



GROUND INVESTIGATION LAND OFF KING'S BARN LANE STEYNING

Prepared for: Richborough Estates Limited

ASL Report No. 288-20-087-10R1

September 2021

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GROUND INVESTIGATION LAND OFF KING'S BARN LANE STEYNING

1 INTRODUCTION

In December 2020, ASL were instructed by Richborough Estates Limited to undertake the necessary ground investigation and consultancy services associated with the proposed development of the site known as Land off King's Barn Lane, Steyning.

A ground investigation is required in order to determine the contaminative and geotechnical properties of the ground conditions at the site ahead of its proposed development. It is understood that the proposed development comprises the construction of approximately 240 residential dwellings with associated areas of hardstanding for access and parking and soft landscaping for gardens together with areas of public open space including sustainable drainage features. A Proposed Illustrative Masterplan is presented in Appendix I.

ASL has previously completed a Permeability Testing Letter Report (letter report reference 288-17-087-2501, dated 11th February 2021) for the site to determine the permeability of the ground conditions at the site. ASL have also undertaken a Desk Study Report (report reference 288-20-87-11, dated October 2020). This report assessed the potential for environmental and geotechnical risk issues and liabilities pertaining to the future development of the site. Based on the findings of the desk study it was recommended that an intrusive ground investigation was completed ahead of any development works to determine the founding properties of the underlying ground conditions and to determine the actual contaminative status of the site. It was also recommended that the intrusive investigation should include an assessment of hazardous ground gas.

The scope of works for this project was set out in ASL's proposal reference 288-20-087.elo.3543, dated 14th January 2021 which was formally accepted by Richborough Estates Limited and confirmed by email from ASL dated 15th January 2021.

This report presents the results from the previous and current intrusive investigations and subsequent laboratory analyses and interpretative comment in terms of contaminative status and the geotechnical properties of the ground conditions encountered at the site in relation to the proposed development. This report should be read in conjunction with ASL's Permeability Testing Letter Report and Desk Study Report.

This report has been prepared for the sole benefit of the client, Richborough Estates Limited and their representatives and agents. The report has been written based on the results of data searches and ground conditions encountered at the time of the

investigation and the results of subsequent analyses and monitoring. Future changes in legislation and advances in current best practises or provision of more detailed design proposals will result in this report requiring review and possible further assessment after the date of issue. The general notes section within this report should be noted in relation to the limitations of this investigation and assessment.



2 THE SITE

The site is located to the north and west of King's Barn Lane, to the east of Steyning Bypass, to the south of an unnamed roadway and to the north-east of the village of Steyning. The site can be located approximately by National Grid Reference TQ184115 as presented as Figure 1.

The site comprises an irregularly shaped piece of land with maximum dimensions of approximately 570m by 330m and the long axis aligned approximately east to west.

The site topography varies across the site. The high point of the site is in the south-west formed by a small rise surrounded by downward slopes with the steepest slopes extending to the north-western boundary from this point. The remainder of the site is undulating with various changes in elevation and sloping ground including a hollow located centrally in the east of the site that may be the low point of the site.

The site boundary is locally not physically marked in the south-west with this area open to further agricultural land used for grazing horses. The remainder of the south-western boundary is generally marked by wooden post and wire mesh fencing. The south-eastern boundary is marked by various wooden fencing and locally hedgerows associated with residential dwellings to the south.

The site is bound to the west by Steyning Bypass and residential dwellings, to the north by undeveloped open space, electrical substations centrally and in the north-east and a sewage pumping station, to the east by King's Barn Lane with agricultural land and a farm beyond, to the south and south-east by residential dwellings and to the south-west by Glebe Farm. The sewage pumping station comprises a two storey brick walled and sloping tiled roofed structure. This structure has an overhead power supply from the electrical substation to the north-east. A shipping container is located in the south-east corner of the pumping station compound that appears to be a backup generator.

At the time of the intrusive works portions of the site, particularly existing access points and routes, were noted to be very wet and soft, with areas of standing water also locally present across the site.

The general site layout is presented as Figure 2.

It is understood that the proposed development comprises the construction of approximately 240 residential dwellings with associated areas of hardstanding for access and parking and soft landscaping for gardens together with areas of public open space including sustainable drainage features. A Proposed Illustrative Masterplan is presented in Appendix I.



3 ENVIRONMENTAL SETTING

The British Geological Survey (BGS) Sheets No. 318 and 333 – Brighton and Worthing (Solid and Drift) and the Geology of Britain Viewer indicates the east and locally the central portion of the site to be directly underlain by drift deposits of the 2nd River Terrace Deposits. The 2nd River Terrace Deposits are generally described as ‘Sand and gravel, flint, chalk and sandstone, with silt and clay’ by the BGS. The thickness of the 2nd River Terrace Deposits is not defined by the BGS in the vicinity of the site, but this stratum is expected to be of limited thickness. From here on the 2nd River Terrace Deposits will be referred to as River Terrace Deposits.

The majority of the central portion of the site is indicated to be directly underlain by drift deposits comprising Head. The Head deposits are generally described as ‘variable deposits of sandy, silty clay, locally gravelly; chalky and flinty in dry chalk valleys’ by the BGS. The thickness of the Head is not defined by the BGS in the vicinity of the site, but this stratum is expected to be of limited thickness.

The remainder of the site in the west is indicated to be devoid of drift deposits.

Solid geology comprising the Upper Greensand Formation is indicated to locally subcrop beneath the River Terrace Deposits located centrally and outcrop at the surface in the south-west. The Upper Greensand Formation is generally described as ‘Siltstone to very fine grained sandstone, bioturbated, pale greenish yellow mottled grey’ by the BGS. The thickness of the Upper Greensand Formation is indicated to be up to 36m thick by the BGS in the vicinity of the site.

The remaining drift deposits, the Upper Greensand Formation and the remainder of the site in the west are indicated to be underlain by solid geology comprising the Gault Formation. The Gault Formation is generally described as ‘Mudstone, stiff, shelly, glauconitic, micaceous and with seams of phosphatic nodule in part. Yellow when weathered becomes dark blueish grey with depth’ by the BGS. The thickness of the Gault Formation is indicated to be between 65m and 105m thick by the BGS in the vicinity of the site.

Further drift deposits comprising Alluvium are indicated to be present at the surface directly to the north and north-west of the site and may locally encroach onto the site. The Alluvium is generally described as ‘Normally soft to firm consolidated, compressible silty clay, but can contain layers of silt, sand, peat and basal gravel. A stronger, desiccated surface zone may be present’ by the BGS. The thickness of the Alluvium is not defined by the BGS in the vicinity of the site.

Further solid geology comprising the West Melbury Marly Chalk Formation is indicated to be present overlying the Upper Greensand Formation to the south of the site and may locally encroach onto site. The West Melbury Marly Chalk Formation is generally described as ‘Chalk, marly with fossiliferous limestone, pale grey. Glauconitic Marl Member at base’ by the BGS. The thickness of the West Melbury Marly Chalk Formation is indicated to be between 30m to 35m thick by the BGS in the vicinity of the site. However, if present at the site, this stratum is anticipated to be of limited thickness.

In addition to the published geology, it is expected that Topsoil will be present at the surface given the current use of the site. Made Ground is also anticipated in the vicinity of existing structures and services. Made Ground materials may also be present in the north-east of the site where reprofiling works and/or excavation works appear to have been completed.



ASL has completed limited investigation works across the north of the site and locally within the central portion of the site as part of the permeability testing assessment undertaken for the site. The findings of this investigation are presented in ASL's Permeability Testing Letter Report. This investigation identified the ground conditions to comprise a limited thickness of Topsoil and Made Ground (Topsoil) typically overlying cohesive materials considered to represent solid geology of the Gault Formation. Cohesive materials considered to represent Possible Head were locally encountered in the central north of the site, with these materials present to depths between 1.4m and 3.45m. Where proven the Head materials were underlain by cohesive materials of the Gault Formation.

The site is located in an area that may not be affected by coal mining and at unlikely risk from non-coal mining activities. There are no BGS recorded mineral sites located within 0.5km of the site.

The environmental database search indicates the site is in an area where new developments or extensions do not require radon protection measures.

The nearest surface water feature is an unnamed stream located on the north-western boundary of the site. It is understood that this stream flows north into the Black Sewer located approximately 110m to the north. Numerous further unnamed streams or drains are located within the vicinity of the site. These surface water features appear to generally discharge to the River Adur located approximately 305m to the east.

There are no abstractions from surface water within 1.0km of the site.

The site is not indicated to be susceptible to extreme flooding from rivers or seas without defences. However, areas at risk from extreme flooding are located directly to the north and north-east.

The south of the site is locally indicated to be at low risk of flooding from surface water. The north-west and north-east of the site is locally indicated to be at low to medium risk of flooding from surface water and the west of the site is locally indicated to be at low to high risk of flooding from surface water.

The River Terrace Deposits and Alluvium are both classified by the EA as a Secondary Aquifers – A.

The Head is classified by the EA as a Secondary Aquifer – Undifferentiated.

The Gault Formation is classified by the EA as an Unproductive Strata.

The Upper Greensand Formation and the West Melbury Marly Chalk Formation are classified by the EA as Principal Aquifers.

There are no abstractions from groundwater located within 1.0km of the site and the site is not indicated to be located in a Source Protection Zone (SPZ).

The central southern portion of the site is locally indicated to have limited potential for groundwater flooding to occur. The majority of the eastern and central portions of the site are indicated to have the potential for groundwater flooding of property situated below ground level to occur. The south-west, north-east and central northern portions of the site are indicated to have the potential for groundwater flooding to occur at the surface.



4 GROUND INVESTIGATION AND TESTING

4.1 Ground Investigation

The scope of works was defined for the project by ASL and comprised thirty windowless sample boreholes, one hand excavated trial pit and eight insitu dynamic cone penetrometer (DCP) CBR tests. The intrusive investigation was designed to target the location of the proposed development and to give general site coverage to obtain information relating to the contaminative status of the site and the geotechnical properties of the underlying ground conditions. The positions of exploratory holes have been surveyed and plotted approximately on Figure 2.

The ground investigation was carried out in general accordance with BS5930 (2015) 'Code of Practice for Site Investigations' and BS10175+A2:2017 'Code of Practice for the Investigation of Potentially Contaminated Sites' and in accordance with current best practice.

The scope of works for the ground investigation was as follows:

- 30 No. windowless sample boreholes (WS) to a maximum depth of approximately 8.45m bgl;
- 1 No. hand excavated trial pits (HP) to a depth of approximately 1m bgl;
- Insitu standard penetration tests (SPT) at regular intervals within all WS;
- Installation of combined gas and groundwater monitoring standpipes in selected WS;
- 8 No. insitu CBR tests completed by Dynamic Cone Penetration (DCP);
- Chemical and geotechnical laboratory testing;
- Gas and groundwater monitoring programme.

The ground investigation was undertaken between the 1st and 8th February 2021. The intrusive investigation was supervised by a suitably experienced geo-environmental engineer from ASL. The exploratory holes were logged by the supervising engineer and the logs are presented in Appendix II.

4.2 Gas and Groundwater Monitoring

A gas and groundwater monitoring programme comprising three monitoring events was completed between 8th and 23rd March 2021. The monitoring events comprise level measurements of methane, oxygen, carbon dioxide, carbon monoxide, hydrogen sulphide, relative and atmospheric pressure, gas flow rate and groundwater level.

The results of the gas and groundwater level monitoring are presented in Appendix II.

4.3 Chemical Laboratory Testing

Selected soil samples were scheduled for chemical testing for a range of contaminants in order to determine the general contaminative status of conditions on the site.

The samples were scheduled for chemical laboratory testing for the following determinants:

Arsenic, Boron (water soluble), Beryllium, Cadmium, Chromium (total and VI), Copper, Cyanide (free and total) Lead, Mercury, Nickel, Selenium, Vanadium, Zinc, Poly-cyclic Aromatic Hydrocarbons (PAH), Total Petroleum Hydrocarbons (TPH), pH, Phenols, Sulphate (soluble), Total



Sulphur, Total Sulphate, fraction of organic carbon, Asbestos Presence and ID (Made and Topsoil only).

Selected soil samples were scheduled for the following determinants in leachate:

Arsenic, Boron, Beryllium, Cadmium, Calcium, Chromium (total and hexavalent), Copper, Cyanide (free and total), Dissolved Organic Carbon, Lead, Mercury, Nickel, Selenium, Vanadium, Zinc and pH.

The chemical testing is being undertaken by a UKAS accredited laboratory in accordance with the MCERTS accreditation where available.

The results of the chemical laboratory testing are presented in Appendix III.

4.4 Geotechnical Laboratory Testing

Geotechnical laboratory testing was completed on selected soil samples. The samples have been scheduled for Moisture Content and Atterberg Limit testing to assess the volume change potential and for pH and sulphate testing to assess the concrete classification for the proposed development.

The results of the geotechnical laboratory testing are presented in Appendix IV.



5 GROUND, GROUNDWATER AND GAS CONDITIONS

5.1 Materials Encountered

The published geology provided by the BGS indicates the east and locally the central portion of the site to be directly underlain by drift deposits of the 2nd River Terrace Deposits with the majority of the central portion of the site is indicated to be directly underlain by drift deposits comprising Head. The drift deposits across the central and eastern portions of the site and the north-west of the site are indicated to be underlain by solid geology of the Gault Formation. The south-western portion of the site is indicated to be underlain by solid geology of the Upper Greensand Formation, which is indicated to overlie the Gault Formation.

The intrusive investigation generally confirmed the published geology with drift deposits encountered across the majority of the central and eastern portions of the site. The drift deposits have been found to be typically cohesive in nature and are therefore considered to be more characteristic of Head deposits. These materials will therefore be referred to as Possible Head from here on.

The Possible Head deposits were encountered to depths between approximately 1m and 3.45m bgl.

The Possible Head deposits and the remainder of the site were found to be underlain by cohesive materials considered to represent solid geology of the Gault Formation, with these materials present to the termination depth of the investigation at 8.45m bgl.

Materials considered to represent solid geology of the Upper Greensand Formation were not encountered during the intrusive investigations.

In addition to the published geology, the current and previous intrusive investigations identified a limited thickness of Topsoil and Made Ground (Topsoil) at the surface across the site locally overlying subsoil type materials.

Table 3 presents a summary of the ground conditions encountered during the intrusive investigations. Full details of the conditions encountered are presented on the exploratory hole logs in Appendix II.

Table 1 Summary of Strata Encountered

Description	Top of Unit (m bgl)		Thickness of Unit (m)		SPT 'N' Value
	Min	Max	Min	Max	
Topsoil Soft to stiff brown locally slightly gravelly slightly sandy CLAY with frequent rootlets. Gravel is angular to rounded fine to coarse quartzite, sandstone, flint, limestone, chalk, calcareous nodules and mudstone; Firm to stiff brown slightly sandy to sandy CLAY with frequent rootlets;	0.00	0.00	0.30	1.00	None Taken
Made Ground (Topsoil) Firm brown slightly sandy, locally slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint, quartzite, brick, charcoal and chalk;	0.00	0.00	0.35	0.50	None Taken
Subsoil Firm brown slightly sandy CLAY;	0.50	0.50	0.50	0.50	None Taken

Description	Top of Unit (m bgl)		Thickness of Unit (m)		SPT 'N' Value
	Min	Max	Min	Max	
Possible Head Firm light brown slightly sandy CLAY with occasional subangular fine to coarse gravel of flint; Firm to stiff brown, grey brown, light brown and orange brown locally slightly gravelly to gravelly slightly sandy to sandy CLAY locally with rare flint cobbles. Gravel is subangular to subrounded fine to coarse of flint, chalk, calcareous nodules, limestone, quartzite and sandstone; Loose to medium dense orange brown and light brown locally slightly clayey to very clayey SAND. Locally with rare subangular fine to coarse gravel of flint; Firm orange brown very sandy CLAY; Stiff to very stiff grey brown slightly sandy CLAY;	0.30	1.00	0.40	3.05*	5 – 10
Gault Formation Firm, locally soft, becoming stiff to very stiff with depth light brown and grey brown locally mottled white and orange brown slightly sandy locally sandy locally CLAY. Locally with occasional to frequent angular to subangular fine to coarse gravel of mudstone lithorelicts and rare calcareous nodules; Stiff to very stiff brown, light brown, grey and grey brown locally silty CLAY. Locally with rare to frequent subangular fine to coarse mudstone lithorelicts;	0.35	3.40	0.60*	8.05*	5 - >50

Notes: * = Base not proven

Fourteen SPTs were completed within typically cohesive and locally granular materials interpreted as Possible Head that recorded SPT 'N' values of between 5 and 10 indicating typically low to medium strength cohesive materials and locally loose to medium dense granular materials.

One hundred and fifty-two SPTs were completed within the cohesive materials interpreted as the Gault Formation that recorded SPT 'N' values of between 5 and >50, with SPT 'N' typically increasing with depth indicating generally medium strength and locally low strength cohesive materials becoming high to very high strength materials with depth.

The SPT results are plotted versus depth on Figure 4.

Two samples of cohesive materials interpreted as Possible Head recovered from depths of 0.60m and 2.6m bgl and six samples of the Gault Formation materials recovered from depths between 0.60m and 1.60m bgl were scheduled for Atterberg Limit determinations.

The results of Atterberg limit testing indicate the Possible Head materials tested comprise clays of very high plasticity with liquid limits of 73% and 76%, plastic limits of 20% and 32% and plasticity indices of 41% and 56% indicating the material tested to be of high volume change potential. Natural moisture contents of 23% and 49% were recorded for the materials tested.

The results indicate the Gault Formation materials tested comprise clays of high to very plasticity with liquid limits of between 69% and 77%, plastic limits of between 23% and 33% and plasticity indices of between 37% and 53% indicating the material tested to be of high and locally medium volume change potential. Natural moisture contents of between 28% and 52% were recorded for the materials tested.

The results of the Atterberg limit testing indicate that the Possible Head and Gault Formation materials are locally in a state of potential desiccation.



The results of the geotechnical laboratory analysis are presented in full in Appendix IV.

5.3 Dynamic Cone Penetration Testing

Eight DCP tests were completed at the site. The results generally recorded CBR values between approximately 2% and 49% between ground level and approximately 0.9m bgl.

Full details are presented in Appendix II.

5.4 Permeability Testing

As part of the previous phase of investigation, falling head permeability tests were completed at WS101A, WS101B, WS102 to WS107, WS109 and WS110. The tests were completed within cohesive Possible Head and Gault Formation materials.

Positive infiltration was not recorded for the falling head permeability tests completed at WS101A, WS101B, WS105, WS106 and WS109.

The results of the falling head permeability tests undertaken at the remaining borehole installations recorded positive infiltration rates of between $3.12 \times 10^{-10} \text{m/s}$ and $2.95 \times 10^{-8} \text{m/s}$ at WS104 and WS110, respectively.

The results of the permeability testing are presented in full in Appendix II.

5.5 Groundwater

During the intrusive investigation groundwater was only encountered at WS8 and WS9 at 4m bgl, WS25 at 3m bgl and HP1 at 0.6m bgl.

During the subsequent monitoring programme, groundwater was monitored within all of the monitoring installations, with the exception of WS1 and WS21, at depths between 1.51 and 2.95m bgl at WS8 and WS10.

Full details are presented in Appendix II.

5.6 Gas

As part of the monitoring programme below ground gas levels within monitoring standpipes were measured during three events completed between 8th and 23rd March 2021. The results are presented in full in Appendix II.

Methane and hydrogen sulphide were not recorded in excess of the relevant analytical detection limits of the apparatus used during the monitoring programme.

Carbon monoxide was not recorded in excess of the relevant analytical detection limits of the apparatus used during the monitoring programme, with the exception of WS4 during the third monitoring event where a concentration of 1ppm was recorded.

Carbon dioxide was recorded in excess of the analytical detection limits of the apparatus used at all of the monitoring installations during the monitoring programme at concentrations between 0.1% and 5.2% v/v. Concentrations in excess of 5% were recorded at WS1 only during the second and third monitoring events.



Oxygen was recorded above the analytical detection limits of the apparatus used at all monitoring installations during the monitoring programme at concentrations between 2.6% and 20.4% v/v at WS17 and WS20, respectively.

Average downhole pressures and average flow rates were recorded as zero during the monitoring programme.

The monitoring events were completed during periods of higher atmospheric pressure of between 1022mb and 1033mb.



6 GEOTECHNICAL ASSESSMENT

6.1 General

It is understood that the proposed development comprises the construction of approximately 240 residential dwellings with associated areas of hardstanding for access and parking and soft landscaping for gardens together with areas of public open space including sustainable drainage features. A Proposed Illustrative Masterplan is presented in Appendix I.

Across the central and eastern portions of the site typically cohesive materials considered to represent Possible Head deposits have been found to depths of between approximately 1m and 3.5m bgl.

The Possible Head deposits and the remainder of the site were found to be underlain by cohesive materials considered to represent solid geology of the Gault Formation, with these materials present to the termination depth of the investigation at 8.45m bgl.

6.3 Foundation Assessment

Due to their inconsistency and variability the Made Ground (Topsoil), Topsoil and subsoil, materials are not considered a suitable founding stratum in their current condition.

Based on the findings of the intrusive investigation, it is considered that traditional strip or pad foundations could be adopted across the central portion of the site and placed within the Possible Head or Gault Formation materials at a minimum depth of approximately 1.0m bgl (assuming foundations are located outside the zone of influence of existing or proposed planting) and designed to a net allowable bearing pressure of 75kN/m² to limit total settlements to 25mm and differential settlements to acceptable levels.

Across the remainder of the site, it is considered that traditional strip or pad foundations could be adopted within the Possible Head or Gault Formation materials at a minimum depth of approximately 1.0m bgl (assuming foundations are located outside the zone of influence of existing or proposed planting) and designed to a net allowable bearing pressure of 100kN/m² to limit total settlements to 25mm and differential settlements to acceptable levels.

Foundations should be locally deepened through any Made Ground or any soft, loose or otherwise unsuitable materials and placed a minimum of 150mm into the founding stratum.

The extent of areas where different allowable bearing pressures should be adopted is presented as Figure 5 of this report.

Plasticity index results indicate the Possible Head and Gault Formation materials to be typically of high volume change potential. Therefore, where foundations are within the influencing distance of existing or proposed trees, foundations may need to be locally deepened in accordance with NHBC guidelines for high volume change potential soils.

Where foundations span across varying strata, i.e. granular and cohesive materials, such footings could be subject to differential settlement potentially leading to structural distress. Consideration should be given to inclusion of appropriate mesh reinforcement to foundations to span across the interface between different strata types extending at least



1m either side of the interface. This should reduce the potential for differential settlement to occur.

It is understood that existing below ground drainage and service infrastructure is present beneath the site. It is recommended that the exact location and depth of this infrastructure is confirmed to determine any constraints it may pose to the proposed development.

The environmental database indicates the site to be located in an area indicated to have a significant soluble rock risk. It is assumed that the identified risk is associated with chalk strata indicated to be present to the south-west of the site. The published geological information indicates the chalk strata to overlie the Upper Greensand Formation and Gault Formation materials and will therefore not be present beneath the site.

Therefore, based on the findings of the intrusive investigation and the nature of the underlying ground conditions the risk posed from the presence of soluble rock beneath the site is considered to be negligible.

6.4 Floor Slabs

Due to the presence of shallow cohesive strata, it is recommended that suspended floor slabs, with suitable floor voids for high volume change potential soils are adopted for the proposed development.

6.5 Earthworks

Due to the topography of the site, it is considered that reprofiling works may be locally undertaken as part of the proposed development. In addition, it is understood that reprofiling works are likely to be required in the west of the site associated with the construction of a new traffic island and access road.

It is recommended that any significant reprofiling works should be undertaken in accordance with an appropriate earthworks specification and that further investigation and laboratory testing may be required to determine the suitability of the onsite materials for use within earthworks.

Based on the nature of the materials encountered, it is considered that the Possible Head and Gault Formation materials would be suitable for re-use as general cohesive fill. However, the Made Ground (Topsoil), Topsoil and subsoil materials are not considered to be suitable for reuse within earthworks.

Should earthworks be required at the site, further laboratory analysis of the actual materials to be used will be required to confirm their material properties.

6.6 Road Pavements

The results of in-situ DCP CBR testing recorded CBR values between approximately 2% and 49% between ground level and approximately 0.9m bgl, with results within the underlying natural Possible Head and Gault Formation materials typically recorded in excess of 3%.

For the basis of design of any areas of hardstandings or road pavements a design CBR value of 3% could be adopted where formation level lies within the natural Possible Head



or Gault Formation materials following the removal of any Topsoil or otherwise unsuitable materials and suitable preparation of the formation layer.

It should be noted that the formation should be proof rolled and any 'soft' spots removed and replaced with suitable fill. The formation is likely to deteriorate if left uncovered and therefore the road should be constructed within a short time frame after stripping of superficial materials or a protective layer should be left in place. The natural strata at formation level may be frost susceptible and suitable precautions should be included.

6.7 Excavations

Excavation of the materials encountered on site is likely to be achieved using conventional plant, however, should any obstructions be encountered in the ground at shallow depths, the use of pneumatic/hydraulic breakout equipment may be required, particularly within confined excavations.

Due to the lower oxygen levels locally recorded as part of the monitoring undertaken at the site, it is advised that monitoring of atmospheric gas concentrations is undertaken for all works within excavations where man entry is required.

6.8 Dewatering

During the intrusive investigation groundwater was only encountered at WS8 and WS9 at 4m bgl, WS25 at 3m bgl and HP1 at 0.6m bgl. During the subsequent monitoring programme, groundwater was monitored within all of the monitoring installations, with the exception of WS1 and WS21, at depths between 1.51 and 2.95m bgl at WS8 and WS10.

It is therefore considered that significant groundwater issues are unlikely to occur within shallow excavations associated with the proposed development. However, where inflows occur within excavations it is considered these should be sufficiently controlled by conventional sump pumping techniques.

It is considered that very localised instability and spalling of excavations may occur where groundwater is encountered in conjunction with the presence of granular materials.

6.9 Buried Concrete Classification

Based on the results of chemical laboratory testing undertaken on samples recovered Made Ground (Topsoil), Topsoil, Possible Head and Gault Formation materials from across the site it is considered that a Design Sulphate Class "DS-1" and an Aggressive Chemical Environment for Concrete (ACEC) site classification "AC-1" should be adopted for all concrete placed within the ground.

6.10 Gas Protection Measures

The gas monitoring results indicate gas conditions corresponding to a Hazardous Gas Flow (HGF) of <0.07l/hr indicating Characteristic Situation 1 (CS1) characterised as very low potential hazard. However, carbon dioxide has been recorded in excess of 5% at WS1 during the second and third monitoring event with a maximum recorded concentration of 5.2%.

Therefore, based on the results of the ground gas monitoring and the nature of the ground conditions encountered at the site, gas protection measures are generally not required for the proposed development to be protective of carbon dioxide and methane.



However, based on the results of the ground gas monitoring, it is recommended that gas protection measures to CS2 (characterised low potential hazard) are incorporated into the proposed development in the vicinity of WS1, located centrally in the west of the site. The extent of the recommended gas protection measures is presented on Figure 6.

The design and installation of the gas protection measures should be carried out in accordance with BS8485. It is recommended that the installation of the gas membrane should be carried out by specialist membrane installers and should be appropriately verified and validated in accordance with CIRIA C735 and current industry standards.

This conclusion should be agreed with the relevant regulatory authorities prior to the commencement of development works to confirm that the assessment completed meets with their requirements and further monitoring to verify these results is not required.

The site is indicated to be in a lower probability radon area and that no radon protective measures are required in the construction of new homes or extensions.

6.11 Drainage Design and Surface Water Management

As part of the previous phase of investigation falling head permeability tests were completed at WS101A, WS101B, WS102 to WS107, WS109 and WS110. The tests were completed within cohesive Possible Head and Gault Formation materials.

Positive infiltration was not recorded for the falling head permeability tests undertaken at WS101A, WS101B, WS105, WS106 and WS109.

The results of the falling head permeability tests undertaken at the remaining borehole installations recorded positive infiltration rates of between $3.12 \times 10^{-10} \text{m/s}$ and $2.95 \times 10^{-8} \text{m/s}$ at WS104 and WS110, respectively.

The results of the permeability testing are presented in full in Appendix II.

Based on the results of the falling head permeability tests and the cohesive nature of the underlying ground conditions, it is considered that the use of shallow soakaways or other infiltration drainage systems is unlikely to be feasible for the site.

It is recommended that the advice of a specialist drainage engineer is sought with regards to the design and installation of any drainage systems which may form part of the proposed development.



7 CONTAMINATION ASSESSMENT – HUMAN HEALTH

7.1 Introduction

The results of the chemical laboratory testing undertaken on selected soil samples (see Section 4.3), have been compared where possible to the relevant industry guidance as detailed in the following section.

Defra have published Development of Category 4 Screening Levels (C4SL) for Assessment of Land Affected by Contamination (document reference SP1010, dated 20th December 2013). This document includes proposed C4SL for six contaminants of concern. In March 2014, it was agreed that the C4SL could be used as part of the planning process. The chemical laboratory test results have therefore been compared where relevant to the C4SL. The C4SL have been derived based on the proposed end use of the site. In this instance an end use of 'residential with plant uptake' has been considered the most appropriate. Should the proposed development at the site change the potential risk posed by the identified contamination should be reviewed.

It is noted that the C4SL for benzo(a)pyrene has been derived as a surrogate marker for all genotoxic PAH species including this determinant assuming the assessed site investigation data conforms with the Culp et al 2010 assessment. The remaining genotoxic PAH species included in the priority 16 PAH suite of analysis are benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, chrysene, dibenzo(ah)anthracene and indeno(123cd)pyrene. An assessment of the site investigation data has been completed and shown the site investigation data to conform with the upper and lower limits from Culp 2010 assessment and therefore assessment criteria are not considered necessary for these determinants and benzo(a)pyrene may be used as a surrogate marker.

C4SLs have not been provided for the full range of determinants assessed as part of this contamination assessment. Further Generic Assessment Criteria (GAC) in accordance with this guidance are currently in production. Contaminated Land Exposure Assessment (CLEA) guidance to assess the risk to human health (Document References SC050021/SR2, SC050021/SR3, SC050021/SR4 and SC050021/SR7) is available. GAC for the relevant contaminants of concern included in this report have been derived in accordance with this CLEA guidance and spreadsheet Version 1.06. These criteria are considered to remain appropriate as C4SL are proposed to be more pragmatic whilst still highly precautionary when compared to the previously published guidance and associated SGVs. The GAC in this report are therefore considered to be conservative and define a lower level of risk in consideration of the potential risk to human health when compared to the current guidance and C4SL. The derived GAC are presented in Appendix V.

Laboratory data at the site recorded a result of approximately 3.70% for soil organic matter calculated using fraction of organic carbon results. The GAC for the site are therefore calculated assuming 3.70% SOM.

7.2 Chemical Test Results - Soils

The results of the chemical laboratory testing undertaken on the selected soil samples are summarised in Table 2. Only those determinants recorded in excess of their relevant laboratory detection limits are assessed here.

At tier 1, TPH (C10-C40) is assessed using the GAC for the aromatic TPH fraction >C10-C12. This GAC is selected as it is the most stringent of the TPH species.



The chemical test results on soil are presented in full in Appendix III.

Table 2 Summary of Soils Data with Respect to Human Health (Tier 1)

Contaminants	Max Conc. (mg/kg)	Defra C4SL mg/kg (Residential with plant uptake)	CLEA Derived GAC mg/kg (Residential with plant uptake)	No. of Tests
Arsenic	13	37 (0)	-	15
Beryllium	1.1	-	87.3 (0)	15
Boron	3.1	-	113 (0)	15
Chromium	29	-	1110 (0)	15
Copper	34	-	2310 (0)	15
Lead	60	200 (0)	-	15
Nickel	62	-	127 (0)	15
Vanadium	38	-	275 (0)	15
Zinc	74	-	3100 (0)	15
TPH (C10-C40)	70	-	150 (0)	15
Benzo(a)pyrene	0.53	5.0 (0)	-	15
Fluoranthene	1.2	-	561 (0)	15
Pyrene	0.97	-	1280 (0)	15

Note: 1. Number in brackets represents the number of results above guideline values.

In addition to the determinants summarised in Table 2, asbestos was analysed for in seven samples of the Made Ground (Topsoil) materials. Asbestos was not identified in any of the soil samples analysed. No further assessment of the potential risk to human health from asbestos present in soils is considered necessary.

None of the contaminants of concern summarised in Table 3 are identified in excess of their relevant screening criteria. No further assessment of the potential risk to human health from the recorded concentrations of contaminants of concern is considered necessary. No remediation to be protective of human health is considered necessary.

However, it is recommended that the chemical laboratory test results within this report should be forwarded to the mains water service provider to ensure that their requirements for service line construction are satisfied.



8 CONTAMINATION ASSESSMENT – CONTROLLED WATERS

8.1 Introduction

To assess the potential risk to controlled waters from the recorded concentrations in soils, the use of leachability is generally used to determine contaminant mobility within the ground with the results of these tests compared to the determinants respective environmental quality standards (EQS) or other applicable standards such as UK drinking water standards (DWS). As both surface water and groundwater have been identified as potentially at risk, the most stringent of either the relevant DWS or EQS is used in this assessment. When determining the relevant criteria for copper, nickel and zinc, site specific Predicted No Effect Concentrations (PNEC) are derived using the Water Frame Works Directive Metal Bioavailability Tool (M-BAT). For organic determinants, the use of leachability is not considered reliable. These determinants are assessed using half the inert WAC criteria. Exceedances of these criterion are considered to require further assessment.

8.2 Summary of Results - Soils

Table 3 presents a summary of the screening criteria compared with the recorded concentrations of determinants at the site. Only those determinants recorded in excess of their relevant laboratory detection limits are assessed here.

The chemical test results are presented in full in Appendix III.

Table 3 Summary of Soils Data with Respect to Controlled Waters (Tier 1)

Determinant	Max Conc. (mg/l)	Tier 1 Value (mg/l)	No. of Exceedances
Arsenic	0.0026	0.01	0 (8)
Beryllium	0.0004	0.004	0 (8)
Boron	0.028	1	0 (8)
Chromium	0.003	0.05	0 (8)
Copper	0.037	0.028	2 (8)
Lead	0.0042	0.0072	0 (8)
Nickel	0.0066	0.023	0 (8)
Vanadium	0.0024	0.06	0 (8)
Zinc	0.015	0.036	0 (8)
TPH (C10-C40)	70	250	0 (15)
PAH total	4.97	50	0 (15)

Notes 1. Numbers in brackets denote the number of tests undertaken.
2. Organic determinant concentrations in mg/kg.

Copper has been recorded marginally in excess of its relevant PNEC in two samples of the Made Ground (Topsoil) materials analysed from WS3 and WS21. The Made Ground (Topsoil) materials are considered to be derived from the underlying natural soils as these materials were only noted to include occasional fragments of brick gravel. It is therefore considered that the identified concentrations are likely to be indicative of naturally occurring regional geochemistry and are therefore unlikely to pose a significant risk to the identified surface water receptor.

None of the remaining contaminants of concern are recorded in excess of the relevant Tier 1 screening criteria. No further assessment of the potential risk to controlled waters is considered necessary. No remediation of soils to be protective of controlled waters is considered necessary.



9 WASTE DISPOSAL

Based on the results of the laboratory analysis completed, the Made Ground (Topsoil) and Topsoil materials may be classified as non-hazardous in terms of disposal and should be considered as such until further testing is completed to prove otherwise.

Based on the results of the laboratory analysis completed, the underlying Possible Head and Gault Formation materials may be classified as non-hazardous in terms of disposal and should be considered as such until further testing is completed to prove otherwise. It is anticipated that these materials may be classified as inert subject to the completion of appropriate laboratory analysis including WAC testing.

Prior to disposal, the characteristics of any excavated soils will need final classification in consultation with the relevant waste disposal facility and further testing and analysis may be required on the actual materials requiring off-site disposal.



10 DISCOVERY STRATEGY

This investigation has not identified areas of significant contamination that pose a significant potential risk to human health or controlled waters. However, there is the potential for potentially contaminated materials, differing ground conditions or buried structures to be present at the site between exploratory hole locations. Should any of these conditions be identified during the development works, ASL should be contacted immediately to allow further assessment to be completed to ensure the identified critical receptors are not at risk.

This assessment may take the form of additional intrusive investigation, sampling and laboratory analyses subject to the nature of the conditions encountered.



11 FURTHER WORKS

Due to the topography of the site, reprofiling works will locally be undertaken as part of the proposed development. In addition, it is understood that reprofiling works are likely to be required in the west of the site associated with the construction of a new traffic island and access road.

Therefore, further investigation and laboratory testing may be required within areas of proposed reprofiling to determine the suitability of the onsite materials for use within earthworks. It is recommended that these works are undertaken once detailed development proposals are available for the site, including finished ground levels.

It is considered that any further investigation is likely to comprise a series of trial pits and boreholes together with the completion of appropriate laboratory testing to provide geotechnical parameters to assist with earthworks design and specification.



12 CONCLUSIONS AND RECOMMENDATIONS

A ground investigation has been completed at the site, to characterise the ground and groundwater conditions. A geotechnical and environmental assessment has been completed based on the results of these investigations. The conclusions of this assessment are summarised as follows:

Traditional strip or pad foundations could be adopted across the central portion of the site and placed within the Possible Head or Gault Formation materials at a minimum depth of approximately 1m bgl (assuming foundations are located outside the zone of influence of existing or proposed planting) and designed to a net allowable bearing pressure of 75kN/m² to limit total settlements to 25mm and differential settlements to acceptable levels.

Across the remainder of the site, it is considered that traditional strip or pad foundations could be adopted within the Possible Head or Gault Formation materials at a minimum depth of approximately 1m bgl (assuming foundations are located outside the zone of influence of existing or proposed planting) and designed to a net allowable bearing pressure of 100kN/m².

The extent of areas where different allowable bearing pressures should be adopted is presented as Figure 5 of this report.

Foundations should be locally deepened through any Made Ground or any soft, loose or otherwise unsuitable materials and placed a minimum of 150mm into the founding stratum.

Where foundations are within the influencing distance of existing or proposed trees, foundations may need to be locally deepened in accordance with NHBC guidelines for high volume change potential soils.

Where foundations span across varying strata, consideration should be given to inclusion of appropriate mesh reinforcement to reduce the potential for differential settlement to occur.

It is recommended that suspended floor slabs, with suitable floor voids for high volume change potential soils are adopted for the proposed development.

Due to the topography of the site, it is considered that limited reprofiling works may be undertaken as part of the proposed development. It is recommended that any significant reprofiling works should be undertaken in accordance with an appropriate earthworks specification and that further investigation and laboratory testing may be required to determine the suitability of the on-site materials for use within earthworks.

A design CBR value of 3% could be adopted within the natural strata following the removal of any Topsoil or otherwise unsuitable materials and suitable preparation of the formation layer. The natural strata at formation level may be frost susceptible and suitable precautions should be included.

A Design Sulphate Class “DS-1” and an ACEC site classification “AC-1” should be adopted for all concrete placed within the ground.

Based on the results of the ground gas monitoring and the nature of the ground conditions encountered at the site, it is recommended that gas protection measures to CS2 are only



incorporated into the proposed development in the vicinity of WS1, located centrally in the west of the site. The extent of the recommended gas protection measures is presented on Figure 6. The gas protection measures should be designed, installed and verified in accordance with current guidance and best practice. This conclusion should be agreed with the relevant regulatory authorities prior to the commencement of development works to confirm that the assessment completed meets with their requirements and further monitoring to verify these results is not required.

Based on the results of the falling head permeability tests and the cohesive nature of the underlying ground conditions, it is considered that the use of shallow soakaways or other infiltration drainage systems is unlikely to be feasible for the site.

The contamination assessment has not identified a potential risk to the identified controlled waters or human health receptors. No further assessment of the potential risk to the identified critical receptors is considered necessary. No remediation of soils to be protective of the identified critical receptors is considered necessary.

It is recommended that the chemical laboratory test results within this report should be forwarded to the mains water service provider to ensure that their requirements for service line construction are satisfied.

The Made Ground, Made Ground (Topsoil) and Topsoil materials may be classified as non-hazardous in terms of disposal and should be considered as such until further testing is completed to prove otherwise.

The underlaying natural materials may be classified as non-hazardous in terms of disposal. It is anticipated that these materials may be classified as inert subject to the completion of appropriate laboratory analysis including WAC testing.



REFERENCES

ASL 'Desk Study Report, Land off King's Barn Lane, Steyning', report ref. 288-20-087-11, dated October 2020

ASL 'Permeability Testing Letter Report, Land off King's Barn Lane, Steyning', letter report ref. 288-20-087.2501, dated 11th February 2021

BGS Map Sheet No. 318 and 333 – Brighton and Worthing, Solid and Drift. 1:50 000 scale
BGS Geoindex

DEFRA R&D Publication CLR 11 "Model Procedures for the Management of Land Contamination" dated September 2004.

DEFRA R&D Publication CLR 12 "A Quality Approach for Contaminated Land Consultancy" dated 1997.

www.environment-agency.gov.uk

Department of the Environment Industry Profiles

BS5930:2015 "Code of Practice for Site Investigation"

BS10175+A2:2017 'Investigation of Potentially Contaminated Sites - Code of Practice'

BS1377 "Method of Tests for Soils for Civil Engineering Purposes" : 1991

Environment Agency's Publication 'Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources' R&D Publication 20

Environment Agency's 'Remedial Targets Worksheet, Release 3.1' (October 2007)

Concrete – Complementary British Standards to BS EN 206-1 Part 1: Method of specifying and guidance for the specifier (BS 8500-1:2006)

Concrete – Complementary British Standard to BS EN 206-1 – Part 2: Specification for constituent materials and concrete (BS 8500-2:2006)

Total Petroleum Hydrocarbon Criteria Working Group Series Volume 3 and 4, 1997

Human health toxicological assessment of contaminants in soil (Report Reference SC050021/SR2, dated January 2009);

Updated technical background to the CLEA model (Report Reference SC050021/SR3, dated January 2009);

CLEA Software (Version 1.05) Handbook (Report Reference SC050021/SR4, dated January 2009);

Compilation of Data for Priority Organic Pollutants for Derivation of Soil Guideline Values (Report Reference SC050021/SR7, dated November 2008).

BS8485 'Code of practice for the characterisation and remediation from ground gas in affected developments', 2019

NHBC Standards 2020



GENERAL NOTES

The interpretation made in this report is based on the information obtained during the course of the desk study and ground investigation. It should be appreciated that any desk study information is not necessarily exhaustive and that further information relevant to the site and its proposed usage may be available. There may be conditions present on the site that have not been revealed by the ground investigation which as a result have not been addressed within this report.

The accuracy of any map extracts cannot be guaranteed and it should be recognised that different conditions on site may have existed between and subsequent to the various map surveys.

The qualitative assessment of risk presented in this report presents an assessment of potential pollutant linkages between sources, pathways and receptors. A level of risk is attributed to these linkages. However a low or insignificant risk does not imply that elevated concentrations of various determinants are not present on the site when compared to background or 'greenfield' conditions.

The level of risk attributed is based on a number of factors and the interpretation of this risk may be applied in a different manner for a different end use or environmental setting. The presence of contaminants may be assessed in alternative ways by institutional bodies regardless of whether an apparent risk is present based on the identified pollutant linkages in this assessment.

This report may express an opinion on possible configurations of strata underlying the site between or beyond the exploratory holes or on the possible presence of features based on either visual, verbal or published evidence, this is for guidance only and no liability can be accepted for its accuracy.

Comments made on ground conditions are based on the observations made at the time of the investigation works. It should be noted that groundwater levels may vary due to seasonal fluctuation or other factors. Observations made with respect to below ground gas concentrations may also vary due to seasonal factors and atmospheric conditions.

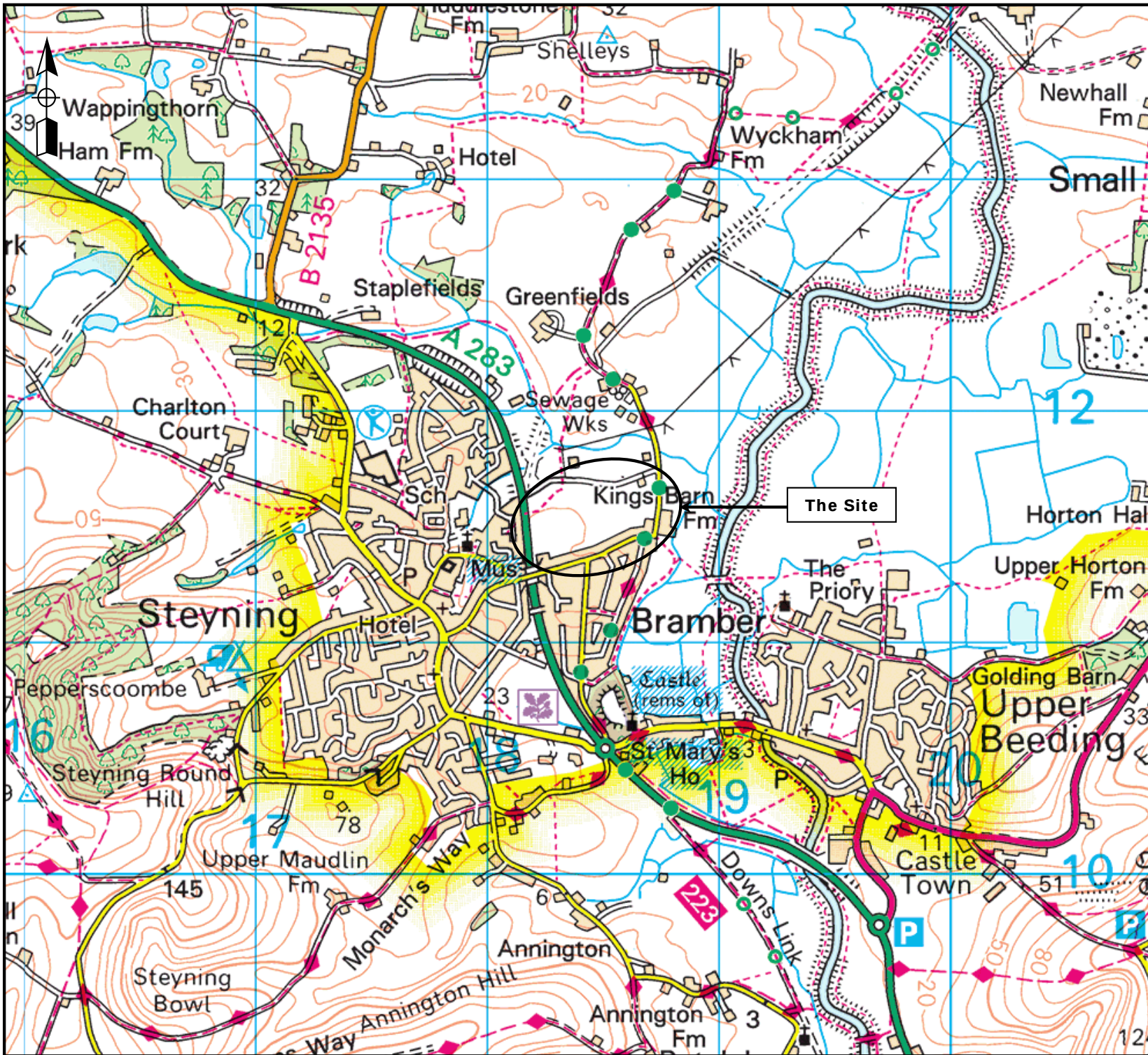
This report has been prepared in relation to the proposed development as detailed herein. Should the nature of the development change following the submission of this report a re-assessment of the conditions recorded on the site may be necessary.

This report may not be used in the assessment of the conditions at any site other than the site described herein

This report has been prepared for the sole use of the client and the client's agents and advisors in relation to the proposed development as detailed herein. The issue of this report to third parties not involved in the proposed development as described herein is not permitted without the prior permission being received in writing by ASL. Reproduction of this report to include all figures, drawings and appendices is prohibited without the prior written consent of ASL.



FIGURES



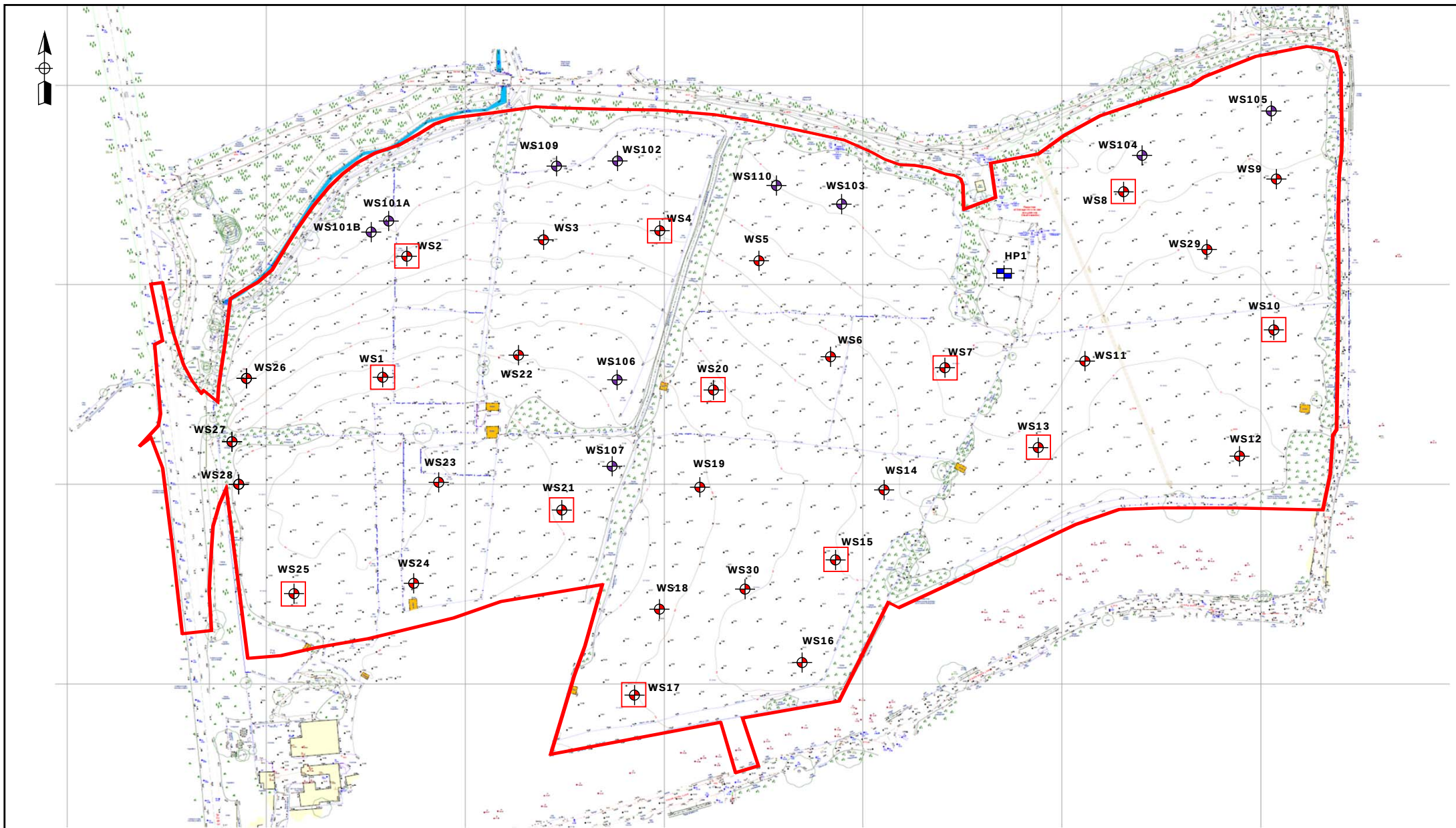
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OS Map Sheet No. 198 Brighton & Lewes, 1:50,000
Scale, dated 2016

Drawing No.	Figure 1
Drawing Name	Site Layout Plan
Project	Land off King's Barn Lane, Steyning, West Sussex
Client Name	Richborough Estates Limited
Project No.	288-20-087

ASL
Holly Farm Business Park
Honiley
Warwickshire
CV8 1NP

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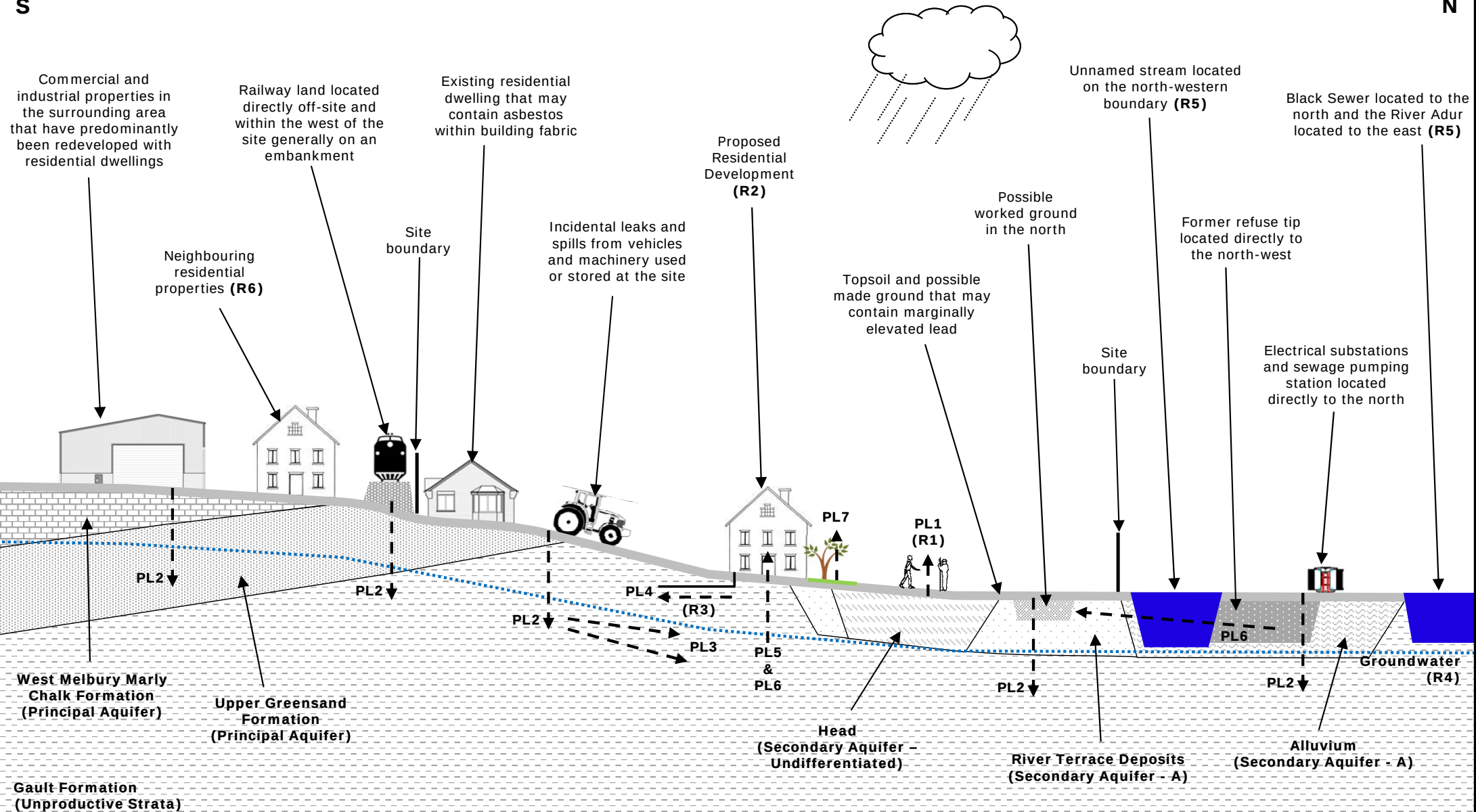
asl



Drawing No.	Figure 2	Key:  Windowless Sample Borehole Location  Hand Excavated Trial Pit Location  Windowless Sample Borehole Location (Permeability Test Location)  Approximate Site Boundary  Monitoring Installation DCP CBR Tests undertaken at WS26, WS3, WS7, WS8, WS12, WS15, WS17, & WS24	Notes: Not to Scale	ASL Holly Farm Business Park Honiley Warwickshire CV8 1NP T: +44 (0)1926 485 508 E: info@aslenvironmental.co.uk W: www.aslenvironmental.co.uk	
Drawing Name	Exploratory Hole Location Plan				
Project Name	Land off King's Barn Lane, Steyning, West Sussex				
Client Name	Richborough Estates Limited				
Project No.	288-20-087				

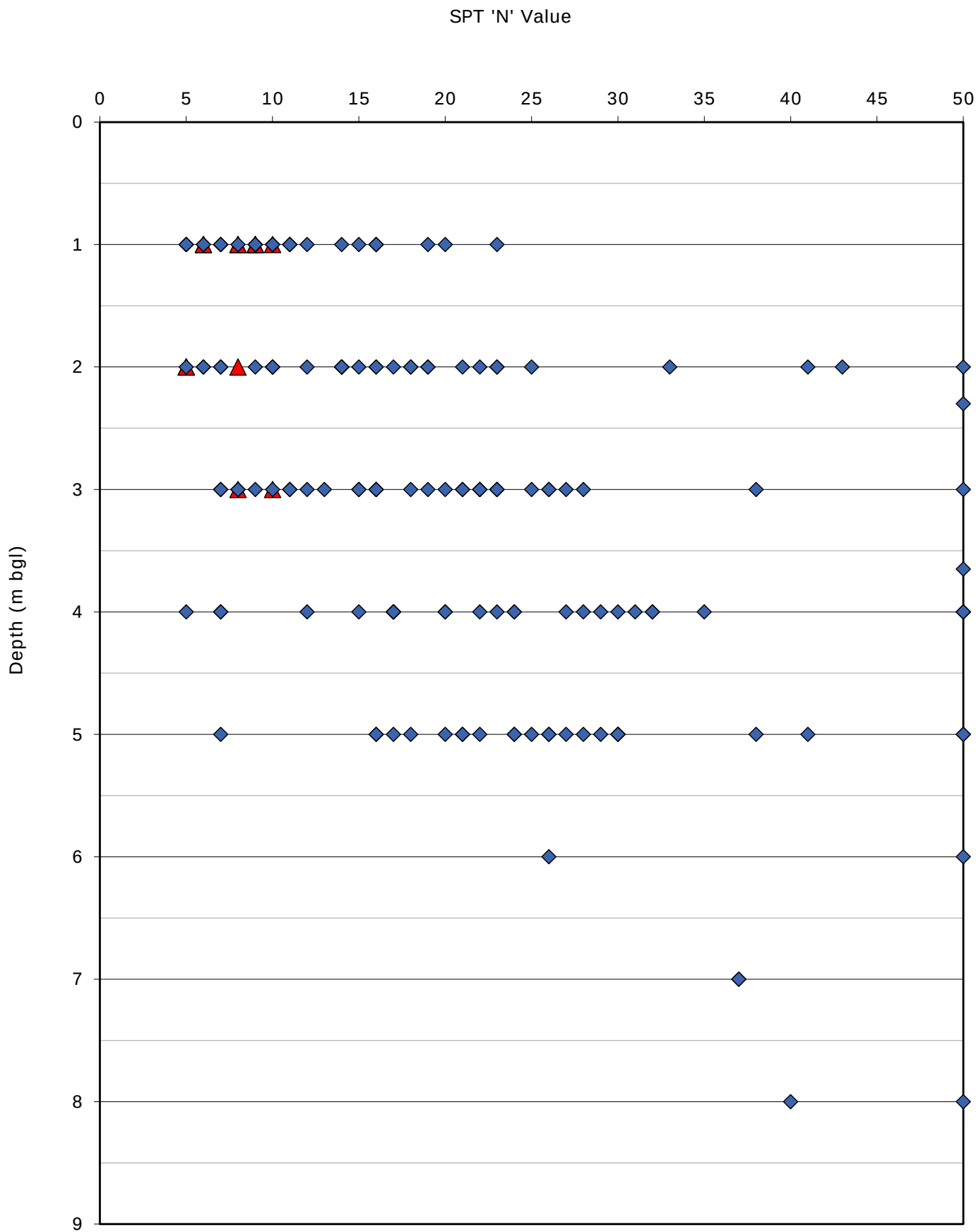
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N



Drawing No.	Figure 3	Summary of Pollutant Linkages (for full details see contamination associated report)	
Drawing Name	Conceptual Site Model		
Project Name	Land at King's Barn Lane, Steyning, West Sussex	Receptors: R1 - Construction and maintenance workers; R2 - Current and future site users; R3 - Service Lines; R4 - Groundwater; R5 - Surface watercourses; R6 - Neighbouring properties and residents.	Pathways: PL1 - Direct Physical Contact; PL2 - Migration from soils to groundwater via leaching; PL3 - Migration within groundwater; PL4 - Migration via service lines; PL5 - Volatilisation of contaminants from soils and groundwater; PL6 - Migration of hazardous ground gases; PL7 - Vegetable intake.
Client Name	Richborough Estates Limited	ASL Holly Farm Business Park Honiley Warwickshire CV8 1NP T: +44 (0)1926 485 508 E: info@aslenvironmental.co.uk W: www.aslenvironmental.co.uk	
Project No.	288-20-087		

asl



Drawing No.	Figure 4
Drawing Name	Plot of SPT 'N' Value Versus Depth
Project Name	Land off King's Barn Lane, Steyning
Client Name	Richborough Estates Limited
Project No.	288-20-087

Key
▲ Possible Head
◆ Gault Formation

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Drawing No.	Figure 5	Key: Windowless Sample Borehole Location Hand Excavated Trial Pit Location Windowless Sample Borehole Location (Permeability Test Location) Approximate Site Boundary Foundations designed to 75kNm²* Foundations designed to 100kNm²* Notes: *Plot specific allowable bearings pressures and foundation depths to be confirmed once detailed finalised development proposals are available.	
Drawing Name	Foundation Zoning Plan		
Project Name	Land off King's Barn Lane, Steyning		
Client Name	Richborough Estates Limited		
Project No.	288-20-087		
		ASL Holly Farm Business Park Honiley Warwickshire CV8 1NP T: +44 (0)1926 485 508 E: info@aslenvironmental.co.uk W: www.aslenvironmental.co.uk	





Not to Scale

Drawing No.	Figure 6	Key: Windowless Sample Borehole Location Hand Excavated Trial Pit Location Windowless Sample Borehole Location (Permeability Test Location) Approximate Site Boundary DCP CBR Tests undertaken at WS26, WS3, WS7, WS8, WS12, WS15, WS17, & WS24	Monitoring Installation Extent of gas protection measures to CS2	ASL Holly Farm Business Park Honiley Warwickshire CV8 1NP T: +44 (0)1926 485 508 E: info@aslenvironmental.co.uk W: www.aslenvironmental.co.uk	
Drawing Name	Extent of Recommended Gas Protection Measures				
Project Name	Land off King's Barn Lane, Steyning				
Client Name	Richborough Estates Limited				
Project No.	288-20-087				



APPENDIX I

PROPOSED ILLUSTRATIVE MASTER PLAN



KEY

SITE LOCATION
14.24 HECTARES / 35.19 ACRES

PROPOSED RESIDENTIAL DEVELOPMENT

PUBLIC OPEN SPACE (INCLUDING SuDS) - 6.23 HA / 15.40 ACRES

RETAINED EXISTING LANDSCAPE

ADDITIONAL/ REINSTATED VEGETATION

PRIMARY STREET / AVENUE

KEY FOCAL JUNCTION

SECONDARY STREET

SIDE STREET / SHARED SURFACE

RURAL LANES/ SHARED SPACES

PRIVATE LANES

EXISTING PUBLIC RIGHT OF WAY

DOWN'S LINK NATIONAL TRAIL / LONG DISTANCE ROUTE & NATIONAL CYCLE ROUTE 223

KEY PEDESTRIAN MOVEMENT WITHIN SITE

KEY PEDESTRIAN/CYCLE MOVEMENT WITHIN SITE

BOARDWALK STYLE PEDESTRIAN MOVEMENT

SUSTAINABLE URBAN DRAINAGE

LOCALLY EQUIPPED AREA OF PLAY

NATURAL AREA OF PLAY

LISTED BUILDING

KEY PRINCIPLES:
1. PROPOSED NEW ACCESS;
2. EXISTING PUBLIC RIGHT OF WAY UPGRADED;
3. CENTRAL 'PRINCIPAL STREET';
4. OUTWARD FACING DEVELOPMENT PROVIDING NATURAL SURVEILLANCE OVER OPEN SPACE;
5. PROPOSED PEDESTRIAN/ CYCLE LINK VIA KING'S BARN LANE;
6. SECONDARY STREET MOVEMENT;
7. KEY FOCAL SPACES BENEFITING FROM VIEWS OF ST ANDREWS CHURCH AND THE DOWNS;
8. TERTIARY RURAL LANES;
9. SHARED SURFACE STREETS;
10. PRIVATE LANES;
11. PRIVATE VEHICULAR LINK TO ADJOINING LAND TO NORTH;
12. EXISTING HEDGEROWS INCORPORATED INTO GREEN INFRASTRUCTURE;
13. REINSTATED HEDGEROWS;
14. CENTRALLY LOCATED 'STEYNING COMMON' BENEFITING FROM AN EQUIPPED AREA OF PLAY;
15. CENTRAL "RIBBON PARK" CONNECTING NEW GREEN SPACES;
16. NEWLY CREATED COMMUNITY ORCHARD;
17. LANDSCAPED BUFFER TO EXISTING DEVELOPMENT;
18. DEVELOPMENT SETBACK TO ADDRESS LISTED BUILDING;
19. KEY ARRIVAL GATEWAY SPACE;
20. KEY MEETING POINTS PROVIDING OPPORTUNITIES FOR SOCIAL INCLUSION;
21. ECOLOGY CORRIDOR WITH ADDITIONAL NATIVE PLANTING;
22. CREATION OF A WETLAND HABITAT WITH BOARDWALK STYLE PEDESTRIAN MOVEMENT; AND
23. PRIVATE VEHICULAR ACCESS TO RETAINED LAND.





APPENDIX II

FIELD RECORDS

 www.aslenvironmental.co.uk										Window Sample No. WS1 Sheet 1 of 2	
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518247.62 E 111554.93 N		Level: 11.40m AOD		Scale 1:25
Client: Richborough Estates Limited							Start Dates: Finish 01/02/2021 01/02/2021		Logged By JT		
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.30	ES1				0.50	10.90	Soft to firm brown slightly gravelly slightly sandy CLAY with frequent rootlets. Gravel is angular to subangular fine to coarse quartzite and rare mudstone. (Topsoil)				
0.60	ES2						Firm becoming stiff with depth light brown slightly sandy locally sandy CLAY. (Gault Formation)				
1.00 - 1.45 1.00	D3 SPT (S)	N=16 (2,2/3,4,5,4)								1	
1.60	D4										
2.00 - 2.45 2.00	D5 SPT (S)	N=23 (5,5/4,5,8,6)								2	
2.60	D6										
3.00 - 3.45 3.00	D7 SPT (S)	N=22 (3,4/6,5,6,5)								3	
3.70	D8										
4.00	SPT (S)	N=32 (5,4/6,7,10,9)								4	
							Continued on Next Sheet			5	
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

Project No.:

288-20-087

Hole Type
WLS

Co-ords:
518247.62 E
111554.93 N

Level:
11.40m AOD

Scale
1:25

Start	Dates:	Finish
01/02/2021		01/02/2021

Logged By
JT

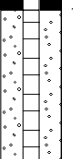
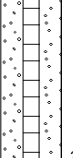
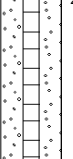
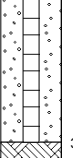
01/02/2021	01/02/2021
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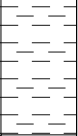
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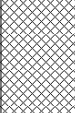
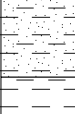
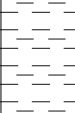
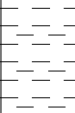
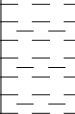
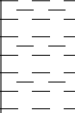
Key

D - Disturbed Sample
ES - Environmental Sample
B - Bulk Sample
U - Undisturbed Sample
SS - Surface Sample
VS - Validation Sample
W - Water Sample



 www.aslenvironmental.co.uk										Window Sample No. WS2 Sheet 1 of 2	
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518259.23 E 111616.43 N		Level: 6.72m AOD		
Client: Richborough Estates Limited							Start Dates: Finish 02/02/2021 02/02/2021		Logged By JT		
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.30	ES1	N=10 (2,1/2,2,3,3)			0.40	6.32	Soft to firm brown slightly gravelly slightly sandy CLAY with frequent rootlets. Gravel is subangular to rounded fine to coarse quartzite, sandstone and calcareous nodules. (Topsoil)				
0.50	ES2						Firm light brown slightly sandy locally sandy CLAY. (Gault Formation)				
1.00 - 1.45 1.00	D3 SPT (S)	N=16 (3,3/3,4,4,5)			1.00	5.72	Very stiff light brown and grey brown mottled white slightly sandy CLAY. (Gault Formation)			1	
1.60	D4										
2.00 - 2.45 2.00	D5 SPT (S)	N=22 (5,3/5,5,6,6)			2.60	4.12	Very stiff grey brown CLAY. (Gault Formation)			2	
2.60	D6										
3.00 - 3.45 3.00	D7 SPT (S)	N=31 (6,6/6,8,8,9)								3	
3.60	D8										
4.00 - 4.45 4.00	D9 SPT (S)									4	
4.70	D10										
5.00 - 5.45	D11						Continued on Next Sheet			5	
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

 www.aslenvironmental.co.uk										Window Sample No. WS2 Sheet 2 of 2				
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS					
Location: Steyning, West Sussex							Co-ords: 518259.23 E 111616.43 N		Level: 6.72m AOD		Scale 1:25			
Client: Richborough Estates Limited							Start 02/02/2021		Dates: Finish 02/02/2021		Logged By JT			
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well				
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)										
5.00	SPT (S)	N=41 (8,7/8,9,11,13)			5.45	1.27	Very stiff grey brown CLAY. (Gault Formation)							
							End of Borehole at 5.450m							
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.												Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike		

 www.aslenvironmental.co.uk										Window Sample No. WS3 Sheet 1 of 2	
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518328.99 E 111625.24 N		Level: 7.19m AOD		Scale 1:25
Client: Richborough Estates Limited							Start Dates: Finish 02/02/2021 02/02/2021		Logged By JT		
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.30	ES1	N=9 (1,1/2,2,2,3)			0.40	6.79	MADE GROUND: Firm brown slightly sandy CLAY with frequent rootlets and rare subangular gravel of flint and brick. (Topsoil)			1	
0.60	ES2						Stiff light brown and grey brown slightly sandy CLAY. (Gault Formation)				
1.00 - 1.45 1.00 1.20	D3 SPT (S) D4				1.00	6.19	Stiff becoming very stiff with depth grey brown locally mottled white CLAY with frequent subangular fine to coarse gravel of mudstone lithorelicts. (Gault Formation)				
1.80	D5	N=14 (2,2/3,3,4,4)								2	
2.00 - 2.45 2.00	D6 SPT (S)										
2.60	D7										
3.00 - 3.45 3.00	D8 SPT (S)	N=16 (4,3/3,4,4,5)								3	
3.60	D9										
4.00 - 4.45 4.00	D10 SPT (S)	N=20 (3,4/4,5,6,5)									
4.60	D11									4	
5.00 - 5.45	D12										
Continued on Next Sheet											5
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

Project No.:

288-20-087

Hole Type

WLS

Co-ords:
518328.99 E
111625.24 N

Level:
7.19m AOD

Scale

1:25

Start	Dates:	Finish
02/02/2021		02/02/2021

Logged By

JT

Depth Level

Stratum Description

Legend

V/S

Well

Depth (m)

Type

SPT

[illegible]

PID (ppm)	Intensity
100	100
105	100
110	100
115	100
120	100
125	100
130	100
135	100
140	100
145	100
150	100
155	100
160	100
165	100
170	100
175	100
180	100
185	100
190	100
195	100
200	100
205	100
210	100
215	100
220	100
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835	100
840	100
845	100
850	100
855	100
860	100
865	100
870	100
875	100
880	100
885	100
890	100
895	100
900	100
905	100

(m)

(m)

Stratum Description
Stiff becoming very stiff with depth grey brown locally mottled white CLAY with frequent subangular fine to coarse gravel of mudstone lithorelicts. (Gault Formation)

End of Borehole at 5.450m

6 -

7 -

8 -

9 -

10 -

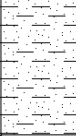
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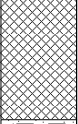
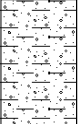
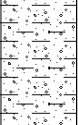
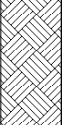
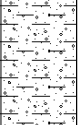
Key
D - Disturbed Sample
ES - Environmental Sample
B - Bulk Sample
U - Undisturbed Sample
SS - Surface Sample
VS - Validation Sample
W - Water Sample

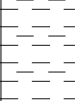
N/R - No Recovery
HVP - Hand Vane Shear Test
W/S - Water Strike

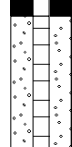
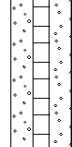
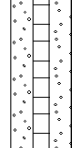


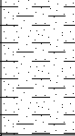
www.aslenvironmental.co.uk asl										Window Sample No. WS4 Sheet 1 of 2	
Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518387.52 E 111629.57 N		Level: 6.98m AOD		Scale 1:25	
Client: Richborough Estates Limited						Start 01/02/2021		Dates: Finish 01/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	W/S	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.30	ES1						Firm to stiff brown slightly sandy CLAY with frequent rootlets and rare subangular to subrounded fine to coarse gravel of chalk, quartzite and flint, (Topsoil)				
					0.50	6.48	Firm orange brown slightly sandy CLAY. (Possible Head)				
1.00 - 1.45 1.00	D3 SPT (S)	N=6 (2,1/1,1,2,2)					Occasional subangular fine to coarse gravel of flint.			1	
					1.50	5.48					
1.60	D4						Firm to stiff becoming very stiff with depth grey brown and light brown locally slightly sandy CLAY with occasional angular to subangular fine to coarse mudstone lithorelicts. (Gault Formation)				
1.80	ES2										
2.00 - 2.45 2.00	D5 SPT (S)	N=5 (1,1/1,1,1,2)								2	
2.60	D6										
3.00 - 3.45 3.00	D7 SPT (S)	N=10 (2,1/2,3,2,3)								3	
3.60	D8										
4.00 - 4.45 4.00	D9 SPT (S)	N=17 (4,3/3,4,4,6)								4	
4.70	D10										
5.00 - 5.45	D11						Continued on Next Sheet			5	
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

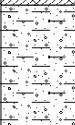
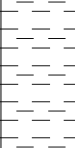
 www.aslenvironmental.co.uk										Window Sample No. WS4 Sheet 2 of 2	
Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518387.52 E 111629.57 N		Level: 6.98m AOD		Scale 1:25	
Client: Richborough Estates Limited						Start 01/02/2021		Dates: Finish 01/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
5.00	SPT (S)	N=18 (3,4/3,5,4,6)			5.45	1.52	Firm to stiff becoming very stiff with depth grey brown and light brown locally slightly sandy CLAY with occasional angular to subangular fine to coarse mudstone lithorelicts. (Gault Formation)				
							End of Borehole at 5.450m				
6 7 8 9 10											

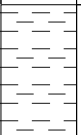
 www.aslenvironmental.co.uk										Window Sample No. WS5 Sheet 1 of 2		
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087			Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518438.11 E 111611.46 N		Level: 6.82m AOD		Scale 1:25	
Client: Richborough Estates Limited							Start Dates: Finish 02/02/2021 02/02/2021		Logged By JT			
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well		
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)								
0.30	ES2	N=9 (1,2/2,3,2,2)			0.40	6.42	MADE GROUND: Firm brown slightly gravelly slightly sandy CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint, brick and chalk. (Topsoil)					
0.50	ES1						Firm to stiff brown slightly sandy CLAY with occasional subangular fine to coarse gravel of flint, chalk and red sandstone. Rare flint cobbles. (Possible Head)					
1.00 - 1.45 1.00	D3 SPT (S)	N=6 (1,1/1,2,1,2)			1.60	5.22	Firm to stiff light brown and grey brown locally slightly sandy CLAY with occasional subangular fine to coarse mudstone lithorelicts. (Gault Formation)				2	
2.00 - 2.45 2.00	D5 SPT (S)											
2.60	D6	N=8 (2,1/2,1,3,2)										
3.00 - 3.45 3.00	D8 D7 SPT (S)											
4.00 - 4.45 4.00	D9 SPT (S)	N=17 (3,2/3,3,5,6)					Becomes very stiff.				4	
4.60	D10											
5.00 - 5.45	D11						Continued on Next Sheet				5	
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike					

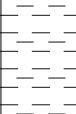
 www.aslenvironmental.co.uk										Window Sample No. WS6 Sheet 1 of 2			
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS				
Location: Steyning, West Sussex							Co-ords: 518475.38 E 111569.42 N		Level: 7.39m AOD				
Client: Richborough Estates Limited							Start Dates: Finish 02/02/2021 02/02/2021		Logged By JT				
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well			
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)									
0.30	ES1				0.35	7.04	Firm brown slightly sandy CLAY with frequent rootlets and occasional subangular fine to coarse gravel of flint. (Topsoil)						
0.60	ES2						Firm to stiff brown slightly gravelly slightly sandy CLAY with rare cobbles of flint. Gravel is subangular to subrounded fine to coarse flint. (Possible Head)						
1.00 - 1.45 1.00	D3 SPT (S)	N=5 (1,1/1,1,2,1)			1.00	6.39	Firm to stiff becoming very stiff with depth grey brown CLAY. (Gault Formation)			1			
1.50	D4												
2.00 - 2.45 2.00	D5 SPT (S)	N=9 (2,1/2,2,3,2)									2		
2.60	D6												
3.00 - 3.45 3.00	D7 SPT (S)	N=11 (2,2/2,3,3,3)											
3.60	D8												
4.00 - 4.45 4.00	D9 SPT (S)	N=24 (4,4/4,6,7,7)						4					
4.60	D10												
5.00 - 5.45	D11										5		
							Continued on Next Sheet						
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike						

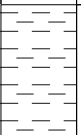
 www.aslenvironmental.co.uk										Window Sample No. WS7 Sheet 1 of 2	
Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518530.32 E 111559.92 N		Level: 6.27m AOD		Scale 1:25	
Client: Richborough Estates Limited						Start 04/02/2021		Dates: Finish 04/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.30	ES1				0.50	5.77	Firm brown slightly sandy CLAY with frequent rootlets. (Topsoil).				
0.60	ES2						Stiff becoming very stiff with depth light brown slightly sandy CLAY. (Gault Formation)				
1.00 - 1.45 1.00	D3 SPT (S)	N=12 (2,2/2,3,4,3)									
1.60	D4						Locally mottled white.				
2.00 - 2.45 2.00	D5 SPT (S)	N=16 (4,3/3,4,5,4)									
2.60	D6										
3.00 - 3.45 3.00	D7 SPT (S)	N=18 (5,3/3,4,5,6)									
3.60	D8										
4.00 - 4.45 4.00	D9 SPT (S)	N=24 (4,3/4,6,6,8)									
4.60	D10										
5.00 - 5.45	D11						Continued on Next Sheet				
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

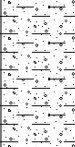
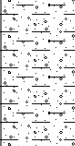
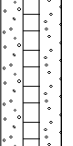
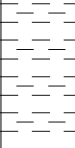
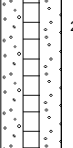
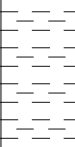
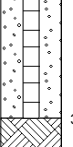
 www.aslenvironmental.co.uk										Window Sample No. WS7 Sheet 2 of 2				
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS					
Location: Steyning, West Sussex							Co-ords: 518530.32 E 111559.92 N		Level: 6.27m AOD		Scale 1:25			
Client: Richborough Estates Limited							Start 04/02/2021		Dates: Finish 04/02/2021		Logged By JT			
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well				
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)										
5.00	SPT (S)	N=38 (6,6/8,9,10,11)			5.45	0.82	Stiff becoming very stiff with depth light brown slightly sandy CLAY. (Gault Formation)							
							End of Borehole at 5.450m							
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.												Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike		

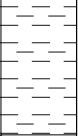
 www.aslenvironmental.co.uk										Window Sample No. WS8 Sheet 1 of 2	
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518622.77 E 111657.10 N		Level: 4.31m AOD		
Client: Richborough Estates Limited							Start Dates: Finish 08/02/2021 08/02/2021		Logged By JT		
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.30	ES1						Firm brown slightly sandy CLAY with frequent rootlets. (Topsoil)				
0.80	ES2				0.60	3.71	Firm brown and orange brown slightly gravelly sandy CLAY. Gravel is subangular to rounded fine to coarse flint. (Possible Head)				
1.00 - 1.45 1.00	D3 SPT (S)	N=9 (1,1/2,2,2,3)			1.00	3.31	Stiff grey CLAY. (Gault Formation)			1	
1.50	D4										
2.00 - 2.45 2.00	D5 SPT (S)	N=10 (2,1/2,2,3,3)								2	
2.60	D6										
3.00 - 3.45 3.00	D7 SPT (S)	N=7 (2,2/3,1,2,1)								3	
3.60	D8										
4.00 - 4.45 4.00	D9 SPT (S)	N=7 (2,1/1,2,2,2)								4	
4.40	D10										
5.00 - 5.45	D11						Continued on Next Sheet			5	
Remarks Windowless sampling from ground level to completed depth. Groundwater encountered at 4m bgl. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

		www.aslenvironmental.co.uk					Window Sample No. WS8 Sheet 2 of 2				
Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087			Hole Type WLS		
Location: Steyning, West Sussex						Co-ords: 518622.77 E 111657.10 N		Level: 4.31m AOD		Scale 1:25	
Client: Richborough Estates Limited						Start 08/02/2021		Dates: Finish 08/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
5.00	SPT (S)	N=17 (3,3/4,4,4,5)					Stiff grey CLAY. (Gault Formation)				
					5.45	-1.14	End of Borehole at 5.450m				
											6
											7
											8
											9
											10
Remarks Windowless sampling from ground level to completed depth. Groundwater encountered at 4m bgl. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

 www.aslenvironmental.co.uk										Window Sample No. WS9 Sheet 1 of 2		
Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087			Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518707.17 E 111670.20 N		Level: 4.82m AOD		Scale 1:25		
Client: Richborough Estates Limited						Start 08/02/2021		Dates: Finish 08/02/2021		Logged By JT		
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	S	W	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)								
0.30	ES1	N=11 (2,2/2,2,3,4)			0.60	4.22	Firm brown slightly sandy CLAY with frequent rootlets. (Topsoil)					
0.80	ES2						Stiff becoming very stiff with depth grey CLAY. (Gault Formation)					
1.00 - 1.45 1.00	D3 SPT (S)					1						
1.60	D4											
2.00 - 2.45 2.00	D5 SPT (S)	N=12 (3,2/2,3,3,4)				2						
2.60	D6											
3.00 - 3.45 3.00	D7 SPT (S)	N=13 (3,3/3,3,3,4)				3						
3.60	D8											
4.00 - 4.45 4.00	D9 SPT (S)	N=15 (3,3/3,5,4,3)				4						
4.60	D10											
5.00 - 5.45	D11					5						
Continued on Next Sheet												
Remarks Windowless sampling from ground level to completed depth. Groundwater encountered at 4m bgl. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike					

		www.aslenvironmental.co.uk					Window Sample No. WS9 Sheet 2 of 2				
Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087			Hole Type WLS		
Location: Steyning, West Sussex						Co-ords: 518707.17 E 111670.20 N		Level: 4.82m AOD		Scale 1:25	
Client: Richborough Estates Limited						Start 08/02/2021		Dates: Finish 08/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
5.00	SPT (S)	N=16 (3,3/3,4,4,5)					Stiff becoming very stiff with depth grey CLAY. (Gault Formation)				
					5.45	-0.63	End of Borehole at 5.450m				
											6
											7
											8
											9
											10
Remarks Windowless sampling from ground level to completed depth. Groundwater encountered at 4m bgl. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

 www.aslenvironmental.co.uk										Window Sample No. WS10 Sheet 1 of 2		
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex							Co-ords: 518701.70 E 111578.73 N		Level: 6.28m AOD			
Client: Richborough Estates Limited							Start Dates: Finish 04/02/2021 04/02/2021		Logged By JT			
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well		
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)								
0.20	ES1	N=9 (2,1/2,1,3,3)			0.50	5.78	Firm brown slightly sandy CLAY with frequent rootlets and rare subangular to subrounded fine to coarse gravel of chalk. (Topsoil)					
0.60	ES2						Firm light brown slightly sandy gravelly CLAY. Gravel is subangular to subrounded fine to coarse chalk and flint. (Possible Head)					
1.00 - 1.45 1.00	D3 SPT (S)											
1.60	D4	N=18 (3,4/3,4,5,6)			1.90	4.38	<i>Damp strata.</i>					
2.00 - 2.45 2.00	D5 SPT (S)											
2.30	D6											
3.00 - 3.45 3.00	D7 SPT (S)	N=23 (5,4/4,6,6,7)					Very stiff grey brown CLAY. (Gault Formation)					
3.60	D8											
4.00 - 4.45 4.00	D9 SPT (S)											
4.60	D10	N=35 (6,4/6,7,10,12)										
5.00 - 5.45	D11											
							Continued on Next Sheet					
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike					

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Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518701.70 E 111578.73 N		Level: 6.28m AOD		Scale 1:25	
Client: Richborough Estates Limited						Start 04/02/2021		Dates: Finish 04/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
5.00	SPT (S)	N=28 (3,3/6,7,7,8)					Very stiff grey brown CLAY. (Gault Formation)				
					5.45	0.83	End of Borehole at 5.450m				
6 7 8 9 10											

 www.aslenvironmental.co.uk										Window Sample No.		
										WS11 Sheet 1 of 2		
Project Name:							Project No.:			Hole Type		
Land off King's Barn Lane, Steyning, West Sussex							288-20-087			WLS		
Location:							Co-ords:		Level:		Scale	
Steyning, West Sussex							518604.07 E 111564.13 N				1:25	
Client:							Start		Dates:		Finish	
Richborough Estates Limited							04/02/2021		04/02/2021		Logged By JT	

Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.20	ES1				0.30	Firm brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular fine to coarse flint. (Topsoil)					
0.50	ES2					Firm brown and orange brown slightly sandy locally sandy CLAY with frequent subangular fine to coarse gravel of flint. (Possible Head)					
1.00 - 1.45	D3	N=6 (1,1/1,1,2,2)			1.00	Stiff to very stiff light brown locally slightly sandy CLAY. (Gault Formation)				1	
1.00	SPT (S)										
1.30	D4										
2.00 - 2.45	D5	N=17 (3,2/3,4,5,5)				Rare subangular fine to coarse gravel of mudstone lithorelicts below 2m bgl.				2	
2.00	SPT (S)										
2.60	D6										
3.00 - 3.45	D7	N=21 (6,4/4,5,6,6)								3	
3.00	SPT (S)										
3.60	D8										
4.00 - 4.45	D9	N=23 (4,5/4,6,7,6)								4	
4.00	SPT (S)										
4.60	D10										
5.00 - 5.45	D11					Continued on Next Sheet				5	

Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.		Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike	
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Project No.:

288-20-087

Hole Type

WLS

Co-ords:
518604.07 E
111564.13 N

Scale

1:25

Start	Dates:	Finish
04/02/2021		04/02/2021

Logged By

JT

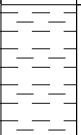
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	Key
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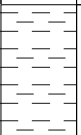
Key
D - Disturbed Sample
ES - Environmental Sample
B - Bulk Sample
U - Undisturbed Sample
SS - Surface Sample
VS - Validation Sample
W - Water Sample



 www.aslenvironmental.co.uk										Window Sample No. WS12 Sheet 1 of 2	
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518683.13 E 111514.54 N		Level: 7.45m AOD		
Client: Richborough Estates Limited							Start Dates: Finish 04/02/2021 04/02/2021		Logged By JT		
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.20	ES1						Firm brown slightly sandy CLAY with frequent rootlets and rare subangular fine to coarse gravel of flint. (Topsoil)				
0.50	ES2				0.50	6.95	Firm light brown and white slightly sandy gravelly CLAY. Gravel is subangular to subrounded fine to coarse calcareous nodules. (Gault Formation) <i>No recovery.</i>				
1.00 - 1.45 1.00	D3 SPT (S)	N=20 (8,4/5,5,5,5)								1	
1.60	D4										
2.00 - 2.45 2.00	D5 SPT (S)	N=14 (2,2/3,3,3,5)			2.00	5.45	Very stiff grey CLAY with rare subangular fine to coarse mudstone lithorelicts. (Gault Formation)			2	
2.60	D6										
3.00 - 3.45 3.00	D7 SPT (S)	N=23 (3,4/4,6,6,7)								3	
3.60	D8										
4.00 - 4.45 4.00	D9 SPT (S)	N=22 (3,3/4,5,6,7)								4	
4.60	D10										
5.00 - 5.45	D11						Continued on Next Sheet			5	
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

 www.aslenvironmental.co.uk										Window Sample No. WS12 Sheet 2 of 2						
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS							
Location: Steyning, West Sussex							Co-ords: 518683.13 E 111514.54 N		Level: 7.45m AOD		Scale 1:25					
Client: Richborough Estates Limited							Start 04/02/2021		Dates: Finish 04/02/2021		Logged By JT					
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well						
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)												
5.00	SPT (S)	N=26 (3,4/6,6,7,7)			5.45	2.00	Very stiff grey CLAY with rare subangular fine to coarse mudstone lithorelicts. (Gault Formation)									
							End of Borehole at 5.450m									
												6				
																7
																8
																9
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike									

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Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518577.41 E 111518.82 N		Level: 6.23m AOD		
Client: Richborough Estates Limited							Start Dates: Finish 05/02/2021 05/02/2021		Logged By JT		
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.20	ES1				0.40	5.83	Firm brown slightly sandy CLAY with frequent rootlets and rare subangular to subrounded fine to coarse gravel of flint. (Topsoil)				
0.50	ES2						Stiff brown slightly sandy locally slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse flint. (Possible Head)				
1.00 - 1.45 1.00	D3 SPT (S)	N=10 (2,1/2,2,3,3)			1.00	5.23	Very stiff light brown locally mottled white CLAY with occasional subangular fine to coarse gravel of mudstone lithorelicts. (Gault Formation)			1	
1.30	D4										
1.80	D5										
2.00 - 2.45 2.00	D6 SPT (S)	N=19 (3,3/4,4,5,6)								2	
2.60	D7										
3.00 - 3.45 3.00	D8 SPT (S)	N=19 (2,3/4,5,5,5)								3	
3.60	D9										
4.00 - 4.45 4.00	D10 SPT (S)	N=20 (3,3/4,5,5,6)								4	
4.60	D11										
5.00 - 5.45	D12						Continued on Next Sheet			5	
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

 www.aslenvironmental.co.uk										Window Sample No. WS13 Sheet 2 of 2	
Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518577.41 E 111518.82 N		Level: 6.23m AOD		Scale 1:25	
Client: Richborough Estates Limited						Start 05/02/2021		Dates: Finish 05/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
5.00	SPT (S)	N=24 (6,5/4,6,7,7)					Very stiff light brown locally mottled white CLAY with occasional subangular fine to coarse gravel of mudstone lithorelicts. (Gault Formation)				
					5.45	0.78	End of Borehole at 5.450m				
6 7 8 9 10											

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Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518503.25 E 111499.14 N	Level: 7.79m AOD	Scale 1:25		
Client: Richborough Estates Limited							Start 02/02/2021	Dates: Finish 02/02/2021	Logged By JT		
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.30	ES1				0.45	7.34	Firm brown sandy CLAY with frequent rootlets. (Topsoil)				
0.60	ES2						Orange brown locally clayey SAND. (Possible Head)				
1.00 - 1.45	D3	N=6 (1,1/1,1,2,2)			1.20	6.59	No recovery				
1.00	SPT (S)						Firm to stiff light brown and orange brown slightly sandy CLAY with rare angular fine to coarse gravel of flint. (Possible Head)				
1.60	D4										
2.00 - 2.45	D5	N=8 (1,1/2,2,2,2)									
2.00	SPT (S)										
2.50	D6						No recovery				
3.00 - 3.45	D7	N=9 (2,1/2,2,2,3)			3.00	4.79	Very stiff grey CLAY with frequent subangular fine to coarse gravel of mudstone lithorelicts. (Gault Formation)				
3.00	SPT (S)						No recovery				
3.50	D8										
4.00 - 4.45	D9	N=17 (3,3/4,4,5,4)									
4.00	SPT (S)										
4.60	D10										
5.00 - 5.45	D11						Continued on Next Sheet				
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

Project No.:

288-20-087

Hole Type

WLS

Co-ords:
518503.25 E
111499.14 N

Level:
7.79m AOD

Scale

1:25

Start	Dates:	Finish
02/02/2021		02/02/2021

Logged By

JT

Richborough Estates Limited

6

7

8

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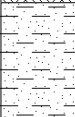
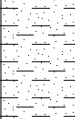
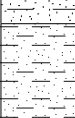
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	Key
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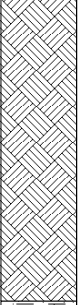
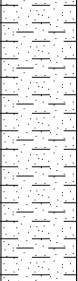
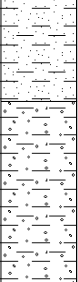
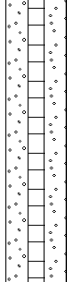
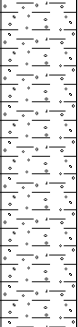
Key
D - Disturbed Sample
ES - Environmental Sample
B - Bulk Sample
U - Undisturbed Sample
SS - Surface Sample
VS - Validation Sample
W - Water Sample

N/R - No Recovery
HVP - Hand Vane Shear Test
W/S - Water Strike



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Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518478.72 E 111463.75 N		Level: 8.48m AOD			
Client: Richborough Estates Limited						Start 02/02/2021		Dates: Finish 02/02/2021			
Sample and In Situ Testing											
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)	Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
0.30	ES1				0.40	8.08	Firm brown slightly sandy CLAY with frequent rootlets. (Topsoil)				
0.50	ES2						Firm orange brown very sandy CLAY. (Possible Head)				
1.00 - 1.45 1.00	D3 SPT (S)	N=8 (1,1/2,2,2,2)			1.50	6.98	Loose orange brown very clayey SAND locally very sandy CLAY with rare subangular fine to coarse gravel of flint. (Possible Head)				1
1.60	D4										
2.00 - 2.45 2.00	D5 SPT (S)	N=5 (1,0/1,1,1,2)			2.40	6.08	Firm locally soft grey locally orange brown locally slightly sandy CLAY. (Gault Formation)				2
2.60	D6										
3.00 - 3.45 3.00	D7 SPT (S)	N=23 (4,5/4,6,6,7)					Stiff to very stiff below 3m.				3
3.60	D8										
4.00 - 4.45 4.00	D9 SPT (S)	N=27 (5,4/6,6,6,9)									
4.60	D10										4
5.00 - 5.45	D11						Continued on Next Sheet				5
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

 www.aslenvironmental.co.uk										Window Sample No. WS16 Sheet 1 of 1	
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518459.80 E 111411.93 N		Level: 8.47m AOD		
Client: Richborough Estates Limited							Start Dates: Finish 04/02/2021 04/02/2021		Logged By JT		
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)	Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
0.20	ES1	N=7 (1,1/2,1,2,2)			0.50	7.97	Firm brown slightly sandy CLAY with frequent rootlets and frequent subangular to subrounded fine to coarse gravel of calcareous nodules and quartzite. (Topsoil)				
0.70	ES2						Firm brown slightly sandy CLAY. (Subsoil)				
1.00 - 1.45 1.00	D3 SPT (S)				N=7 (2,1/2,1,2,2)			1.00	7.47	Firm grey brown mottled orange-brown slightly sandy CLAY with rare angular to subangular fine to coarse gravel of flint. (Possible Head)	
1.30	ES4										
2.00 - 2.45 2.00	D5 SPT (S)	N=15 (3,3/4,3,3,5)						2.00	6.47	Firm to stiff grey mottled orange brown locally slightly sandy CLAY. (Gault Formation)	
2.30	D6										
3.00 - 3.45 3.00	D7 SPT (S)				N=50 (11,9/50 for 260mm)			3.00	5.47	Very stiff grey locally slightly sandy CLAY with frequent subangular fine to coarse gravel of mudstone lithorelicts. (Gault Formation)	
3.40	D8										
4.00 - 4.45 4.00	D9 SPT (C)							4.45	4.02	End of Borehole at 4.450m	
										5	
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

 www.aslenvironmental.co.uk										Window Sample No. WS17 Sheet 1 of 1	
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518374.79 E 111393.56 N		Level: 10.14m AOD		Scale 1:25
Client: Richborough Estates Limited							Start 05/02/2021		Dates: Finish 05/02/2021		Logged By JT
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.20	ES1	N=9 (2,1/2,2,3,2)			1.00	9.14	Firm to stiff brown slightly sandy CLAY with frequent rootlets. (Topsoil)			1	
0.80	ES2										
1.00 - 1.45 1.00	D3 SPT (S)						Stiff brown mottled orange and grey locally slightly sandy CLAY with occasional subangular fine to coarse gravel of mudstone lithorelicts. (Gault Formation)				
1.40	ES4										
2.00 - 2.45 2.00	D5 SPT (S)	N=22 (1,1/2,6,6,8)	2.30	7.84	Very stiff grey slightly gravelly CLAY. Gravel is subangular fine to coarse mudstone lithorelicts. (Gault Formation)			3			
2.60	D6										
3.00	SPT (S)	N=38 (4,3/6,9,10,13)									
3.65	SPT (C)	N=50 (25 for 100mm/50 for 295mm)			4.00	6.14	End of Borehole at 4.000m			4	
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample		N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike		

 www.aslenvironmental.co.uk										Window Sample No. WS18 Sheet 1 of 1	
Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518388.99 E 111438.18 N		Level: 10.66m AOD		Scale 1:25	
Client: Richborough Estates Limited						Start 05/02/2021		Dates: Finish 05/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	S	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.20	ES1				0.50	10.16	MADE GROUND: Firm brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse brick, calcareous nodules and flint. (Topsoil)				1
0.50	ES2						Very stiff light brown locally slightly sandy CLAY. (Gault Formation)				
1.00 - 1.45 1.00	D3 SPT (S)	N=11 (1,2/2,3,3,3)					Frequent subangular to subrounded fine to coarse gravel of mudstone lithorelicts.				
1.60	D4										
2.00 - 2.30 2.00	D5 SPT (C)	50 (6,11/50 for 125mm)									2
2.30	SPT (C)	50 (15,10/50 for 185mm)									
					2.63	8.03	End of Borehole at 2.630m				3
											4
											5
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				



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Window Sample No.

WS19

Sheet 1 of 2

Project Name:

Land off King's Barn Lane, Steyning, West Sussex

Project No.:

288-20-087

Hole Type

WLS

Location:

Steyning, West Sussex

Co-ords:

518407.73 E
111497.54 N

Level:

10.51m AOD

Scale

1:25

Client:

Richborough Estates Limited

Start

Dates:

Finish

05/02/2021

05/02/2021

Logged By

JT

Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	S	W	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)								
0.30	ES1				0.40	10.11	MADE GROUND: Firm brown slightly sandy CLAY with frequent rootlets and rare subangular fine to coarse gravel of brick and calcareous nodules. (Topsoil)					
0.50	ES2						Stiff light brown mottled orange brown slightly sandy CLAY. (Gault Formation)					
1.00 - 1.45 1.00	D3 SPT (S)	N=7 (1,1/1,2,2,2)			2.30	8.21					1	
1.60	D4											
2.00 - 2.45 2.00	D5 SPT (S)	N=7 (1,2/1,2,2,2)										2
2.60	D6											
3.00 - 3.45 3.00	D7 SPT (S)	N=8 (1,1/2,2,2,2)			2.30	8.21	Firm to stiff becoming very stiff light brown mottled orange brown slightly sandy CLAY. (Gault Formation)					3
3.60	D8											
4.00 - 4.45 4.00	D9 SPT (C)	N=5 (1,0/1,1,2,1)										4
4.60	D10											
5.00 - 5.45	D11						Continued on Next Sheet					5

Remarks

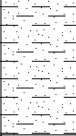
Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.

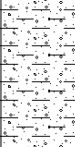
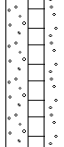
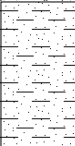
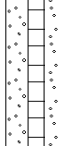
Key

D - Disturbed Sample
ES - Environmental Sample
B - Bulk Sample
U - Undisturbed Sample
SS - Surface Sample
VS - Validation Sample
W - Water Sample

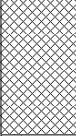
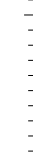
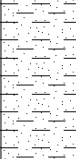
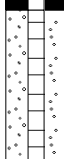
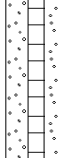
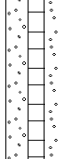
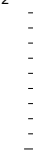
N/R - No Recovery
HVP - Hand Vane Shear Test
W/S - Water Strike



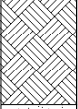
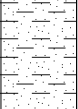
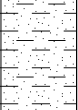
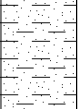
 www.aslenvironmental.co.uk										Window Sample No. WS19 Sheet 2 of 2			
Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS					
Location: Steyning, West Sussex						Co-ords: 518407.73 E 111497.54 N		Level: 10.51m AOD		Scale 1:25			
Client: Richborough Estates Limited						Start 05/02/2021		Dates: Finish 05/02/2021		Logged By JT			
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well			
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)									
5.00	SPT (C)	N=7 (2,1/2,1,2,2)					Firm to stiff becoming very stiff light brown mottled orange brown slightly sandy CLAY. (Gault Formation)						
					5.45	5.06	End of Borehole at 5.450m						
											6		
											7		
											8		
											9		
											10		
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike						

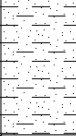
 www.aslenvironmental.co.uk										Window Sample No. WS20 Sheet 1 of 2			
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS				
Location: Steyning, West Sussex							Co-ords: 518420.66 E 111559.89 N		Level: 8.87m AOD				
Client: Richborough Estates Limited							Start Dates: Finish 04/02/2021 04/02/2021		Logged By JT				
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well			
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)	Depth (m)	Level (m)	Stratum Description	Legend	WS	Well			
0.30	ES1	N=9 (4,2/3,2,2,2)			0.50	8.37	Firm brown slightly sandy CLAY with frequent rootlets. (Topsoil)						
0.60	ES2						Stiff brown and orange brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse flint. (Possible Head)						
1.00 - 1.45 1.00	D3 SPT (S)				N=5 (1,1/1,2,1,1)			1.30	7.57	Firm brown slightly gravelly slightly sandy CLAY. Gravel is subrounded to rounded fine to coarse sandstone, limestone, flint and quartzite. (Possible Head)			
1.60	D4												
2.00 - 2.45 2.00	D5 SPT (S)	N=10 (2,3/3,2,3,2)						2.50	6.37	Stiff to very stiff grey brown slightly sandy CLAY. (Possible Head)			
3.00 - 3.45 3.00	D7 SPT (S)												
3.20	D8	N=7 (0,1/1,1,2,3)			3.40	5.87	Medium dense orange brown and light brown locally slightly clayey SAND with rare subangular fine to coarse gravel of flint. (Possible Head)						
3.50	D9												
4.00 - 4.45 4.00	D10 SPT (S)	N=7 (0,1/1,1,2,3)			4.60	5.47	Very stiff grey brown locally orange brown locally slightly sandy CLAY. (Gault Formation)						
4.60	D11												
5.00 - 5.45	D12						Continued on Next Sheet						
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike						

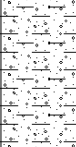
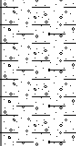
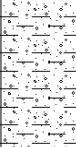
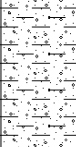
 www.aslenvironmental.co.uk										Window Sample No. WS20 Sheet 2 of 2	
Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518420.66 E 111559.89 N		Level: 8.87m AOD		Scale 1:25	
Client: Richborough Estates Limited						Start 04/02/2021		Dates: Finish 04/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
5.00	SPT (S)	N=21 (2,3/4,6,5,6)					Very stiff grey brown locally orange brown locally slightly sandy CLAY. (Gault Formation)				
					5.45	3.42	End of Borehole at 5.450m				
6 7 8 9 10											

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Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518338.12 E 111488.40 N		Level: 12.18m AOD		Scale 1:25	
Client: Richborough Estates Limited						Start 04/02/2021		Dates: Finish 04/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.30	ES1				0.45	11.73	MADE GROUND: Firm brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse brick, sandstone and flint. (Topsoil)				
0.60	ES2						Stiff to very stiff light brown becoming grey brown with depth slightly sandy locally sandy CLAY. (Gault Formation)				
1.00 - 1.45 1.00	D3 SPT (S)	N=8 (2,1/1,2,3,2)					Slightly gravelly. Gravel is subangular to subrounded fine to coarse gravel mudstone lithorelicts. Rare subangular cobbles of mudstone lithorelicts.				
1.60	D4										
2.00 - 2.45 2.00	D5 SPT (S)	N=18 (4,3/3,5,5,5)									
2.60	D6										
3.00 - 3.45 3.00	D7 SPT (S)	N=28 (3,4/5,6,8,9)									
3.60	D8										
4.00 - 4.45 4.00	D9 SPT (S)	N=29 (6,6/6,7,7,9)									
4.60	D10										
Continued on Next Sheet											
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.						Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample		N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike			

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Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex							Co-ords: 518338.12 E 111488.40 N		Level: 12.18m AOD		Scale 1:25	
Client: Richborough Estates Limited							Start 04/02/2021		Dates: Finish 04/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well		
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)								
5.00 5.10	SPT (C) D11	50 (25 for 105mm/50 for 30mm)			5.10	7.08	Stiff to very stiff light brown becoming grey brown with depth slightly sandy locally sandy CLAY. (Gault Formation) End of Borehole at 5.100m					
6 7 8 9 10												

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Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087			Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518316.28 E 111566.86 N		Level: 10.86m AOD		Scale 1:25	
Client: Richborough Estates Limited							Start Dates: Finish 04/02/2021 04/02/2021		Logged By JT			
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	S	W	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)								
0.30	ES1	N=5 (1,1/1,1,1,2)			0.35	10.52	Firm brown slightly sandy CLAY with frequent rootlets. (Topsoil)					
0.60	ES2						Stiff light brown mottled brown slightly sandy CLAY. (Gault Formation)					
1.00 - 1.45 1.00	D3 SPT (S)											
1.40	D4	N=14 (3,2/3,3,4,4)			1.20	9.66	Stiff becoming very stiff with depth light brown slightly sandy CLAY with frequent subangular gravel of mudstone lithorelicts. (Gault Formation)					
2.00 - 2.45 2.00	D5 SPT (S)											
2.60	D6											
3.00 - 3.45 3.00	D7 SPT (S)	N=15 (3,3/3,4,4,4)										
3.60	D8											
4.00 - 4.45 4.00	D9 SPT (S)											
4.60	D10	N=17 (5,4/4,4,5,4)										
5.00 - 5.45	D11											
							Continued on Next Sheet					5
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike					

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Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518316.28 E 111566.86 N		Level: 10.86m AOD		Scale 1:25	
Client: Richborough Estates Limited						Start 04/02/2021		Dates: Finish 04/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
5.00	SPT (S)	N=30 (6,4/5,6,8,11)					Stiff becoming very stiff with depth light brown slightly sandy CLAY with frequent subangular gravel of mudstone lithorelicts. (Gault Formation)				
					5.45	5.42	End of Borehole at 5.450m				
6 7 8 9 10											

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Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518275.85 E 111502.20 N		Level: 13.21m AOD		Scale 1:25	
Client: Richborough Estates Limited						Start 04/02/2021		Dates: Finish 04/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.30	ES1				0.50	12.71	Firm to stiff brown slightly sandy CLAY with frequent rootlets and rare subangular gravel of flint, sandstone and mudstone. (Topsoil)				
0.50	ES2						Very stiff grey becoming light brown and grey brown locally slightly sandy slightly gravelly CLAY. Gravel is subangular fine to coarse mudstone lithorelicts. (Gault Formation)				
1.00 - 1.45 1.00	D3 SPT (S)	N=15 (5,4/3,3,4,5)								1	
1.60	D4										
2.00 - 2.45 2.00	D5 SPT (S)						N=15 (3,2/3,3,5,4)				
2.60	D6										
3.00 - 3.45 3.00	D7 SPT (S)						N=50 (4,4/50 for 255mm)				
					3.45	9.76	End of Borehole at 3.450m				
										5	
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				



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Window Sample No.

WS24

Sheet 1 of 2

Project Name:

Land off King's Barn Lane, Steyning, West Sussex

Project No.:

288-20-087

Hole Type

WLS

Location:

Steyning, West Sussex

Co-ords:

518262.61 E
111450.58 N

Level:

12.73m AOD

Scale

1:25

Client:

Richborough Estates Limited

Start

Dates:

Finish

04/02/2021

04/02/2021

Logged By

JT

Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	S	W	Well		
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)									
0.20	ES1	N=23 (10,8/8,6,5,4)			0.35	12.38	Firm brown slightly sandy CLAY with frequent rootlets and rare subrounded to rounded fine to coarse gravel of quartzite and flint. (Topsoil)						
0.50	ES2						Stiff brown slightly sandy CLAY with frequent subangular fine to coarse gravel of mudstone lithorelicts. (Gault Formation)						
0.90	D3						Very stiff brown becoming grey brown with depth slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse mudstone and mudstone lithorelicts. (Gault Formation)						
1.00 - 1.45	D4	N=41 (10,9/8,11,11,11)											
1.00	SPT (S)												
1.60	D5	N=26 (7,5/5,6,5,10)											
2.00 - 2.45	D6												
2.00	SPT (S)												
2.60	D7	N=32 (12,11/9,7,8,8)											
3.00 - 3.45	D8												
3.00	SPT (S)												
3.60	D9	N=32 (12,11/9,7,8,8)											
4.00	SPT (S)												
4.10	D10												
5.00	D11						Continued on Next Sheet						

Remarks

Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.

Key

D - Disturbed Sample

ES - Environmental Sample

B - Bulk Sample

U - Undisturbed Sample

SS - Surface Sample

VS - Validation Sample

W - Water Sample

N/R - No Recovery

HVP - Hand Vane Shear Test

W/S - Water Strike



Project No.:

288-20-087

Hole Type

WLS

Co-ords:
518262.61 E
111450.58 N

Level:
12.73m AOD

Scale

1:25

Start	Dates:	Finish
04/02/2021		04/02/2021

Logged By

JT

Depth Level

Stratum Description

Legend

V/S

Well

Depth (m)

Type

SPT

HPV
(KPa)

PID (ppm)	Intensity
10.0	100
9.0	100
8.0	100
7.0	100
6.0	100
5.0	100
4.0	100
3.0	100
2.0	100
1.0	100
0.0	100

(m)

(m)

Stratum	Description
Very stiff brown becoming grey brown with depth slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse mudstone and mudstone lithorelicts. (Gault Formation)	

End of Borehole at 5.450m

6 -

7 -

8 -

9 -

10 -

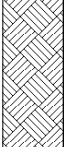
	Key
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Key
D - Disturbed Sample
ES - Environmental Sample
B - Bulk Sample
U - Undisturbed Sample
SS - Surface Sample
VS - Validation Sample
W - Water Sample

N/R - No Recovery
HVP - Hand Vane Shear Test
W/S - Water Strike

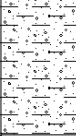


 www.aslenvironmental.co.uk										Window Sample No. WS25 Sheet 1 of 1	
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518203.13 E 111446.79 N		Level: 12.59m AOD		Scale 1:25
Client: Richborough Estates Limited							Start Dates: Finish 04/02/2021 04/02/2021		Logged By JT		
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.20	ES1				0.35	12.24	Firm brown slightly sandy CLAY with frequent rootlets and rare subangular to subrounded fine to coarse gravel of flint. (Topsoil)				
0.50	ES2						Firm light brown slightly sandy locally sandy CLAY. (Gault Formation)				
1.00 - 1.45 1.00	D3 SPT (S)	N=14 (3,3/3,5,3,3)			1.00	11.59	Stiff becoming very stiff with depth grey brown slightly sandy CLAY. (Gault Formation)			1	
1.60	D4										
2.00 - 2.45 2.00	D5 SPT (S)	N=23 (6,3/3,5,7,8)								2	
2.60	D6				2.50	10.09	Very stiff grey CLAY with frequent mudstone lithorelicts. (Gault Formation)				
3.00 - 3.45 3.00	D7 SPT (S)	N=25 (6,6/5,7,7,6)								3	
3.60	D8										
4.00 - 4.45 4.00	D9 SPT (S)	N=50 (4,2/50 for 265mm)								4	
					4.45	8.14	End of Borehole at 4.450m				
										5	
Remarks Windowless sampling from ground level to completed depth. Groundwater encountered at 3m bgl. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

 www.aslenvironmental.co.uk										Window Sample No. WS26 Sheet 1 of 2	
Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518185.86 E 111565.59 N		Level: 7.11m AOD		Scale 1:25	
Client: Richborough Estates Limited						Start 01/02/2021		Dates: Finish 01/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.30	ES1	N=9 (1,1/2,3,2,2)			0.50	6.61	Firm grey brown slightly gravelly slightly sandy CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint, quartzite and chalk. (Topsoil)				
0.70	ES2						Firm light brown slightly sandy locally sandy CLAY. (Gault Formation)				
1.00 1.00 - 1.45 1.00	D4 D3 SPT (S)										
2.00 - 2.45 2.00	D5 SPT (S)				N=14 (2,3/3,4,3,4)						
2.60	D6										
3.00 - 3.45 3.00	D7 SPT (S)	N=16 (3,2/3,4,4,5)									
3.60	D8										
4.00 - 4.45 4.00	D9 SPT (S)	N=12 (2,2/2,3,3,4)									
4.60	D10										
5.00 - 5.45	D11										
Continued on Next Sheet											
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

 www.aslenvironmental.co.uk										Window Sample No. WS26 Sheet 2 of 2	
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518185.86 E 111565.59 N		Level: 7.11m AOD		Scale 1:25
Client: Richborough Estates Limited							Start Date: 01/02/2021		Finish Date: 01/02/2021		Logged By JT
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
5.00	SPT (S)	N=25 (6,6/6,6,6,7)					Firm light brown slightly sandy locally sandy CLAY. (Gault Formation)				
5.60	D12										
6.00 - 6.45 6.00	D13 SPT (S)	N=26 (5,4/5,7,7,7)								6	
6.60	D14				6.70	0.41					
7.00 - 7.45 7.00	D15 SPT (S)	N=37 (3,5/6,8,9,14)					Very stiff grey and grey brown locally slightly sandy CLAY with frequent subangular fine to coarse gravel of mudstone lithorelicts. (Gault Formation)			7	
7.40	D16										
8.00 - 8.45 8.00	D17 SPT (S)	N=40 (7,8/10,10,10,10)								8	
					8.45	-1.34					
							End of Borehole at 8.450m			9	
										10	
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

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Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087			Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518196.12 E 111515.47 N		Level: 12.25m AOD		Scale 1:25	
Client: Richborough Estates Limited							Start Dates: Finish 04/02/2021 04/02/2021		Logged By JT			
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	S	W	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)								
0.20	ES1				0.35	11.90	MADE GROUND: Firm brown slightly sandy CLAY with frequent rootlets and rare subangular to subrounded fine to coarse gravel of quartzite, brick and flint. (Topsoil)					
0.50	ES2						Stiff light brown slightly sandy slightly gravelly CLAY. Gravel is subangular fine to coarse mudstone lithorelicts. (Gault Formation)					
1.00 - 1.45 1.00	D3 SPT (S)	N=10 (1,1/2,2,3,3)									1	
1.60	D4											
2.00 - 2.45 2.00	D5 SPT (S)	N=33 (6,6/6,9,8,10)									2	
2.60	D6											
3.00 - 3.45 3.00	D7 SPT (S)	N=16 (4,3/3,5,4,4)									3	
3.60	D8											
4.00 - 4.45 4.00	D9 SPT (S)	N=30 (12,11/9,7,6,8)									4	
4.60	D10											
5.00 - 5.45	D11						Continued on Next Sheet				5	
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike					

		www.aslenvironmental.co.uk						Window Sample No. WS27 Sheet 2 of 2					
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087			Hole Type WLS			
Location: Steyning, West Sussex							Co-ords: 518196.12 E 111515.47 N		Level: 12.25m AOD		Scale 1:25		
Client: Richborough Estates Limited							Start 04/02/2021		Dates: Finish 04/02/2021		Logged By JT		
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well			
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)									
5.00	SPT (S)	N=22 (6,4/5,5,6,6)					Stiff light brown slightly sandy slightly gravelly CLAY. Gravel is subangular fine to coarse mudstone lithorelicts. (Gault Formation)						
					5.45	6.80	End of Borehole at 5.450m						
											6		
											7		
											8		
											9		
											10		
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike						



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Window Sample No.

WS28

Sheet 1 of 2

Project Name:

Land off King's Barn Lane, Steyning, West Sussex

Project No.:

288-20-087

Hole Type

WLS

Location:

Steyning, West Sussex

Co-ords:

518174.97 E
111501.65 N

Level:

Scale

1:25

Client:

Richborough Estates Limited

Start

Dates:

Finish

04/02/2021

04/02/2021

Logged By

JT

Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	S	W	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)								
0.20	ES1				0.40	Firm brown slightly sandy CLAY with frequent rootlets and rare subangular fine to coarse gravel of flint. (Topsoil)						
0.50	ES2					Firm light brown slightly sandy locally sandy CLAY. (Gault Formation)						
1.00 - 1.45 1.00	D3 SPT (S)	N=5 (2,2/2,1,1,1)			1.75							1
1.60	D4											
1.80	D5											
2.00 - 2.45 2.00	D6 SPT (S)	N=43 (13,5/5,14,14,10)				Very stiff light brown and grey brown CLAY with frequent subangular fine to coarse mudstone lithorelicts. (Gault Formation)						2
2.60	D7											
3.00 - 3.45 3.00	D8 SPT (S)	N=21 (3,3/5,5,5,6)										3
3.60	D9											
4.00 4.10	SPT (C) D10	N=28 (7,7/6,6,8,8)										4
4.80	D11											
5.00 - 5.45	D12											5
						Continued on Next Sheet						

Remarks

Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.

Key

D - Disturbed Sample

ES - Environmental Sample

B - Bulk Sample

U - Undisturbed Sample

SS - Surface Sample

VS - Validation Sample

W - Water Sample

N/R - No Recovery

HVP - Hand Vane Shear Test

W/S - Water Strike



Project No.:

288-20-087

Hole Type

WLS

Co-ords:
518174.97 E
111501.65 N

Scale

1:25

Start	Dates:	Finish
04/02/2021		04/02/2021

Logged By

JT

Dent

Level

Stratum Description

111

8

100

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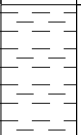
	Key
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Key
D - Disturbed Sample
ES - Environmental Sample
B - Bulk Sample
U - Undisturbed Sample
SS - Surface Sample
VS - Validation Sample
W - Water Sample

N/R - No Recovery
HVP - Hand Vane Shear Test
W/S - Water Strike



 www.aslenvironmental.co.uk										Window Sample No. WS29 Sheet 1 of 2	
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518657.88 E 111619.70 N		Level: 6.01m AOD		
Client: Richborough Estates Limited							Start Dates: Finish 08/02/2021 08/02/2021		Logged By JT		
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	S	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.30	ES1	N=10 (2,1/2,2,3,3)			0.40	5.61	Firm brown slightly sandy CLAY with frequent rootlets. (Topsoil)				
0.60	ES2						Stiff orange brown sandy CLAY with occasional subangular to subrounded fine to coarse gravel of flint. (Possible Head)				
1.00 - 1.45 1.00	D3 SPT (S)	N=10 (2,1/2,2,3,3)			2.00	4.01	Stiff becoming very stiff with depth grey CLAY. (Gault Formation)				
1.60	D4										
2.00 - 2.45 2.00	D5 SPT (S)	N=20 (3,4/3,5,5,7)									
2.30	D6										
3.00 - 3.45 3.00	D7 SPT (S)	N=17 (4,3/4,3,5,5)									
3.60	D8										
4.00 - 4.45 4.00	D9 SPT (S)										
4.60	D10										
5.00 - 5.45	D11						Continued on Next Sheet				
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

 www.aslenvironmental.co.uk										Window Sample No. WS29 Sheet 2 of 2	
Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518657.88 E 111619.70 N		Level: 6.01m AOD		Scale 1:25	
Client: Richborough Estates Limited						Start 08/02/2021		Dates: Finish 08/02/2021		Logged By JT	
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
5.00	SPT (S)	N=21 (4,3/4,6,6,5)					Stiff becoming very stiff with depth grey CLAY. (Gault Formation)				
					5.45	0.56	End of Borehole at 5.450m				
6 7 8 9 10											



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Window Sample No.

WS30

Sheet 1 of 1

Project Name:

Land off King's Barn Lane, Steyning, West Sussex

Project No.:

288-20-087

Hole Type

WLS

Location:

Steyning, West Sussex

Co-ords:

518429.73 E
111448.22 N

Level:

9.40m AOD

Scale

1:25

Client:

Richborough Estates Limited

Start

Dates:

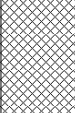
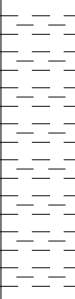
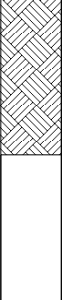
Finish

04/02/2021

04/02/2021

Logged By

JT

Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.20	ES1	N=19 (2,2/2,5,6,6)			0.40	9.00	MADE GROUND: Firm brown slightly sandy CLAY with frequent rootlets and occasional subangular fine to coarse gravel of brick and flint. (Topsoil)				
0.60	ES2						Stiff grey mottled orange brown slightly sandy locally sandy CLAY. (Gault Formation)				
No recovery.											
1.00 - 1.45 1.00	D3 SPT (S)	N=25 (3,4/5,8,6,6)			1.00	8.40	Very stiff grey CLAY with occasional subangular fine to coarse gravel of mudstone lithorelicts. (Gault Formation)				1
1.60	D4										
2.00 - 2.45 2.00	D5 SPT (S)										
2.60	D6	N=27 (5,5/6,7,7,7)									2
3.00 - 3.45 3.00	D7 SPT (S)										
3.60	D8										
4.00 - 4.45 4.00	D9 SPT (S)	N=50 (10,10/50 for 255mm)									3
											4
											5
							End of Borehole at 4.450m				

Remarks

Windowless sampling from ground level to completed depth. Groundwater not encountered. Backfilled with arisings on completion.

Key

D - Disturbed Sample

ES - Environmental Sample

B - Bulk Sample

U - Undisturbed Sample

SS - Surface Sample

VS - Validation Sample

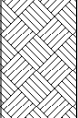
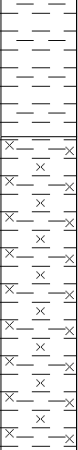
W - Water Sample

N/R - No Recovery

HVP - Hand Vane Shear Test

W/S - Water Strike



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Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518249.20 E 111633.60 N		Level: Scale 1:25		
Client: Richborough Estates Limited							Start Dates: Finish 18/01/2021 18/01/2021		Logged By JT		
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.30	ES1	N=11 (1,2/2,2,3,4)			0.40		Firm brown silty CLAY with rare subangular to subrounded fine to coarse gravel of chalk with frequent rootlets. (Topsoil)				
0.70	ES2						Stiff light brown CLAY. (Gault Formation)				
1.00 - 1.45 1.00	D3 SPT (S)	N=19 (2,3/4,4,5,6)			1.50		Very stiff light brown and white silty CLAY. (Gault Formation)			1	
1.60	D4										
2.00 - 2.45 2.00	D5 SPT (S)	N=22 (3,3/5,5,5,7)			2.40		Very stiff light brown silty CLAY. (Gault Formation)			2	
2.60	D6										
3.00 - 3.45 3.00	D7 SPT (S)				3.45		End of Borehole at 3.450m			3	
										4	
										5	
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

Project No.:

Hole Type

Location:

Co-ords:

Level:

Scale

1:25

Client:

Start

Dates:

Logged By

18/01/2021

1 18/01/2021

JT

[illegible]

Key

Key
D - Disturbed Sample
ES - Environmental Sample
B - Bulk Sample
U - Undisturbed Sample
SS - Surface Sample
VS - Validation Sample
W - Water Sample



Project No.:

Hole Type

Location:

Co-ords:
518480.70 E
111643.59 N

Level:

Scale

1:25

Client:

Start	Dates:	Finish
8/01/2021		18/01/2021

Logged By

JT

Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.	Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike	
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Remarks

Windowless sampling from ground level to completed depth. Groundwater not encountered.
Installed with combined gas and groundwater standpipe on completion.

Key

Key
D - Disturbed Sample
ES - Environmental Sample
B - Bulk Sample
U - Undisturbed Sample
SS - Surface Sample
VS - Validation Sample
W - Water Sample

N/R - No Recovery
HVP - Hand Vane Shear Test
W/S - Water Strike



Project No.:

Hole Type

Location:

Co-ords:
518633.17 E
111668.31 N

Level:

Scale

1:25

Client:

Start	Dates:	Finish
18/01/2021		18/01/2021

Logged By

JT

Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.	Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike	
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Remarks

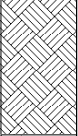
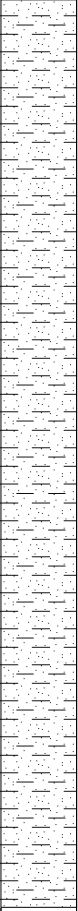
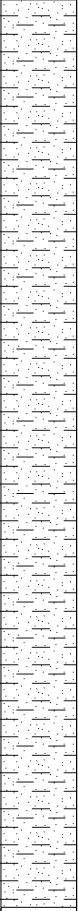
Windowless sampling from ground level to completed depth. Groundwater not encountered.
Installed with combined gas and groundwater standpipe on completion.

Key

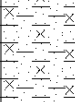
Key
D - Disturbed Sample
ES - Environmental Sample
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SS - Surface Sample
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W - Water Sample

N/R - No Recovery
HVP - Hand Vane Shear Test
W/S - Water Strike

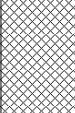
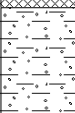
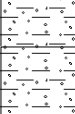
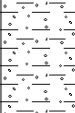
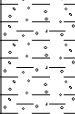
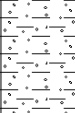
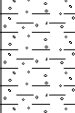


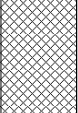
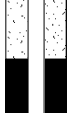
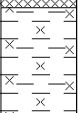
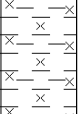
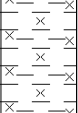
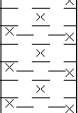
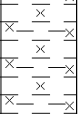
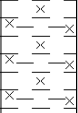
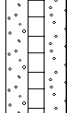
 www.aslenvironmental.co.uk										Window Sample No. WS105 Sheet 1 of 1	
Project Name: Land off King's Barn Lane, Steyning, West Sussex							Project No.: 288-20-087		Hole Type WLS		
Location: Steyning, West Sussex							Co-ords: 518698.57 E 111690.90 N		Level: Scale 1:25		
Client: Richborough Estates Limited							Start Dates: Finish 18/01/2021 18/01/2021		Logged By JT		
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.30	ES1	N=7 (1,1/1,2,2,2)			0.45		Firm brown slightly sandy CLAY with frequent rootlets and rare subangular to subrounded fine to coarse gravel of limestone and flint. (Topsoil)				
0.70	ES2						Stiff to very stiff light brown and grey becoming grey brown with depth locally slightly sandy CLAY. (Gault Formation)				
1.00 - 1.45 1.00	D3 SPT (S)					N=10 (1,2/2,2,3,3)					
1.70	D4										
2.00 - 2.45 2.00	D5 SPT (S)										
2.70	D6	N=7 (1,1/1,2,2,2)									
3.00 - 3.45 3.00	D8 SPT (S)										
					3.45		End of Borehole at 3.450m				
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike				

 www.aslenvironmental.co.uk		Window Sample No.	
		WS106	
Sheet 1 of 1			
Project Name:		Project No.:	
Land off King's Barn Lane, Steyning, West Sussex		288-20-087	
Location:		Co-ords:	Level:
Steyning, West Sussex		518366.90 E 111554.57 N	
Client:		Start	Dates: Finish
Richborough Estates Limited		18/01/2021	18/01/2021
Logged By		JT	

Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)						
0.20	ES1						MADE GROUND: Firm brown slightly gravelly silty CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse brick, charcoal and sandstone. (Topsoil)			
0.50	ES2				0.35		Firm to stiff lightly brown and grey brown locally slightly sandy silty CLAY. (Gault Formation)			
1.00 - 1.45 1.00	D3 SPT (S)	N=16 (3,3/4,4,4,4)			1.00		Stiff grey brown slightly gravelly silty CLAY. Gravel is subangular fine to coarse mudstone lithorelicts. (Gault Formation)			1
1.50	D4									
2.00 - 2.45 2.00	D5 SPT (S)	N=14 (3,2/3,3,4,4)								2
2.60	D6				2.50		Very stiff grey gravelly silty CLAY. Gravel is subangular fine to coarse mudstone lithorelicts. (Gault Formation) <u>Locally very weak mudstone.</u>			
3.00 - 3.45 3.00	D7 SPT (S)	N=12 (2,2/2,3,3,4)			3.45		End of Borehole at 3.450m			3
										4
										5

Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.	Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample	N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike	

		www.aslenvironmental.co.uk				Window Sample No. WS107 Sheet 1 of 1				
Project Name: Land off King's Barn Lane, Steyning, West Sussex					Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex					Co-ords: 518364.46 E 111510.73 N	Level:	Scale 1:25			
Client: Richborough Estates Limited					Start 18/01/2021	Dates: Finish 18/01/2021	Logged By JT			
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)	Depth (m)	Level (m)	Stratum Description	Legend	WS	Well
0.20	ES1						MADE GROUND: Firm brown slightly gravelly silty CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse flint, limestone and brick. (Topsoil)			
0.60	ES2				0.40		Stiff light brown and grey brown slightly gravelly CLAY. Gravel is subangular fine to coarse mudstone lithorelicts. (Gault Formation)			
1.00 - 1.45 1.00	D3 SPT (S)	N=16 (2,3/3,3,5,5)			0.90		Very stiff grey brown and grey slightly gravelly CLAY. Gravel is subangular fine to coarse mudstone lithorelicts. (Gault Formation)			1
1.60	D4									
2.00 - 2.45 2.00	D5 SPT (S)	N=21 (3,4/4,4,5,8)								2
2.80	D6									
3.00 - 3.45 3.00	D7 SPT (S)	N=26 (3,4/4,5,7,10)								3
					3.45		End of Borehole at 3.450m			4
										5
Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.							Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike			

 www.aslenvironmental.co.uk										Window Sample No. WS109 Sheet 1 of 1	
Project Name: Land off King's Barn Lane, Steyning, West Sussex						Project No.: 288-20-087		Hole Type WLS			
Location: Steyning, West Sussex						Co-ords: 518345.09 E 111661.06 N		Level:			
Client: Richborough Estates Limited						Start 18/01/2021		Dates: Finish 18/01/2021			
Logged By JT											
Sample and In Situ Testing					Depth (m)	Level (m)	Stratum Description	Legend	WS	Well	
Depth (m)	Type	SPT	HPV (KPa)	PID (ppm)							
0.20	ES1				0.40	MADE GROUND: Firm brown slightly gravelly silty CLAY with frequent rootlets. Gravel is subangular to subrounded fine to coarse brick, flint and limestone. (Topsoil)					
0.60	ES2					Stiff grey brown locally slightly sandy silty CLAY. (Gault Formation)					
1.30	D3				3.00						
1.30	D4										
1.90	D5										
2.30	D6										
3.00	D7					End of Borehole at 3.000m					
Remarks						Key					
Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.						D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike					

Project No.:

Hole Type

Location:

Co-ords:
518456.17 E
111650.61 N

Level:

Scale

1:25

Client:

Start	Dates:	Finish
8/01/2021		18/01/2021

Logged By

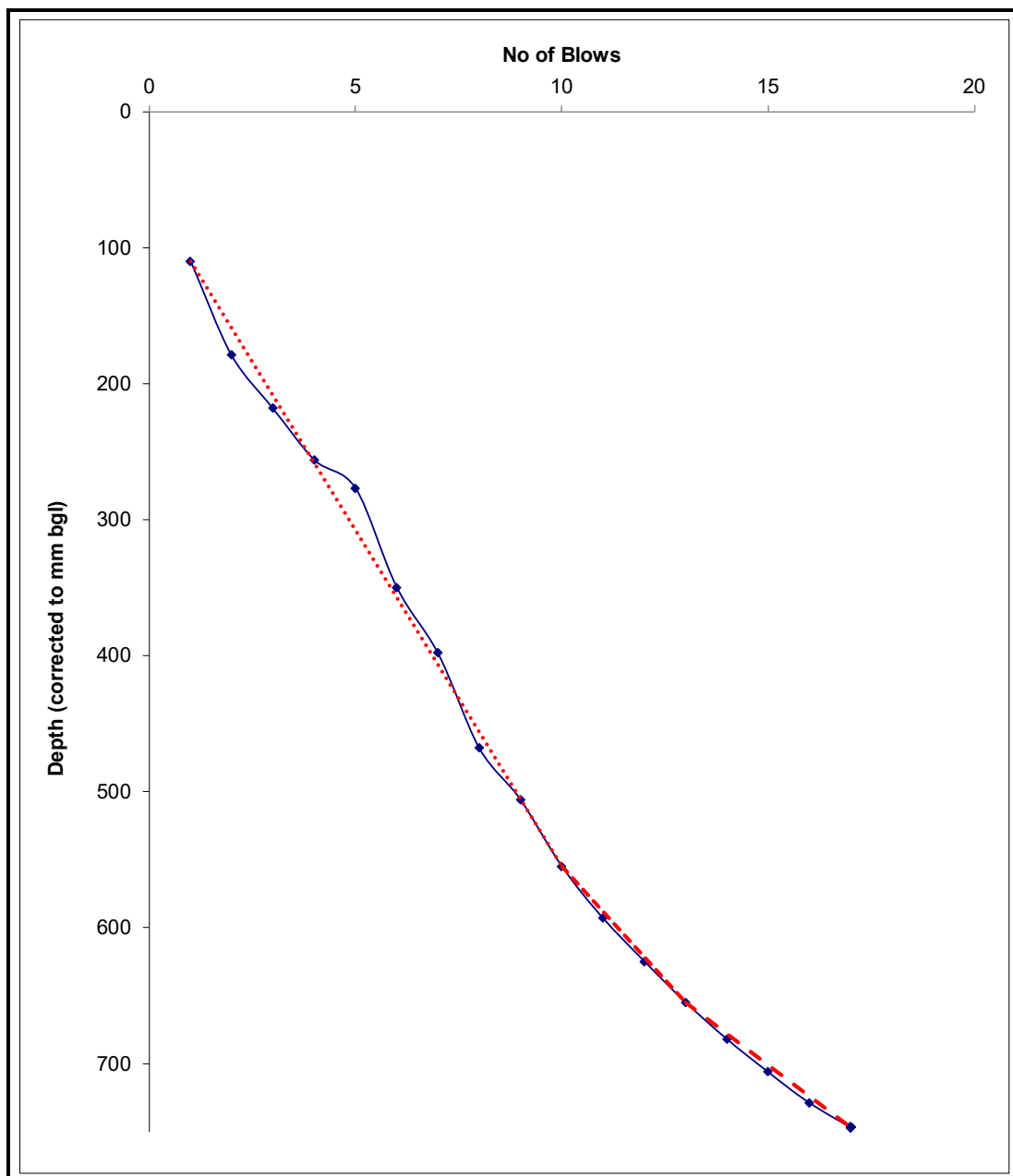
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Remarks Windowless sampling from ground level to completed depth. Groundwater not encountered. Installed with combined gas and groundwater standpipe on completion.	Key D - Disturbed Sample ES - Environmental Sample B - Bulk Sample U - Undisturbed Sample SS - Surface Sample VS - Validation Sample W - Water Sample N/R - No Recovery HVP - Hand Vane Shear Test W/S - Water Strike	
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DCP Test Number: **WS3**
 Project Number: **288-20-087**
 Project Name: **Land off King's Barn Lane, Steyning**
 Date: **02/02/2021**



Plot 1 - No of Blows versus Depth Profile



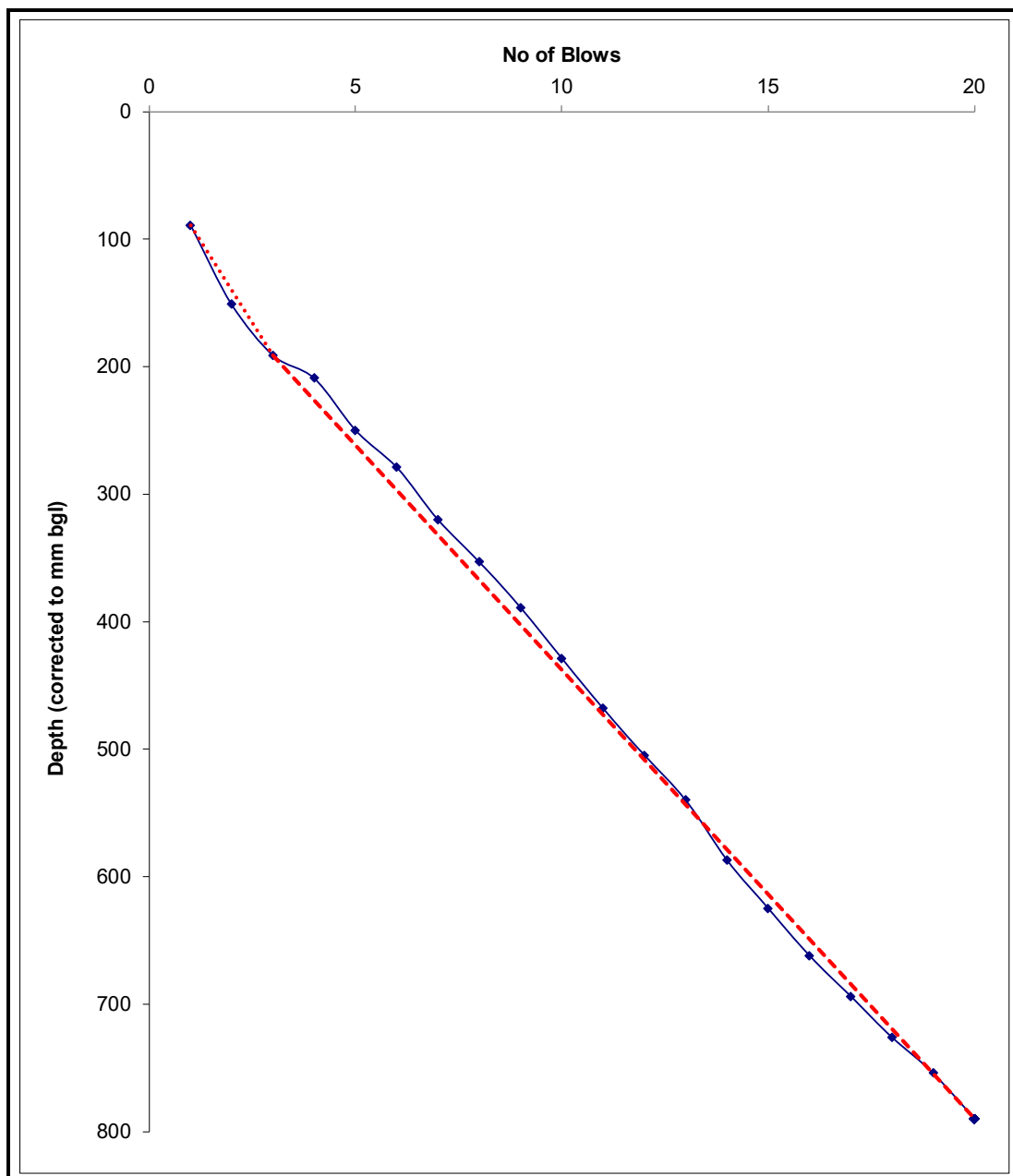
Assessment	mm/blow	depth (m bgl)		Log10(CBR)	CBR (%)
		from	to		
1	49.44	0.11	0.56	0.463529598	2.91
2	33.33	0.56	0.66	0.682715206	4.82
3	23.00	0.66	0.75	0.88898837	7.74

-- indicative line of best fit. Results have been correlated to a CBR value using industry recognised guidelines (based on the relationship derived by Kleyn and Vanheerden)

DCP Test Number: **WS7**
 Project Number: **288-20-087**
 Project Name: **Land off King's Barn Lane, Steyning**
 Date: **02/02/2021**



Plot 1 - No of Blows versus Depth Profile



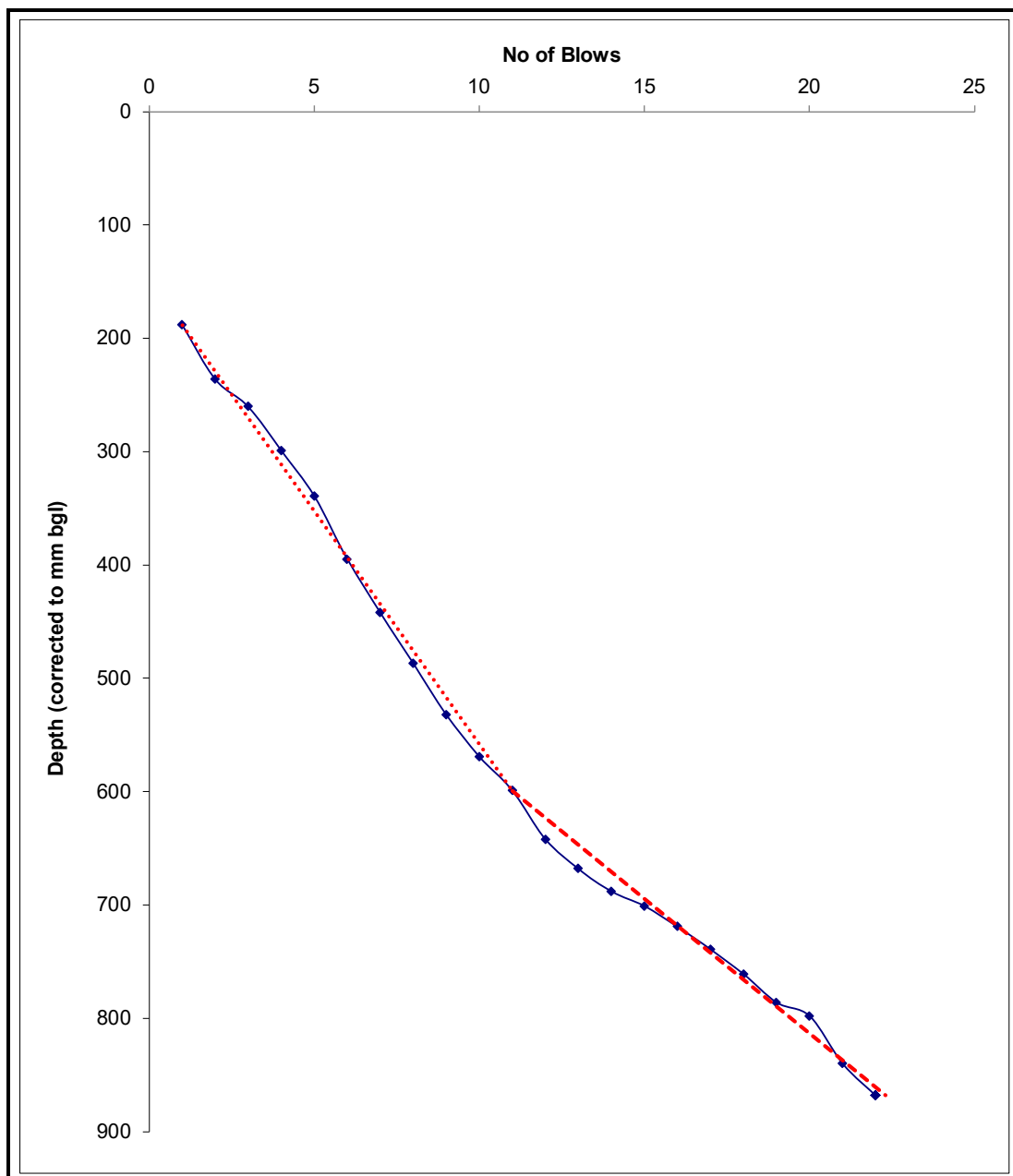
Assessment	mm/blow	depth (m bgl)		Log10(CBR)	CBR (%)
		from	to		
1	51.00	0.09	0.19	0.446310175	2.79
2	35.24	0.19	0.79	0.651868287	4.49

-- indicative line of best fit. Results have been correlated to a CBR value using industry recognised guidelines (based on the relationship derived by Kleyn and Vanheerden)

DCP Test Number: WS8
 Project Number: 288-20-087
 Project Name: Land off King's Barn Lane, Steyning
 Date: 08/02/2021



Plot 1 - No of Blows versus Depth Profile



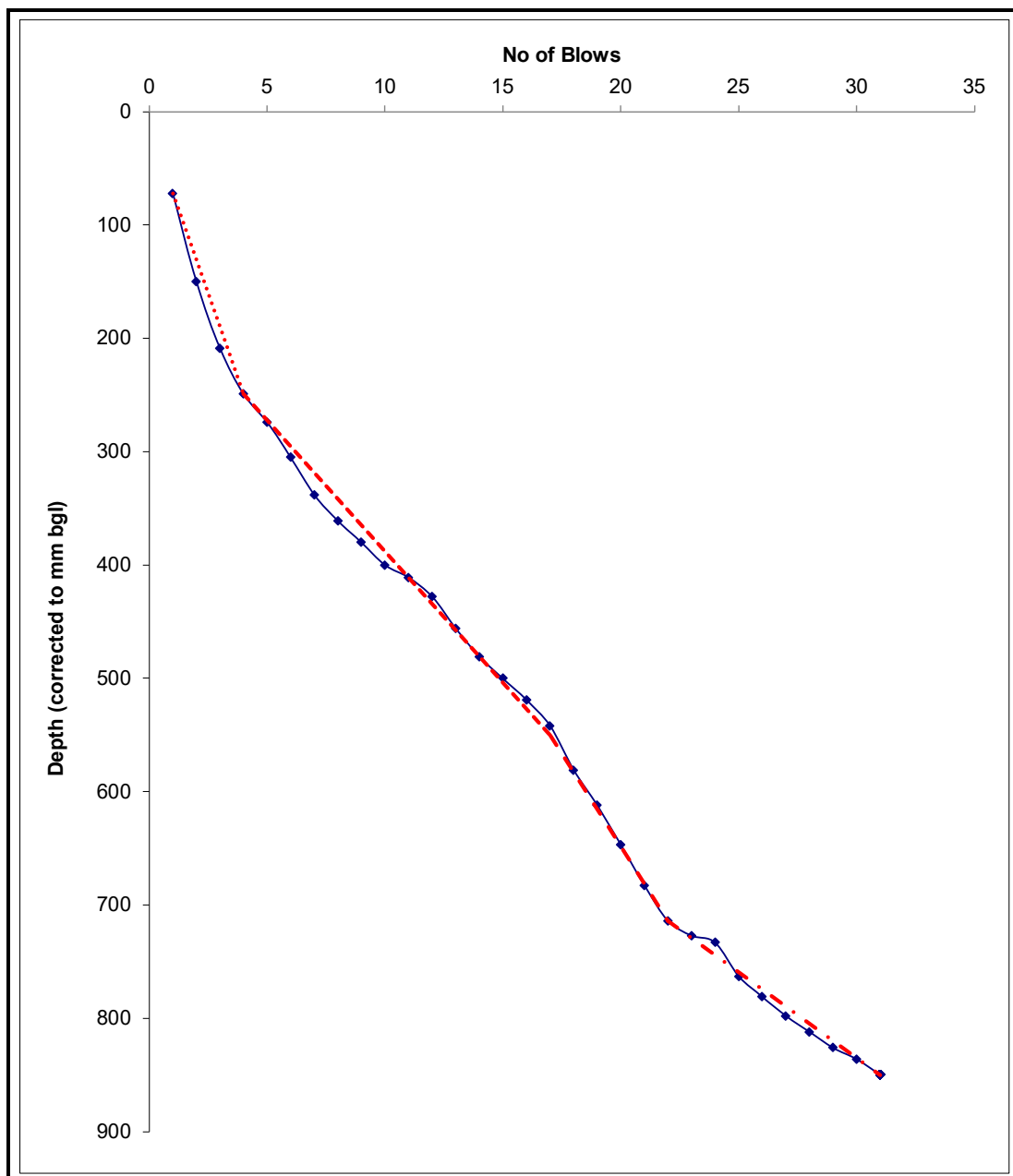
Assessment	mm/blow	depth (m bgl)		Log10(CBR)	CBR (%)
		from	to		
1	41.10	0.19	0.60	0.566282468	3.68
2	23.81	0.60	0.87	0.869857489	7.41

-- indicative line of best fit. Results have been correlated to a CBR value using industry recognised guidelines (based on the relationship derived by Kleyn and Vanheerden)

DCP Test Number: **WS12**
 Project Number: **288-20-087**
 Project Name: **Land off King's Barn Lane, Steyning**
 Date: **05/02/2021**



Plot 1 - No of Blows versus Depth Profile



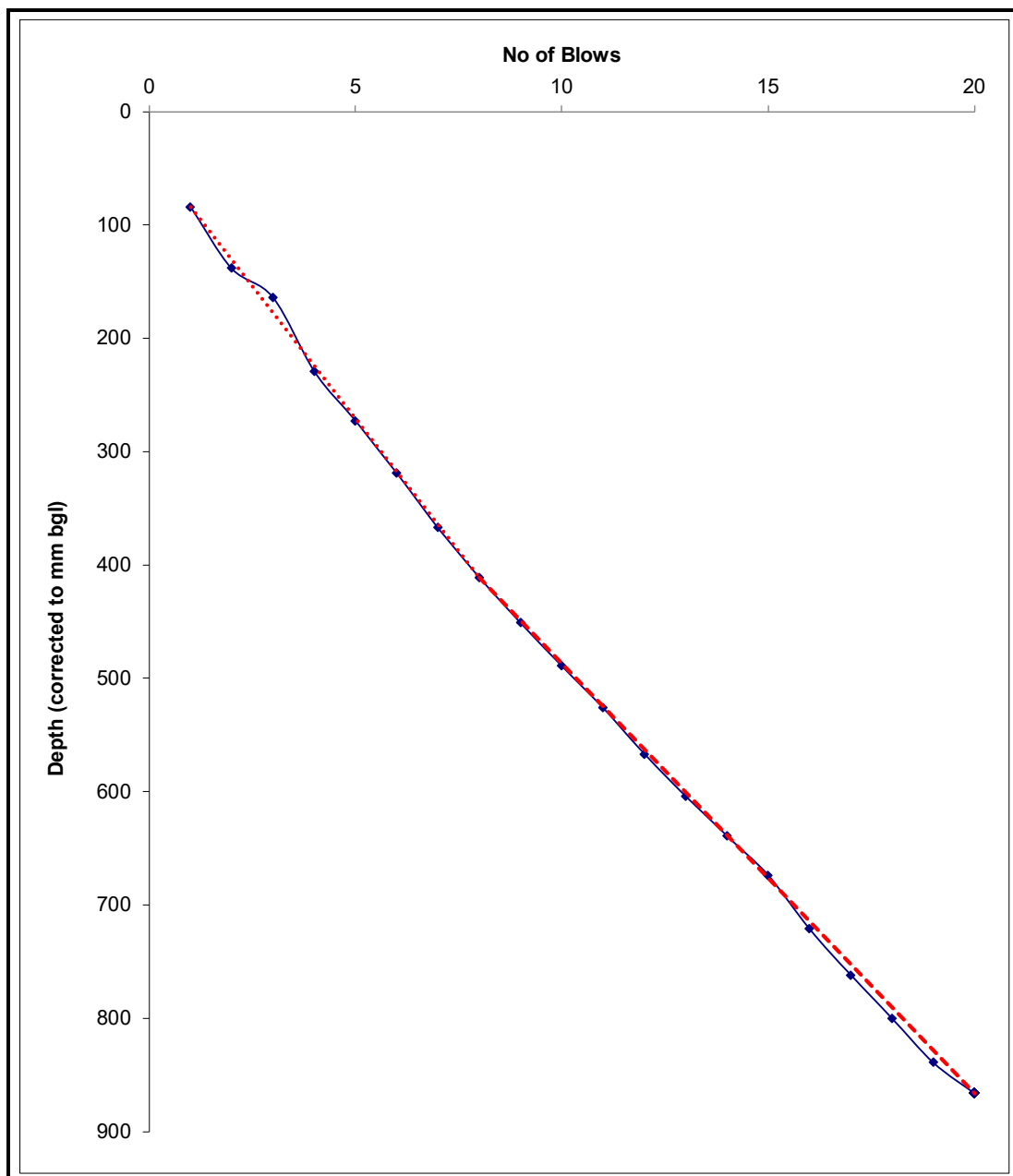
Assessment	mm/blow	depth (m bgl)		Log10(CBR)	CBR (%)
		from	to		
1	59.00	0.07	0.25	0.365309425	2.32
2	23.15	0.25	0.55	0.885282377	7.68
3	32.80	0.55	0.71	0.69168148	4.92
4	15.11	0.71	0.85	1.122500609	13.26

-- indicative line of best fit. Results have been correlated to a CBR value using industry recognised guidelines (based on the relationship derived by Kleyn and Vanheerden)

DCP Test Number: WS15
 Project Number: 288-20-087
 Project Name: Land off King's Barn Lane, Steyning
 Date: 04/02/2021



Plot 1 - No of Blows versus Depth Profile



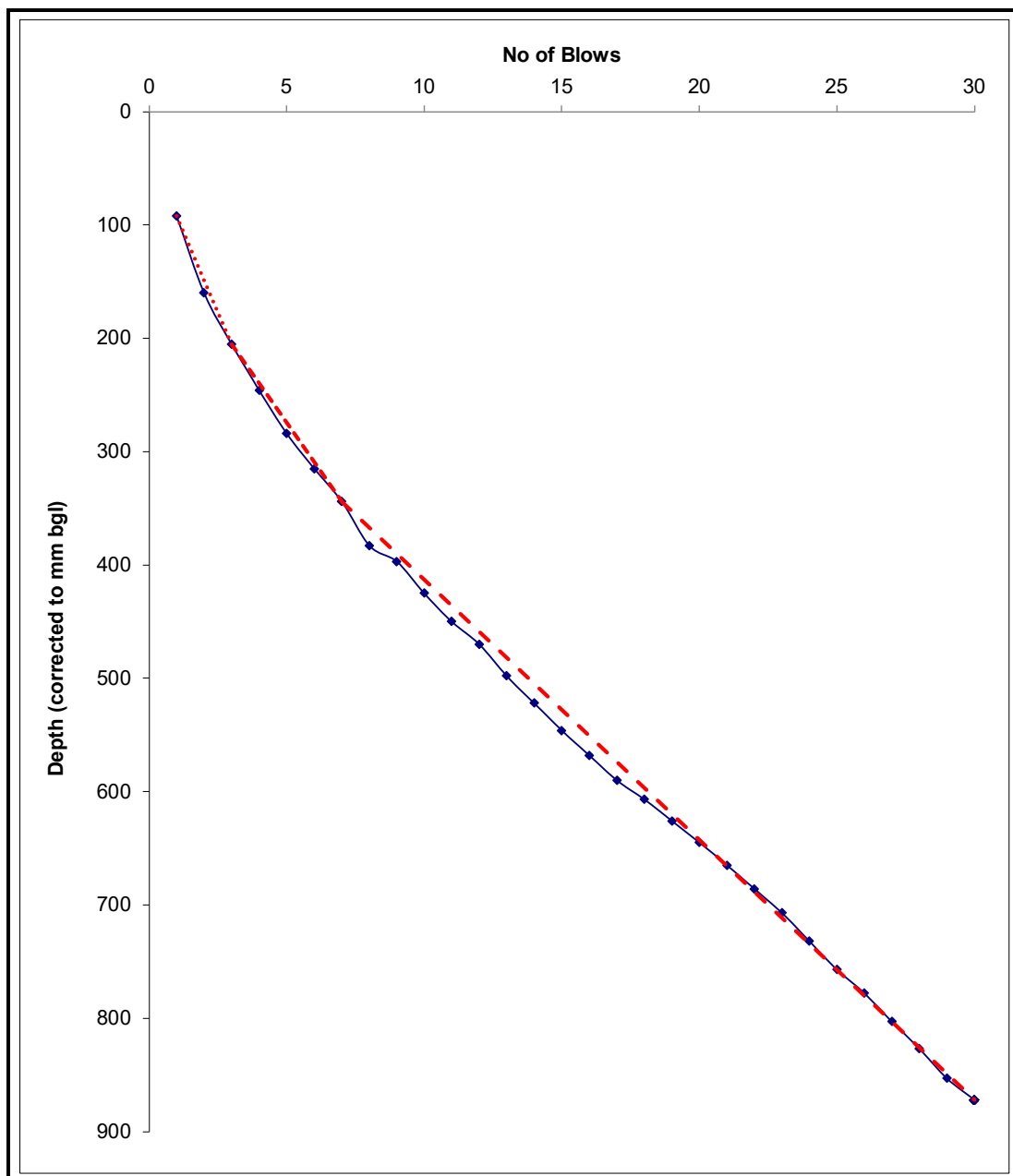
Assessment	mm/blow	depth (m bgl)		Log10(CBR)	CBR (%)
		from	to		
1	46.71	0.08	0.41	0.495104368	3.13
2	37.92	0.41	0.87	0.611097407	4.08

-- indicative line of best fit. Results have been correlated to a CBR value using industry recognised guidelines (based on the relationship derived by Kleyn and Vanheerden)

DCP Test Number: **WS17**
 Project Number: **288-20-087**
 Project Name: **Land off King's Barn Lane, Steyning**
 Date: **04/02/2021**



Plot 1 - No of Blows versus Depth Profile



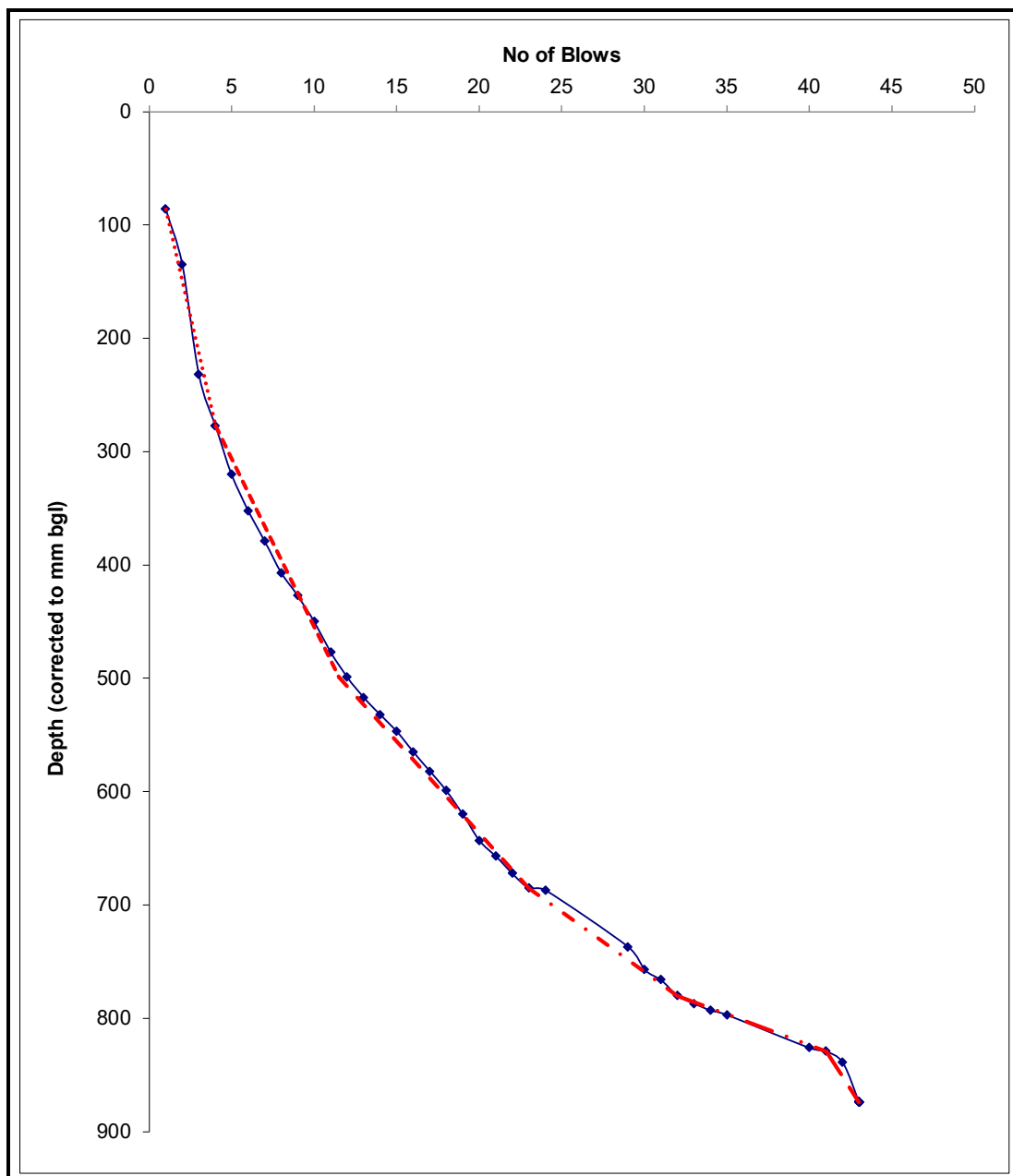
Assessment	mm/blow	depth (m bgl)		Log10(CBR)	CBR (%)
		from	to		
1	56.50	0.09	0.21	0.389377987	2.45
2	34.75	0.21	0.34	0.659577845	4.57
3	22.96	0.34	0.87	0.890040209	7.76

-- indicative line of best fit. Results have been correlated to a CBR value using industry recognised guidelines (based on the relationship derived by Kleyn and Vanheerden)

DCP Test Number: **WS24**
 Project Number: **288-20-087**
 Project Name: **Land off King's Barn Lane, Steyning**
 Date: **03/02/2021**



Plot 1 - No of Blows versus Depth Profile



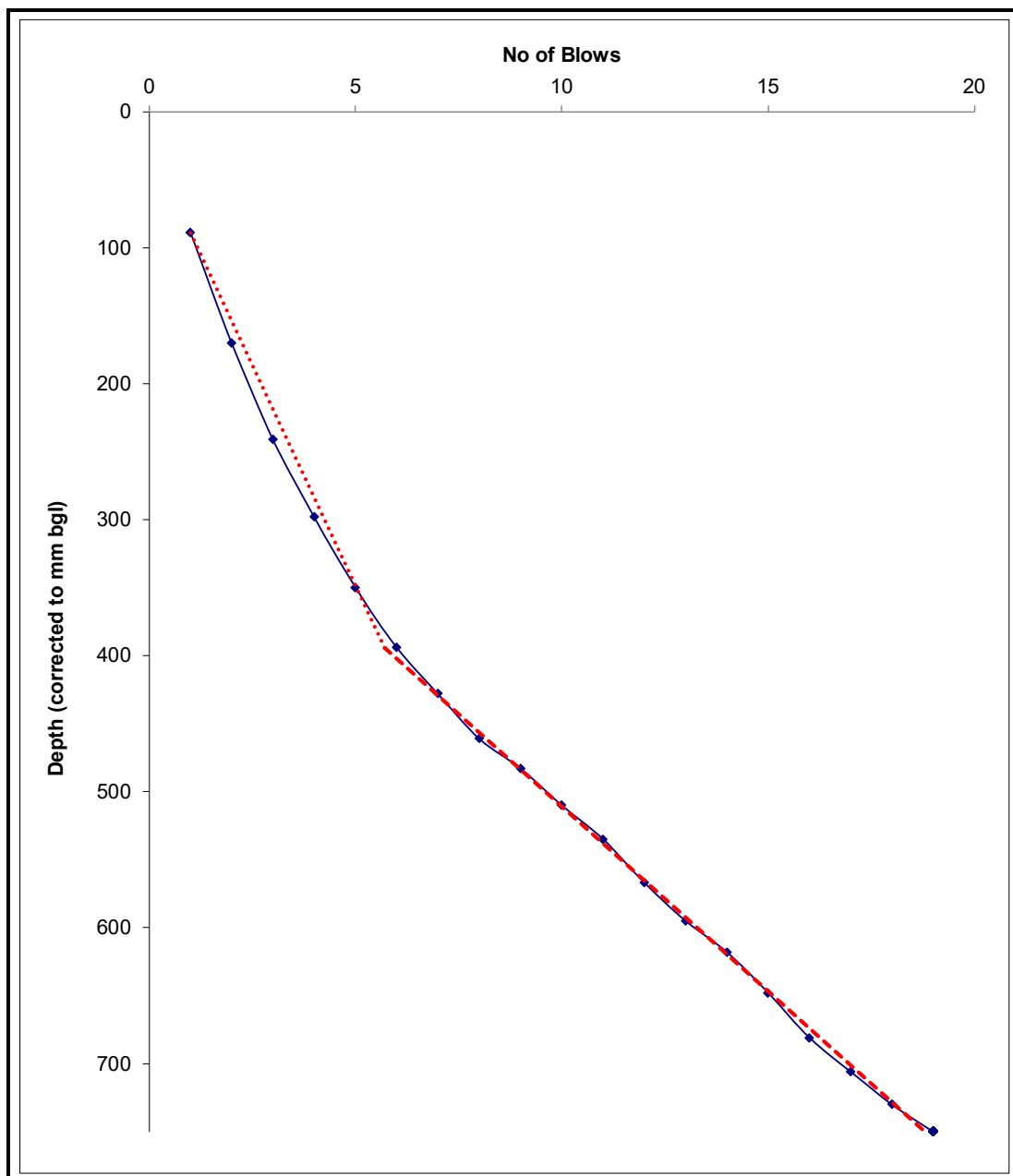
Assessment	mm/blow	depth (m bgl)		Log10(CBR)	CBR (%)
		from	to		
1	63.67	0.09	0.28	0.322992496	2.10
2	29.60	0.28	0.50	0.74874661	5.61
3	16.17	0.50	0.69	1.084716667	12.15
4	10.56	0.69	0.78	1.321944197	20.99
5	5.44	0.78	0.83	1.68997943	48.98
6	22.50	0.83	0.87	0.901206377	7.97

-- indicative line of best fit. Results have been correlated to a CBR value using industry recognised guidelines (based on the relationship derived by Kleyn and Vanheerden)

DCP Test Number: WS26
 Project Number: 288-20-087
 Project Name: Land off King's Barn Lane, Steyning
 Date: 02/02/2021



Plot 1 - No of Blows versus Depth Profile



Assessment	mm/blow	depth (m bgl)		Log10(CBR)	CBR (%)
		from	to		
1	64.89	0.09	0.39	0.312381464	2.05
2	27.18	0.39	0.75	0.796251261	6.26

-- indicative line of best fit. Results have been correlated to a CBR value using industry recognised guidelines (based on the relationship derived by Kleyn and Vanheerden)



Hole ID	Event	GW Level (m bgl)	Borehole Depth (m bgl)	CH ₄ (% v/v)	CO ₂ (% v/v)	O ₂ (% v/v)	CO (ppm)	H ₂ S (ppm)	Downhole Pressure (Pa)		Average Flow Rate (l/hr)	
									Average	Peak	Average	Peak
Start	1	-	-	<0.1	<0.1	20.5	<1	<1	0	-	0.0	-
Finish	1	-	-	<0.1	<0.1	20.6	<1	<1	0	-	0.0	-
WS1	1	Dry	3.02	<0.1	4.5	4.5	<1	<1	0	-	0.0	-
WS2	1	2.92	3.00	<0.1	1.5	16.4	<1	<1	0	-	0.0	-
WS4	1	2.94	3.02	<0.1	2.8	12.0	<1	<1	0	-	0.0	-
WS7	1	2.49	3.07	<0.1	1.5	15.9	<1	<1	0	-	0.0	-
WS8	1	1.69	3.03	<0.1	1.8	16.4	<1	<1	0	-	0.0	-
WS10	1	2.95	3.04	<0.1	2.3	12.5	<1	<1	0	-	0.0	-
WS13	1	2.93	3.02	<0.1	1.4	17.1	<1	<1	0	-	0.0	-
WS15	1	2.94	3.02	<0.1	2.7	11.7	<1	<1	0	4	0.0	1.1
WS17	1	2.92	3.01	<0.1	4.3	2.6	<1	<1	0	-	0.0	-
WS20	1	2.40	2.99	<0.1	0.4	20.1	<1	<1	0	-	0.0	-
WS21	1	Dry	3.05	<0.1	2.3	9.5	<1	<1	0	-	0.0	-
WS25	1	2.93	3.02	<0.1	2.1	14.4	<1	<1	0	-	0.0	-

Borehole	Condition Report
WS4, WS17	Vacuum created, sucking sound heard when tube disconnected.

Notes:

Date: 08/03/21

Atmospheric Pressure: 1022mb-1024mb

Weather Conditions: 2-6°C, gentle breeze, dry, overcast, dry/damp ground.

Engineer: A Bensley

Gas concentrations recorded in either parts per million (ppm) or as a percentage of the total volume of gas recorded by the testing apparatus.

Table IIa**Gas and Groundwater Monitoring Results****Site Name: Land off King's Barn Lane, Steyning****Project No. 288-20-087****Prepared for: Richborough Estates Limited**



Hole ID	Event	GW Level (m bgl)	Borehole Depth (m bgl)	CH ₄ (% v/v)	CO ₂ (% v/v)	O ₂ (% v/v)	CO (ppm)	H ₂ S (ppm)	Downhole Pressure (Pa)		Average Flow Rate (l/hr)	
									Average	Peak	Average	Peak
Start	2	-	-	<0.1	<0.1	20.6	<1	<1	0	-	0.0	-
Finish	2	-	-	<0.1	<0.1	20.2	<1	<1	0	-	0.0	-
WS1	2	Dry	3.02	<0.1	5.2	7.0	<1	<1	0	-	0.0	-
WS2	2	2.92	3.00	<0.1	1.5	16.4	<1	<1	0	14	0.0	2.1
WS4	2	2.94	3.02	<0.1	2.9	11.8	<1	<1	0	-48	0.0	-6.2
WS7	2	2.66	3.07	<0.1	1.6	16.1	<1	<1	0	-	0.0	-
WS8	2	1.51	3.03	<0.1	1.3	17.1	<1	<1	0	-	0.0	-
WS10	2	2.95	3.04	<0.1	2.0	13.0	<1	<1	0	-	0.0	-
WS13	2	2.82	3.01	<0.1	1.5	17.0	<1	<1	0	-	0.0	-
WS15	2	2.93	3.02	<0.1	2.9	10.8	<1	<1	0	-	0.0	-
WS17	2	2.75	3.01	<0.1	4.4	3.6	<1	<1	0	-	0.0	-
WS20	2	1.71	2.99	<0.1	0.6	19.6	<1	<1	0	-	0.0	-
WS21	2	Dry	3.05	<0.1	2.4	8.5	<1	<1	0	-	0.0	-
WS25	2	2.93	3.02	<0.1	2.0	15.4	<1	<1	0	-	0.0	-

Borehole	Condition Report
WS4, WS21	Vacuum created, sucking sound heard when tube disconnected.

Notes:

Date: 17/03/21

Atmospheric Pressure: 1031mb-1033mb

Weather Conditions: 9-10°C, moderate breeze, dry becoming light rain, overcast, dry becoming wet.

Engineer: A Bensley

Gas concentrations recorded in either parts per million (ppm) or as a percentage of the total volume of gas recorded by the testing apparatus.

Table IIa**Gas and Groundwater Monitoring Results****Site Name: Land off King's Barn Lane, Steyning****Project No. 288-20-087****Prepared for: Richborough Estates Limited**



Hole ID	Event	GW Level (m bgl)	Borehole Depth (m bgl)	CH ₄ (% v/v)	CO ₂ (% v/v)	O ₂ (% v/v)	CO (ppm)	H ₂ S (ppm)	Downhole Pressure (Pa)		Average Flow Rate (l/hr)	
									Average	Peak	Average	Peak
Start	3	-	-	<0.1	<0.1	20.6	<1	<1	0	-	0.0	-
Finish	3	-	-	<0.1	<0.1	20.2	<1	<1	0	-	0.0	-
WS1	3	Dry	3.02	<0.1	5.2	5.5	<1	<1	0	-	0.0	-
WS2	3	2.92	3.00	<0.1	1.5	16.8	<1	<1	0	-6	0.0	-0.2
WS4	3	2.94	3.02	<0.1	2.9	12.4	1	<1	0	-	0.0	-
WS7	3	2.71	3.07	<0.1	1.6	17.0	<1	<1	0	-	0.0	-
WS8	3	1.68	3.03	<0.1	1.6	17.8	<1	<1	0	-	0.0	-
WS10	3	2.95	3.04	<0.1	2.3	12.9	<1	<1	0	-	0.0	-
WS13	3	2.39	3.01	<0.1	1.5	17.5	<1	<1	0	-	0.0	-
WS15	3	2.93	3.02	<0.1	3.0	10.9	<1	<1	0	-	0.0	-
WS17	3	2.92	3.01	<0.1	4.5	4.5	<1	<1	0	-	0.0	-
WS20	3	2.16	2.98	<0.1	0.1	20.4	<1	<1	0	-	0.0	-
WS21	3	Dry	3.05	<0.1	2.5	8.2	<1	<1	0	-	0.0	-
WS25	3	2.93	3.01	<0.1	2.1	15.3	<1	<1	0	-	0.0	-

Borehole	Condition Report
WS4, WS17	Vacuum created, sucking sound heard when tube disconnected.

Notes:

Date: 23/03/21

Atmospheric Pressure: 1023mb-1025mb

Weather Conditions: 11°C, moderate breeze, dry, cloudy, dry ground.

Engineer: A Bensley

Gas concentrations recorded in either parts per million (ppm) or as a percentage of the total volume of gas recorded by the testing apparatus.

Table IIa**Gas and Groundwater Monitoring Results****Site Name: Land off King's Barn Lane, Steyning****Project No. 288-20-087****Prepared for: Richborough Estates Limited**

Project No:	288-20-087
Project:	Land off King's Barn Lane, Steyning, West Sussex
Date:	19/01/2021
Borehole No.:	WS101A

[illegible]

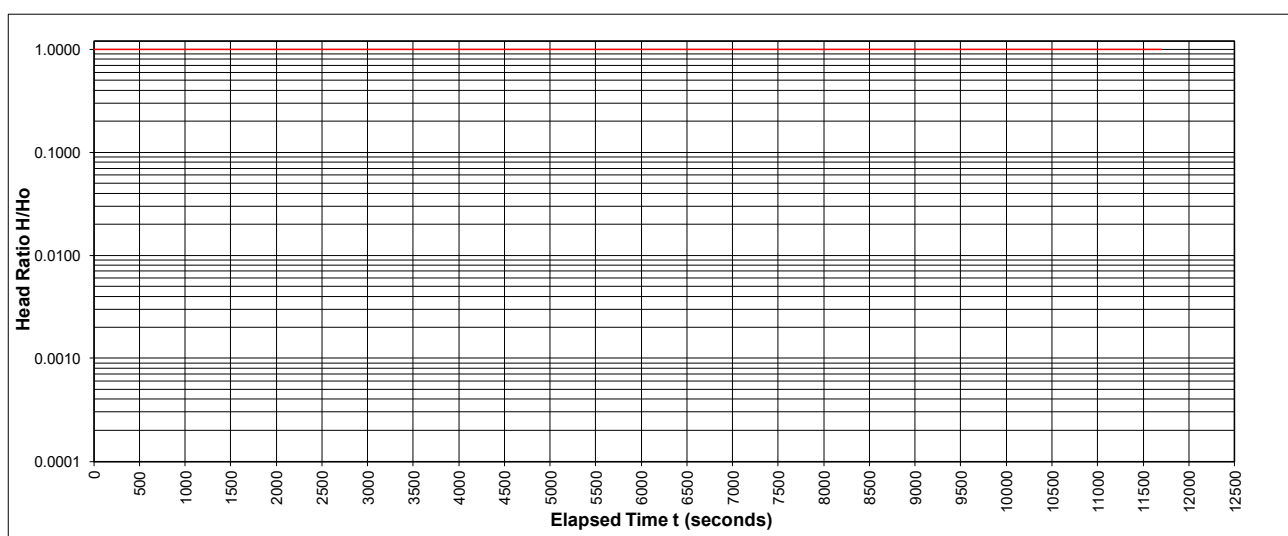
Diameter of piezometer (or where surrounded by granular filter, the diameter of the filter)	80	mm
Diameter of standpipe	50	mm
Top of response zone	1.00	m bgl
Base of response zone	3.00	m bgl
Length of response zone (saturated)	2.00	m
L/D	25.00	
Area	0.0019625	m ²
Starting Water Level	2.92	m

Comments:
Test carried out in general accordance with the methodology set out in BS 5930:1999

Time Interval (t_1)	0	seconds
Time Interval (t_2)	11700	seconds

Method	Intake Factor (F)	
a = Soil flush with bottom at impervious boundary	0.160	○
b = Soil flush with bottom in uniform soil	0.220	○
c = Well or hole extended at impervious boundary	3.105	○
d = Well or hole extended in uniform soil	3.210	○
e = Soil in casing with bottom at impervious boundary	0.002	○
f = Soil in casing with bottom in uniform soil	0.002	○
Test carried out in piezometer tube	3.6588	●

Intake Factor (F)	3.6588	
Permeability (k) - General Method	0.00E+00	m/s



Project No:	288-20-087
Project:	Land off King's Barn Lane, Steyning, West Sussex
Date:	19/01/2021
Borehole No.:	WS101B

[illegible]

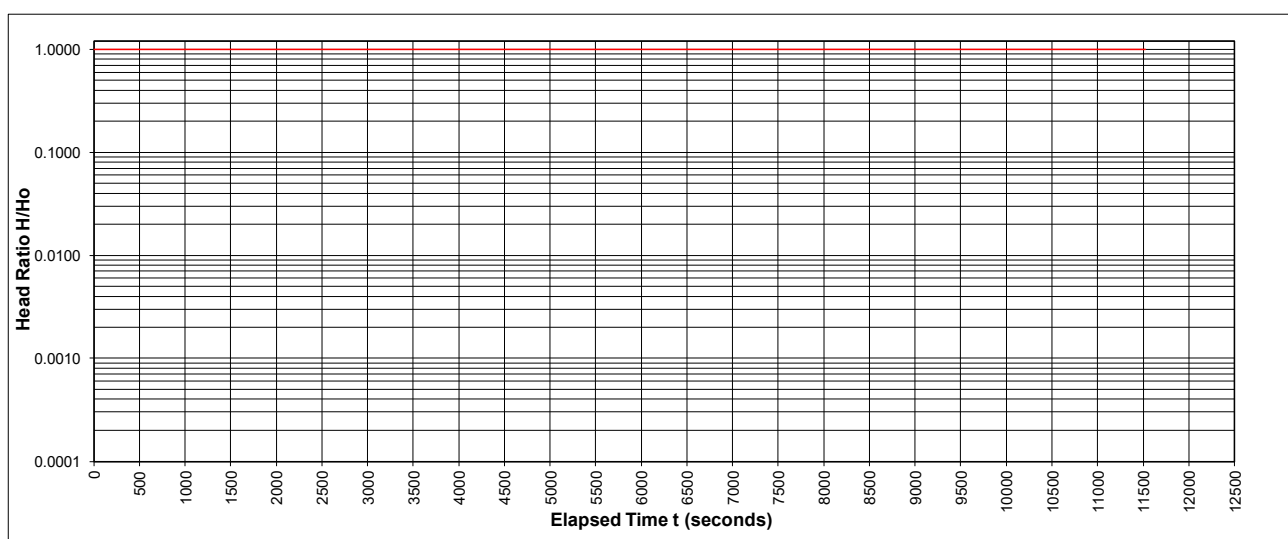
Diameter of piezometer (or where surrounded by granular filter, the diameter of the filter)	80	mm
Diameter of standpipe	50	mm
Top of response zone	1.02	m bgl
Base of response zone	3.02	m bgl
Length of response zone (saturated)	2.00	m
L/D	25.00	
Area	0.0019625	m ²
Starting Water Level	2.97	m

Comments:	
Test carried out in general accordance with the methodology set out in BS 5930:1999	

Time Interval (t_1)	0	seconds
Time Interval (t_2)	11520	seconds

Method	Intake Factor (F)	
a = Soil flush with bottom at impervious boundary	0.160	⦿
b = Soil flush with bottom in uniform soil	0.220	⦿
c = Well or hole extended at impervious boundary	3.105	⦿
d = Well or hole extended in uniform soil	3.210	⦿
e = Soil in casing with bottom at impervious boundary	0.002	⦿
f = Soil in casing with bottom in uniform soil	0.002	⦿
Test carried out in piezometer tube	3.6588	●

Intake Factor (F)	3.6588
Permeability (k) - General Method	0.00E+00 m/s



Project No:	288-20-087
Project:	Land off King's Barn Lane, Steyning, West Sussex
Date:	19/01/2021
Borehole No.:	WS102

[illegible]

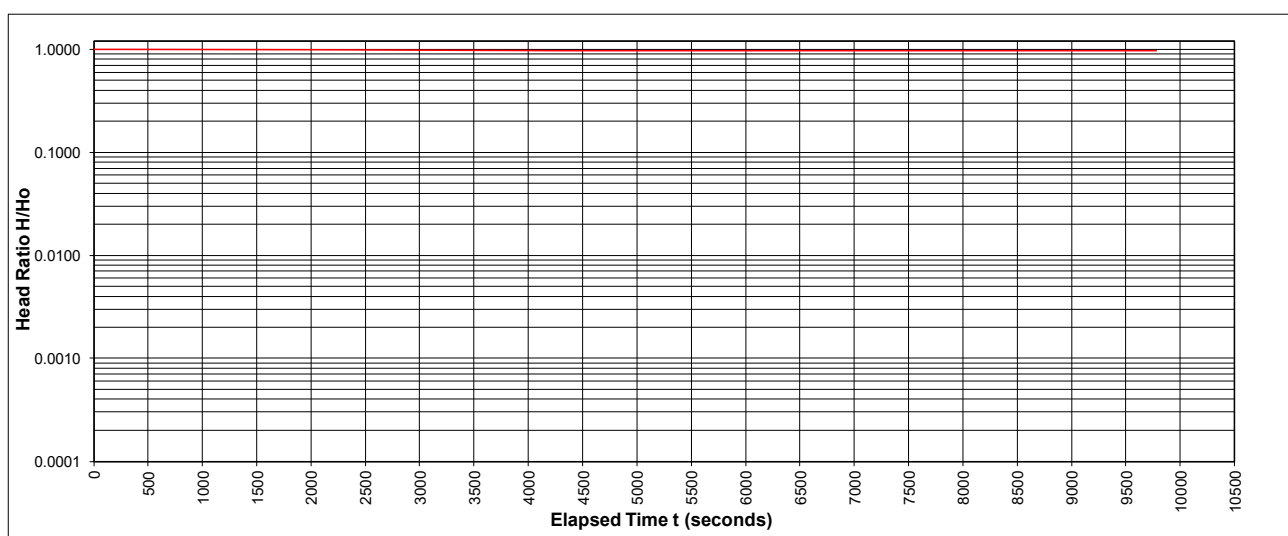
Diameter of piezometer (or where surrounded by granular filter, the diameter of the filter)	80	mm
Diameter of standpipe	50	mm
Top of response zone	1.00	m bgl
Base of response zone	3.00	m bgl
Length of response zone (saturated)	2.00	m
L/D	25.00	
Area	0.0019625	m ²
Starting Water Level	3.01	m

Comments:	
	Test carried out in general accordance with the methodology set out in BS 5930:1999

Time Interval (t_1)	0	seconds
Time Interval (t_2)	9780	seconds

Method	Intake Factor (F)	
a = Soil flush with bottom at impervious boundary	0.160	○
b = Soil flush with bottom in uniform soil	0.220	○
c = Well or hole extended at impervious boundary	3.105	○
d = Well or hole extended in uniform soil	3.210	○
e = Soil in casing with bottom at impervious boundary	0.002	○
f = Soil in casing with bottom in uniform soil	0.002	○
Test carried out in piezometer tube	3.6588	●

Intake Factor (F)	3.6588	
Permeability (k) - General Method	1.14E-09	m/s





Project No:	288-20-087
Project:	Land off King's Barn Lane, Steyning, West Sussex
Date:	19/01/2021
Borehole No.:	WS103 - Test 1

[illegible]

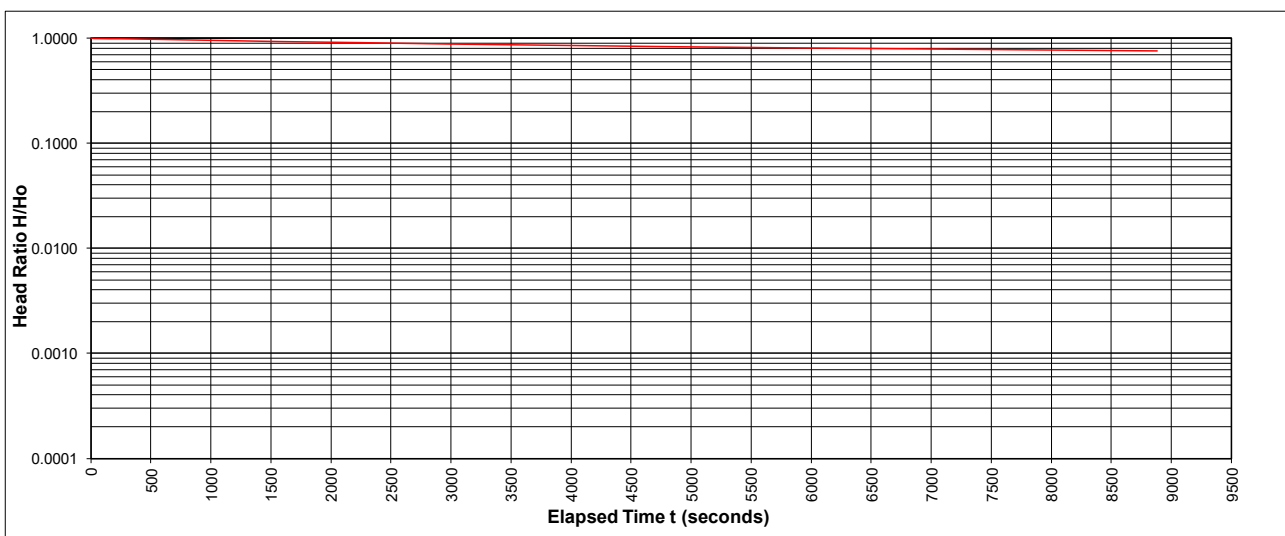
Diameter of piezometer (or where surrounded by granular filter, the diameter of the filter)	80	mm
Diameter of standpipe	50	mm
Top of response zone	1.07	m bgl
Base of response zone	3.07	m bgl
Length of response zone (saturated)	2.00	m
L/D	25.00	
Area	0.0019625	m ²
Starting Water Level	1.32	m

Comments:
Test carried out in general accordance with the methodology set out in BS 5930:1999

Time Interval (t_1)	0	seconds
Time Interval (t_2)	8880	seconds

Method	Intake Factor (F)	
a = Soil flush with bottom at impervious boundary	0.160	○
b = Soil flush with bottom in uniform soil	0.220	○
c = Well or hole extended at impervious boundary	3.105	○
d = Well or hole extended in uniform soil	3.210	○
e = Soil in casing with bottom at impervious boundary	0.002	○
f = Soil in casing with bottom in uniform soil	0.002	○
Test carried out in piezometer tube	3.6588	●

Intake Factor (F)	3.6588	
Permeability (k) - General Method	1.64E-08	m/s



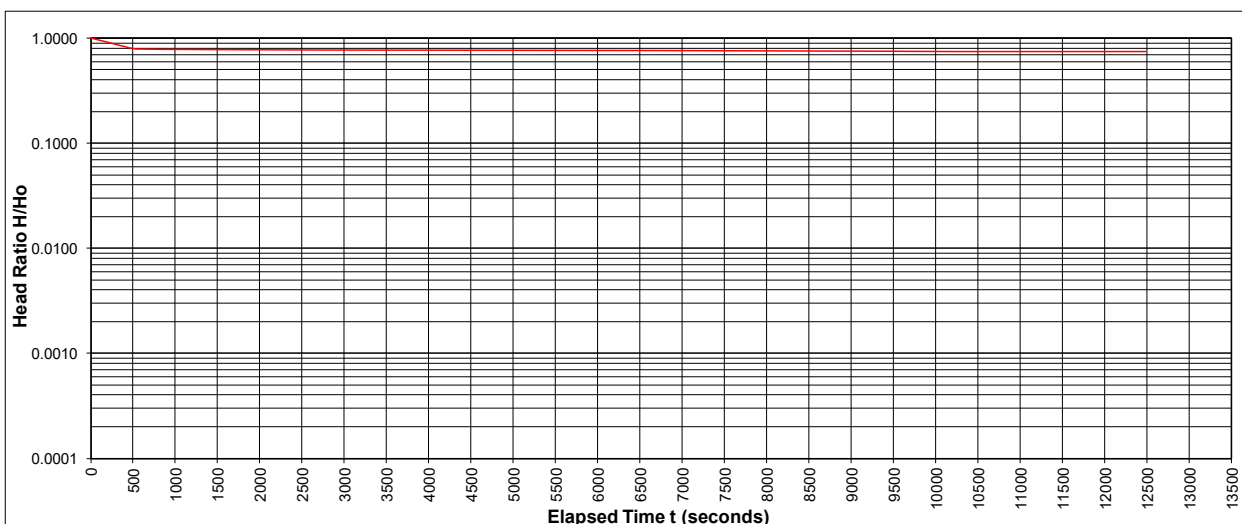
Project No:	288-20-087
Project:	Land off King's Barn Lane, Steyning, West Sussex
Date:	20/01/2021
Borehole No.:	WS103 - Test 2

[illegible]

Comments:
Test carried out in general accordance with the methodology set out in BS 5930:1999

Method	Intake Factor (F)	
a = Soil flush with bottom at impervious boundary	0.160	○
b = Soil flush with bottom in uniform soil	0.220	○
c = Well or hole extended at impervious boundary	3.105	○
d = Well or hole extended in uniform soil	3.210	○
e = Soil in casing with bottom at impervious boundary	0.002	○
f = Soil in casing with bottom in uniform soil	0.002	○
Test carried out in piezometer tube	3.6588	●

Intake Factor (F)	3.6588	
Permeability (k) - General Method	1.24E-08	m / s



Project No:	288-20-087
Project:	Land off King's Barn Lane, Steyning, West Sussex
Date:	20/01/2021
Borehole No.:	WS105

[illegible]

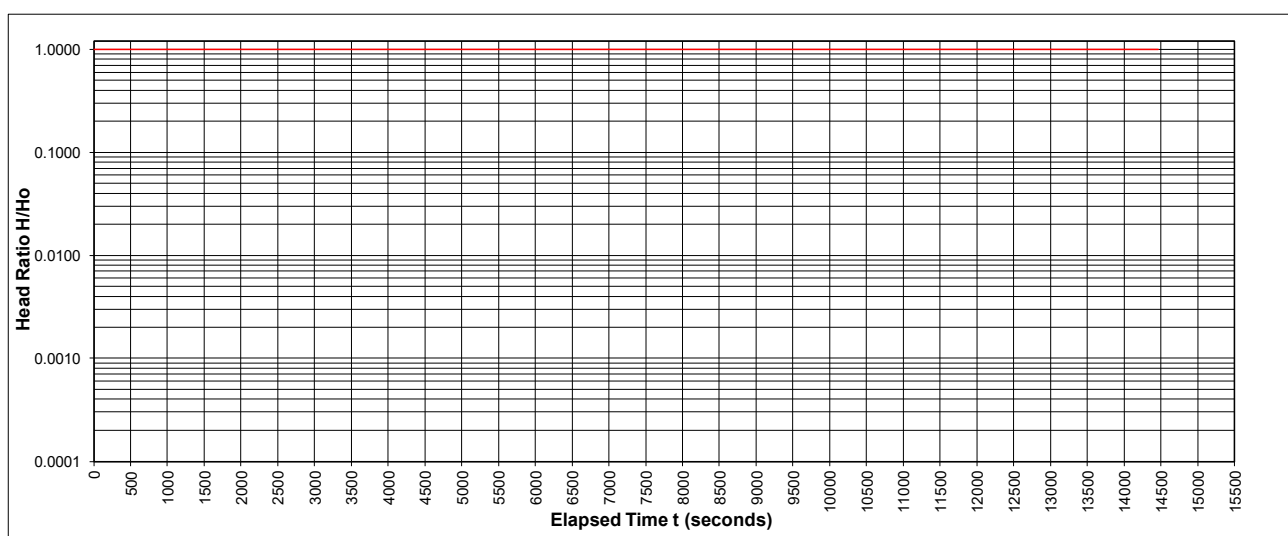
Diameter of piezometer (or where surrounded by granular filter, the diameter of the filter)	80	mm
Diameter of standpipe	50	mm
Top of response zone	1.00	m bgl
Base of response zone	3.09	m bgl
Length of response zone (saturated)	2.00	m
L/D	25.00	
Area	0.0019625	m ²
Starting Water Level	2.99	m

Comments:
Test carried out in general accordance with the methodology set out in BS 5930:1999

Time Interval (t_1)	0	seconds
Time Interval (t_2)	14460	seconds

Method	Intake Factor (F)	
a = Soil flush with bottom at impervious boundary	0.160	○
b = Soil flush with bottom in uniform soil	0.220	○
c = Well or hole extended at impervious boundary	3.105	○
d = Well or hole extended in uniform soil	3.210	○
e = Soil in casing with bottom at impervious boundary	0.002	○
f = Soil in casing with bottom in uniform soil	0.002	○
Test carried out in piezometer tube	3.6588	●

Intake Factor (F)	3.6588	
Permeability (k) - General Method	0.00E+00	m/s



Project No:	288-20-087
Project:	Land off King's Barn Lane, Steyning, West Sussex
Date:	19/01/2021
Borehole No.:	WS106

[illegible]

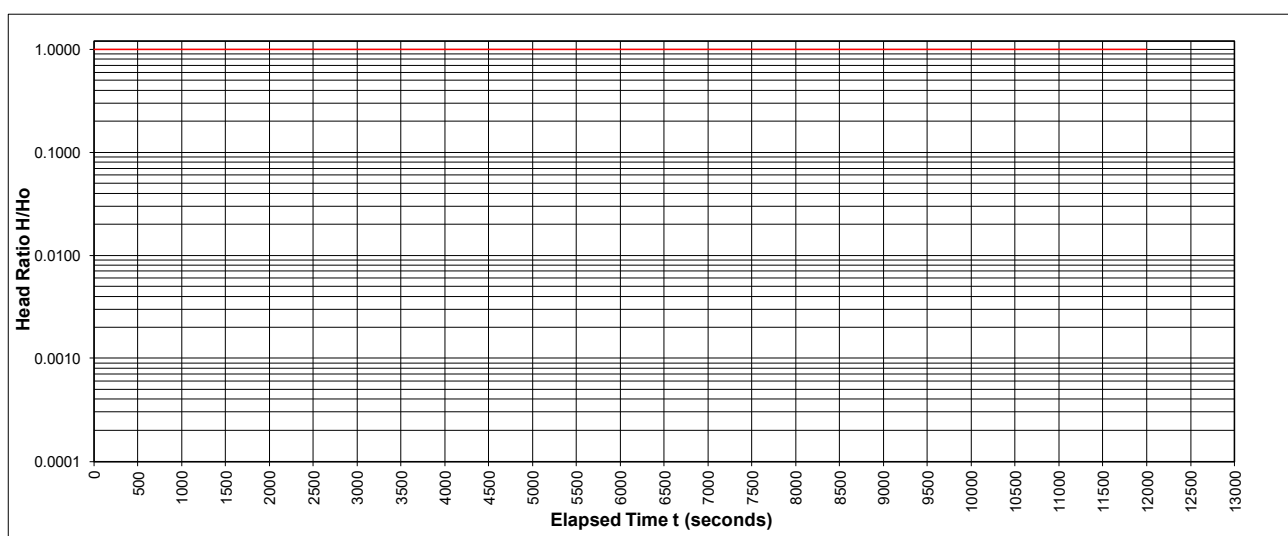
Diameter of piezometer (or where surrounded by granular filter, the diameter of the filter)	80	mm
Diameter of standpipe	50	mm
Top of response zone	1.05	m bgl
Base of response zone	3.05	m bgl
Length of response zone (saturated)	2.00	m
L/D	25.00	
Area	0.0019625	m ²
Starting Water Level	2.91	m

Comments:	
	Test carried out in general accordance with the methodology set out in BS 5930:1999

Time Interval (t_1)	0	seconds
Time Interval (t_2)	12000	seconds

Method	Intake Factor (F)	
a = Soil flush with bottom at impervious boundary	0.160	○
b = Soil flush with bottom in uniform soil	0.220	○
c = Well or hole extended at impervious boundary	3.105	○
d = Well or hole extended in uniform soil	3.210	○
e = Soil in casing with bottom at impervious boundary	0.002	○
f = Soil in casing with bottom in uniform soil	0.002	○
Test carried out in piezometer tube	3.6588	●

Intake Factor (F)	3.6588	
Permeability (k) - General Method	0.00E+00	m/s



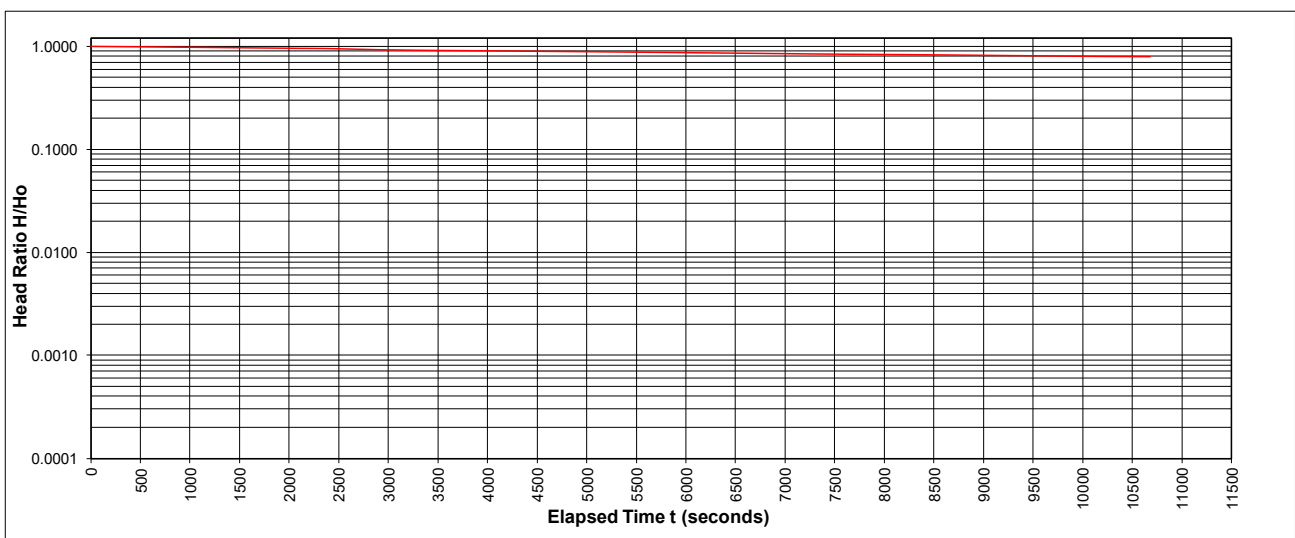
Project No:	288-20-087
Project:	Land off King's Barn Lane, Steyning, West Sussex
Date:	19/01/2021
Borehole No.:	WS107 - Test 1

[illegible]

Comments:
Test carried out in general accordance with the methodology set out in BS 5930:1999

Method	Intake Factor (F)	
a = Soil flush with bottom at impervious boundary	0.160	⊙
b = Soil flush with bottom in uniform soil	0.220	⊙
c = Well or hole extended at impervious boundary	3.105	⊙
d = Well or hole extended in uniform soil	3.210	⊙
e = Soil in casing with bottom at impervious boundary	0.002	⊙
f = Soil in casing with bottom in uniform soil	0.002	⊙
Test carried out in piezometer tube	3.6588	●

Intake Factor (F)	3.6588	
Permeability (k) - General Method	1.17E-08	m/s



Project No:	288-20-087
Project:	Land off King's Barn Lane, Steyning, West Sussex
Date:	19/01/2021
Borehole No.:	WS107 - Test 2

[illegible]

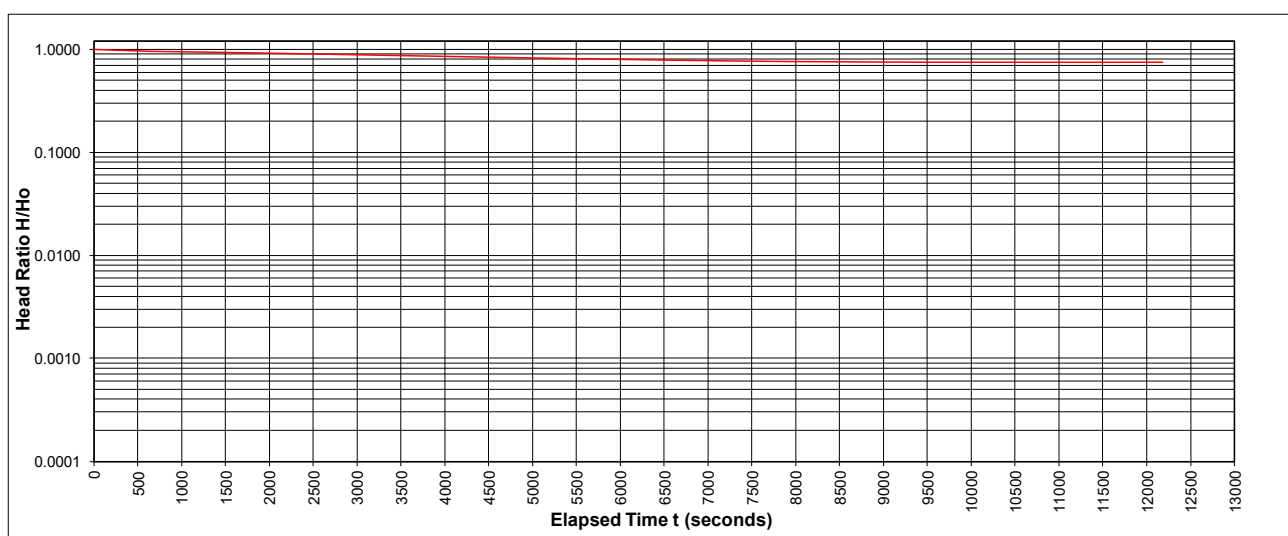
Diameter of piezometer (or where surrounded by granular filter, the diameter of the filter)	80	mm
Diameter of standpipe	50	mm
Top of response zone	1.00	m bgl
Base of response zone	3.00	m bgl
Length of response zone (saturated)	2.00	m
L/D	25.00	
Area	0.0019625	m ²
Starting Water Level	1.69	m

Comments:
Test carried out in general accordance with the methodology set out in BS 5930:1999

Time Interval (t_1)	0	seconds
Time Interval (t_2)	12180	seconds

Method	Intake Factor (F)	
a = Soil flush with bottom at impervious boundary	0.160	○
b = Soil flush with bottom in uniform soil	0.220	○
c = Well or hole extended at impervious boundary	3.105	○
d = Well or hole extended in uniform soil	3.210	○
e = Soil in casing with bottom at impervious boundary	0.002	○
f = Soil in casing with bottom in uniform soil	0.002	○
Test carried out in piezometer tube	3.6588	●

Intake Factor (F)	3.6588	
Permeability (k) - General Method	1.27E-08	m/s





Project No:	288-20-087
Project:	Land off King's Barn Lane, Steyning, West Sussex
Date:	19/01/2021
Borehole No.:	WS109

[illegible]

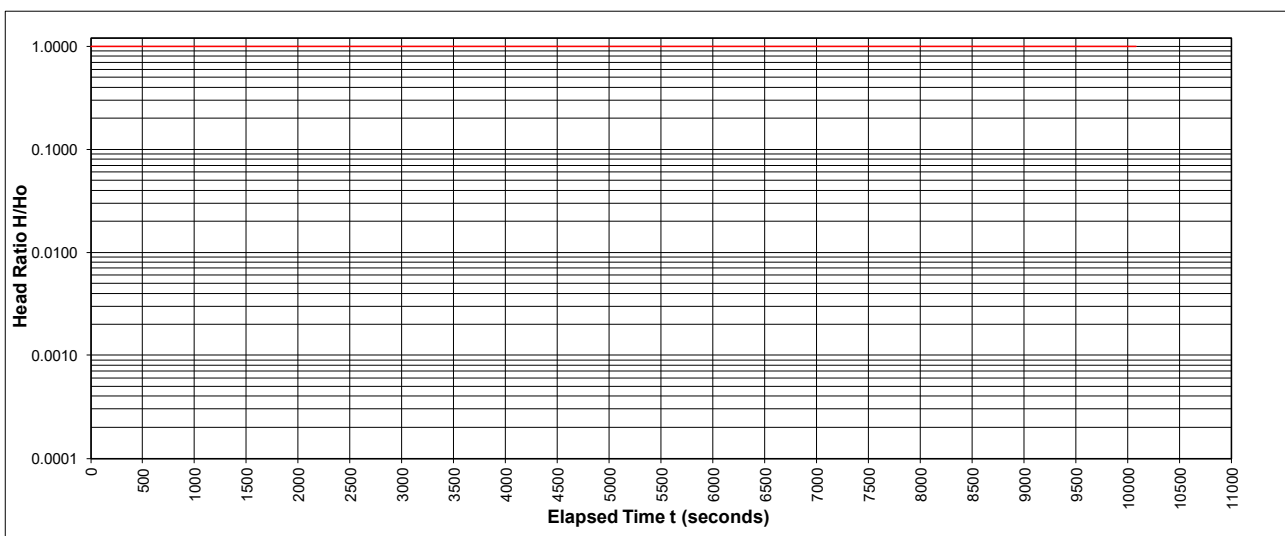
Diameter of piezometer (or where surrounded by granular filter, the diameter of the filter)	80	mm
Diameter of standpipe	50	mm
Top of response zone	1.10	m bgl
Base of response zone	3.10	m bgl
Length of response zone (saturated)	2.00	m
L/D	25.00	
Area	0.0019625	m ²
Starting Water Level	3.11	m

Comments:
Test carried out in general accordance with the methodology set out in BS 5930:1999

Time Interval (t_1)	0	seconds
Time Interval (t_2)	10080	seconds

Method	Intake Factor (F)	
a = Soil flush with bottom at impervious boundary	0.160	○
b = Soil flush with bottom in uniform soil	0.220	○
c = Well or hole extended at impervious boundary	3.105	○
d = Well or hole extended in uniform soil	3.210	○
e = Soil in casing with bottom at impervious boundary	0.002	○
f = Soil in casing with bottom in uniform soil	0.002	○
Test carried out in piezometer tube	3.6588	●

Intake Factor (F)	3.6588	
Permeability (k) - General Method	0.00E+00	m/s



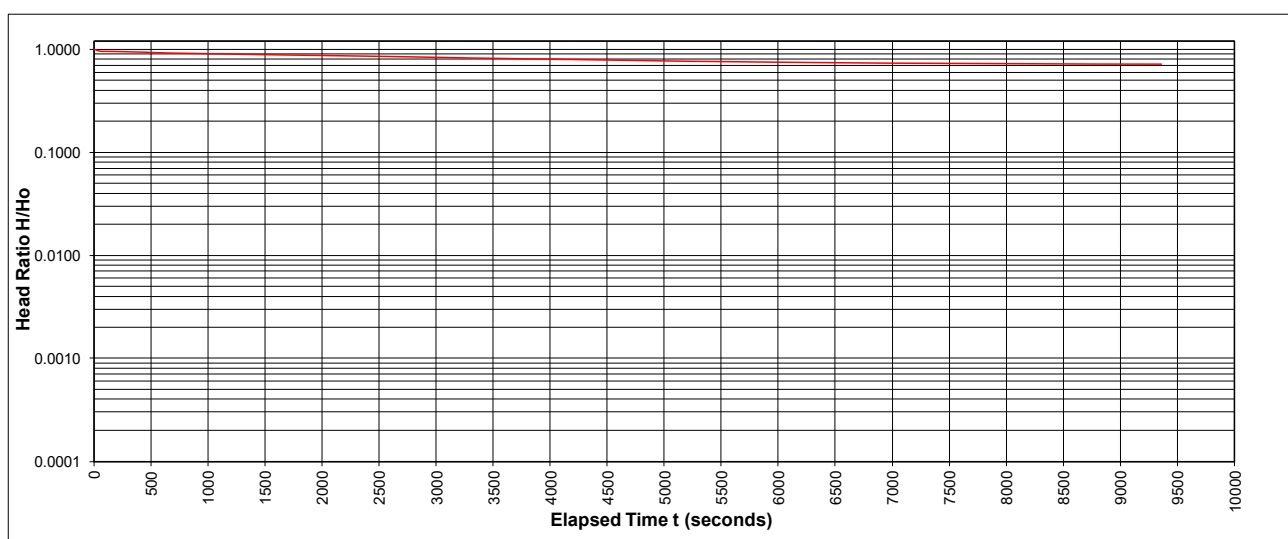
The Geo-Environmental Service Provider

[illegible]

Comments:	
Test carried out in general accordance with the methodology set out in BS 5930:1999	

Method	Intake Factor (F)	
a = Soil flush with bottom at impervious boundary	0.160	⦿
b = Soil flush with bottom in uniform soil	0.220	⦿
c = Well or hole extended at impervious boundary	3.105	⦿
d = Well or hole extended in uniform soil	3.210	⦿
e = Soil in casing with bottom at impervious boundary	0.002	⦿
f = Soil in casing with bottom in uniform soil	0.002	⦿
Test carried out in piezometer tube	3.6588	●

Intake Factor (F)	3.6588	
Permeability (k) - General Method	1.91E-08	m/s



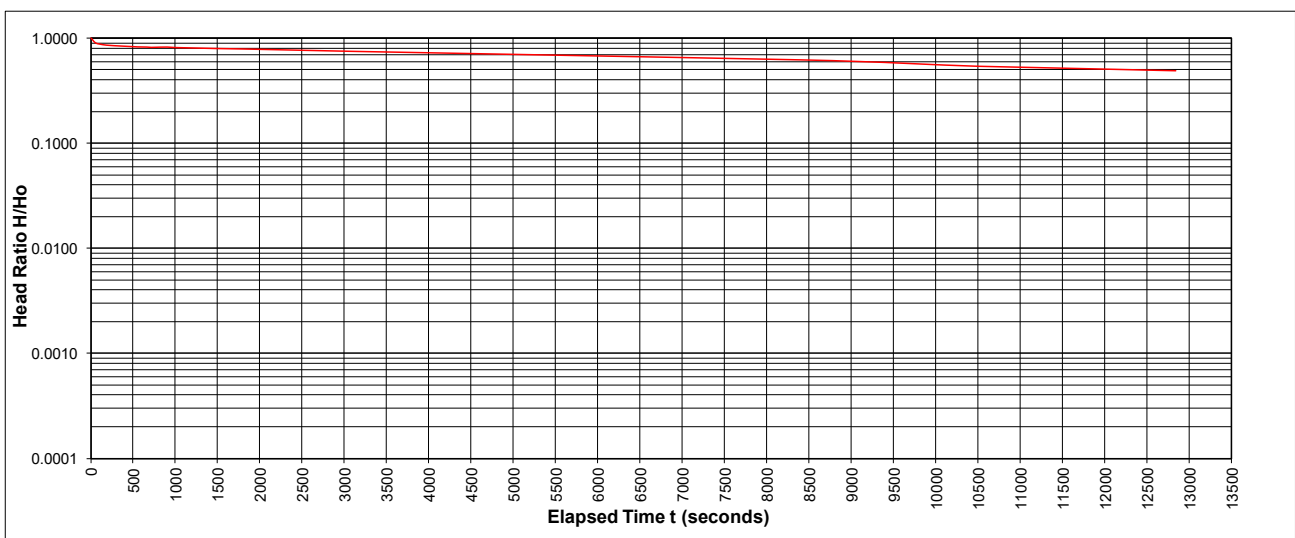
Project No:	288-20-087
Project:	Land off King's Barn Lane, Steyning, West Sussex
Date:	20/01/2021
Borehole No.:	WS110 - Test 2

[illegible]

Comments:
Test carried out in general accordance with the methodology set out in BS 5930:1999

Method	Intake Factor (F)	
a = Soil flush with bottom at impervious boundary	0.160	○
b = Soil flush with bottom in uniform soil	0.220	○
c = Well or hole extended at impervious boundary	3.105	○
d = Well or hole extended in uniform soil	3.210	○
e = Soil in casing with bottom at impervious boundary	0.002	○
f = Soil in casing with bottom in uniform soil	0.002	○
Test carried out in piezometer tube	3.6588	●

Intake Factor (F)	3.6588	
Permeability (k) - General Method	2.95E-08	m/s





APPENDIX III

CHEMICAL LABORATORY TEST DATA

**Joe Taylor**

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CV8 1NP

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f: 01926 485 507
e: joseph.taylor@aslenvironmental.co.uk

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Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 21-57501

Project / Site name:	Steyning, West Sussex	Samples received on:	17/02/2021
Your job number:	288-20-087	Samples instructed on/ Analysis started on:	18/02/2021
Your order number:	288-20-087	Analysis completed by:	01/03/2021
Report Issue Number:	1	Report issued on:	01/03/2021
Samples Analysed:	8 leachate samples - 15 soil samples		

Signed:

Joanna Wawrzeczko
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 21-57501
Project / Site name: Steyning, West Sussex
Your Order No: 288-20-087

Lab Sample Number				1774150	1774151	1774152	1774153	1774154
Sample Reference				WS3	WS5	WS21	WS27	WS30
Sample Number				ES1	ES1	ES1	ES1	ES1
Depth (m)				0.30	0.30	0.30	0.20	0.20
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	24	21	27	29	27
Total mass of sample received	kg	0.001	NONE	1.4	1.3	1.1	1.2	1.5

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.4	6.4	6.6	6.8	6.1
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	50	MCERTS	380	500	480	530	490
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.014	0.012	0.014	0.012	0.015
Total Sulphur	mg/kg	50	MCERTS	210	250	310	300	220
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.013	0.034	0.023	0.042	0.019

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
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Analytical Report Number: 21-57501
 Project / Site name: Steyning, West Sussex
 Your Order No: 288-20-087

Lab Sample Number				1774150	1774151	1774152	1774153	1774154
Sample Reference				WS3	WS5	WS21	WS27	WS30
Sample Number				ES1	ES1	ES1	ES1	ES1
Depth (m)				0.30	0.30	0.30	0.20	0.20
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	8.9	10	8.9	9.7	9
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.79	0.85	0.84	0.96	0.9
Boron (water soluble)	mg/kg	0.2	MCERTS	0.8	1.4	1.5	2	1.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	18	24	19	21	23
Copper (aqua regia extractable)	mg/kg	1	MCERTS	24	26	33	34	31
Lead (aqua regia extractable)	mg/kg	1	MCERTS	34	40	50	57	52
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	25	24	25	26	23
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	26	34	26	28	32
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	48	64	60	62	58

Petroleum Hydrocarbons

TPH C10 - C40	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 21-57501
 Project / Site name: Steyning, West Sussex
 Your Order No: 288-20-087

Lab Sample Number				1774155	1774156	1774157	1774158	1774159
Sample Reference				WS19	HP1	WS13	WS9	WS2
Sample Number				ES1	ES1	ES1	ES1	ES1
Depth (m)				0.30	0.20	0.20	0.20	0.30
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	24	27	24	27	27
Total mass of sample received	kg	0.001	NONE	1.5	1.2	1.3	1.1	1.3

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	-	-	-
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General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.3	6.4	6.3	6.9	6.9
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	50	MCERTS	440	610	700	660	840
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.013	0.024	0.019	0.017	0.015
Total Sulphur	mg/kg	50	MCERTS	210	290	350	320	490
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.024	0.022	0.039	0.021	0.028

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.56	< 0.05	< 0.05	< 0.05	1.2
Pyrene	mg/kg	0.05	MCERTS	0.46	< 0.05	< 0.05	< 0.05	0.97
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.42	< 0.05	< 0.05	< 0.05	0.61
Chrysene	mg/kg	0.05	MCERTS	0.45	< 0.05	< 0.05	< 0.05	0.72
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.59
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.37
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.53
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	1.89	< 0.80	< 0.80	< 0.80	4.97
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Analytical Report Number: 21-57501
 Project / Site name: Steyning, West Sussex
 Your Order No: 288-20-087

Lab Sample Number				1774155	1774156	1774157	1774158	1774159
Sample Reference				WS19	HP1	WS13	WS9	WS2
Sample Number				ES1	ES1	ES1	ES1	ES1
Depth (m)				0.30	0.20	0.20	0.20	0.30
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	10	9.9	12	11	9.5
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.98	1.1	1	0.96	0.88
Boron (water soluble)	mg/kg	0.2	MCERTS	0.6	1.9	1.4	1.5	3.1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25	29	24	22	21
Copper (aqua regia extractable)	mg/kg	1	MCERTS	26	24	26	23	33
Lead (aqua regia extractable)	mg/kg	1	MCERTS	47	27	31	28	60
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	25	19	30	25	24
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	34	38	35	31	30
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	58	74	70	57	70

Petroleum Hydrocarbons

TPH C10 - C40	mg/kg	10	MCERTS	< 10	< 10	47	< 10	< 10
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 21-57501
 Project / Site name: Steyning, West Sussex
 Your Order No: 288-20-087

Lab Sample Number				1774160	1774161	1774162	1774163	1774164
Sample Reference				WS24	WS12	WS14	WS23	WS8
Sample Number				ES1	ES1	ES2	ES2	ES2
Depth (m)				0.20	0.20	0.60	0.50	0.80
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	23	21	12	31	15
Total mass of sample received	kg	0.001	NONE	1.3	1.3	1.8	1.2	1.2

Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	-	-
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General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.5	6.4	6.6	6.4	6.9
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	50	MCERTS	540	560	82	260	210
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.011	0.024	0.004	0.012	0.011
Total Sulphur	mg/kg	50	MCERTS	310	330	< 50	160	140
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.032	0.0094	0.0014	0.0056	0.0088

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
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Analytical Report Number: 21-57501
 Project / Site name: Steyning, West Sussex
 Your Order No: 288-20-087

Lab Sample Number				1774160	1774161	1774162	1774163	1774164
Sample Reference				WS24	WS12	WS14	WS23	WS8
Sample Number				ES1	ES1	ES2	ES2	ES2
Depth (m)				0.20	0.20	0.60	0.50	0.80
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	8.9	13	5.1	7.4	13
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.9	0.98	0.49	0.73	0.86
Boron (water soluble)	mg/kg	0.2	MCERTS	1.5	2.2	0.6	0.9	1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	25	11	15	24
Copper (aqua regia extractable)	mg/kg	1	MCERTS	29	26	14	28	24
Lead (aqua regia extractable)	mg/kg	1	MCERTS	51	26	7.4	20	18
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	27	30	9.5	62	28
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	29	36	17	17	35
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	62	63	34	55	58
Petroleum Hydrocarbons								
TPH C10 - C40	mg/kg	10	MCERTS	70	52	< 10	< 10	< 10
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 21-57501
Project / Site name: Steyning, West Sussex

Your Order No: 288-20-087

Lab Sample Number				1774165	1774166	1774167	1774168	1774169
Sample Reference				WS3	WS5	WS21	WS27	WS30
Sample Number				ES1	ES1	ES1	ES1	ES1
Depth (m)				0.30	0.30	0.30	0.20	0.20
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

General Inorganics

pH	pH Units	N/A	ISO 17025	6.8	6.4	6.8	6.6	7
Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1	< 1	< 1	< 1	< 1
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	8.72	7.58	10.9	8.51	11.7

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	< 1.0	2.6	< 1.0	< 1.0	< 1.0
Beryllium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.3	< 0.2	< 0.2	< 0.2
Boron (dissolved)	µg/l	10	ISO 17025	23	17	21	28	24
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	< 0.4	0.9	0.7	0.5	3
Copper (dissolved)	µg/l	0.7	ISO 17025	37	23	34	19	9.2
Lead (dissolved)	µg/l	1	ISO 17025	< 1.0	1.5	3.8	< 1.0	4.2
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	4.4	4.1	6.6	6.3	6.6
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	13	10	12	13	15

Calcium (dissolved)	mg/l	0.012	ISO 17025	1.3	0.7	3.4	2.1	4.9
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 21-57501
Project / Site name: Steyning, West Sussex

Your Order No: 288-20-087

Lab Sample Number				1774170	1774171	1774172
Sample Reference				WS19	HP1	WS12
Sample Number				ES1	ES1	ES1
Depth (m)				0.30	0.20	0.20
Date Sampled				Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status			

General Inorganics

pH	pH Units	N/A	ISO 17025	6.8	6.6	6.5
Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Free Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1	< 1	< 1
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	8.27	9.16	10.4

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Beryllium (dissolved)	µg/l	0.2	ISO 17025	0.3	0.4	< 0.2
Boron (dissolved)	µg/l	10	ISO 17025	22	26	27
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	0.6	0.7	< 0.4
Copper (dissolved)	µg/l	0.7	ISO 17025	15	15	15
Lead (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	1.9
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	4.2	4.5	3.6
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	2.4	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	12	9.8	9.7

Calcium (dissolved)	mg/l	0.012	ISO 17025	1.7	1.2	0.91
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U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 21-57501

Project / Site name: Steyning, West Sussex

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1774150	WS3	ES1	0.3	Brown loam and clay with gravel and vegetation.
1774151	WS5	ES1	0.3	Brown loam and clay with gravel and vegetation.
1774152	WS21	ES1	0.3	Brown loam and clay with gravel and vegetation.
1774153	WS27	ES1	0.2	Brown loam and clay with gravel and vegetation.
1774154	WS30	ES1	0.2	Brown loam and clay with gravel and vegetation.
1774155	WS19	ES1	0.3	Brown loam and clay with gravel and vegetation.
1774156	HP1	ES1	0.2	Brown loam and clay with gravel and vegetation.
1774157	WS13	ES1	0.2	Brown loam and clay with gravel and vegetation.
1774158	WS9	ES1	0.2	Brown loam and clay with gravel and vegetation.
1774159	WS2	ES1	0.3	Brown loam and clay with gravel and vegetation.
1774160	WS24	ES1	0.2	Brown loam and clay with gravel and vegetation.
1774161	WS12	ES1	0.2	Brown loam and clay with gravel and vegetation.
1774162	WS14	ES2	0.6	Brown clay and sand.
1774163	WS23	ES2	0.5	Brown clay and sand with gravel and vegetation.
1774164	WS8	ES2	0.8	Brown clay and sand with gravel and vegetation.

Analytical Report Number : 21-57501

Project / Site name: Steyning, West Sussex

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Boron in leachate	Determination of boron in leachate. Sample acidified and followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Hexavalent chromium in leachate	Determination of hexavalent chromium in leachate by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Fraction of Organic Carbon in soil	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
pH at 20oC in leachate	Determination of pH in leachate by electrometric measurement.	In house method.	L005-PL	W	ISO 17025
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS

Analytical Report Number : 21-57501

Project / Site name: Steyning, West Sussex

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
TPH2 (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Dissolved Organic Carbon in leachate	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L023-PL	W	NONE
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	W	MCERTS
Free cyanide in leachate	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total cyanide in leachate - 1µg/l	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



APPENDIX IV

GEOTECHNICAL LABORATORY TEST DATA



Laboratory Report



Contract Number: 52752

Client Ref: **288-20-087**

Report Date: **03-03-2021**

Client PO: **288-20-087**

Client **ASL**
Holly Farm Business Park
Honiley
Warwickshire
CV8 1NP

Contract Title: **Land off Kings Barn Lane, Steyning**
For the attention of: **Steve Jones**

Date Received: **18-02-2021**

Date Completed: **03-03-2021**

Test Description	Qty
Moisture Content BS 1377:1990 - Part 2 : 3.2 - * UKAS	9
4 Point Liquid & Plastic Limit BS 1377:1990 - Part 2 : 4.3 & 5.3 - * UKAS	9
Samples Received - @ Non Accredited Test	9
Disposal of samples for job	1

Notes: **Observations and Interpretations are outside the UKAS Accreditation**

* - denotes test included in laboratory scope of accreditation

- denotes test carried out by approved contractor

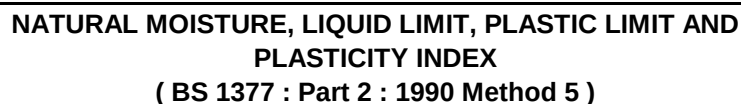
@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved Signatories:

Emma Sharp (Office Manager) - Paul Evans (Quality/Technical Manager) - Richard John (Advanced Testing Manager)

Shaun Jones (Laboratory manager) - Wayne Honey (Administrative/Quality Assistant)



Contract Number

52752

Site Name

Land off Kings Barn Lane, Steyning

Date Tested

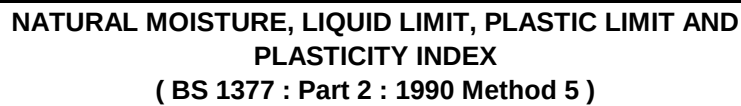
01/03/2021

DESCRIPTIONS

[illegible]

Operators	Checked	03/03/2021	Wayne Honey (Administrative/Quality Assistant)
Daniel Bassett	Approved	03/03/2021	Paul Evans (Quality/Technical Manager)



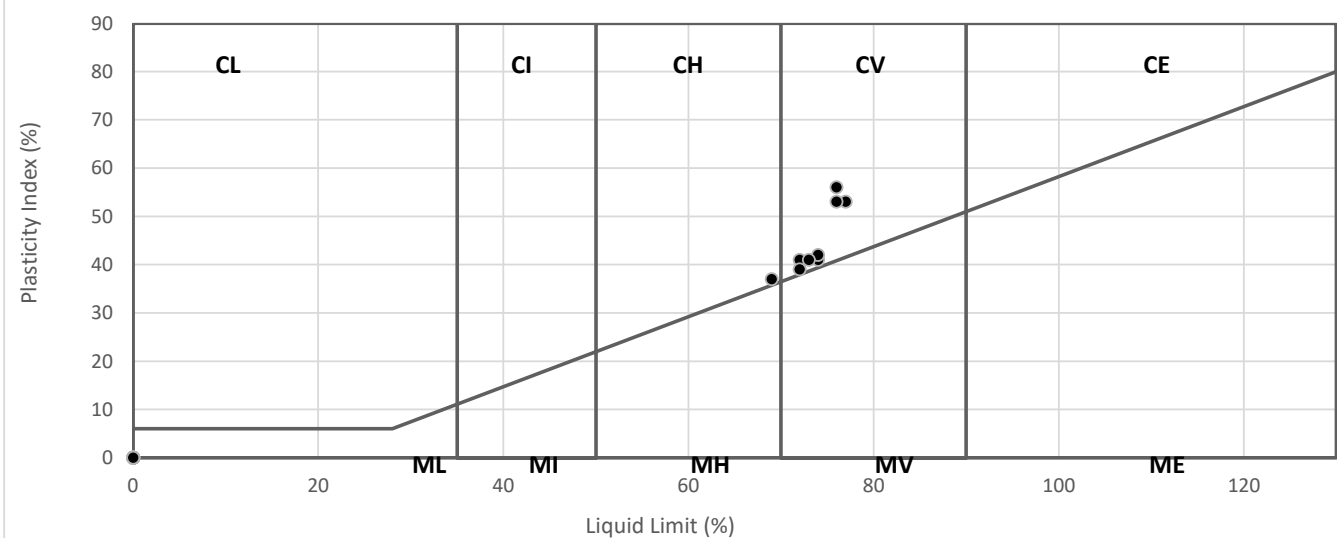


Contract Number	52752	
Project Location	Land off Kings Barn Lane, Steyning	
Date Tested	01/03/2021	

[illegible]

Symbols: NP : Non Plastic # : Liquid Limit and Plastic Limit Wet Sieved

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION BS 5930:1999+A2:2010



Operators	Checked	03/03/2021	Wayne Honey (Administrative/Quality Assistant)
Daniel Bassett	Approved	03/03/2021	Paul Evans (Quality/Technical Manager)

**Joe Taylor**

ASL Environmental
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e: reception@i2analytical.com

Analytical Report Number : 21-57800

Project / Site name:	Steyning, West Sussex	Samples received on:	16/02/2021
Your job number:	288-20-087	Samples instructed on/ Analysis started on:	16/02/2021
Your order number:	288-20-087	Analysis completed by:	01/03/2021
Report Issue Number:	1	Report issued on:	01/03/2021
Samples Analysed:	6 soil samples		

Signed: 

Zina Abdul Razzak
Senior Quality Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 21-57800
 Project / Site name: Steyning, West Sussex
 Your Order No: 288-20-087

Lab Sample Number				1775856	1775857	1775858	1775859	1775860
Sample Reference				WS2 D3	WS5 ES2	WS12 D3	WS17 ES4	WS19 D4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00-1.45	0.5	1.00-1.45	1.40	1.60
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	22	21	11	27	19
Total mass of sample received	kg	0.001	NONE	0.6	0.2	0.7	0.2	1.5

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.2	7.5	8.8	8	8.2
Total Sulphate as SO ₄	%	0.005	MCERTS	0.027	0.029	0.044	0.009	0.019
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivale	g/l	0.00125	MCERTS	0.0065	0.008	0.0059	0.011	0.015
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	1.2	1.3	1.6	6.8	1.7
Total Sulphur	%	0.005	MCERTS	0.012	0.014	0.018	< 0.005	0.005
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	5.5	9.9	< 5.0	< 5.0	5.6
Magnesium (leachate equivalent)	mg/l	2.5	NONE	2.8	5	< 2.5	< 2.5	2.8

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 21-57800
Project / Site name: Steyning, West Sussex
Your Order No: 288-20-087

Lab Sample Number				1775861
Sample Reference				WS28 D5
Sample Number				None Supplied
Depth (m)				1.80
Date Sampled				Deviating
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	21
Total mass of sample received	kg	0.001	NONE	1.5

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.5
Total Sulphate as SO ₄	%	0.005	MCERTS	0.009
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivale	g/l	0.00125	MCERTS	0.03
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	14
Total Sulphur	%	0.005	MCERTS	0.01
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0

Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	6.4
Magnesium (leachate equivalent)	mg/l	2.5	NONE	3.2

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 21-57800

Project / Site name: Steyning, West Sussex

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1775856	WS2 D3	None Supplied	1.00-1.45	Grey clay.
1775857	WS5 ES2	None Supplied	0.5	Brown clay and loam with gravel and vegetation.
1775858	WS12 D3	None Supplied	1.00-1.45	Brown sandy clay.
1775859	WS17 ES4	None Supplied	1.4	Brown clay and sand with gravel.
1775860	WS19 D4	None Supplied	1.6	Brown clay and sand with gravel.
1775861	WS28 D5	None Supplied	1.8	Brown clay and sand.

Analytical Report Number : 21-57800

Project / Site name: Steyning, West Sussex

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES.	In-house method based on TRL 447	L038-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewater & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

**Joe Taylor**

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e: reception@i2analytical.com

Analytical Report Number : 21-58742

Project / Site name:	Steyning, West Sussex	Samples received on:	24/02/2021
Your job number:	28820087	Samples instructed on/ Analysis started on:	24/02/2021
Your order number:	28820087	Analysis completed by:	10/03/2021
Report Issue Number:	1	Report issued on:	10/03/2021
Samples Analysed:	1 soil sample		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 21-58742
Project / Site name: Steyning, West Sussex
Your Order No: 28820087

Lab Sample Number				1781371
Sample Reference				WS9
Sample Number				D3
Depth (m)				1.00-1.45
Date Sampled				15/02/2021
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	20
Total mass of sample received	kg	0.001	NONE	0.5

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.3
Total Sulphate as SO ₄	%	0.005	MCERTS	0.017
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivale	g/l	0.00125	MCERTS	0.0078
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	1.8
Total Sulphur	%	0.005	MCERTS	0.007
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0

Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	5.1
Magnesium (leachate equivalent)	mg/l	2.5	NONE	2.6

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 21-58742
Project / Site name: Steyning, West Sussex

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1781371	WS9	D3	1.00-1.45	Brown clay and sand with gravel.

Analytical Report Number : 21-58742

Project / Site name: Steyning, West Sussex

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES.	In-house method based on TRL 447	L038-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewater & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.



APPENDIX V

QUALITATIVE RISK ASSESSMENT

STEP 2: BASIC SETTINGS

Apply Settings to Model

Back to Guide

SELECT LAND USE

Residential with produce

RATIO MODE

☐

LAND USE OPTIONS

RECEPTOR

Female (res)

BUILDING

Medium/large terraced house

SOIL TYPE

Clay loam

START AC

1

END AC

6

pH

7

SOM (%)

3.7

EXPOSURE PATHWAYS

ORAL ROUTES

direct soil and dust ingestion

consumption of homegrown produce

soil attached to homegrown produce

DERMAL ROUTES

indoor

outdoor

INHALATION ROUTES

indoor dust

outdoor dust

indoor vapour

outdoor vapour

STEP 5: RESULTS

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