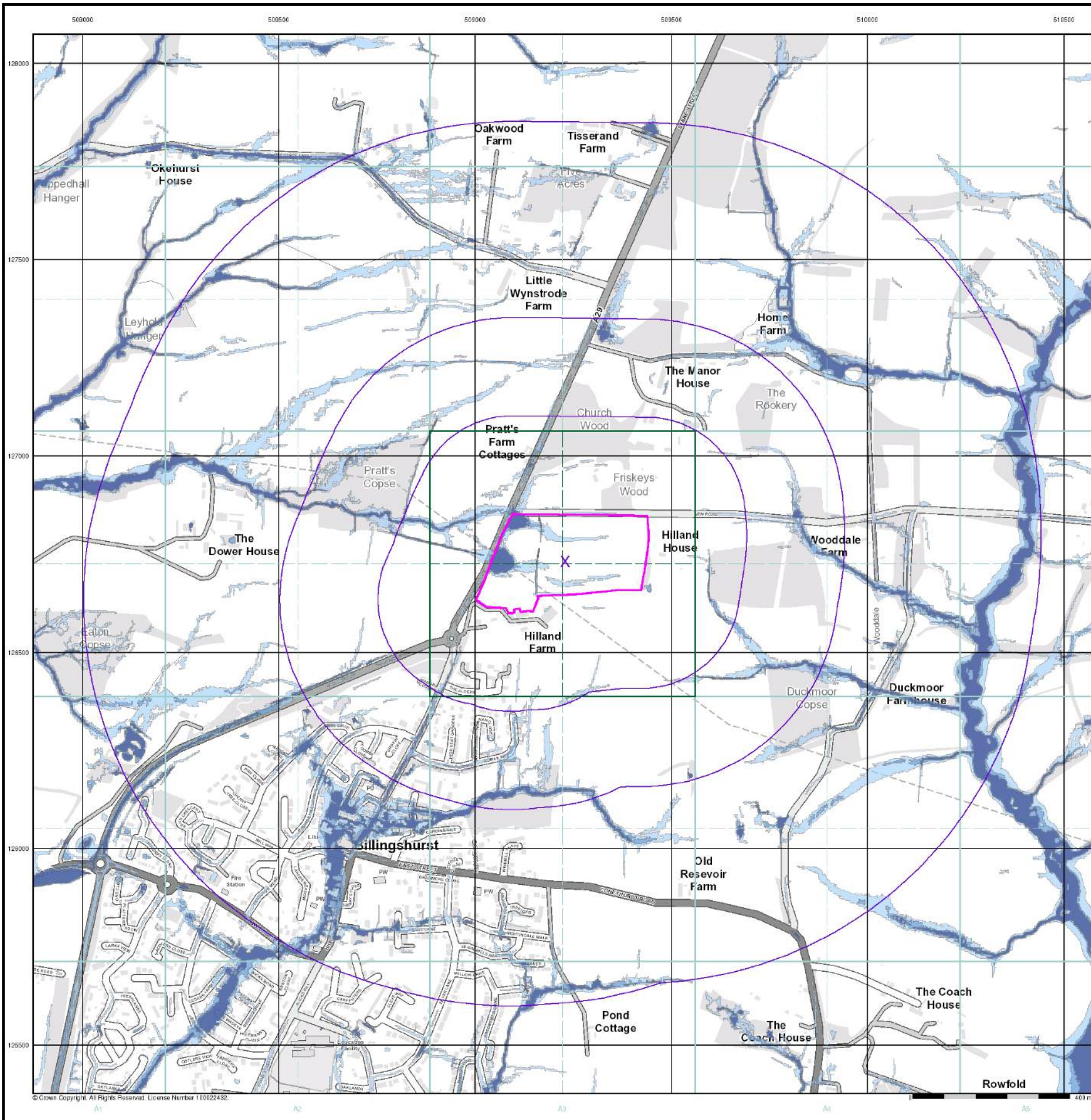
Order Number: 175723966_1_1
Customer Ref: GE17451
National Grid Reference: 509230, 126730
Slice: A
Site Area (Ha): 8.28
Search Buffer (m): 1000

Site Details

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Geo-Environmental

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Risk of Flooding from Surface Water

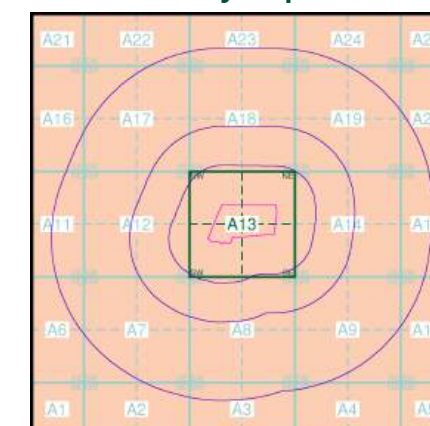
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EANRW Suitability Map - Slice A



Order Details

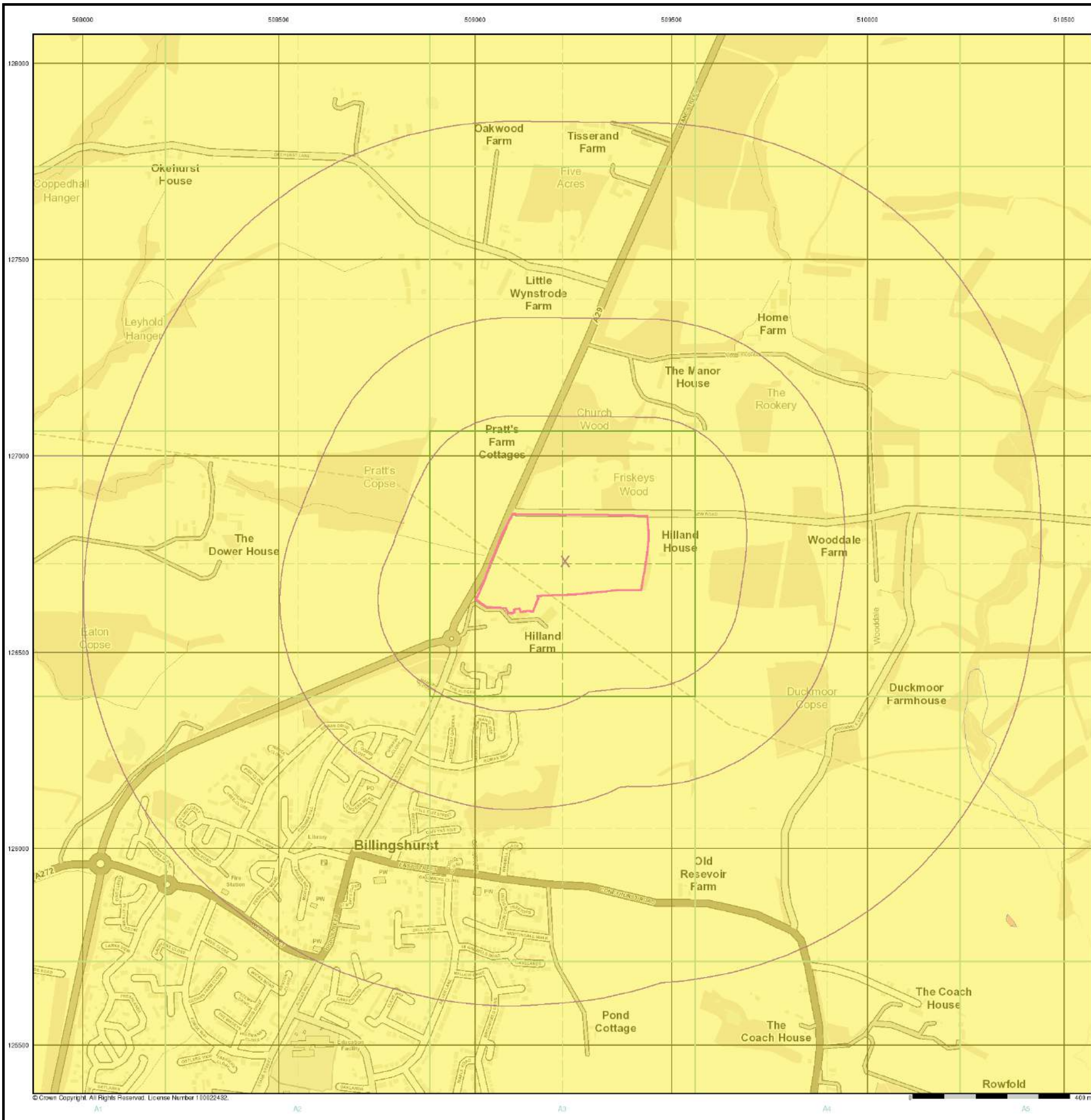
Order Number: 175723966_1_1
Customer Ref: GE17451
National Grid Reference: 509230, 126730
Slice: A
Site Area (Ha): 8.28
Search Buffer (m): 1000

Site Details

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Web: www.envirocheck.co.uk



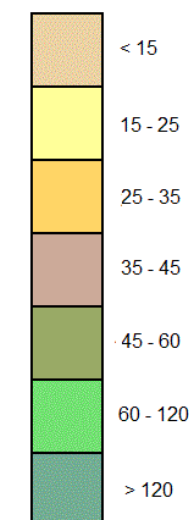
Geo-Environmental

General

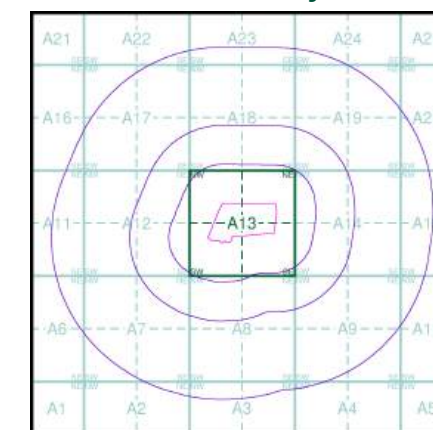
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice A



Order Details

Order Details: 175723966_1_1
Customer Ref: GE17451
National Grid Reference: 509230, 126730
Slice: A
Site Area (Ha): 8.28
Search Buffer (m): 1000

Site Details

Hilland Farm, Stane Street, BILLINGSHURST, RH14 9HN

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Fax: 0844 844 9951
Web: www.envirocheck.co.uk



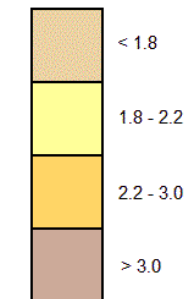
Geo-Environmental

General

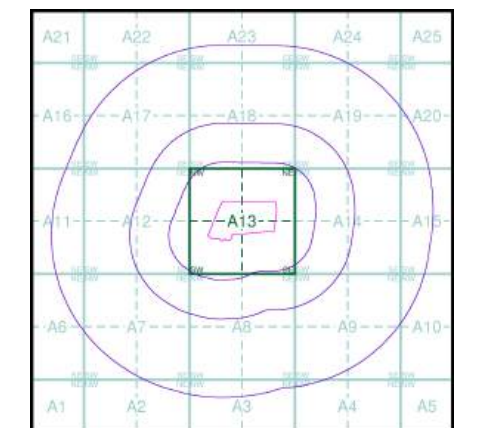
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A



Order Details

Order Details: 175723966_1_1
Customer Ref: GE17451
National Grid Reference: 509230, 126730
Slice: A
Site Area (Ha): 8.28
Search Buffer (m): 1000

Site Details

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INFORMATION GROUP

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Fax: 0844 844 9951
Web: www.envirocheck.co.uk



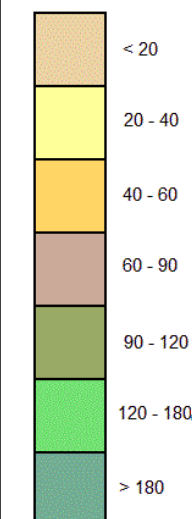
Geo-Environmental

General

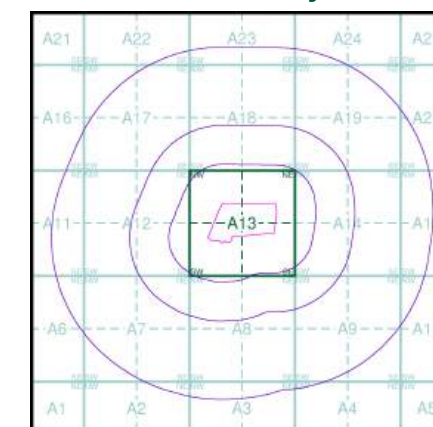
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice A



Order Details

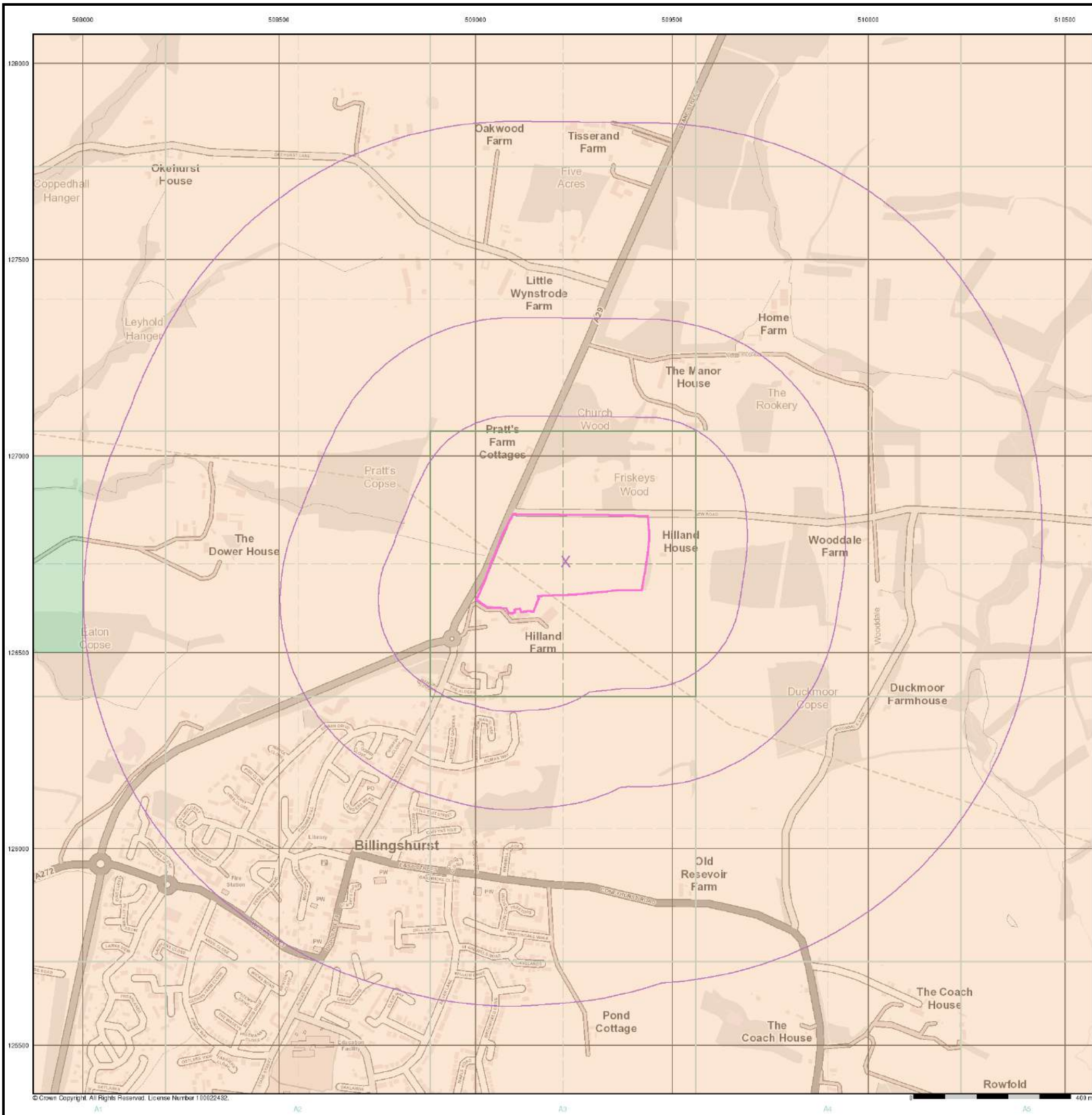
Order Details: 175723966_1_1
Customer Ref: GE17451
National Grid Reference: 509230, 126730
Slice: A
Site Area (Ha): 8.28
Search Buffer (m): 1000

Site Details

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Web: www.envirocheck.co.uk



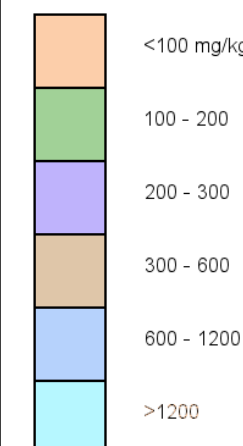
Geo-Environmental

General

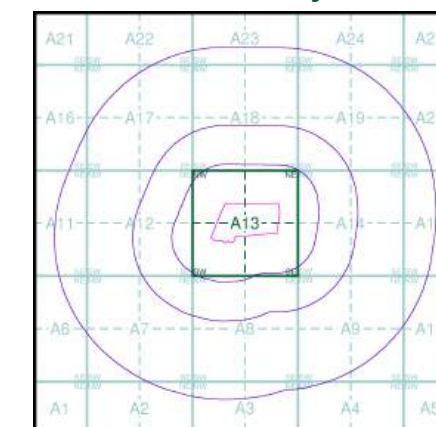
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A



Order Details

Order Details: 175723966_1_1
Customer Ref: GE17451
National Grid Reference: 509230, 126730
Slice: A
Site Area (Ha): 8.28
Search Buffer (m): 1000

Site Details

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Fax: 0844 844 9951
Web: www.envirocheck.co.uk



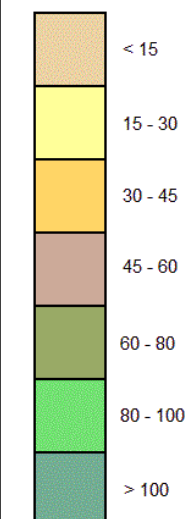
Geo-Environmental

General

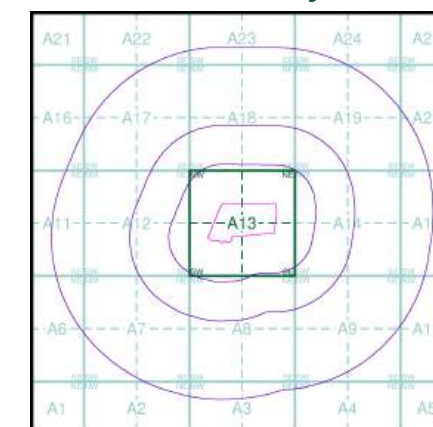
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A



Order Details

Order Details: 175723966_1_1
Customer Ref: GE17451
National Grid Reference: 509230, 126730
Slice: A
Site Area (Ha): 8.28
Search Buffer (m): 1000

Site Details

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Landmark
INFORMATION GROUP

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Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Geology 1:50,000 Maps Legends

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	AR2	Arun Terrace Deposits, 2 Member	Sand and Gravel	Not Supplied - Devensian
	AR3	Arun Terrace Deposits, 3 Member	Sand and Gravel	Not Supplied - Wolstonian
	AD2	River Terrace Deposits, 2 (Adur)	Sand and Gravel	Not Supplied - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WC	Weald Clay Formation	Sandstone	Not Supplied - Hauterivian
	WC	Weald Clay Formation	Mudstone	Not Supplied - Hauterivian
	WC	Weald Clay Formation	Limestone	Not Supplied - Hauterivian
		Faults		



Geo-Environmental

Geology 1:50,000 Maps

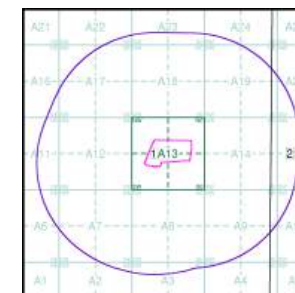
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	1	Map ID:	2
Map Sheet No:	301	Map Sheet No:	302
Map Name:	Haslemere	Map Name:	Horsham
Map Date:	1981	Map Date:	1972
Bedrock Geology:	Available	Bedrock Geology:	Available
Superficial Geology:	Available	Superficial Geology:	Available
Artificial Geology:	Not Available	Artificial Geology:	Available
Faults:	Not Supplied	Faults:	Not Supplied
Landslip:	Available	Landslip:	Available
Rock Segments:	Not Supplied	Rock Segments:	Not Supplied

Geology 1:50,000 Maps - Slice A



Order Details:

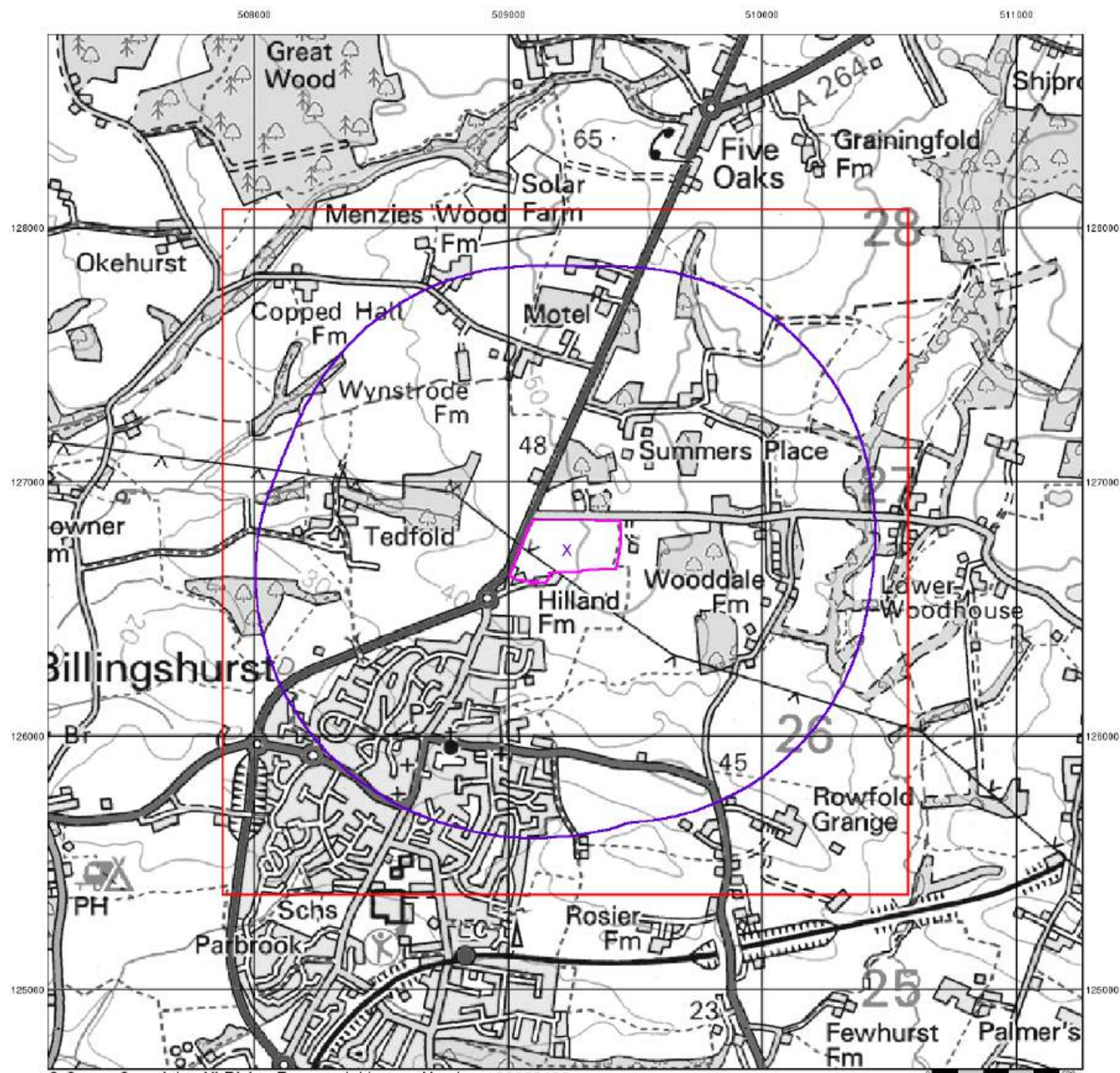
Order Number:	175723966_1_1
Customer Reference:	GE17451
National Grid Reference:	509230, 126730
Slice:	A
Site Area (Ha):	8.28
Search Buffer (m):	1000

Site Details:

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Geo-Environmental

Artificial Ground and Landslip

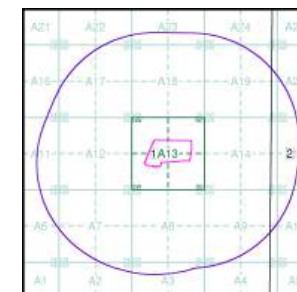
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



Order Details:

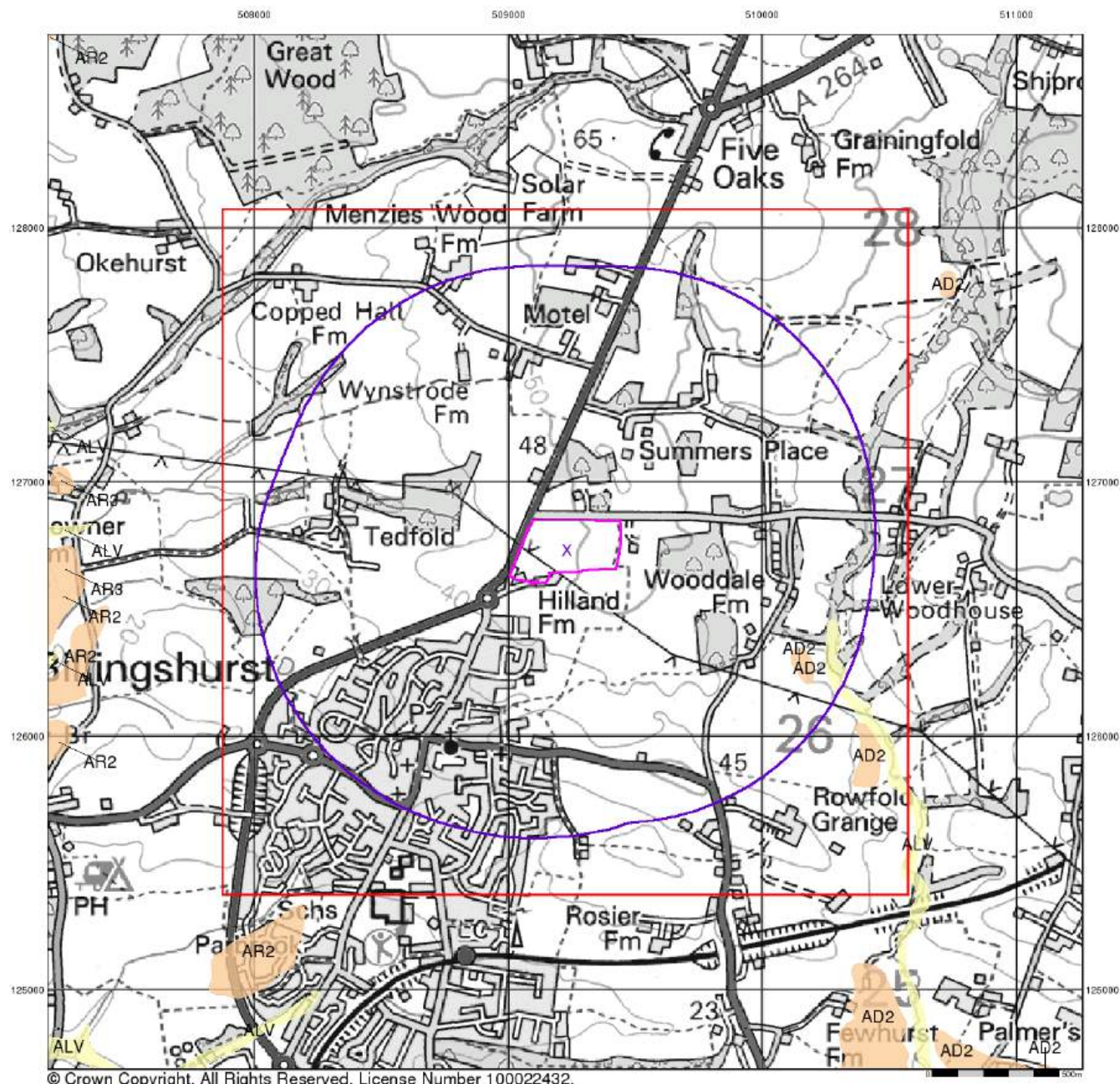
Order Number: 175723966_1_1
 Customer Reference: GE17451
 National Grid Reference: 509230, 126730
 Slice: A
 Site Area (Ha): 8.28
 Search Buffer (m): 1000

Site Details:

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Geo-Environmental

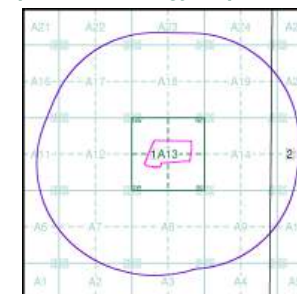
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



Order Details:

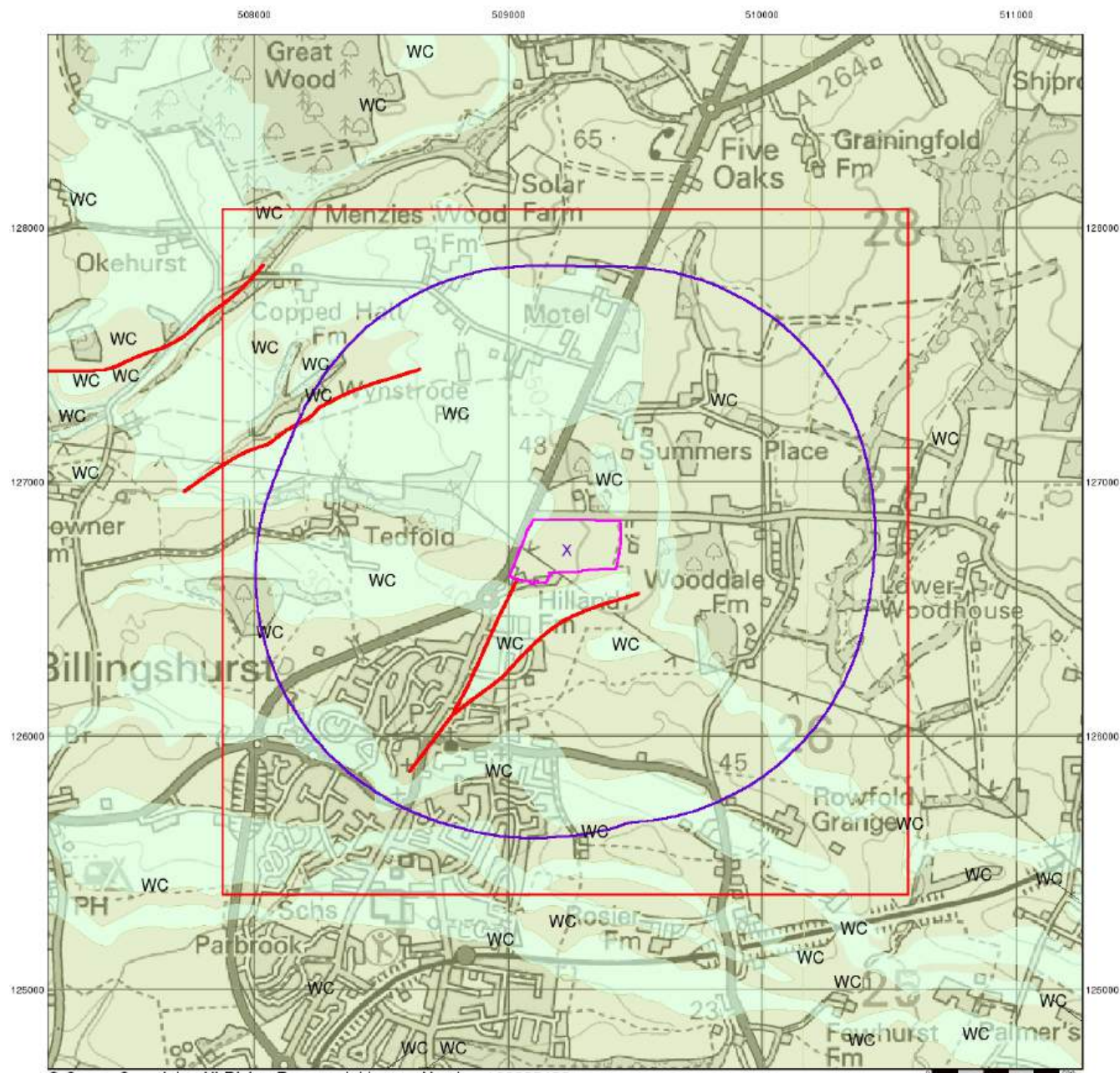
Order Number: 175723966_1_1
 Customer Reference: GE17451
 National Grid Reference: 509230, 126730
 Slice: A
 Site Area (Ha): 8.28
 Search Buffer (m): 1000

Site Details:

Hilland Farm, Stane Street, BILLINGSHURST, RH14 9HN

Landmark
 INFORMATION GROUP

Tel: 0844 844 9952
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Geo-Environmental

Bedrock and Faults

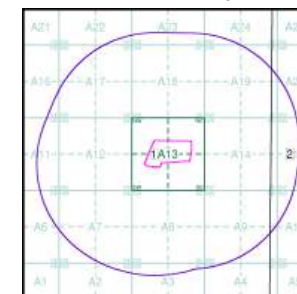
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



Order Details:

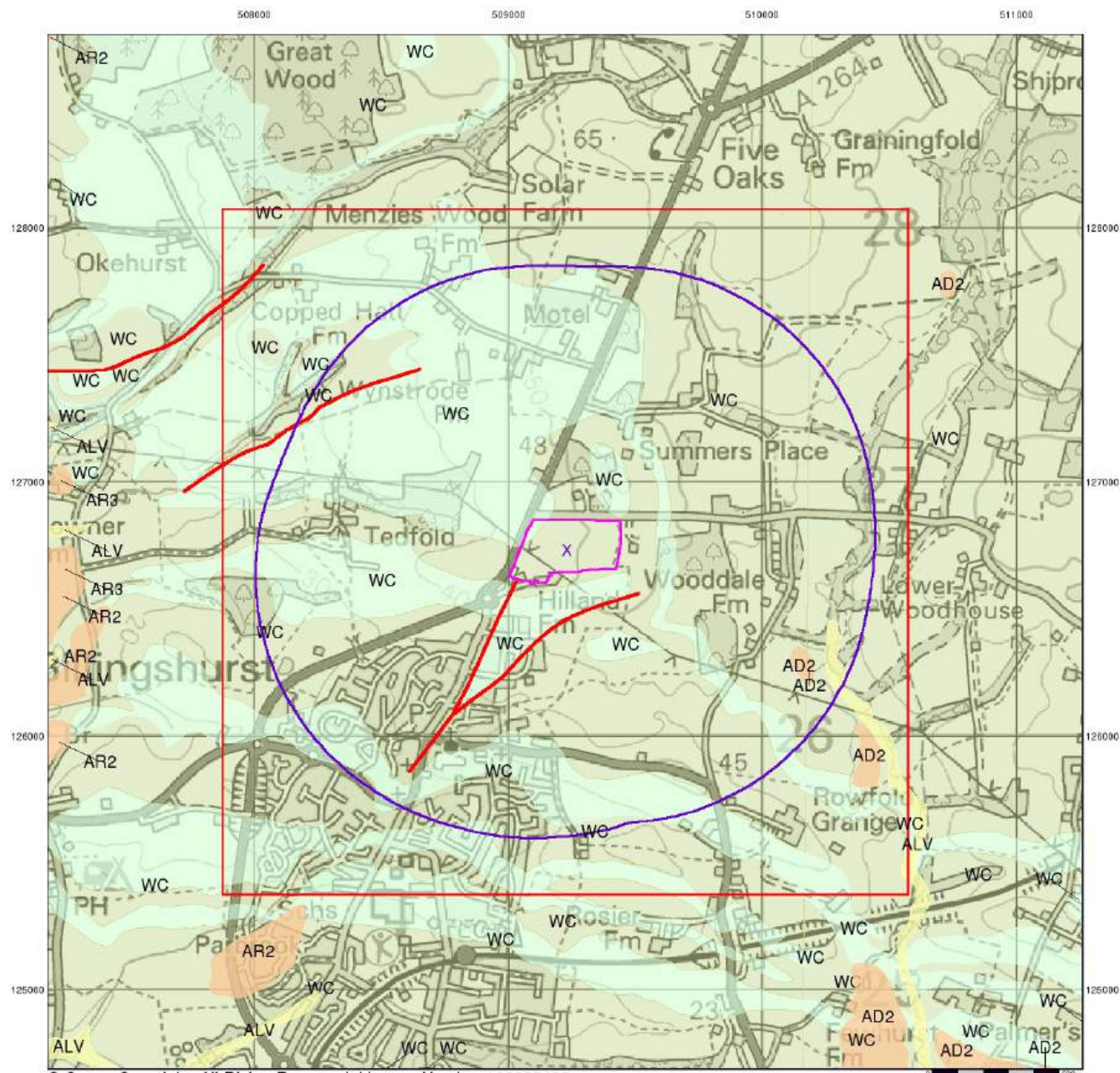
Order Number: 175723966_1_1
 Customer Reference: GE17451
 National Grid Reference: 509230, 126730
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Geo-Environmental

Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

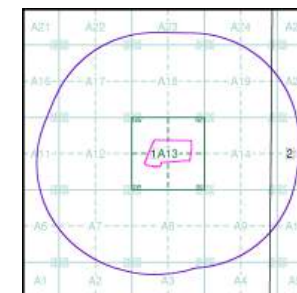
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A



Order Details:

Order Number: 175723966_1_1
Customer Reference: GE17451
National Grid Reference: 509230, 126730
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Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500

	Quarry		Gravel Pit		Sand Pit
	Clay Pit		Shingle		Refuse Heap
	Sloping Masonry		Flat Rock		
	Marsh		Reeds		Osiers
	Rough Pasture		Furze		Wood
	Mixed Wood		Brushwood		Orchard
	Fir		Ford		Stepping Stones
	Ferry		Waterfall		Lock
	Trig. Station		Altitude at Trig. Station		
	B.M. 325-9		Bench Mark		Surface Level
	Arrow denotes flow of water		Antiquities (site of)		
	Cutting		Embankment		
	Railway crossing Road		Level Crossing		Road crossing Railway
	Railway crossing River or Canal		Road over single stream		Road over River or Canal
	County Boundary (Geographical)		County & Civil Parish Boundary		Administrative County & Civil Parish Boundary
	County Borough Boundary (England)		County Burgh Boundary (Scotland)		
	Boundary Post or Stone		Police Call Box		
	Bridle Road		Pump		
	Electricity Pylon		Signal Post		
	Foot Bridge		Sluice		
	Foot Path		Spring		
	Guide Post or Board		Telephone Call Box		
	Mile Stone		Trough		
	Mooring Post or Ring		Well		

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250

	Inactive Quarry, Chalk Pit or Clay Pit		Active Quarry, Chalk Pit or Clay Pit
	Rock		Boulders
	Cliff		Slopes
	Roofed Building		Glazed Roof Building
	Sloping Masonry		Archway
	Non-Coniferous Tree (surveyed)		Coniferous Tree (surveyed)
	Non-Coniferous Trees (not surveyed)		Coniferous Trees (not surveyed)
	Orchard Tree		Scrub
	Coppice, Osier		Reeds
	Rough Grassland		Heath
	Direction of water flow		Bench Mark
	Cave Entrance		Triangulation Station
	Electricity Transmission Line		Electricity Pylon
	County Boundary (Geographical)		County & Civil Parish Boundary
	County Boundary		Boundary post/stone
	County Borough Boundary (England)		County Burgh Boundary (Scotland)
	London Borough Boundary		Symbol marking point where boundary mereing changes
	Beer House		Pillar, Pole or Post
	Boundary Post or Stone		Post Office
	Capstan, Crane		Public Convenience
	Chimney		Public House
	Drinking Fountain		Pump
	Electricity Pillar or Post		Signal Box or Bridge
	Fire Alarm Pillar		Signal Post or Light
	Foot Bridge		Spring
	Guide Post		Tank or Track
	Hydrant or Hydraulic		Telephone Call Box
	Level Crossing		Telephone Call Post
	Manhole		Trough
	Mile Post or Mooring Post		Water Point, Water Tap
	Mile Stone		Well
	Normal Tidal Limit		Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250

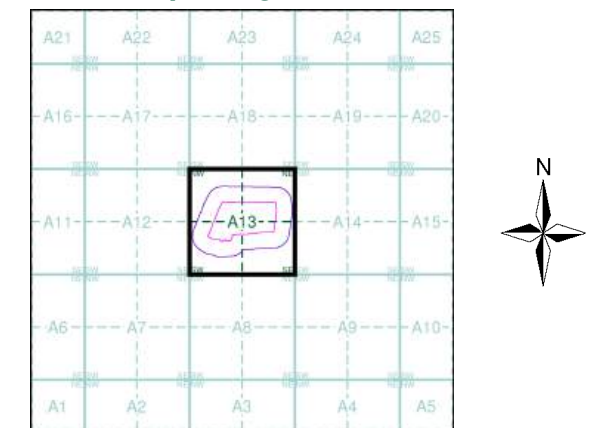
	Cliff		Slopes
	Rock		Rock (scattered)
	Boulders		Boulders (scattered)
	Positioned Boulder		Scree
	Non-Coniferous Tree (surveyed)		Coniferous Tree (surveyed)
	Non-Coniferous Trees (not surveyed)		Coniferous Trees (not surveyed)
	Orchard Tree		Scrub
	Coppice, Osier		Reeds
	Rough Grassland		Heath
	Direction of water flow		Triangulation Station
	Electricity Transmission Line		Electricity Pylon
	Bench Mark		Buildings with Building Seed
	Roofed Building		Glazed Roof Building
	Civil parish/community boundary		
	District boundary		
	County boundary		
	Boundary post/stone		
	Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)		
	Barracks		Pillar, Pole or Post
	Battery		Post Office
	Cemetery		Public Convenience
	Chimney		Pump
	Cistern		Pumping Station
	Dismantled Railway		Place of Worship
	Electricity Generating Station		Sewage Pumping Station
	Electricity Pole, Pillar		Signal Box or Bridge
	Electricity Sub Station		Signal Post or Light
	Filter Bed		Spring
	Fountain / Drinking Ftn.		Tank or Track
	Gas Valve Compound		Trough
	Gas Governor		Wind Pump
	Guide Post		Water Point, Water Tap
	Manhole		Works (building or area)
	Mile Post or Mile Stone		Well



Geo-Environmental Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Sussex	1:2,500	1876	2
Sussex	1:2,500	1897	3
Sussex	1:2,500	1911 - 1912	4
Sussex	1:2,500	1939	5
Ordnance Survey Plan	1:2,500	1971 - 1972	6
Supply of Unpublished Survey Information	1:2,500	1973	7
Supply of Unpublished Survey Information	1:2,500	1974	8
Additional SIMs	1:2,500	1977	9
Additional SIMs	1:2,500	1991	10
Large-Scale National Grid Data	1:2,500	1993	11
Large-Scale National Grid Data	1:2,500	1996	12
Large-Scale National Grid Data	1:2,500	1996	13
Historical Aerial Photography	1:2,500	1999	14

Historical Map - Segment A13



Order Details

Order Number: 175723966_1_1
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Slice: A
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